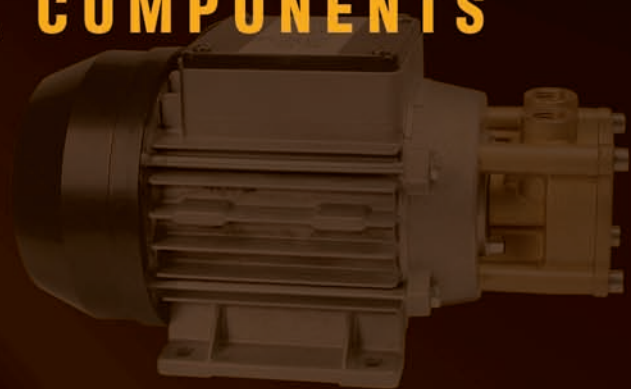


FLUID CONTROL COMPONENTS



CEME

FLUID CONTROL COMPONENTS



Wir über uns Who we are



DER URSPRUNG

CEME S.p.A. wurde 1974 von Ing. h.c. Renzo Miotti gegründet. Die dann folgende Firmengeschichte ist typisch für ein italienisches Unternehmen dieser Zeit. Am Anfang stand ein Handwerksbetrieb, welcher Magnetventile für Dieselöl fertigte; erst allmählich erweiterte man die Produktpalette der bis dahin noch in Kleinserien hergestellten Artikel. Die Leitmotive lauteten schon damals wie auch heute: hoher Qualitätsstandard bei wettbewerbsfähigen Preisen sowie die ständige Erweiterung neuer Produktgruppen mit einem Höchstmaß an Herstellungsautonomie.

DIE MÄRKTE UND DIE VERKAUFSLEISTUNGEN

Durch seinen marktorientierten Verkaufsstil gelang es **CEME S.p.A.**, besondere Produkte zu schaffen, welche neue innovative Märkte eröffneten. Dabei wurden stets die traditionellen Fertigungsbereiche wie die Herstellung von Branchenlösungen in Schweißindustrie, Kälte - technik bzw. Wasser und Dampfanwendung beibehalten. Vor allem in Letzterem ist die heutige **CEME** Gruppe weltweit führend und exportiert in mehr als 80 Länder. Trotz der Globalisierung und des dadurch gestiegenen Konkurrenzdrucks konnte **CEME S.p.A.** seinen Umsatz in den letzten Jahren verdoppeln.

Um einen mehrstufigen Vertriebsweg zu gewährleisten, unterhält **CEME** heute in vielen Ländern Werksniederlassungen. Speziell die deutsche Tochter **CEME GmbH** sorgt mit ihrem großen Werk in Süddeutschland für eine hervorragende Marktpräsenz am deutschen bzw. im deutschsprachigen Raum.

UNSER ERKLÄRTES ZIEL: KONTROLLE DER EINGESETZTEN MEDIEN

Neben einer Vielzahl von Magnetventil-Baureihen bietet **CEME S.p.A.** heute, nach dreißigjähriger kundenorientierter Spezialisierung, eine in der Firmengeschichte vorher noch nie verfügbare Bandbreite von Produkten an: Neben Schwingkolben- und Kleinkreiselpumpen gehören Druckschalter, Schwimmerschalter, Durchflusswächter und Sicherheitsventile zu unseren Regelungs- und Kontrollkomponenten. Wichtigstes Kriterium ist und bleibt dabei, die Medien zu kontrollieren, in denen die Produkte zum Einsatz kommen.

Egal, ob Standardprodukt oder Sonderausführung – die Philosophie bleibt stets die gleiche: beste Qualität bei niedrigst möglichem Preis. Dank Umsetzung dieser Ziele genießt **CEME** einen hervorragenden Ruf bei international renommierten Unternehmen.

Selbstverständlich befassen wir uns gerne mit kundenspezifischen Lösungen und verhelfen unseren Partnern zu entscheidenden technologischen und preislichen Vorteilen.

INNOVATIONEN UND KONSTANT HOHE QUALITÄT

Durch die ISO-9001-Zertifizierung hat **CEME S.p.A.** ein wichtiges langfristiges Entwicklungsprogramm zur Produktverbesserung abgeschlossen. Aufgrund eines hohen Qualitätsmanagements garantiert **CEME** für Edelstahl mit hoher Korrosionsbeständigkeit, zuverlässige Elastomere, Plastikummüllungen und emaillierte Drähte für die Spulen. Bei **CEME** ist geprüfte Qualität und dokumentierte Sicherheit Bestandteil der Fertigungsaufgabe; internationale Warenzeichen und Zulassungen sind die Ergebnisse dieser Bemühungen.

EINE FIRMENGRUPPE IM DRITTEN JAHRTAUSEND

Der durch die Globalisierung hervorgerufene Wettbewerb motivierte **CEME S.p.A.**, neue Strategien zu einer effektiveren Organisation zu entwickeln. So entstand 1995 **CEME Engineering S.p.A.** mit vier eigenen Produktionszentren, welche in der Firmengruppe ein Ultimo an automatisierter Fertigung darstellen.

Dieser Teil der **CEME** Gruppe produziert selbstständig für die Haushaltsgeräte-Industrie, beliefert aber auch entsprechend der Firmenphilosophie die Mutterfirma in Millionenhöhe.

THE ORIGINS

CEME S.p.A. was established in 1974 by the initiative of ENG. h.c. Renzo Miotti. Its history is one of a typical Italian company: artisan concepts at the beginning and limited business (solenoid valves for diesel oil) progressing to an extension of products and application fields. A trend which has continued to serve and satisfy market demand with products of high quality at competitive prices, in a context of innovation and continuous improvement.

THE MARKETS AND SALES PERFORMANCE

A sales strategy dedicated to the market encouraged **CEME S.p.A.** to manufacture products for specific market segments. This has led to **CEME S.p.A.** becoming undisputed market leader in industries such as welding, refrigeration, steam and water applications as well as maintaining a very strong presence in the general purpose markets. The company exports to approximately 80 countries and in the most recent years, **CEME S.p.A.** has doubled its turnover in spite of global competition becoming stronger and more aggressive.

THE MISSION: FLUID CONTROL COMPONENTS

Despite the wide range of solenoid valves produced by **CEME S.p.A.**, after almost thirty years of knowledge acquired in many hundreds of applications and integrated into the product, the range has been enhanced still further with rotary and solenoid pumps, pressure switches, level switches, flow sensors and safety valves in line with its own future: Fluid Control Components. A dynamic technical staff develops dedicated products specific to the customers requirements. The philosophy on the standard catalogue products or the customised one is consistent: offer the best quality at the lowest cost.

QUALITY STABILITY AND INNOVATION

For **CEME S.p.A.**, ISO 9001 certification was attained some years ago and completed the first stage development and improvement of the product. Due to the high quality of materials used such as high grade corrosion resistant stainless steels, highly reliable elastomers, plastics and enamelled copper wire for the coils, the acquisition of many international approvals have been achieved. This stage of the process has added strength and greater technological knowledge for the future direction of the company.

A GROUP IN THE THIRD MILLENIUM

The big challenges of global competition in the market encouraged **CEME** group to adopt a diversification in the organizational strategy. In 1995, an important productive and commercial structure of the group, **CEME Engineering S.p.A.**, dis-incorporated from **CEME S.p.A.** Fully equipped with four production plants and automated assembly lines, **CEME Engineering S.p.A.** directly supplies components for the household appliance industry and systematically in a group philosophy also supplies the founder group **CEME S.p.A.** with a volume of tens of millions of component pieces per year.

Chi siamo

LE ORIGINI

CEME S.p.A nasce nel 1974 per iniziativa dell'Ing. h.c. Renzo Miotti. La sua storia è quella di una tipica azienda italiana: dimensioni artigianali all'inizio ed un business limitato (elettrovalvole per gasolio) e poi via via un'estensione progressiva dei campi applicativi e dei prodotti. Un unico filo conduttore: servire il mercato e soddisfarlo con prodotti di alta qualità, a prezzi competitivi in un contesto di innovazione e miglioramento continui.

I MERCATI E LE PERFORMANCE COMMERCIALI

Uno stile di vendita fortemente orientato verso il mercato ha spinto **CEME S.p.A.** alla realizzazione di prodotti sempre più particolari, fermo restando i settori tradizionali e più propri della saldatura, della refrigerazione, dell'acqua e di tutto ciò che è vapore dove **CEME S.p.A.** è leader indiscusso. L'azienda esporta in circa 80 paesi del mondo. Negli ultimi anni **CEME S.p.A.** ha raddoppiato il fatturato nonostante che la competizione globale si sia fatta più forte.

LA MISSIONE: IL CONTROLLO DEI FLUIDI

Oltre alla vasta gamma di elettrovalvole (intercettazione), la **CEME S.p.A.** oggi, dopo circa un trentennio di specializzazione acquisita per centinaia di applicazioni e riversata sui prodotti, arricchisce l'offerta con pompe a solenoide e rotative (movimentazione), pressostati, regolatori di livello, flussostati e valvole di sicurezza (regolazione e controllo) in linea con la strategia del proprio futuro: componenti per il controllo dei fluidi.

Un dinamico staff tecnico elabora prodotti personalizzati su richiesta del Cliente. La filosofia per il prodotto standard a catalogo o personalizzato è comunque identica: garantire il massimo della qualità al minor costo possibile.

QUALITA' COSTANTE E INNOVAZIONE

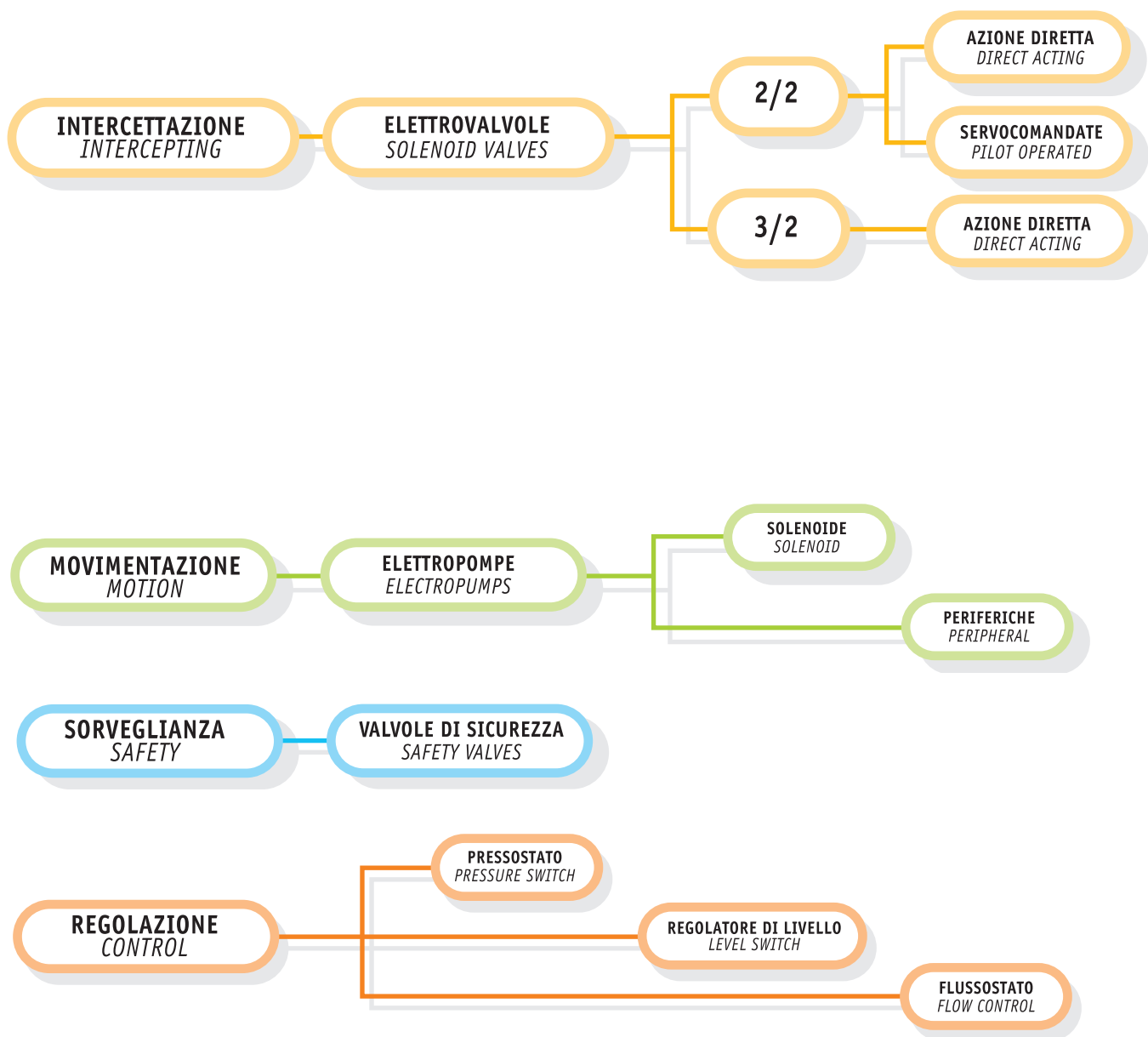
Per **CEME S.p.A.** la certificazione ISO 9001 ha completato un primo programma di sviluppo e miglioramento del prodotto che era in atto da tempo. Acciai ad alta resistenza contro la corrosione, l'alta affidabilità degli elastomeri, e dei rivestimenti plastici ed il filo smaltato delle bobine, l'acquisizione di numerosi marchi ed approvazioni internazionali sono alcuni dei passi in questa direzione che hanno reso più forte il bagaglio tecnologico maturato nel corso dei decenni.

UN GRUPPO NEL TERZO MILLENNIO

Le grandi sfide della competizione globale hanno spinto il gruppo **CEME** a diversificare le proprie strategie organizzative. Nel 1995, da **CEME S.p.A.** si è scorporata un'importante struttura produttiva e commerciale: **CEME Engineering S.p.A.** Dotata di quattro unità produttive e di linee di montaggio automatizzate progettate e realizzate al proprio interno, **CEME Engineering S.p.A.** alimenta con i propri componenti l'industria dell'elettrodomestico e, sinergicamente in una filosofia di gruppo, anche la capostipite **CEME S.p.A.**, per un volume di decine di milioni di pezzi all'anno.



FLUID CONTROL COMPONENTS



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guida alla selezione ELETTROVALVOLE

- 1 Le informazioni tecniche contenute in questo paragrafo Vi aiuteranno a selezionare la giusta valvola per la Vs. applicazione. Ovviamente in questo catalogo sono raccolte solo le elettrovalvole standard, tutte le esecuzioni speciali, studiate e progettate per e con il cliente non sono state inserite. Nel caso non doveste trovare la giusta soluzione per Voi, Vi consigliamo di contattare direttamente la nostra azienda.

DEFINIZIONE

Una elettrovalvola è la combinazione di due parti funzionali fondamentali:

- un solenoide (elettromagnete)
- un corpo valvola con uno o più passaggi

Serve per chiudere od aprire un passaggio di un fluido in un circuito tramite un comando elettrico.

CLASSIFICAZIONE

Tutte le caratteristiche descritte in questo capitolo sono raccolte in modo dettagliato per ogni modello nell'indice generale.

Le elettrovalvole vengono classificate secondo le seguenti caratteristiche:

- NUMERO DI VIE
- POSIZIONI
- STATO A RIPOSO
- PRINCIPIO DI FUNZIONAMENTO

-NUMERO DI VIE

Le vie sono i punti di collegamento con il circuito:

2 VIE - 2/: una entrata ed una uscita

3 VIE - 3/: una entrata, una uscita ed uno scarico oppure le 3 VIE possono essere utilizzate in altre combinazioni per avere una deviazione del fluido oppure una miscelazione di più fluidi.

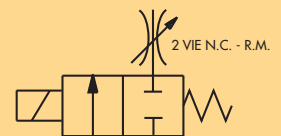
La quasi totalità della produzione è ripartita in valvola a 2 e 3 VIE anche se per alcuni progetti speciali si sono eseguite valvole a 4 VIE (5935).

-POSIZIONI /2

Questa caratteristica si riferisce al tipo passaggio, se a portata fissa o regolabile. Tutta la nostra produzione è eseguita nella versione a due posizioni ON/OFF, aperto/chiuso.

Le uniche varianti esistenti sono delle regolazioni di tipo "manuale", vengono cioè ottenute delle variazioni di flusso tramite rubinetti applicati direttamente sulle elettrovalvole

(vedi modelli 5584, 6660, 6724, 9934, 9922)



-STATO A RIPOSO

Verificare se la valvola deve rimanere più tempo APERTA (con passaggio del fluido) oppure CHIUSA senza passaggio.

N.C. Normalmente chiusa: la valvola quando non c'è alimentazione elettrica ai capi del solenoide, è chiusa;

N.A. Normalmente aperta: viceversa la valvola è aperta nelle suddette condizioni.

-PRINCIPIO DI FUNZIONAMENTO

A seconda del valore minimo di pressione che deve essere intercettato, uguale a 0 o maggiore di 0, ci sono due grandi famiglie di valvole ad azione diretta o ad azione servocomanda.

Secondo il principio di funzionamento le valvole si suddividono in due categorie:

AZIONE DIRETTA: significa che il passaggio viene aperto o chiuso da una tenuta montata direttamente sul nucleo magnetico che viene azionato dalla bobina. La pressione di funzionamento è quindi legata direttamente al diametro di passaggio e alla potenza della bobina, e la minima pressione di funzionamento è uguale a 0.

AZIONE SERVO COMANDATA: esiste un orifizio pilota e un orifizio principale, il magnete andrà ad aprire e chiudere solo il pilota quindi la massima e la minima pressione di funzionamento non dipenderanno dalla potenza dell'elettromagnete ma dalle caratteristiche costruttive della tenuta sull'orifizio principale (membrana, pistone..)

Per questo tipo di valvola è una caratteristica fondamentale la minima pressione di funzionamento che è sempre diversa e maggiore di 0.

Esempi: 5511.. 2/2 N.C. AZIONE DIRETTA
6724.. 2/2 N.C. AZIONE DIRETTA
6212.. 3/2 N.C. AZIONE DIRETTA
8614.. 2/2 N.C. AZIONE SERVO COMANDATA

A questo punto abbiamo descritto le caratteristiche fondamentali di una valvola, tutte queste sono state raccolte nell' INDICE GENERALE.

Le informazioni di progetto che seguiranno sono più dettagliate, sarà quindi possibile verificarle solo consultando la specifica pagina di catalogo.

	PRESSIONE MIN. MIN. PRESSURE	SERIE / SERIES	ATTACCHI / PIPES MIN - MAX	PRESSIONE - PRESSURE						ARIA / AIR	ACQUA / WATER	GAS INERTI / INNERT GAS	GAS [CE GAS]	VAPORE / STEAM	OLI LEGGERI / LIGHT OILS	FREON	PAG. / PAGE	VERSIONE (N.A.) VERSION (N.O.)	
				DIAMETRO-PRESSIONE - bar (~C.A.) DIAMETER-PRESSURE - bar (~A.C.)															
2/2	0	52	G 1/8	Ø 2,8	Ø 1,5					•	•	•	•	•		10	65 PAG. 24		
			R 1/8								•	•	•	•	•			14	
		55	G 1/8	Ø 3,3	Ø 1,5											•		14	
		59	G 1/4		Ø 2,5	Ø 1,5					•	•	•	•	•			18	
		66	G 1/8	Ø 4,0			Ø 2,0					•	•		•	•			26
			R 1/8								•					•			
		67	G 1/8-G 1/4		Ø 3,3			Ø 1,7			•	•				•		30	
		68AD	G 1/4-G 3/8					Ø 3,0			•	•			•	•		32	
		84	G 3/8-G 2	Ø 51							•	•				•		38	
		93	G 1/4-G 1/2	Ø 5,0			Ø 2,8				•	•	•		•	•		50	
93CM	G 3/8-G 1	Ø 5,7	Ø 19						•				•	•	52				
99	G 1/4-G 1/4	Ø 7,0				Ø 2,8									58				
99RM	G 1/4	Ø 5,5				Ø 2,8									60				
bar 0 5 10 15 20 25 30																			
2/2	SERVOCOMANDATA / PILOT OPERATED	0,1	68SC	G 3/8-G 1/2					Ø 10						•	34	87 PAG. 44		
		0,1	83	G 1/4-G 1/2				Ø 11			•	•			•	36			
		0,25	85	G 1/4-G 1/2		Ø 12					•	•			•	40			
		0,3	86	G 3/8-G 3		Ø 75					•	•			•	42			
		0,25	88	G 3/8-G 1/2	Ø 12						•	•				46			
		1	90	G 3/8-G 2		Ø 50									•	48			
bar 0 5 10 15 20 25 30																			
3/2	0	53	G 1/8		Ø 1,5					•	•	•	•	•		12	61 PAG. 20		
		62	G 1/8-G 1/4	Ø 2,8	Ø 1,5					•	•	•	•	•		22			
bar 0 5 10 15 20 25 30																			

guide to select SOLENOID VALVES

UK The technical features shown in this chapter will assist in selecting the correct valve for your application. The solenoid valves shown in this catalogue are standard production valves only, for non-standard valves or special applications, please contact our sales/ technical department who will be pleased to help.

DEFINITION

A solenoid valve is a combination of two functional, essential parts:

-a solenoid (electromagnet)

-a valve body with two or three ways (passages)

It is used to open and close a fluid path controlled by an electrical circuit

CLASSIFICATION

All the features described in this chapter are illustrated in detailed form for each model in the general index.

The solenoid valves were classified according to the following features:

-NUMBER OF WAYS

-POSITIONS

-CONDITION OF PERFORMANCE

-FUNCTIONING PRINCIPLE

-NUMBER OF WAYS

The ways are the connection points with the circuit:

2 WAY - **2/**: one inlet, one outlet

3 WAY - **3/**: one inlet, one outlet and one exhaust or the three ways could be used differently combined to obtain a fluid deflecting or a blending of fluids.

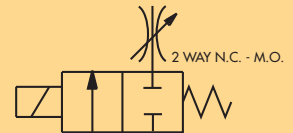
Almost the whole of the production is shared in two or three WAY valves although for some special projects four WAY valves (5935) have been produced.

-POSITIONS /2

This feature refers to the type of passage, if constant or regulable flow rate.

All our production is executed in the two position version ON/OFF, open/close.

The only variables are represented by the regulation type "manual override", the variations of the flow rate were obtained through a regulator device built directly into the solenoid valve (see models 5584, 6660, 6724, 9934, 9922)



-CONDITIONS OF PERFORMANCE

Verify if the valve remains for more time OPENED (with fluid path) or CLOSED (without fluid path).

N.C. Normally closed: The valve is closed by no power supply to the terminals of the coil;

N.O. Normally opened: On the contrary the valve is opened by above-mentioned conditions

-FUNCTIONING PRINCIPLE

Depending on the minimum pressure that has to be intercepted, equal to 0 or more than 0, there are two large valve families, direct acting or servo piloted.

Depending on the functioning principle, the valves were divided in two categories :

DIRECT ACTING: Means that the fluid passage becomes opened or closed by a sealing mounted directly on the magnetic plunger actuated by the coil. The working pressure is directly connected to the orifice diameter and to the power of the coil, and the minimum working pressure is 0.

SERVO PILOTED: It exists of a pilot orifice and a master orifice, the magnetic unit opens and closes only the pilot orifice so the maximum and minimum working pressure doesn't depend upon the coil power but from the sealing constructive features on the master orifice (diaphragm, piston..)

For this type of valve the minimum working pressure is a fundamental feature and is always different and more than 0.

example: 5511.. 2/2 N.C. DIRECT ACTING

6724.. 2/2 N.C. DIRECT ACTING

6212.. 3/2 N.C. DIRECT ACTING

8614.. 2/2 N.C. SERVO PILOTED

Now we have described the fundamental features of a valve, all these are illustrated in the "GENERAL INDEX".

The project information that follows are more detailed, therefore it would be possible to verify them only by consulting the specific catalogue page.

Erläuterung zur Artikelwahl MAGNETVENTILE

- D Die hier gelisteten technischen Informationen werden Ihnen bei der Wahl des fuer Ihre Anwendung richtigen Artikels helfen. Sollten Sie trotz unseres großen Produktsortiments eine für Sie wichtige Sonderlösung nicht abgebildet finden, möchten wir Sie bitten sich mit unserem Hause direkt in Verbindung zu setzen. Unsere Technischer Verkauf im Innen und Außendienst berät Sie gerne.

FUNKTIONSPRINZIP

Ein Magnetventil ist eine Kombination zweier elementarer Bestandteile:

-Ein Elektromagnet

-Ein Ventilkörper mit einem oder mehreren Anschlüssen

Es ermöglicht das Schließen und wieder Öffnen eines Durchganges, mittels einer elektrischen Betaetigung, zur Steuerung von Medien.

KLASSIFIZIERUNG

Alle in diesem Abschnitt beschriebenen Merkmale sind in detaillierter Form im Abschnitt "GENERALINDEX" zu finden.

Die Magnetventile werden nach folgenden Merkmalen klassifiziert :

-ANZAHL DER SCHALT-WEGEN

-ANZAHL DER SCHALT-POSITIONEN

-RUHESTELLUNGSPPOSITION

-STEUERUNGSARTEN

-ANZAHL DER SCHALT-WEGE

Die Schalt - Wege sind die Verbindungspunkte eines Kreislaufes:

2 WEGE - 2/: Ein Eingang und ein Ausgang

3 WEGE - 3/: Ein Eingang, ein Ausgang und ein Auslass oder die drei Wege

koennen in verschiedenen Kombinationen verwendet werden um eine Abweisung der Medien bzw. eine Mischung verschiedener Medien zu erreichen.

Der Großteil der Produktion besteht aus 2 und 3 Wege Magnetventilen auch wenn fuer Spezialprojekte, 4 WEGE Magnetventile (5935) gefertigt werden.

-ANZAHL DER SCHALT - POSITIONEN /2

Diese Eigenschaft bezieht sich auf die Art des Durchflußverhaltens im Ventilquerschnitt und gibt an ob die Foerdermenge konstant oder regelbar ist.

C.E.M.E. fertigt ausschließlich Ventile mit zwei Schalt - Positionen ON/OFF, geoeffnet/geschlossen.

Die einzig existierenden Varianten sind Baureihen mit "manuelle" Regeleinheit, d.h. eine Aenderung der Durchflussmenge wird durch eine direkt am Magnetventil angebrachte Regeleinheit, erreicht. (Siehe Modelle 5584, 6660, 6724, 9934, 9922)

-RUHESTELLUNGSPPOSITION

Die Entscheidung nach der Ruhestellungsposition richtet sich hauptsächlich nach dem größeren Verweilzustand des Ventils. Ueberpruefen Sie ob das Ventil in Ihrem Anwendungsfall laenger GEOEFFNET (Mit Mediumdurchfluss) oder GESCHLOSSEN (Ohne Mediumdurchfluss) bleiben soll.

S.G. stromlos geschlossen: Das Ventil ist ohne Stromzufuhr geschlossen.

S.O. stromlos offen: Das Ventil ist ohne Stromzufuhr geoeffnet.

-FUNKTIONSPRINZIP

In Abhaengigkeit vom minimalen Druck der eingesetzten Medien, gleich 0 bar bzw. hoeher als 0 bar, gibt es zwei grosse Ventulfamilien. Man unterteilt Sie gemäß Ihrem Fuktionsprinzip in direkt gesteuerte und servo gesteuerte Ventile.

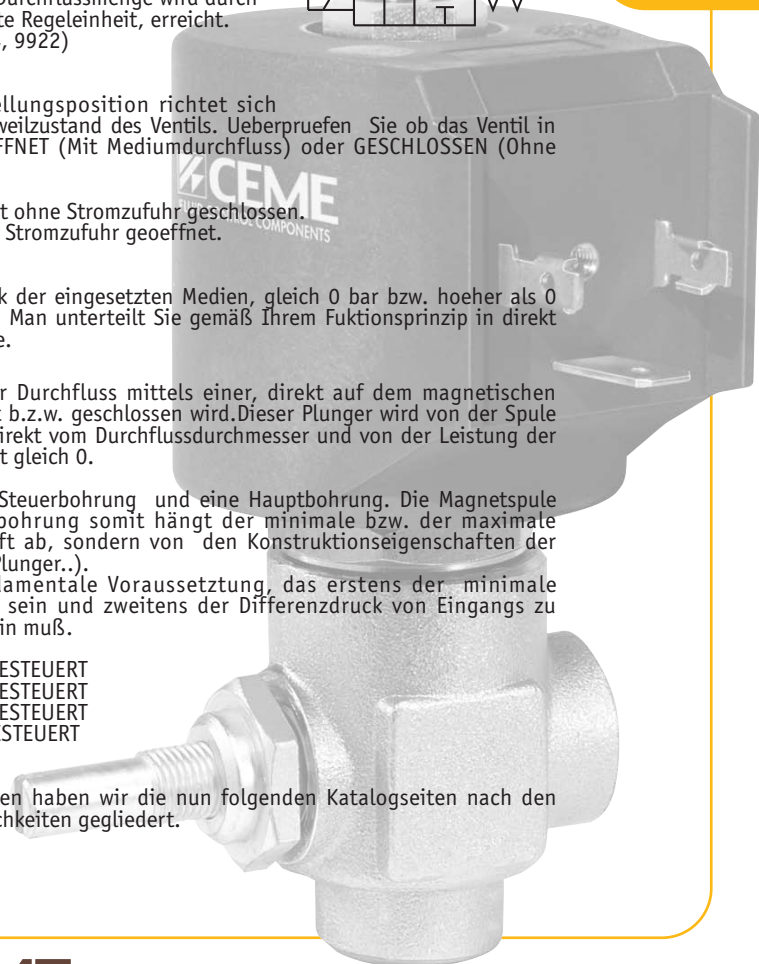
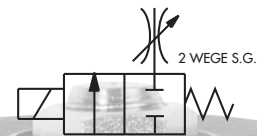
DIREKTGESTEUERT: Bedeutet dass der Durchfluss mittels einer, direkt auf dem magnetischen Plunger befestigten Dichtung, geoeffnet b.z.w. geschlossen wird. Dieser Plunger wird von der Spule betaetigt. Der Betriebsdruck haengt direkt vom Durchflusdurchmesser und von der Leistung der Spule ab. Der minimaler Arbeitsdruck ist gleich 0.

SERVOGESTEUERT: Hier existiert eine Steuerbohrung und eine Hauptbohrung. Die Magnetspule offnet und schliesst nur die Steuerbohrung somit hängt der minimale bzw. der maximale Arbeitsdruck nicht von der Spulenkraft ab, sondern von den Konstruktionseigenschaften der Hauptbohrungs Dichtung (Membrane, Plunger..).

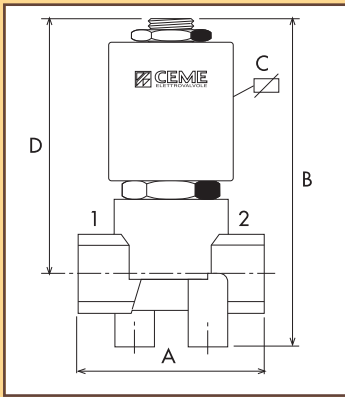
Fuer diese Ventilsreihe ist eine fundamentale Voraussetzung, das erstens der minimale Eingangsdruck immer groesser 0 bar sein und zweitens der Differenzdruck von Eingangs zu Ausgangsseite ebenfalls größer 0 bar sein muß.

Beispiel: 5511..	2/2 N.C.	DIREKTGESTEUERT
6724..	2/2 N.C.	DIREKTGESTEUERT
6212..	3/2 N.C	DIREKTGESTEUERT
8614..	2/2 N.C.	SERVOGESTEUERT

Um Ihre Artikelauswahl zu vereinfachen haben wir die nun folgenden Katalogseiten nach den bisher beschriebenen Einteilungsmöglichkeiten gegliedert.



CARATTERISTICHE SPECIFICATIONS



ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
N.A. - N.O.	R 1/8 - G 1/8	1,5 5201	0.070	20	22	22	62,5	40	-	0.120
N.C.	G 1/8	1,5 5211	0.070	17	10	33	63	40	52	0.135
	G 1/8	1,6 5252	0.075	25	12	30	63.6	40	50.6	0.135
	G 1/8	2,0 5252	0.110	17	10	30	63.6	40	50.6	0.135
	G 1/8	2,8 5252	0.180	4,5	1,5	30	63.6	40	50.6	0.135
FLANGIA / FLANGE	1,5 5270	0.070	17	10	29	56	40	-	0.130	

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

V~	POTENZA/POWER	
	NOMINALE HOLDING	SPUNTO IN RUSH
12 24 48 110 230 400	50 60	Hz
11VA	15VA	
V=	12 24 48 110	10W

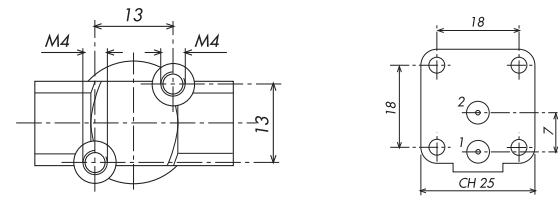
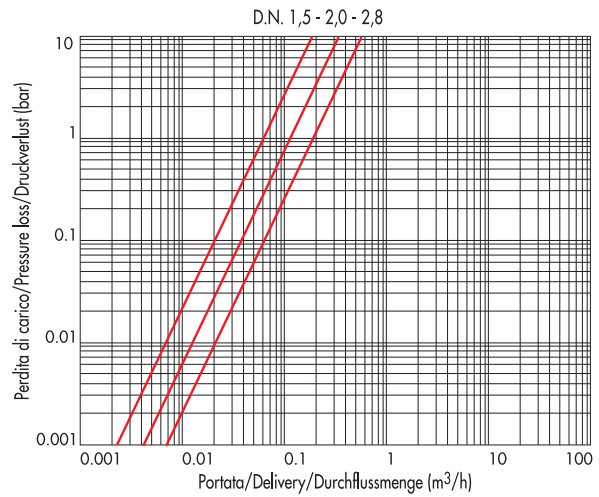
Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulnen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM	FPM	HNBR	80°C
90°C	140°C	150°C	110°C	

Disponibili bobine per temperature ambienti fino a 120°C
Coils available for ambient temperatures until 120°C
Spulen verfügbar für Umgebungstemperaturen bis zu 120°C

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



5201

5211

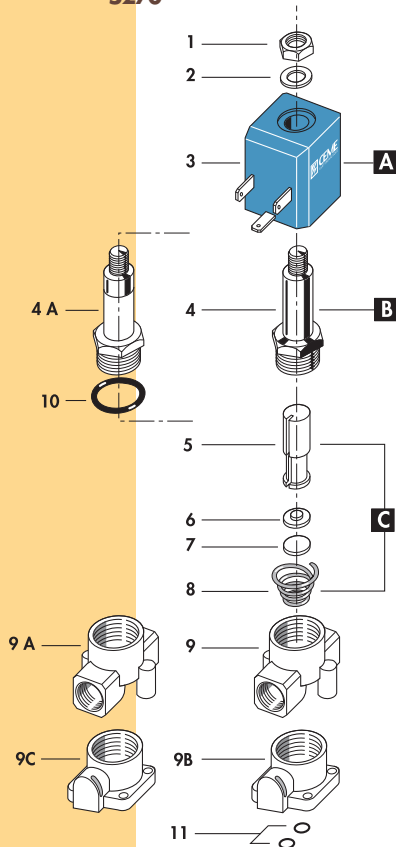
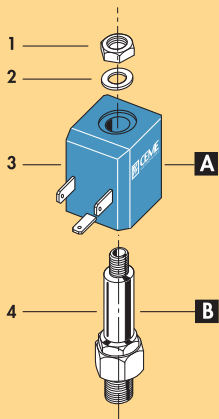
5270



5201

5211
5270

5252



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Cannotto	Tube guide	Plungerrohr
5	Nucleo mobile	Plunger	Plunger
6	Piattello	Support	Scheibe
7	Pastiglia	Seal	Dichtung
8	Molla	Spring	Feder
9	Corpo	Valve body base	Grundkörper
10	O-Ring	O-Ring	O-Ring
11	O-Ring	O-Ring	O-Ring
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Cannotto	Tube guide	Plungerrohr
C	Nucleo mobile	Plunger	Plunger

ELETTOVALVOLA AZIONE DIRETTA 2/2 vie N.C. (5201 N.A.)
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C. (5201 N.O.)
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G. (5201 S.O.)



I

CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO 0 bar

PARTI A CONTATTO CON IL FLUIDO

TENUTA EPDM ALIMENTARE - HNBR - NBR - FPM

CORPO OTTONE

ORGANI INTERNI ACCIAIO INOX

VALVOLA FORNITA CON TUBO GUIDA OTTONE (5211, 5270)

TUBO GUIDA INOX (solo per serie 5201, 5252) CON LE SEGUENTI CARATTERISTICHE:

- Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego.

- Migliore resistenza alla corrosione.

- SEDE DI TENUTA INOX.

- Particolarmente indicata per vapore fino a 155°C.

ACQUA - ARIA - VAPORE - GAS - OLII LEGGERI - GASOLIO

FLUIDI

VALVOLA UNIDIREZIONALE

VALVOLA ISPEZIONABILE

POSIZIONE DI MONTAGGIO

Qualsiasi; sconsigliata quella con bobina rivolta verso il basso.

TEMPERATURA AMBIENTE

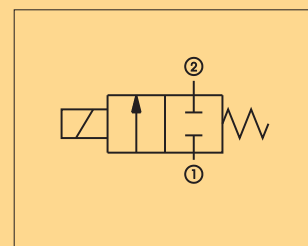
80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.

ESECUZIONI SPECIALI

NICHELATURA sul corpo

ACCESSORI

CONNETTORE TRIPOLARE UNI ISO 6952 (DIN 43650B) - IP65



UK

GENERAL FEATURES

MINIMUM WORKING PRESSURE 0 bar

PARTS IN CONTACT WITH THE FLUID

SEALING FOOD GRADE EPDM - HNBR - NBR - FPM

BODY BRASS

INTERNAL PARTS STAINLESS STEEL

VALVE SUPPLIED WITH BRASS TUBE GUIDE (5211, 5270)

STAINLESS STEEL TUBE GUIDE (only for series 5201 and 5252) WITH THE FOLLOWING CHARACTERISTICS:

- Metallic sealing with the body for safety sealing also for high temperature applications.

- Improved corrosion resistance.

- BODY SEALING SEAT IN STAINLESS STEEL.

- Particularly suitable for steam up to 155°C

WATER - AIR - STEAM - GAS - LIGHT OILS - DIESEL OIL

FLUIDS

ONE WAY DIRECTION VALVE

SERVICEABLE VALVE

MOUNTING POSITION

Any, the position with the coil downwards is not recommended.

AMBIENT TEMPERATURE

80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

SPECIAL EXECUTIONS

NICKEL-PLATED VALVE BODY

ACCESSORIES

THREE POLE PLUG CONNECTOR UNI ISO 6952 (DIN 43650B)-IP65

D

ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK 0 bar

MEDIUMS BERUEHRTE TEILE

DICHTUNG EPDM FUER LEBENSMITTELANWENDUNGEN- HNBR - NBR - FPM

KOERPER MESSING

INNERE ELEMENTE EDELSTAHL

LIEFERUMFANG PLUNGERROHR AUS MESSING (5211, 5270)

PLUNGERROHR AUS EDELSTAHL (nur für Serie 5201, 5252) MIT DEN FOLGENDEN EIGENSCHAFTEN:

- Metallische Dichtung fuer einen sicheren Einsatz auch bei hohen Medium Temperaturen.

- Bessere Korrosionsbestaendigkeit.

- VENTILSITZ AUS EDELSTAHL

- DIE EDELSTAHLVERSION IST SPEZIELL GEEIGNET FUER DAMPF BIS ZU 155°C

WASSER - LUFT - DAMPF - GAS - LEICHTE OELE - DIESEL OEL

MEDIUM

UNIDIREKTIONALES VENTIL

VENTIL WARTUNGSFREUNDLICH

MONTAGEPOSITION

Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.

UMGEBUNGSTEMPERATUR

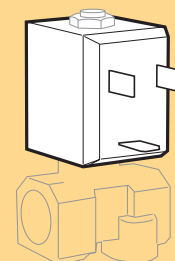
80°C .Im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkraefte (M.O.P.D.) des Ventils beeintraechtigen

SONDERAUSFUERUNGEN

Vernickelter Ventilkoeper.

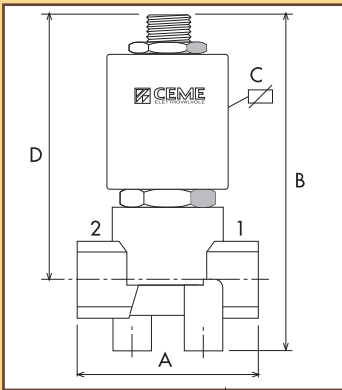
ZUBEHOER

DREIPOLIGER STECKER UNI ISO 6952 (DIN 43650B)-IP65



BOBINA TIPO B4
COIL TYPE B4
SPULE TYP B4

CARATTERISTICHE SPECIFICATIONS



ATTACCHI / PIPES				CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
in → out	Ømm	3a via-3rd way	Ømm			AC	DC	A	B	C	D	
G 1/8	1,5	G 1/8	1,5	5311	0.080	11	9	33	68	40	55	0.125
G 1/8	1,5	G 1/8	1,5	5313	0.060	11	9	30	68	40	55	0.130
G 1/8	2,0	G 1/8	1,5	5313	0.090	6,5	5,5	30	68	40	55	0.130
G 1/8	2,5	G 1/8	1,5	5313	0.130	4,5	3,5	30	68	40	55	0.130
G 1/8	1,0	(*)	1,5	5315	0.040	20	15	30	68	40	60	0.125
G 1/8	1,5	(*)	1,5	5315	0.080	11	9	30	68	40	60	0.125
G 1/8	1,5	G 1/8	1,5	5316	0.080	11	9	30	63	40	55	0.125
FLANGIA / FLANGE	1,5	G 1/8	1,5	5370	0.065	11	9	29	59	40	-	0.130

(*) Vedi tabella Diametro sede 3ª via - Seat Diameter 3rd way - ø 1,5

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

POTENZA/POWER	
NOMINALE HOLDING	SPUNTO IN RUSH

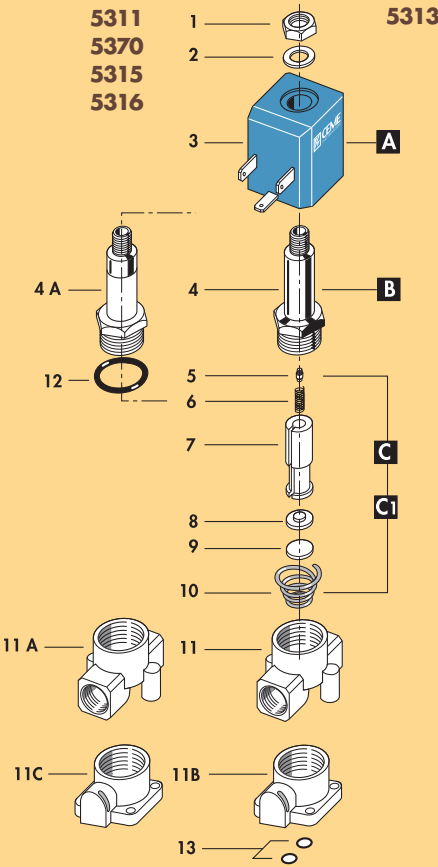
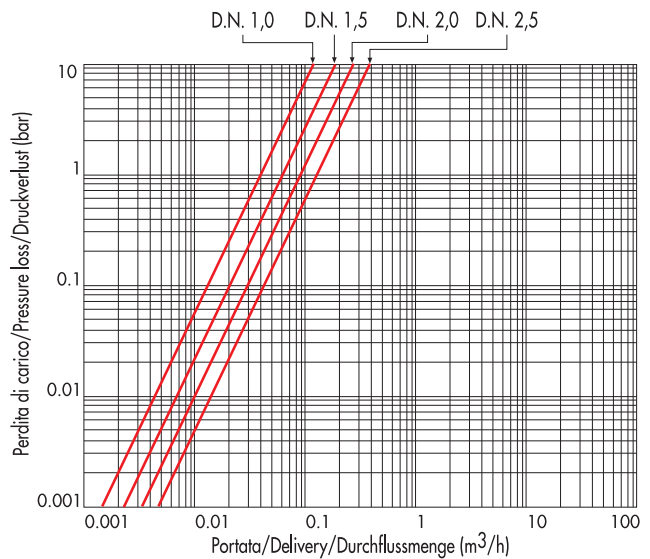
V~	12	24	48	110	230	400	50	60	Hz	11VA	15VA
V=	12	24	48	110						10W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

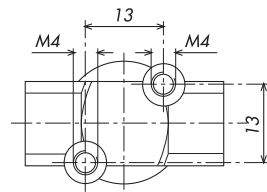
	FLUIDI/FLUIDS				AMBIENTE/AMBIENT
	NBR	EPDM	FPM	HNBR	
5311-5315-5316-5370	90°C	140°	140°	110°	80°C
5313	-	155°	150°	-	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM

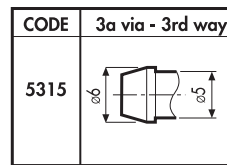


1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Cannotto	Tube guide	Plungerrohr
5 Gommino di tenuta	Rubber seal	Dichtung
6 Molla	Spring	Feder
7 Nucleo mobile	Plunger	Plunger
8 Piattello	Support	Scheibe
9 Pastiglia	Seal	Dichtung
10 Molla	Spring	Feder
11 Corpo	Valve body base	Grundkörper
12 O-ring	O-ring	O-Ring
13 O-ring	O-ring	O-Ring

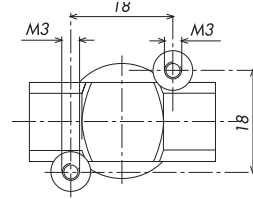
RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule
B Cannotto	Tube guide	Plungerrohr
C Nucleo mobile (C.A.)	Plunger (A.C.)	Plunger (A.C.)
C1 Nucleo mobile (C.C.)	Plunger (D.C.)	Plunger (D.C.)



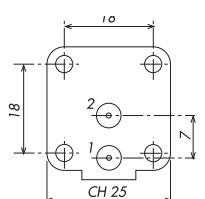
5311 - 5313



5315



5316



5370



ELETTROVALVOLA AZIONE DIRETTA 3/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 3/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 3/2 WEGE S.G.



I CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO 0 bar
 PARTI A CONTATTO CON IL FLUIDO

TENUTA HNBR - NBR - FPM - EPDM
 CORPO OTTONE
 ORGANI INTERNI ACCIAIO INOX
 VALVOLA FORNITA CON TUBO GUIDA OTTONE (5311, 5315, 5316, 5370)
 TUBO GUIDA INOX (5313)
 - Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego.
 - Migliore resistenza alla corrosione.
 - SEDE DI TENUTA INOX.
 - Particolarmente indicata per vapore fino a 155°C.
 ACQUA - ARIA - VAPORE - GAS - OLII LEGGERI - GASOLIO
 N.C. con ingresso da attacco n°2

FLUIDI
 VERSIONE STANDARD
 VALVOLA ISPEZIONABILE
 POSIZIONE DI MONTAGGIO
 TEMPERATURA AMBIENTE

Qualsiasi.
 80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.
 NICHELATURA sul corpo
 TUBO GUIDA INOX: Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego.
 Migliore resistenza alla corrosione.
 SEDE DI TENUTA INOX
 LA VALVOLA PUÒ ESSERE USATA OLTRE ALLA VERSIONE STANDARD, RIPORTATA A CATALOGO NORMALMENTE CHIUSA (INGRESSO DA 2), ANCHE COME: DEVIATRICE (INGRESSO DA 1) UNIVERSALE
 CONNETTORE TRIPOLARE UNI ISO 6952 (DIN 43650B) - IP65

ESECUZIONI SPECIALI

ACCESSORI

UK GENERAL FEATURES

MINIMUM WORKING PRESSURE 0 bar
 PARTS IN CONTACT WITH THE FLUID

SEALING HNBR - NBR - FPM - EPDM
 BODY BRASS
 INTERNAL PARTS STAINLESS STEEL
 VALVE SUPPLIED WITH BRASS TUBE GUIDE (5311, 5315, 5316, 5370)
 STAINLESS STEEL TUBE GUIDE (5313)
 - Metallic sealing with the body for safety sealing also for high temperature applications.
 - Improved corrosion resistance.
 - BODY SEALING SEAT IN STAINLESS STEEL.
 - Particularly suitable for steam up to 155°C
 WATER - AIR - STEAM - GAS - LIGHT OILS - DIESEL OIL
 Normally closed, inlet from port 2

FLUIDS
 STANDARD VERSION
 SERVICEABLE VALVE
 MOUNTING POSITION
 AMBIENT TEMPERATURE

Any.
 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

SPECIAL EXECUTIONS

NICKEL-PLATED VALVE BODY
 STAINLESS STEEL TUBE GUIDE: Metallic sealing with the body for safety sealing also for high temperature applications
 Improved corrosion resistance.
 BODY SEALING SEAT IN STAINLESS STEEL

temperature applications

2), the valve can also be used as a diverter (inlet from port 1) or universal.
 ACCESSORIES

THREE POLE PLUG CONNECTOR UNI ISO 6952 (DIN 43650B)-IP65

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK 0 bar
 MEDIUMS BERUEHRTE TEILE

DICHTUNG HNBR - NBR - FPM - EPDM
 KOERPER MESSING
 INNERE ELEMENTE EDELSTAHL
 LIEFERUMFANG PLUNGERROHR AUS MESSING (5311, 5315, 5316, 5370)
 PLUNGERROHR AUS EDELSTAHL (5313)
 - Metallische Dichtung fuer einen sicheren Einsatz auch bei hohen Medium Temperaturen.
 - Bessere Korrosionsbestaendigkeit.
 - VENTILSITZ AUS EDELSTAHL
 - DIE EDELSTAHLVERSION IST SPEZIELL GEEIGNET FUER DAMPF BIS ZU 155°C

MEDIUM
 STANDARD AUSFUEHRUNG
 VENTIL WARTUNGSFREUNDLICH
 MONTAGEPOSITION
 UMGEBUNGSTEMPERATUR
 Ventilts beeintraechtigen.
 SONDERAUSFUEHRUNGEN

WASSER- LUFT- DAMPF - GAS - LEICHTE OELE, DIESEL OEL
 Stromlos geschlossen Eingang 2

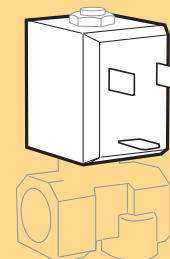
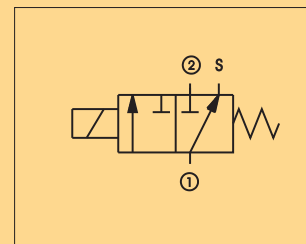
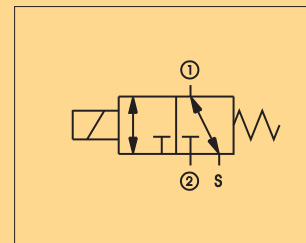
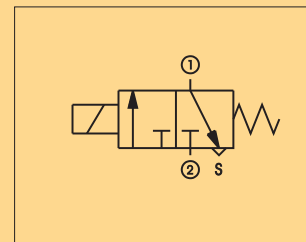
hohen Medium Temperaturen.

Vernickelter Ventilkoeper.
 PLUNGERROHR AUS EDELSTAHL: Metallische Dichtung fuer einen sicheren Einsatz auch bei

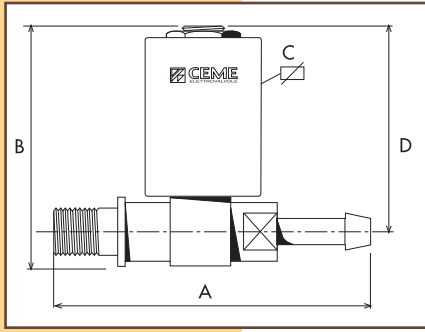
Bessere Korrosionsbestaendigkeit.
 VENTILSITZ AUS EDELSTAHL
 ANSCHLUSSMOEGlichkeiten: Dieser Ventiltyp ermoeoglicht eine freie Anschlusswahl:
 In Ruhestellung (S.G.) befindet sich Eingang 1 zu 3 in Verbindung.
 DREIPOLIGER STECKER UNI ISO 6952 (DIN 43650B)-IP65

ZUBEHOER

STANDARD



BOBINA TIPO B4
COIL TYPE B4
SPULE TYP B4



(*) VEDI TABELLA ATTACCHI PORTAGOMMA /
SEE SCHEDULE "HOSE BIB CONNECTION" /
SIEHE TABELLE "SCHLAUCHNIPPELANSCHLUSS"

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
1/8 NPT	1,5	5503	0.065	17	8	31	48	40	41	0.105
(*)	2,0	5504	0.090	13	7	66	54	40	41	0.130
1/4 NPT	1,5	5505	0.065	17	8	38	56	40	42	0.100
G 1/8	2,8	5509	0.160	7	2	31	56	40	41	0.100
G 1/8	1,5	5510	0.065	17	8	31	54	40	41	0.100
G 1/8	2,0	5510	0.090	13	7	31	54	40	41	0.100
G 1/8	2,5	5510	0.150	9	2	31	54	40	41	0.100
G 1/8	2,7	5510	0.160	8	2	31	54	40	41	0.100
G 1/8	3,3	5510	0.190	4	1	31	54	40	41	0.100
G 1/8	1,5	5511	0.065	17	8	31	48	40	41	0.100
G 1/8	2,0	5511	0.090	13	7	31	48	40	41	0.100
G 1/8	2,7	5511	0.160	8	2	31	48	40	41	0.100
G 1/8	3,3	5511	0.190	4	1	31	48	40	41	0.100
G 1/4	1,5	5512	0.065	17	8	38	56	40	42	0.120
G 1/4	2,0	5512	0.090	13	7	38	56	40	42	0.120
(*)	2,0	5522	0.090	13	7	49	45	40	39	0.105
(*)	2,7	5522	0.160	8	2	49	45	40	39	0.105
(*)	2,0	5523	0.090	13	7	35	44	40	39	0.090
(*)	2,0	5524	0.090	13	7	35	44	40	39	0.090
(*)	2,0	5525	0.090	13	7	32	61	40	39	0.090
(*)	2,0	5532	0.090	13	7	63	54	40	41	0.125
(*)	2,2	5534	0.105	10	3	56	54	40	44	0.125
(*)	2,0	5535	0.090	13	7	70	51	40	41	0.130
(*)	2,0	5536	0.090	13	7	66	54	40	41	0.130
G 1/8	2,0	5537	0.090	13	7	26	51	40	43.5	0.110
G 1/8	2,5	5537	0.150	9	2	26	48	40	41	0.110
G 1/8	2,0	5540	0.090	13	7	39	54	40	41	0.110
(*)	1,5	5541	0.065	17	8	58.5	51	40	41	0.125
(*)	2,0	5541	0.090	13	7	58.5	51	40	41	0.125
G 1/8 - M8x1	2,0	5543	0.090	13	7	31	54	40	41	0.105
1/8 NPT	2,0	5545	0.090	13	7	26	48	40	41	0.110
1/8 NPT	3,0	5545	0.175	5	1	26	48	40	41	0.110
1/8 NPT	2,0	5546	0.090	13	7	26	51	40	43.5	0.105
(*)	2,3	5572	0.090	10	3	70	47	40	40	0.130
(*)	2,3	5573	0.090	10	3	70	47	40	40	0.130
G 1/8 - M8x1	2,0	5584	0.090	13	7	79	56	40	43	0.150

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

	V~	12	24	48	110	230	400	50	60	Hz	POTENZA/POWER	
											NOMINALE HOLDING	SPUNTO IN RUSH
V~	12	24	48	110	230	400	50	60	Hz	11VA	15VA	
V=	12	24	48	110						9W		

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM	FPM	HNBR	80°C
90°C	140°C	140°C	110°C	

Disponibili bobine per temperature ambiente fino a 120°C
Coils available for ambient temperatures up to 120°C
Spulen verfügbar für Umgebungstemperaturen bis zu 120°C

ATTACCHI PORTAGOMME HOSEBIB PIPES

CODE	IN	OUT	IN	OUT
5504	PG	PG		
5522 5523 5524 5525	R 1/8"	PG		
5532	PG	PG		
5534	1/4"	PG		
5535	PG/M12x1	M12x1/PG		
5536	PG	PG		
5541	1/4"	PG		
5572 5573	PG	PG		

ELETTROVALVOLA AZIONE DIRETTA 2/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.

Per conoscere quali modelli sono disponibili con le omologazioni/marchi indicati rivolgersi al nostro servizio tecnico.

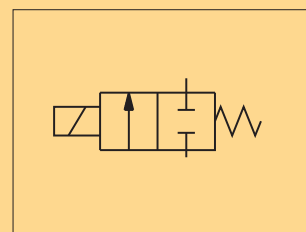
Pls refer to our technical dept in order to identify the valve models covered by the mentioned certifications/brand.

Sie können unsere technische Abteilung fragen, welche Ventile die o.g. Zulassungen haben.



I CARATTERISTICHE GENERALI

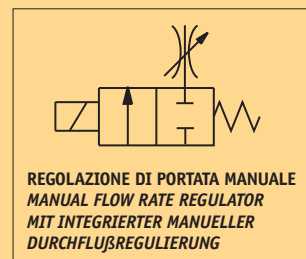
PRESSIONE MINIMA DI FUNZIONAMENTO	0 bar
PARTI A CONTATTO CON IL FLUIDO	
TENUTA	EPDM – NBR – FPM
CORPO	OTTONE
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	ACQUA – ARIA – VAPORE – GAS INFIAMMABILE - GAS INERTI
VALVOLA UNIDIREZIONALE	
VALVOLA NON ISPEZIONABILE	
POSIZIONE DI MONTAGGIO	Qualsiasi; sconsigliata quella con bobina rivolta verso il basso
TEMPERATURA AMBIENTE	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire
ESECUZIONI SPECIALI	NICHELATURA SUL CORPO BYPASS = FORO DI COMUNICAZIONE TRA INGRESSO E USCITA PER CONSENTIRE IL PASSAGGIO RIDOTTO MA CONTINUO DEL FLUIDO
ACCESSORI	CONNETTORE TRIPOLARE UNI ISO 6952 (DIN 43650B) - IP65 FILTRO MECCANICO IN INGRESSO (5505-5510-5511-5512-5535-5536-5537)



UK GENERAL FEATURES

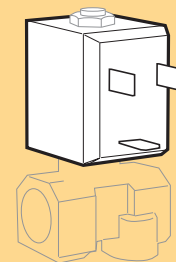
MINIMUM WORKING PRESSURE	0 bar
PARTS IN CONTACT WITH THE FLUID	
SEALING	EPDM – NBR – FPM
BODY	BRASS
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	WATER – AIR – STEAM – INFLAMMABLE GAS- INERT GAS
ONE WAY DIRECTION VALVE	
NON-SERVICEABLE VALVE	
MOUNTING POSITION	Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE	80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
SPECIAL EXECUTIONS	NICKEL-PLATED VALVE BODY BY-PASS= COMMUNICATION HOLE BETWEEN INLET AND OUTLET TO ALLOW A REDUCED BUT CONSTANT PASSAGE OF FLUID
ACCESSORIES	THREE POLE PLUG CONNECTOR UNI ISO 6952 (DIN 43650B) -IP65 MECHANICAL FILTER ON THE INLET SIDE (5505-5510-5511-5512-5535-5536-5537)

5584

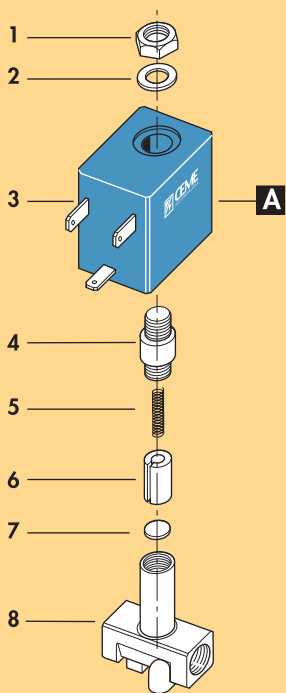


D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK	0 bar
MEDIUMS BERUEHRTE ELEMENTE	
DICHTUNG	EPDM – NBR – FPM
KOERPER	MESSING
INNERE ELEMENTE	EDELSTAHL
MEDIEN	WASSER – LUFT – DAMPF – ENTZUENDBARE GASE - EDELGASE
UNIDIREKTIONALES VENTIL	
VENTIL WARTUNGSFREI	
MONTAGEPOSITION	Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
UMGEBUNGSTEMPERATUR	80°C, im D.C-Betrieb koennen Temperaturen ueber 40°C die Schaltkraefte(M.O.P.D.) des Ventils beeintraehtigen.
SONDERAUSFUEHRUNGEN	VERNICKELTER GRUNDKOERPER BYPASS= VERBINDUNGSBOHRUNG ZWISCHEN EINGANGS-AUSGANGSSEITE UM EINEN GERINGEN ABER KONSTANTEN DURCHFLUSS ZUERMOEGLICHEN
ZUBEHOER	DREIPOLIGER STECKER UNI ISO 6952 (DIN 43650B) - IP65 MECHANISCHER FILTER AUF EINGANGSSEITE (5505-5510-5511-5512-5535-5536-5537)



BOBINA TIPO B4
COIL TYPE B4
SPULE TYP B4



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Nucleo fisso	Tube top	Kern
5	Molla	Spring	Feder
6	Nucleo mobile	Plunger	Plunger
7	Pastiglia	Seal	Dichtung
8	Corpo	Valve body base	Grundkörper
	RICAMBI	SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule

VALVOLA FORNITA CON

- 1 FILTRO MECCANICO IN INGRESSO NON ISPEZIONABILE PER EVITARE L'INTRODUZIONE DI SPORCIZIA NELLA VALVOLA (5532, 5540, 5543, 5545, 5534, 5541, 5544, 5584).
- 2 DADO E GUARNIZIONE DI FISSAGGIO DELLA VALVOLA DIRETTAMENTE SULLA CARPENTERIA DI UNA MACCHINA (INDICATO PER INDUSTRIA SALDATRICI) (5504, 5534, 5535, 5536, 5541, 5544, 5584).

CE GAS

QUESTA SERIE DI VALVOLE E' IDONEA ALL'INTERCETTAZIONE DI GAS INFIAMMABILE, OLTRE A TUTTI GLI ALTRI FLUIDI DESCRITTI NELLE CARATTERISTICHE GENERALI PAG.15. ALCUNI MODELLI SONO STATI SOTTOPOSTI ALL'ESAME DI TIPO RICHIESTO DALLA DIRETTIVA EUROPEA CEE 90/396 (APPARECCHI A GAS E SUOI COMPONENTI) (5510, 5511, 5512, 5540, 5543, 5584) E SONO CONFORMI AI REQUISITI DELLA CLASSE A SECONDO UNI EN 161.

VALVE SUPPLIED WITH:

- 1 NON-SERVICEABLE MECHANICAL FILTER ON INLET, TO DETER PARTICLE INTRODUCTION IN THE VALVE (5532-5534-5540-5541-5543-5544- 5545-5584).
- 2 NUT AND GASKET TO MOUNT THE VALVE DIRECTLY ONTO A BULKHEAD OF A MACHINE (INDICATED FOR WELDING INDUSTRY) (5504, 5534, 5535, 5536, 5541, 5544, 5584).

CE GAS

BESIDES ALL OTHER KIND OF MEDIUMS POINTED OUT IN THE GENERAL FEATURES OF PAGE NO. 15, THIS SERIES OF VALVES ARE SUITABLE FOR INTERCEPTION OF INFLAMMABLE GAS, CERTAIN MODELS HAVE BEEN SUBMITTED FOR THE TESTING REQUIRED FROM THE EEC DIRECTIVE CEE 90/ 396 (GAS APPARATUS AND THEIR COMPONENTS) (5510, 5511, 5512, 5540, 5543, 5584) AND COMPLY TO THE REQUIREMENTS OF CLASS A VALVES ACCORDING TO UNI EN 161.

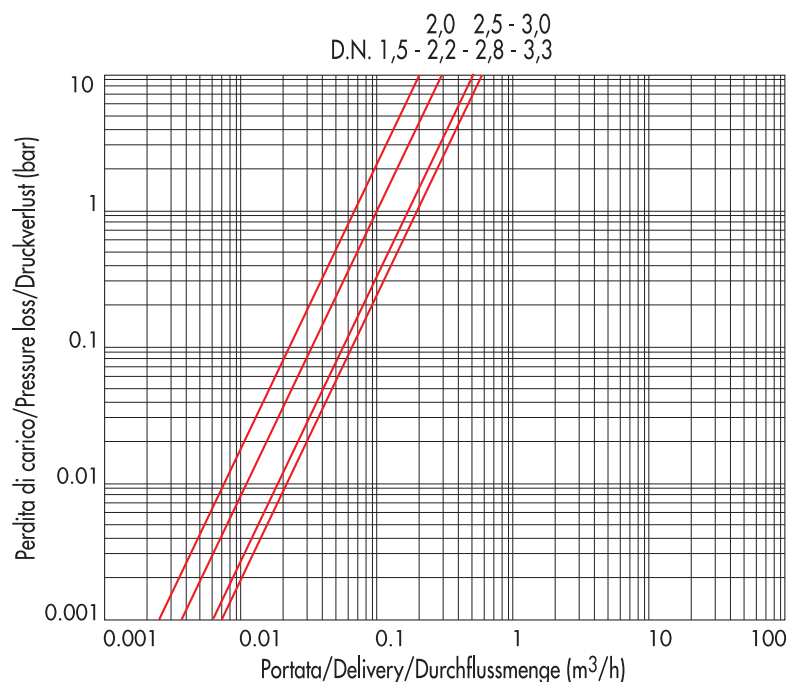
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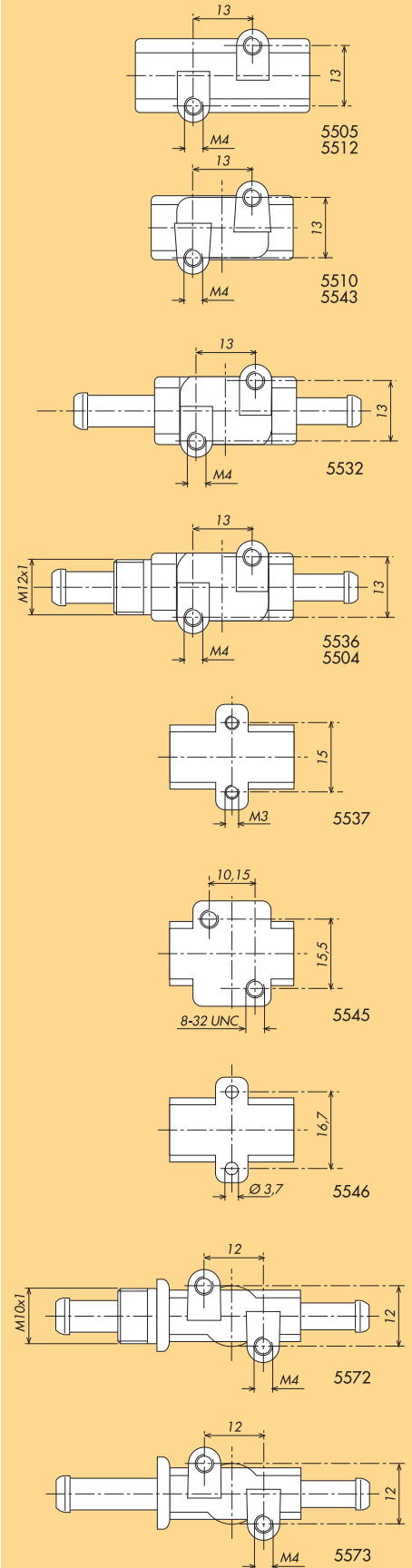
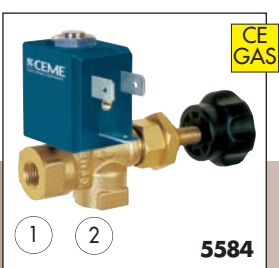
- 1 WARTUNGSFREIER MECHANISCHER FILTER AUF VENTILEINGANGSSEITE UM DAS EINDRINGEN VON SCHMUTZ ZU VERMEIDEN (5532, 5534, 5540, 5541, 5543, 5544, 5545, 5584).
- 2 MUTTER UND DICHTUNG UM DAS VENTIL DIREKT AN GEHAUSEWAENDEN DER MASCHINEN ZU MONTIEREN (z.B. SCHWEISSMASCHINEN) (5504, 5534, 5535, 5536, 5541, 5544, 5584).

CE GAS

AUSSER DEN BEREITS AUF SEITE 15 IN DEN ALLGEMEINE MERKMALEN ANGEGBEN MEDIEN, WURDEN DIESE VENTILSERIEN SPEZIELL FUER DIE VERWENDUNG MIT ENTZUENDBAREN GASEN GEPRUEFT.EIN GROSSTEIL DER BAUSERIEN WURDE GEMAESS EUROPAEISCHER GAS RICHTLINIE CEE 90/396 GEPRUEFT UND UNTERLIEGEN SOMIT EINER 100%TIGER DICHTIGKEITSPRUEFUNG. IM SPEZIELLEN DIE TYPEN (5510, 5511, 5512, 5540, 5543, 5584) SIE WERDEN IN ÜBEREINSTIMMUNG MIT DEM UNI EN 161 GEPRÜFT, STUFEN SIE EINE DIREKTIVE EIN.

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM





CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
ODF 6 mm	1,5	5906	0.080	25	15	107	48	40	41	0.120
ODF 1/4	2,5	5907	0,160	18	5	107	48	40	41	0,120
ODF 6 mm	1,5	5925	0.080	25	15	59	86.5	40	38.5	0.100
ODF 6 mm	2,0	5925	0.120	25	8	59	86.5	40	38.5	0.100
ODM 5 mm	1,5	5934	0.065	28	15	116	114	49	39.5	0.308
ODM 5 mm	1,5	5935	0.065	28	15	122	114	53.5	39.5	0.382

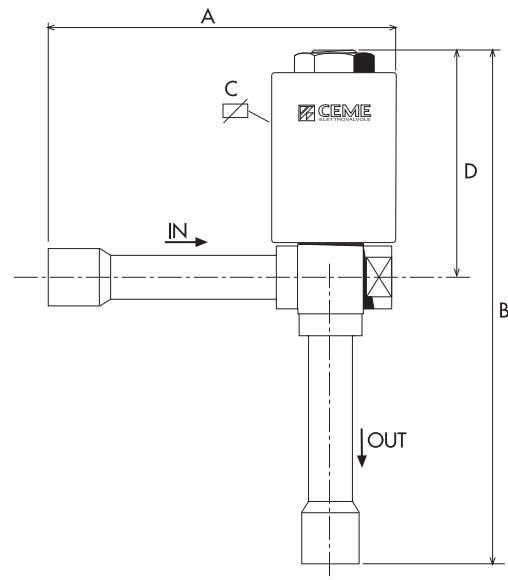
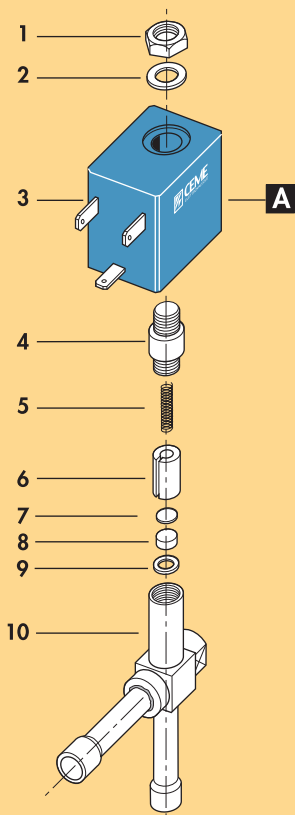
CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

							POTENZA/POWER				
							NOMINALE HOLDING	SPUNTO IN RUSH			
V~	12	24	48	110	230	400	50	60	Hz	13VA	14,5VA
V=	12	24	48	110						10W	

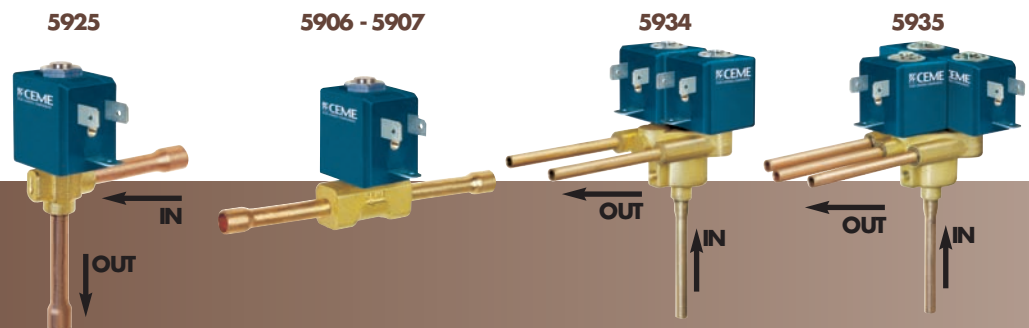
Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulnen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
PTFE			80°C
-45+125°C			



1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Nucleo fisso	Tube top	Kern
5 Molla	Spring	Feder
6 Nucleo mobile	Plunger	Plunger
7 Piattello	Support	Scheibe
8 Pastiglia	Seal	Dichtung
9 Rondella	Washer	Spindeldichtung
10 Corpo	Valve body base	Grundkörper
RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule



serie 59

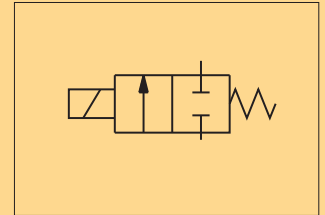
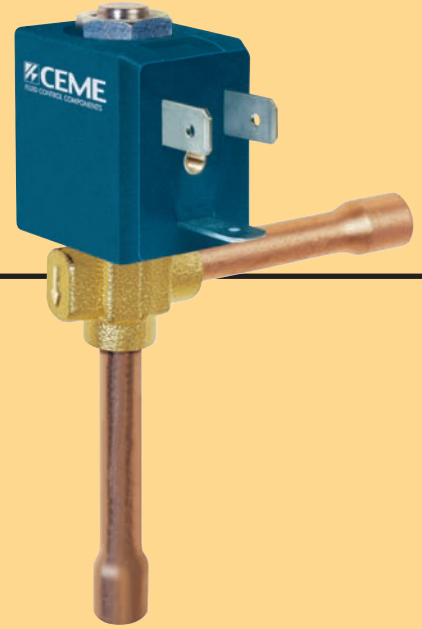
ELETTROVALVOLA AZIONE DIRETTA 2/2 VIE N.C.
 SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C.
 DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



- I CARATTERISTICHE GENERALI**
 PRESSIONE MINIMA DI FUNZIONAMENTO 0 bar
 PARTI A CONTATTO CON IL FLUIDO
 TENUTA PTFE
 CORPO OTTONE
 ORGANI INTERNI ACCIAIO INOX
 FLUIDI TUTTI I TIPI DI FLUIDI REFRIGERANTI ESCLUSA AMMONIACA₃NH
 VALVOLA UNIDIREZIONALE
 VALVOLA NON ISPEZIONABILE
 POSIZIONE DI MONTAGGIO Qualsiasi. Per ottenere le massime prestazioni le valvole devono essere montate con la bobina rivolta verso l'alto; si sconsiglia quella con bobina rivolta verso il basso
 TEMPERATURA AMBIENTE 80°C, In D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire
 ESECUZIONI SPECIALI TENUTA IN NEOPRENE
 ACCESSORI CONNETTORE TRIPOLARE UNI ISO 6952 (DIN 43650B) - IP65

- UK GENERAL FEATURES**
 MINIMUM WORKING PRESSURE 0 bar
 PARTS IN CONTACT WITH THE FLUID
 SEALING PTFE
 BODY BRASS
 INTERNAL PARTS STAINLESS STEEL
 FLUIDS ALL TYPES OF REFRIGERANT FLUIDS EXCEPT AMMONIA (NH₃)
 ONE WAY DIRECTION VALVE
 NON-SERVICEABLE VALVE
 MOUNTING POSITION Any; to obtain the best performances the valves has to be installed with the coil vertical; the position with the coil downwards is not recommended
 AMBIENT TEMPERATURE 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
 SPECIAL EXECUTIONS SEALING IN NEOPRENE
 ACCESSORIES THREE POLE PLUG CONNECTOR UNI ISO 6952 (DIN 43650B)-IP65

- D ALLGEMEINE MERKMALE**
 MINIMALER ARBEITSDRUCK 0 bar
 MEDIUMS BERUEHRTE ELEMENTE
 DICHTUNG PTFE
 KOERPER MESSING
 INNERE ELEMENTE EDELSTAHL
 MEDIEN ALLE ARTEN VON KUEHLMITTEL AUSSER AMMONIAK (NH₃)
 UNIDIREKTIONALES VENTIL
 VENTIL WARTUNGSFREI
 MONTAGEPOSITION Keine Einschränkungen, um beste Leistungen zu erreichen, muessen die Ventile mit der Spule senkrecht nach oben eingebaut werden. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
 UMGEBUNGSTEMPERATUR 80°C, im D.C- Betrieb, koennen Temperaturen ueber 40°C, die Schaltkraefte(M.O.P.D.)des Ventils beeintraehtigen.
 SONDERAUSFUEHRUEHRUNGEN
 DICHTUNG AUS NEOPRENE
 ZUBEHOER DREIPOLIGER STECKER UNI ISO 6952 (DIN 43650B)-IP65

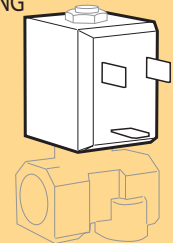


NEW

TRA LE PIÙ PICCOLE E COMPATTE ELETTROVALVOLE SUL MERCATO ALTE PRESTAZIONI 5934, 5935 UNICO CORPO UN INGRESSO, DUE O TRE USCITE RIDUZIONE COSTI E TEMPI D'INSTALLAZIONE

ONE OF THE SMALLEST AND COMPACT VALVES PRESENT ON THE MARKET HIGH PERFORMANCES 5934, 5935 ONE BODY WITH SINGLE INLET, TWO OR THREE OUTLETS REDUCTION OF COST AND INSTALLATION TIME

KLEINE KOMPAKTE BAUFORM HOHEN LEISTUNGEN 5934, 5935 EIN KOERPER MIT EINEM EINGANGSANSCHLUSS, ZWEI BZW. DREI AUSGANGSANSCHLUESSEN KOSTENERSPARNISS DURCH MONTAGEZEIT REDUZIERUNG



BOBINA TIPOB4
 COIL TYPIB4
 SPULE TYIB4

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/8	1,5	6111	0.067	15	10	35	91	47	76	0.270
G 1/8	2,0	6111	0.122	10	7	35	91	47	76	0.270
G 1/4	1,5	6112	0.067	15	10	35	91	47	76	0.260
G 1/4	2,0	6112	0.122	10	7	35	91	47	76	0.260
G 1/4	2,8	6112	0.210	5	3	35	91	47	76	0.260
FLANGIA / FLANGE	1,5	6170	0.067	15	10	33	74	47	-	0.235
FLANGIA / FLANGE	2,0	6170	0.122	10	7	33	74	47	-	0.235

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

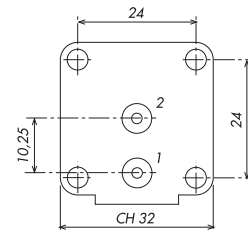
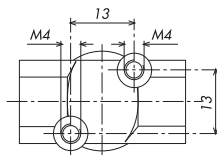
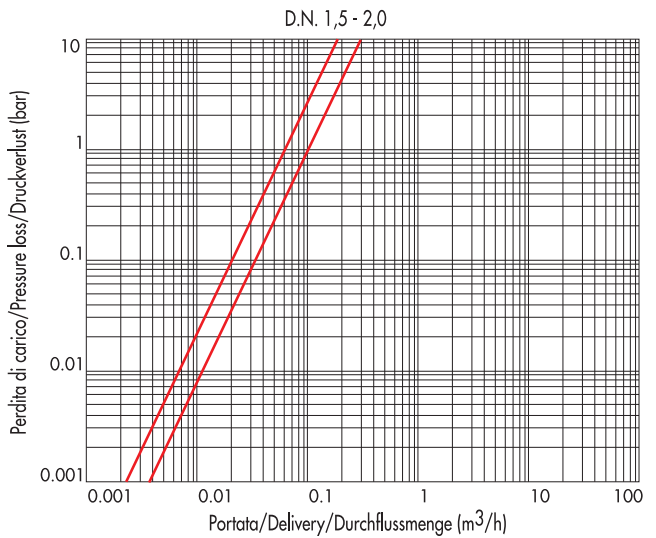
V~	12	24	48	110	230	400	50	60	Hz	POTENZA/POWER	
										NOMINALE HOLDING	SPUNTO IN RUSH
V=	12	24	48	110						15VA	25VA
										16W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
NBR	EPDM	FPM	80°C
90°C	140°C	140°C	

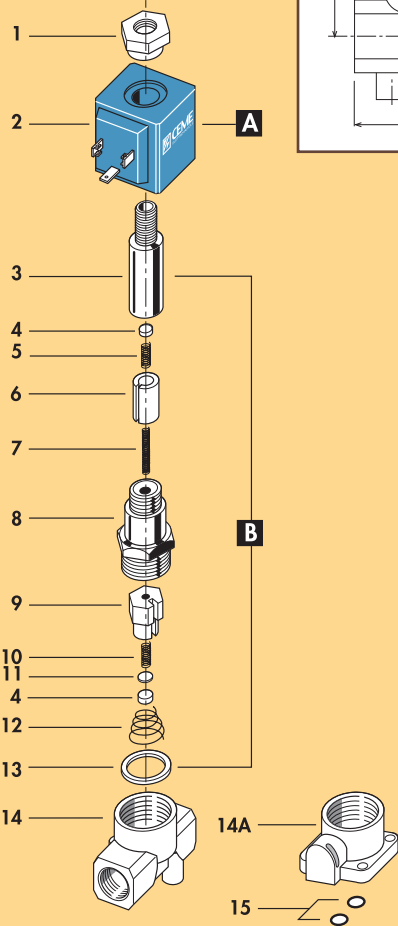
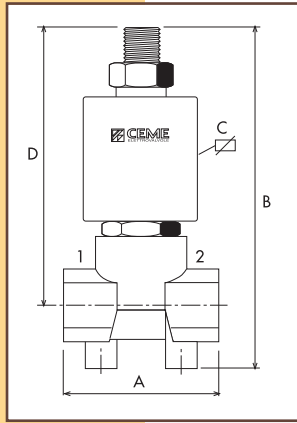
DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



6111-12



6170



1	Dado	Lock nut	Mutter
2	Bobina	Coil	Magnetspule
3	Cannotto	Tube guide	Plungerrohr
4	Pastiglia	Seal	Dichtung
5	Molla	Spring	Feder
6	Nucleo mobile	Plunger	Plunger
7	Molla	Spring	Feder
8	Cannotto-Nucleo fisso	Tube guide-Tube top	Plungerrohr-Kern
9	Otturatore	Shutter	Verschluss
10	Molla	Spring	Feder
11	Piattello	Support	Scheibe
12	Molla	Spring	Feder
13	Rondella	Washer	Beilagscheibe
14	Corpo	Valve body base	Grundkörper
15	O-ring	O-ring	O-Ring
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Gruppo pilota	Pilot unit	Verschleisssteilsatz Komplett

ELETTROVALVOLA AZIONE DIRETTA 3/2 VIE N.A.
SOLENOID VALVE DIRECT ACTING 3/2 WAY N.O.
DIREKTGESTEUERTES MAGNETVENTIL 3/2 WEGE S.O.



I CARATTERISTICHE GENERALI

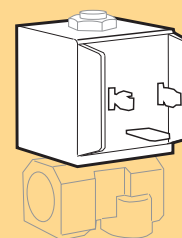
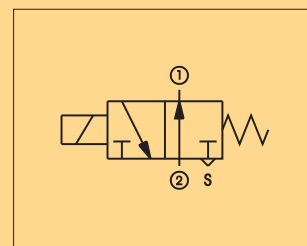
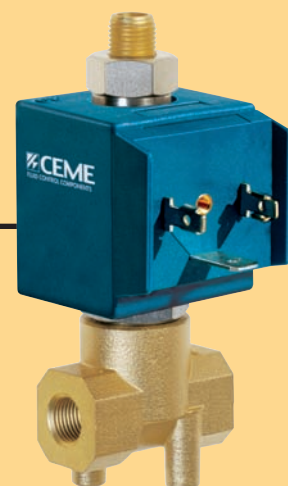
PRESSIONE MINIMA DI FUNZIONAMENTO	0 bar
PARTI A CONTATTO CON IL FLUIDO	
TENUTA	EPDM - NBR - FPM
CORPO	OTTONE
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	ACQUA - ARIA - VAPORE - GAS - OLII LEGGERI
VERSIONE STANDARD	N.A. con ingresso da attacco n°2
VALVOLA ISPEZIONABILE	
POSIZIONE DI MONTAGGIO	Qualsiasi.
TEMPERATURA AMBIENTE	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire
ACCESSORI	CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) IP65 BASETTE COMPONIBILI DI DISTRIBUZIONE-MANIFOLDS

UK GENERAL FEATURES

MINIMUM WORKING PRESSURE	0 bar
PARTS IN CONTACT WITH THE FLUID	
SEALING	EPDM - NBR - FPM
BODY	BRASS
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	WATER - AIR - STEAM - GAS - LIGHT OILS
STANDARD VERSION	Normally opened, inlet from port 2
SERVICEABLE VALVE	
MOUNTING POSITION	Any.
AMBIENT TEMPERATURE	80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
ACCESSORIES	THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A)-IP65 FLANGED BASE WHICH ALLOWS MANIFOLD MOUNTING.

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK	0 bar
MEDIUMS BERUEHRTE TEILE	
DICHTUNG	EPDM - NBR - FPM
KOERPER	MESSING
INNERE ELEMENTE	EDELSTAHL
MEDIUM	WASSER - LUFT- DAMPF - GAS - LEICHTE OELE
STANDARD VERSION	Stromlos offen, Eingang 2.
VENTIL WARTUNGSFREUNDLICH	
MONTAGEPOSITION	Keine Einschränkungen.
UMGEBUNGSTEMPERATUR	80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkrafte (M.O.P.D.) des Ventils beeintraehtigen.
ZUBEHOER	DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) IP65 ZUSAMMENSETZBARE MONTAGEPLATTFORMEN (FLANSCH) FUER MEHRFACHVERTEILUNG.

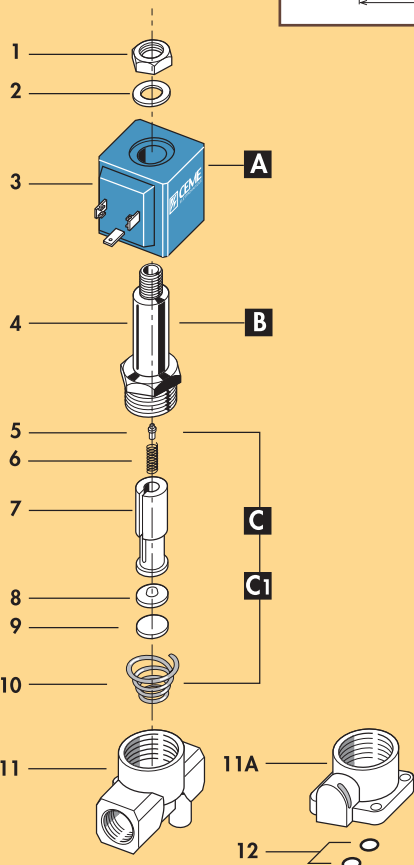
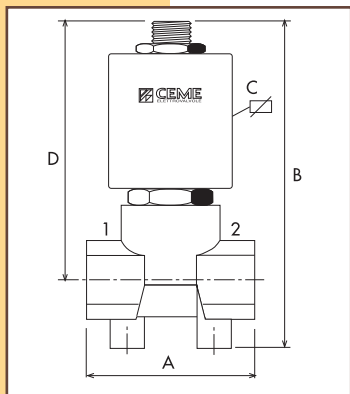


BOBINA TIPO B6 NA
COIL TYPE B6 NA
SPULE TYP B6 NA

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/8	1,5	6211	0.070	15	10	35	84,5	47	69	0.250
G 1/8	2,0	6211	0.120	10	7	35	84,5	47	69	0.250
G 1/8	2,8	6211	0.210	5	3	35	84,5	47	69	0.250
G 1/4	1,5	6212	0.070	15	10	35	84,5	47	69	0.230
G 1/4	2,0	6212	0.120	10	7	35	84,5	47	69	0.230
G 1/4	2,8	6212	0.210	5	3	35	84,5	47	69	0.230
FLANGIA / FLANGE	1,5	6270	0.065	15	10	33	67	47	-	0.220
FLANGIA / FLANGE	2,0	6270	0.110	10	7	33	67	47	-	0.220

Diametro sede 3^a via - Seat Diameter 3rd way - ø 1,9



CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

POTENZA/POWER	
NOMINALE HOLDING	SPUNTO IN RUSH

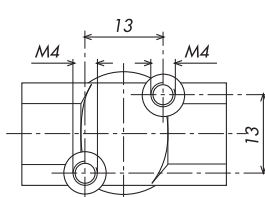
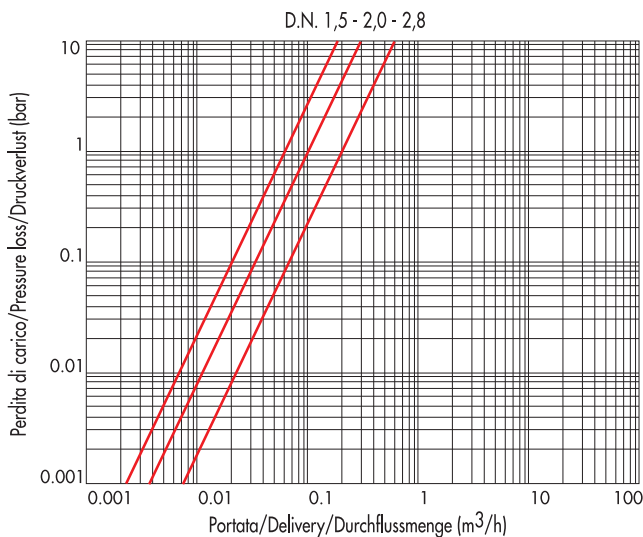
V~	12 24 48 110 230 400	50 60 Hz	12VA	23VA
V=	12 24 48 110		16W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

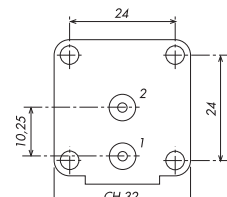
MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM	FPM	HNBR	80°C
90°C	150°C	150°C	110°C	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



6211-12



6270



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Cannotto	Tube guide	Plungerrohr
5	Gommino di tenuta	Rubber seal	Dichtung
6	Molla	Spring	Feder
7	Nucleo mobile	Plunger	Plunger
8	Piattello	Support	Scheibe
9	Pastiglia	Seal	Dichtung
10	Molla	Spring	Feder
11	Corpo	Valve body base	Grundkörper
12	O-ring	O-ring	O-ring
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Cannotto	Tube guide	Plungerrohr
C	Nucleo mobile (C.A.)	Plunger (A.C.)	Plunger (A.C.)
C1	Nucleo mobile (C.C.)	Plunger (D.C.)	Plunger (D.C.)

ELETTROVALVOLA AZIONE DIRETTA 3/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 3/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 3/2 WEGE S.G.



I CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO	0 bar
PARTI A CONTATTO CON IL FLUIDO	
TENUTA	EPDM - NBR - FPM - HNBR
CORPO	OTTONE CON SEDE DI TENUTA INOX
TUBO GUIDA INOX	- Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego. - Migliore resistenza alla corrosione.
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	ACQUA - ARIA - VAPORE - GAS - OLII LEGGERI - GASOLIO
VERSIONE STANDARD	N.C. con ingresso da attacco n°2
VALVOLA ISPEZIONABILE	
POSIZIONE DI MONTAGGIO	Qualsiasi.
TEMPERATURA AMBIENTE	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.
ESECUZIONI SPECIALI	NICHELATURA sul corpo LA VALVOLA PUÒ ESSERE USATA OLTRE ALLA VERSIONE STANDARD, RIPORTATA A CATALOGO NORMALMENTE CHIUSA (INGRESSO DA 2), ANCHE COME: - DEVIATRICE (INGRESSO DA 1) - UNIVERSALE
ACCESSORI	CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) IP65 BASETTE componibili di distribuzione-MANIFOLDS (6270)

UK GENERAL FEATURES

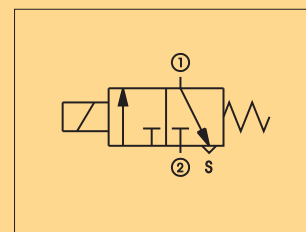
MINIMUM WORKING PRESSURE	0 bar
PARTS IN CONTACT WITH THE FLUID	
SEALING	EPDM - NBR - FPM - HNBR
BODY	BRASS WITH SEALING SEAT IN STAINLESS STEEL
STAINLESS STEEL TUBE GUIDE	- Metallic sealing with the body for safety sealing also for high temperature applications. - Improved corrosion resistance.
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	WATER - AIR - STEAM - GAS - LIGHT OILS - DIESEL OIL
STANDARD VERSION	N.C. with inlet from port 2
SERVICEABLE VALVE	
MOUNTING POSITION	Any.
AMBIENT TEMPERATURE	80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
SPECIAL EXECUTIONS	NICKEL-PLATED VALVE BODY - IN ADDITION TO THE STANDARD VERSION, SHOWN IN THE CATALOGUE (NORMALLY CLOSED INLET FROM PORT 2), THE VALVE CAN ALSO BE USED AS A DIVERTER (INLET FROM PORT 1) OR UNIVERSAL.
ACCESSORIES	THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) IP65 FLANGED BASE WHICH ALLOWS MANIFOLD MOUNTING (6270)

D ALLGEMEINE MERKMALE

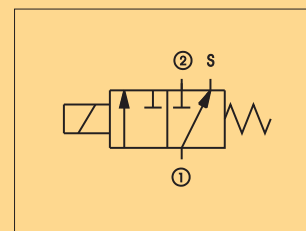
MINIMALER ARBEITSDRUCK	0 bar
MEDIUMS BERUEHRTE TEILE	
DICHTUNG	EPDM - NBR - FPM - HNBR
KOERPER	MESSING MIT VENTILSITZ AUS EDELSTAHL
PLUNGERROHR AUS EDELSTAHL	- Metallische Dichtung fuer einen sicheren Einsatz auch bei hohen Medien Temperaturen. - Bessere Korrosionsbestaendigkeit.
INNERE ELEMENTE	EDELSTAHL
MEDIEN	WASSER - LUFT- DAMPF - GAS - LEICHTE OELE - DIESEL OEL
STANDARD AUSFUEHRUNG	S.G. Eingang 2
VENTIL WARTUNGSFREUNDLICH	
MONTAGEPOSITION	Keine Einschränkungen.
UMGEBUNGSTEMPERATUR	80°C, im D.C. -Betrieb koennen Temperaturen ueber 40°C, die Schaltkreaefte (M.O.P.D.) des Ventils beeintraechtigen.
SONDERAUSFUEHRUNGEN	VERNICKELTER VENTILKOERPER. ANSCHLUSSMOEGELICHKEITEN: -DIESER VENTILTYP ERMOEGLICHT EINE FREIE ANSCHLUSSWAHL: IN RUHESTELLUNG (S.G.) BEFINDET SICH EINGANG 1 ZU 3 IN VERBINDUNG
ZUBEHOER	DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) IP65 ZUSAMMENSETZBARE MONTAGEPLATTFORMEN (FLANSCH) FUEER MEHRFACHVERTEILUNG (6270)



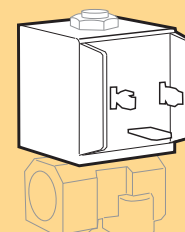
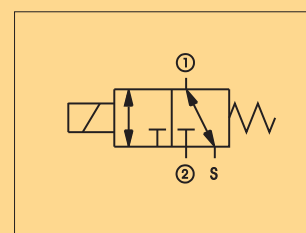
STANDARD



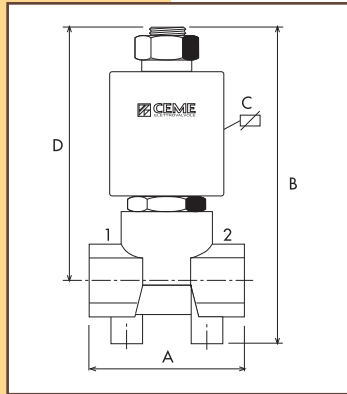
DEVIATRICE - DIVERTER



UNIVERSALE - UNIVERSAL



BOBINA TIPO B6
COIL TYPE B6
SPULE TYP B6



CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
R 1/8M-G 1/8M	1,9	6500	0.100	25	25	33	73.5	47	-	0.190
R 1/8M-G 1/8M	2,5	6500	0.130	10	10	33	73.5	47	-	0.190
G 1/8	1,5	6511	0.080	22	17	35	85	47	69	0.270
G 1/8	2,0	6511	0.125	20	10	35	85	47	69	0.270
G 1/8	2,8	6511	0.265	10	7	35	85	47	69	0.270
G 1/4	1,5	6512	0.080	22	17	35	85	47	69	0.260
G 1/4	2,0	6512	0.125	20	10	35	85	47	69	0.260
G 1/4	2,8	6512	0.265	10	7	35	85	47	69	0.260
FLANGIA / FLANGE	1,5	6570	0.080	22	17	33	67	47	-	0.235
FLANGIA / FLANGE	2,0	6570	0.125	20	10	33	67	47	-	0.235
FLANGIA / FLANGE	2,8	6570	0.265	10	7	33	67	47	-	0.235

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

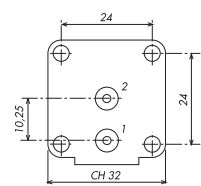
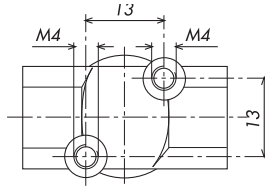
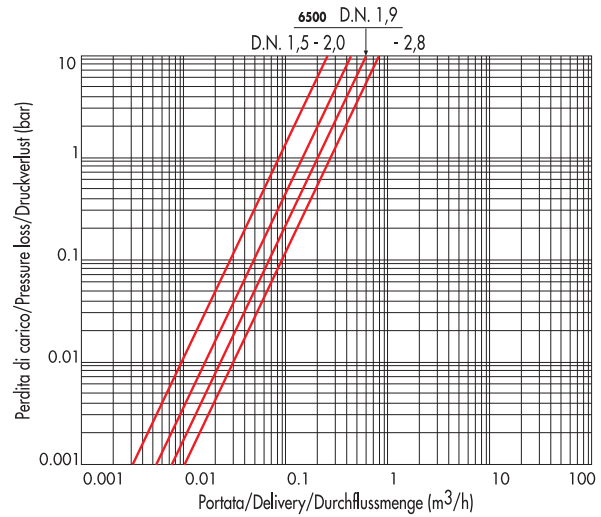
V~	NOMINALE HOLDING					SPUNTO IN RUSH		
	12	24	48	110	230	400	15VA	25VA
V=	12	24	48	110			16W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulnen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
NBR	EPDM	FPM	80°C
90°C	150°C	150°C	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



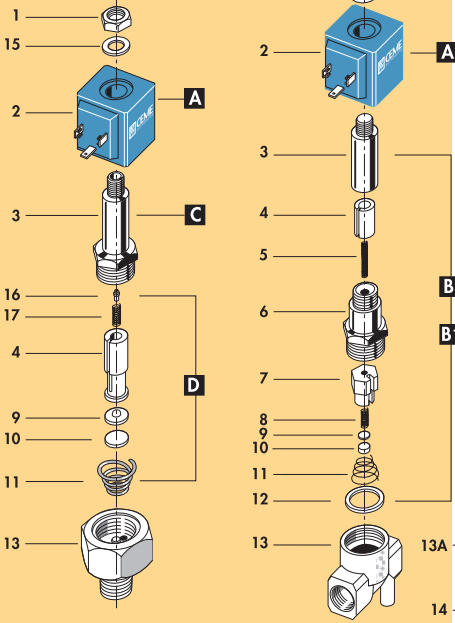
6500



6511 - 6512



6570



1	Dado	Lock nut	Mutter
2	Bobina	Coil	Magnetspule
3	Cannotto	Tube guide	Plungerrohr
4	Nucleo mobile	Plunger	Plunger
5	Molla	Spring	Feder
6	Cannotto-Nucleo fisso	Tube guide-Tube top	Plungerrohr-Kern
7	Otturatore	Shutter	Verschluss
8	Molla	Spring	Feder
9	Piattello	Support	Scheibe
10	Pastiglia	Seal	Dichtung
11	Molla	Spring	Feder
12	Rondella	Washer	Beilagscheibe
13	Corpo	Valve body base	Grundkörper
14	O-ring	O-ring	O-Ring
15	Rondella	Washer	Beilagscheibe
16	Gommino di tenuta	Rubber seal	Dichtung
17	Molla	Spring	Feder
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Gruppo pilota (C.A.)	Pilot unit (A.C.)	Verschleißteilsatz Komplett (A.C.)
B1	Gruppo pilota (C.C.)	Pilot unit (D.C.)	Verschleißteilsatz Komplett (D.C.)
C	Cannotto	Tube guide	Plungerrohr
D	Nucleo mobile	Plunger	Plunger

serie 65

**ELETTROVALVOLA AZIONE DIRETTA 2/2 VIE N.A.
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.O.
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.O.**



I CARATTERISTICHE GENERALI

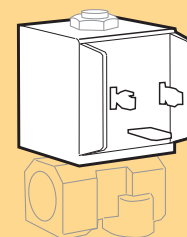
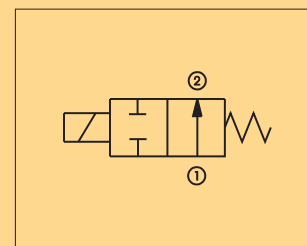
PRESSIONE MINIMA DI FUNZIONAMENTO	0 bar
PARTI A CONTATTO CON IL FLUIDO	
TENUTA	EPDM - NBR - FPM (6500 SOLO NBR)
CORPO	OTTONE CON SEDE DI TENUTA INOX
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	ACQUA - ARIA - VAPORE - OLII LEGGERI - GASOLIO
VALVOLA UNIDIREZIONALE	
VALVOLA ISPEZIONABILE	
POSIZIONE DI MONTAGGIO	Qualsiasi; sconsigliata quella con bobina rivolta verso il basso.
TEMPERATURA AMBIENTE	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.
VALVOLA FORNITA CON	CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65

UK GENERAL FEATURES

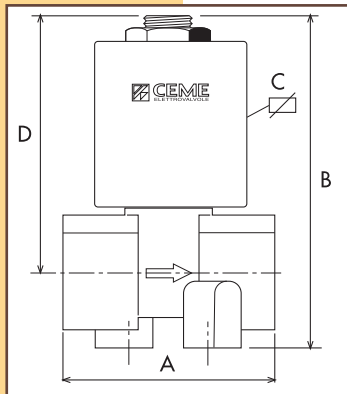
MINIMUM WORKING PRESSURE	0 bar
PARTS IN CONTACT WITH THE FLUID	
SEALING	EPDM - NBR - FPM (only NBR for 6500)
BODY	BRASS WITH SEALING SEAT IN STAINLESS STEEL
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	WATER - AIR - STEAM - LIGHT OILS - DIESEL OIL
ONE WAY DIRECTION VALVE	
SERVICEABLE VALVE	
MOUNTING POSITION	Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE	80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
VALVE SUPPLIED WITH	THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) -IP65

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK	0 bar
MEDIUMS BERUEHRTE TEILE	
DICHTUNG	EPDM - NBR - FPM (fuer 6500 nur NBR)
KOERPER	MESSING MIT VENTILSITZ AUS EDELSTAHL
INNERE ELEMENTE	EDELSTAHL
MEDIEN	WASSER - LUFT - DAMPF - LEICHTE OELE - DIESEL OEL
UNIDIREKTIONALES VENTIL	
VENTIL WARTUNGSFREUNDLICH	
MONTAGEPOSITION	Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
UMGEBUNGSTEMPERATUR	80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkraefte (M.O.P.D.) des Ventils beeintraechtigen.
LIEFERUMFANG	DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A)-IP65



**BOBINA TIPO B6 NA
COIL TYPE B6 NA
SPULE TYP B6 NA**

CARATTERISTICHE SPECIFICATIONS


ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/2-G 1/4 M-M	4,0	6601	0.250	6	4	72.5	61	47	52	0.260
1/4 NPT	4,0	6604	0.260	6	4	35	62.5	47	50	0.225
1/4 NPT	3,2	*6605	0.220	8	5	35	63	47	50	0.220
3/8 NPT	4,0	*6606	0.390	6	4	40	70	47	57	0.310
1/2 NPT	4,0	*6607	0.390	6	4	46	70	47	57	0.300
G 1/8	3,0	*6609	0.170	9	5	35	63	47	50	0.220
G 1/4	2,0	*6610	0.085	25	12	35	63	47	50	0.220
G 1/4	3,0	*6610	0.170	9	5	35	63	47	50	0.220
G 1/4	4,0	*6610	0.250	6	4	35	63	47	50	0.220
G 1/8	2,0	6611	0.085	25	12	35	63	47	50	0.220
G 1/8	3,0	6611	0.170	9	5	35	63	47	50	0.220
G 1/4	2,0	6612	0,085	25	12	35	63	47	50	0,220
G 1/4	3,0	6612	0.170	9	5	35	63	47	50	0.220
G 3/8	4,0	*6613	0.390	6	4	40	70	47	57	0.310
G 1/2	4,0	*6614	0.390	6	4	46	70	47	57	0.300
R 1/8-P.G.	2,0	6622	0.085	25	12	55	58	47	50	0.240
G 1/4-P.G.	2,2	6625	0.115	23	11	46	59	47	50	0.230
R 1/8-P.G.	2,0	6628	0.085	25	12	44	58	47	50	0.190
G 1/4-P.G.	2,0	6630	0.085	25	12	34	58	47	50	0.190
G 1/4	3,0	6660	0.170	9	5	57	73.5	47	55	0.265

P.G.=PORTAGOMMA Ø 5.4 - HOSEBIB Ø 5.4 - SCHLAUCHNIPPEL Ø 5.4

* UNICHE VERSIONI CON FORI DI FISSAGGIO - ONLY THESE EXECUTIONS AVAILABLE WITH FIXING HOLES
NUR DIESE AUSFUEHRUNGEN ERHAELTLICH MIT BEFESTIGUNGSFUESSE

CARATTERISTICHE ELETTRICHE
ELECTRICAL INFORMATION

									POTENZA/POWER		
									NOMINALE HOLDING	SPUNTO IN RUSH	
V~	12	24	48	110	230	400	50	60	Hz	17VA	24VA
V=	12	24	48	110						16W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
NBR	EPDM	FPM	80°C
90°C	150°C	150°C	

Disponibili bobine per temp. ambienti fino a 120°C
Coils available for ambient temperatures up to 120°C
Spulen verfügbar für Umgebungstemperaturen bis zu 120°C

ELETTOVALVOLA AZIONE DIRETTA 2/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



Per conoscere quali modelli sono disponibili con le omologazioni/marchi indicati rivolgersti al nostro servizio tecnico.

Pls refer to our technical dept in order to identify the valve models covered by the mentioned certifications/brand.

Sie können unsere technische Abteilung fragen, welche Ventile die o.g. Zulassungen haben.



I

CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO 0 bar

PARTI A CONTATTO CON IL FLUIDO

TENUTA EPDM - NBR - FPM

CORPO OTTONE

ORGANI INTERNI ACCIAIO INOX

FLUIDI ACQUA - ARIA - VAPORE - GAS - GASOLIO - NAFTA

VALVOLA UNIDIREZIONALE

VALVOLA NON ISPEZIONABILE

POSIZIONE DI MONTAGGIO Qualsiasi; sconsigliata quella con bobina rivolta verso il basso

TEMPERATURA AMBIENTE 80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire

ESECUZIONI SPECIALI

- VALVOLA OMOLOGATA CE GAS (CEE 90/396) PER GAS INFIAMMABILI (CE-0085AS0422)

- ESECUZIONE ANTIRUMORE (PER CORRENTE CONTINUA)

- ESECUZIONE PER FLUIDI AD ALTA VISCOSITA'

- ESECUZIONE ISPEZIONABILE (6610)

- FORO BY-PASS PER SALDATRICI

- MODELLI DISPONIBILI IN VERSIONE SPECIALE PER INCREMENTO DELLE PRESTAZIONI MOPD

ACCESSORI

CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65

MANOPOLA (6660)

RACCORDO 1/4" M- PORTAGOMMA (6660)

UK

GENERAL FEATURES

MINIMUM WORKING PRESSURE 0 bar

PARTS IN CONTACT WITH THE FLUID

SEALING EPDM - NBR - FPM

BODY BRASS

INTERNAL PARTS STAINLESS STEEL

FLUIDS WATER - AIR - STEAM - GAS - DIESEL OIL- NAFTA

ONE WAY DIRECTION VALVE

NON-SERVICEABLE VALVE

MOUNTING POSITION Any, the position with the coil downwards is not recommended.

AMBIENT TEMPERATURE 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

SPECIAL EXECUTIONS

- VALVE CERTIFIED CE GAS(CEE 90/396) for INFLAMMABLE GAS (CE-0085AS0422)

- NOISE DECREASING EXECUTION (for CONTINUOUS CURRENT)

- EXECUTION FOR HIGH DENSITY FLUIDS

- INSPECTIONABLE EXECUTION (6610)

- BY-PASS HOLE for WELDING MACHINES

- MODELS AVAILABLE IN SPECIAL EXECUTION TO INCREASE THE PERFORMANCE MOPD

ACCESSORIES

THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A)-IP65

KNOB (6660)

CONNECTION 1/4" M-HOSE BIB (6660)

D

ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK 0 bar

MEDIUMS BERUEHRTE TEILE

DICHTUNG EPDM - NBR - FPM

KOERPER MESSING

INNERE ELEMENTE EDELSTAHL

MEDIUM WASSER - LUFT - DAMPF - GAS - DIESEL OEL - NAFTA

UNIDIREKTIONALES VENTIL

VENTIL WARTUNGSFREI

MONTAGEPOSITION Keine Einschraenkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.

UMGEBUNGSTEMPERATUR 80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkreaefte (M.O.P.D.) des Ventils beeintraehtigen

SONDERAUSFUEHRUNGEN - VENTIL ZERTIFIZIERT NACH GASRICHTLINIE CE GAS (CEE 90/396) FUER ENTZUENDBARE GAASE (CE-0085AS0422)

- GERAEUSCHGEDAEMPFTES VERSION (fuer GLEICHSTROM)

- AUSFUEHRUNG FUER MEDIEN MIT HOHER VISCOSITAET

- AUSFUEHRUNG ZERLEGBAR (6610)

- BYPASSBOHRUNG fuer SCHWEISSGERAETE

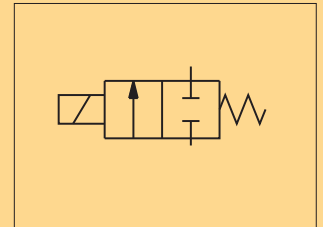
- MODELLE ERHAELTLICH IN SONDERAUSFUEHRUNGEN UM DIE MOPD LEISTUNG ZU ERHOEHEN

ZUBEHOER

DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A)-IP65 - DREHKNOFF (6660) - ANSCHLUSS

1/4" M-SCHLAUCHNIPPEL (6660)

STANDARD

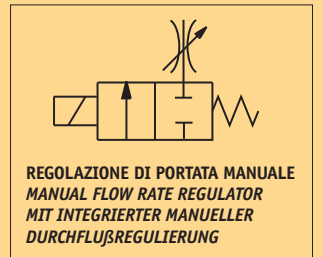


6601

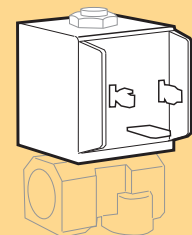


COMANDO MANUALE
MANUAL OVERRIDE
MANUELLE BETÄTIGUNG

6660



REGOLAZIONE DI PORTATA MANUALE
MANUAL FLOW RATE REGULATOR
MIT INTEGRIERTER MANUELLER DURCHFLUSSREGULIERUNG



BOBINA TIPO B6
COIL TYPE B6
SPULE TYP B6

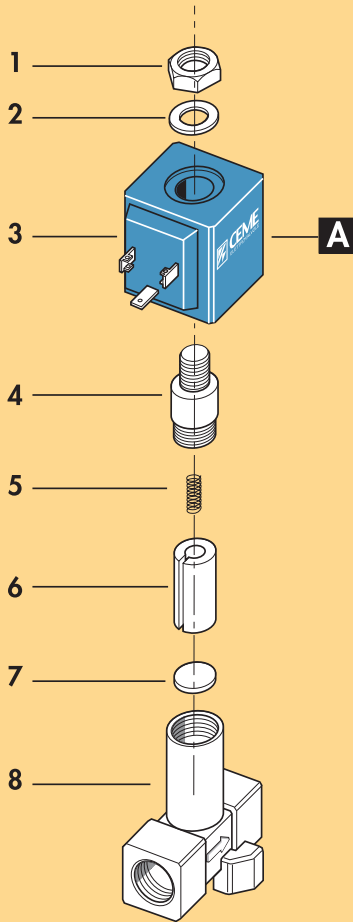
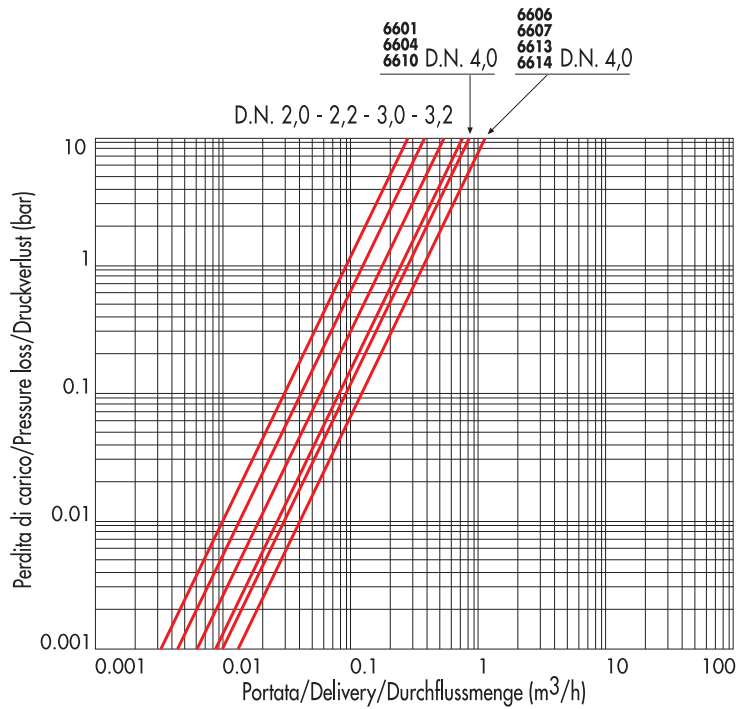


DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



VALVOLA FORNITA CON



QUESTA SERIE DI VALVOLE E' IDONEA ALL'INTERCETTAZIONE DI GAS INFIAMMABILE, OLTRE A TUTTI GLI ALTRI FLUIDI DESCRITTI NELLE CARATTERISTICHE GENERALI PAG.27. ALCUNI MODELLI SONO STATI SOTTOPOSTI ALL'ESAME DI TIPO RICHIESTO DALLA DIRETTIVA EUROPEA CEE 90/396 (APPARECCHI A GAS E SUOI COMPONENTI) (6609-6610-6611-6612) E SONO CONFORMI AI REQUISITI DELLA CLASSE A SECONDO UNI EN 161

VALVE SUPPLIED WITH:



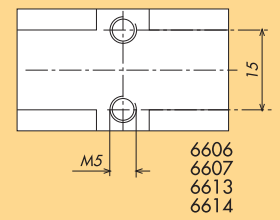
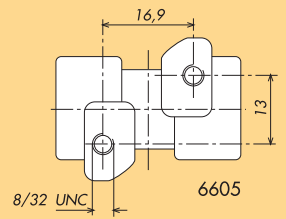
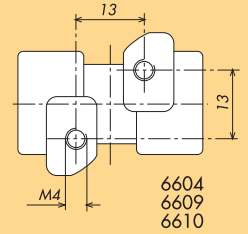
BESIDES ALL OTHER KIND OF MEDIUMS POINTED OUT IN THE GENERAL FEATURES OF PAGE NO. 27, THIS SERIES OF VALVES ARE SUITABLE FOR INTERCEPTION OF INFLAMMABLE GAS, CERTAIN MODELS HAVE BEEN SUBMITTED FOR THE TESTING REQUIRED FROM THE EEC DIRECTIVE CEE 90/ 396 (GAS APPARATUS AND THEIR COMPONENTS) (6609-6610-6611-6612) AND COMPLY TO THE REQUIREMENTS OF CLASS A VALVES ACCORDING TO UNI EN 161.

LIEFERUMFANG:



AUSSER DEN BEREITS AUF SEITE 27 IN DEN ALLGEMEINE MERKMALEN ANGEGBEN MEDIEN, WURDEN DIESE VENTILSERIEN SPEZIELL FUER DIE VERWENDUNG MIT ENTZUENDBAREN GASEN GEPRUEFT. EIN GROSSTEIL DER BAUSERIEN WURDE GEMAESS EUROPAEISCHER GAS RICHTLINIE CEE 90/396 GEPRUEFT UND UNTERLIEGEN SOMIT EINER 100% TIGER DICHTIGKEITSPRUEFUNG. IM SPEZIELLEN DIE TYPEN (6609-6610-6611-6612) SIE WERDEN IN ÜBEREINSTIMMUNG MIT DEM UNI EN 161 GEPRÜFT, STUFEN SIE EINE DIREKTIVE EIN.

1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Nucleo fisso	Tube top	Kern
5	Molla	Spring	Feder
6	Nucleo mobile	Plunger	Plunger
7	Pastiglia	Seal	Dichtung
8	Corpo	Valve body base	Grundkörper
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule



CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/8	1,5	6711	0.080	25	17	35	77	47	62	0.250
G 1/8	2,0	6711	0.130	22	10	35	77	47	62	0.250
G 1/8	2,8	6711	0.265	10	7	35	77	47	62	0.250
G 1/4	1,5	6712	0.080	25	17	35	77	47	62	0.230
G 1/4	2,0	6712	0.130	22	10	35	77	47	62	0.230
G 1/4	2,5	6712	0.210	12	8	35	77	47	62	0.230
G 1/4	2,8	6712	0.265	10	7	35	77	47	62	0.230
G 1/4	2,8	6724	0.265	10	7	59	80	47	61	0.270
FLANGIA / FLANGE	1,5	6770	0.070	25	17	33	60	47	-	0.220
FLANGIA / FLANGE	2,0	6770	0.110	22	10	33	60	47	-	0.220
FLANGIA / FLANGE	2,8	6770	0.180	10	7	33	60	47	-	0.220

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

V~	V=	POTENZA/POWER	
		NOMINALE HOLDING	SPUNTO IN RUSH
12 24 48 110 230 400		50 60 Hz	12VA 21VA
	12 24 48 110		16W

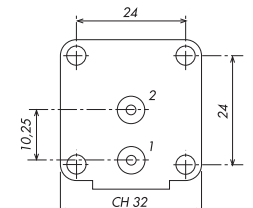
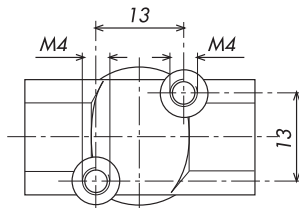
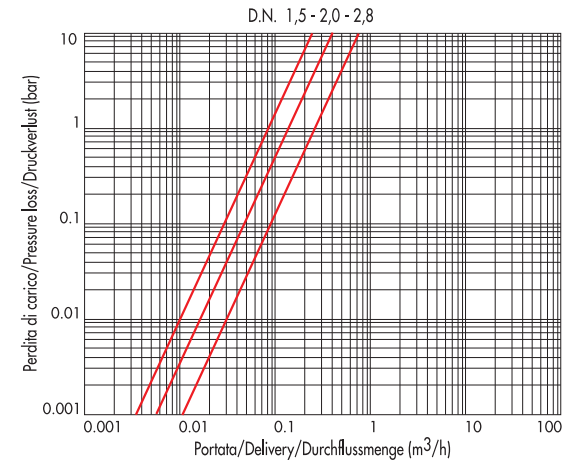
Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
NBR	EPDM	FPM	80°C
90°C	155°C	150°C	

Disponibili bobine per temp. ambienti fino a 120°C
Coils available for ambient temperatures up to 120°C
Spulen verfügbar für Umgebungstemperaturen bis zu 120°C

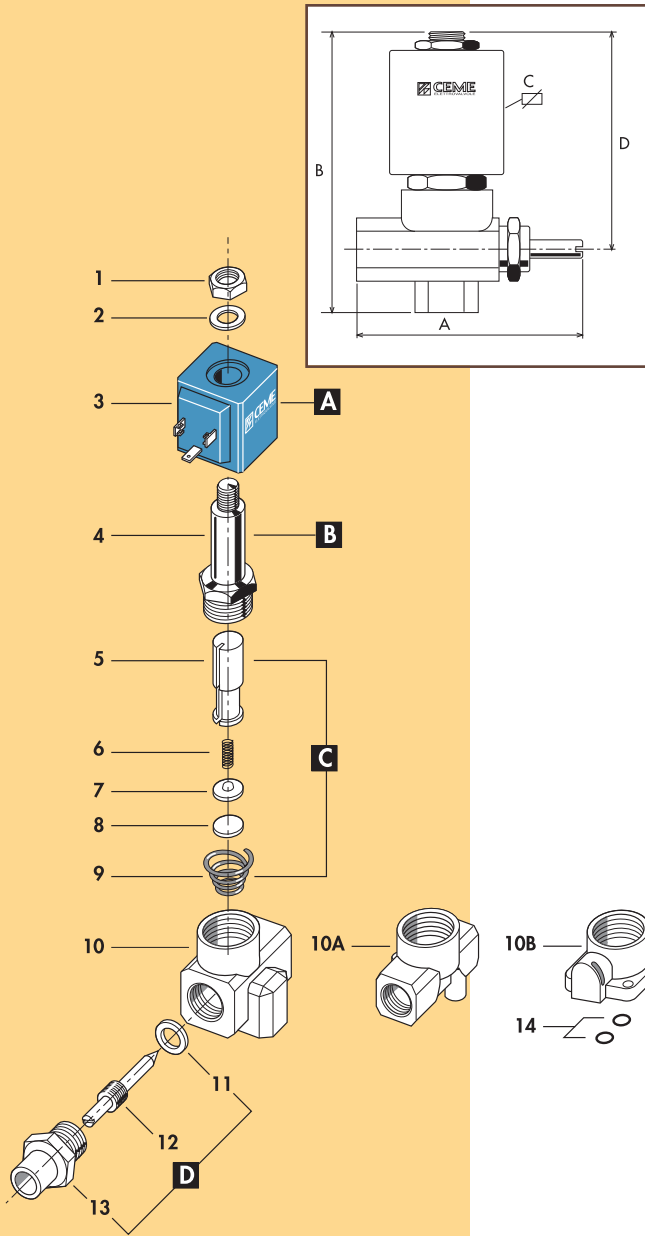
DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



6711 - 6712

6724

6770



1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Cannotto	Tube guide	Plungerrohr
5 Nucleo mobile	Plunger	Plunger
6 Molla	Spring	Feder
7 Piattello	Support	Scheibe
8 Pastiglia	Seal	Dichtung
9 Molla	Spring	Feder
10 Corpo	Valve body base	Grundkörper
11 Rondella	Washer	Spindeldichtung
12 Spillo	Plunger	Spindel
13 Dado di regolazione	Regular lock nut	Haltemutter-Spindel
14 O-ring	O-ring	O-Ring
RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule
B Cannotto	Tube guide	Plungerrohr
C Nucleo mobile	Plunger	Plunger
D Gruppo di regolazione	Regulator unit	Spindel

**ELETTROVALVOLA AZIONE DIRETTA 2/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.**



I CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO 0 bar

PARTI A CONTATTO CON IL FLUIDO

TENUTA EPDM - NBR - FPM
CORPO OTTONE CON SEDE DI TENUTA INOX
TUBO GUIDA INOX - Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego.
 - Migliore resistenza alla corrosione.

ORGANI INTERNI ACCIAIO INOX
FLUIDI ACQUA - ARIA - VAPORE - OLII LEGGERI
 (GAS PER 6711- 6712)

VALVOLA UNIDIREZIONALE
VALVOLA ISPEZIONABILE
VALVOLA FORNITA CON CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65 (TRANNE PER 6724)
POSIZIONE DI MONTAGGIO Qualsiasi; sconsigliata quella con bobina rivolta verso il basso
TEMPERATURA AMBIENTE 80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire

ESECUZIONI SPECIALI CORPO VALVOLA INOX (AISI 303)
ACCESSORI -MANOPOLA (6724)
 -CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65 (6724)
 -RACCORDO 1/4" M- PORTAGOMMA

UK GENERAL FEATURES

MINIMUM WORKING PRESSURE 0 bar

PARTS IN CONTACT WITH THE FLUID

SEALING EPDM - NBR - FPM
BODY BRASS WITH SEALING SEAT IN STAINLESS STEEL
STAINLESS STEEL TUBE GUIDE - Metallic sealing with the body for safety sealing also for high temperature applications.
 - Improved corrosion resistance.

INTERNAL PARTS STAINLESS STEEL
FLUIDS WATER - AIR - STEAM- LIGHT OILS
 (GAS FOR 6711- 6712)

ONE WAY DIRECTION VALVE
SERVICEABLE VALVE THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) -IP65 (EXCEPT FOR 6724)
VALVE SUPPLIED WITH Any, the position with the coil downwards is not recommended.
MOUNTING POSITION 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
AMBIENT TEMPERATURE VALVE BODY STAINLESS STEEL (AISI 303)
SPECIAL EXECUTIONS -KNOB (6724)
ACCESSORIES -THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) -IP 65 (6724)
 -CONNECTION 1/4" M-HOSE BIB

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK 0 bar

MEDIUMS BERUEHRTE TEILE

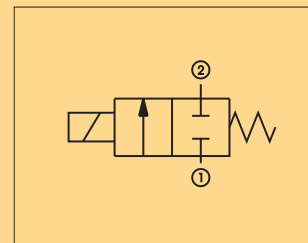
DICHTUNG EPDM - NBR - FPM
KOERPER MESSING MIT VENTILSITZ AUS EDELSTAHL
PLUNGERROHR AUS EDELSTAHL

- Metallische Dichtung fuer einen sicheren Einsatz auch bei hohen Medien Temperaturen.
 - Bessere Korrosionsbestaendigkeit.

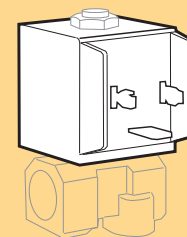
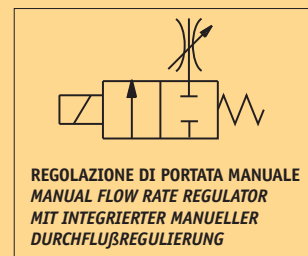
INNERE ELEMENTE EDELSTAHL
MEDIEN WASSER - LUFT - DAMPF - LEICHTE OELE
 (GAS FUER 6711- 6712)

UNIDIREKTIONALES VENTIL
VENTIL WARTUNGSFREUNDLICH DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A)-IP65 (AUSSER FUER 6724)
LIEFERUNGFANG Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
MONTAGEPOSITION 80°, im D.C-Betrieb koennen Temperaturen ueber 40°C, die Schaltkraefte (M.O.P.D.) des Ventils beeintraechtigen.
UMGEBUNGSTEMPERATUR

SONDERAUSFUEHRUNGEN VENTILKOERPER AUS EDELSTAHL (AISI 303)
ZUBEHOER -DREHKNOPF (6724)
 -DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) -IP 65 (6724)
 -ANSCHLUSS 1/4" M- SCHLAUCHNIPPEL

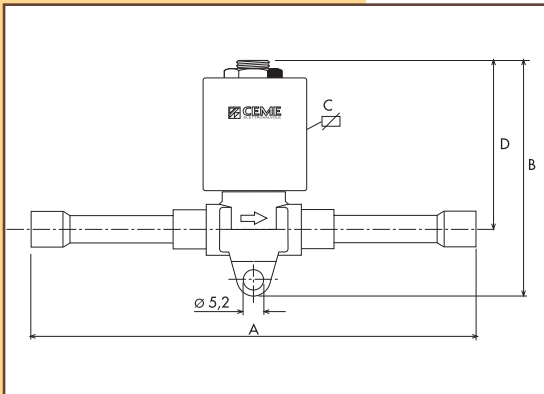


6724



BOBINA TIPO B6
COIL TYPE B6
SPULE TYP B6

CARATTERISTICHE SPECIFICATIONS



ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
ODF 6 mm	2,5	6806	0.170	25	17	111	67	47	50	0.220
ODF 1/4	2,5	6807	0.170	25	17	111	67	47	50	0.220
ODF 10 mm	3,0	6810	0.230	25	17	116	78	60	59	0.360
ODF 3/8	3,0	6811	0.230	25	17	116	78	60	59	0.360
1/4 SAE - (UNF 7/16)	2,5	6812	0.170	25	17	65	67	47	50	0.220
3/8 SAE - (UNF 5/8)	3,0	6813	0.230	25	17	71	78	60	59	0.395
ODF 6 mm	2,5	6825	0.170	25	17	105	136	47	49	0.210

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

	POTENZA/POWER			
	6806-07-12-25		6810-11-13	
	NOMINALE HOLDING	SPUNTO IN RUSH	NOMINALE HOLDING	SPUNTO IN RUSH
V~	12 24 48 110 230 400		50 60 Hz	17,5VA 28VA 23VA 33VA
V=	12 24 48 110			16W 21W

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
PTFE	NEOPRENE		-30+80°C
-45+125°C	-35+100°C		

DIAGRAMMA PERDITA DI CARICO

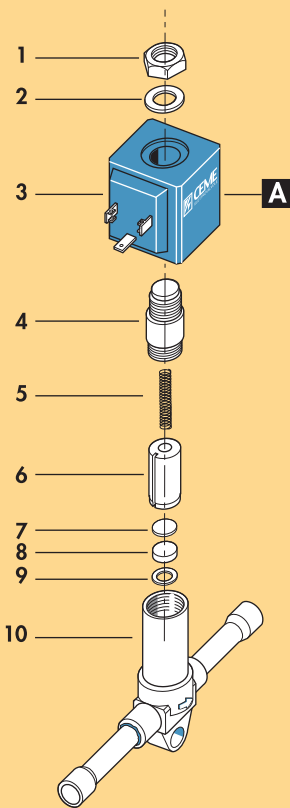
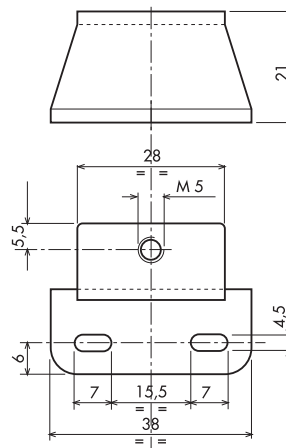
Per informazioni dettagliate sulle capacità di portata per i diversi fluidi refrigeranti, vedi capitolo "INFORMAZIONI DI PROGETTO".

PRESSURE LOSS DIAGRAM

Detailed information on the flow rate capacity for the various "refrigeration fluids" are available under chapter "PROJECT INFORMATION".

DRUCK-DURCHFLUSS DIAGRAMM

Ausführliche Informationen über spezifische Kühlmittel Eigenschaften finden Sie unter "TECHNISCHE INFORMATIONEN".



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Nucleo fisso	Tube top	Kern
5	Molla	Spring	Feder
6	Nucleo mobile	Plunger	Plunger
7	Piattello	Support	Scheibe
8	Pastiglia	Seal	Dichtung
9	Rondella	Washer	Spindeldichtung
10	Corpo	Valve body base	Grundkörper
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule



serie 68 AD

ELETTROVALVOLA AZIONE DIRETTA 2/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



1 CARATTERISTICHE GENERALI

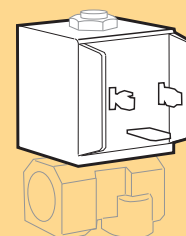
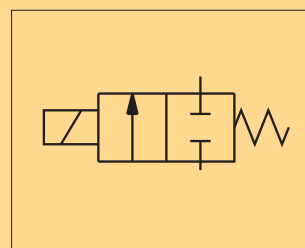
PRESSIONE MINIMA DI FUNZIONAMENTO	0 bar
PARTI A CONTATTO CON IL FLUIDO	
TENUTA	PTFE
CORPO	OTTONE
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	TUTTI I TIPI DI FLUIDI REFRIGERANTI ESCLUSA AMMONIACA (NH ₃)
VALVOLA UNIDIREZIONALE	
VALVOLA NON ISPEZIONABILE	
VALVOLA FORNITA CON	- CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65 - STAFFA E VITE PER IL FISSAGGIO (ESCLUSA LA SERIE 6825)
POSIZIONE DI MONTAGGIO	Qualsiasi. Per ottenere le massime prestazioni le valvole devono essere montate con la bobina rivolta verso l'alto; si sconsiglia quella con bobina rivolta verso il basso.
TEMPERATURA AMBIENTE	-30°C +80°C
ESECUZIONI SPECIALI	In D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire TENUTA IN NEOPRENE (6806 - 6812)
ACCESSORI	DADO E GUARNIZIONI ANTI UMIDITA' PER LA BOBINA BOCCHETTONI SAE PER CONNESSIONE TUBO DI RAME

UK GENERAL FEATURES

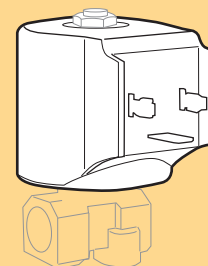
MINIMUM WORKING PRESSURE	0 bar
PARTS IN CONTACT WITH THE FLUID	
SEALING	PTFE
BODY	BRASS
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	ALL TYPE OF REFRIGERANT FLUIDS EXCEPT AMMONIA (NH ₃)
ONE WAY DIRECTION VALVE	
NON-SERVICEABLE VALVE	
VALVE SUPPLIED WITH	- THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) -IP 65 - SCREW AND MOUNTING BRACKET, (EXCEPT FOR SERIES 6825)
MOUNTING POSITION	Any; to obtain the best performances the valves has to be installed with the coil vertical; the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE	- 30 °C +80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
SPECIAL EXECUTIONS	SEALING IN NEOPRENE(6806-6812)
ACCESSORIES	NUT AND GASKET TO AID AGAINST HUMIDITY FOR THE COIL SAE NUT FOR COPPER TUBE CONNECTION

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK	0 bar
MEDIUMS BERUEHRTE ELEMENTE	
DICHTUNG	PTFE
KOERPER	MESSING
INNERE ELEMENTE	EDELSTAHL
MEDIEN	ALLE ARTEN VON KUEHLMITTEL AUSSER AMMONIAK (NH ₃)
UNIDIREKTIONALES VENTIL	
VENTIL WARTUNGSFREI	
LIEFERUMFANG	
	- DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) -IP 65 - SCHRAUBE UND BEFESTIGUNGSBUEGEL (AUSSER FUER 6825)
MONTAGEPOSITION	Keine Einschränkungen. Um beste Leistungen zu erreichen, muessen die Ventile mit der Spule senkrecht nach oben eingebaut werden. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
UMGEBUNGSTEMPERATUR	-30°C +80°C, im D.C.-Betrieb koennen Temperaturen ueber 40°C, die Leistungen (M.O.P.D.) des Ventils beeintraechtigen.
SONDERAUSFUEHRUNGEN	DICHTUNG AUS NEOPRENE (6806-6812)
ZUBEHOER	MUTTER UND DICHTUNG GEGEN FEUCHTIGKEIT FUER DIE SPULE MUTTER MIT SAE GEWINDE FUER KUPFERROHR ANSCHLUSS

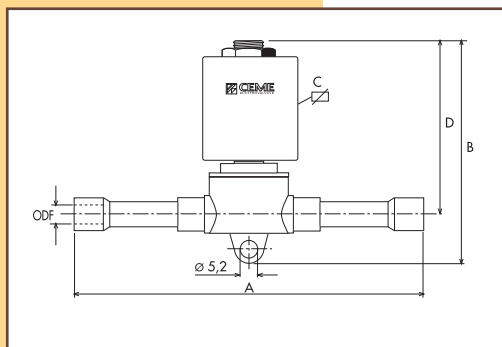


6806-6807-6812-6825
BOBINA TIPO B6
COIL TYPE B6
SPULE TYP B6



6810-6811-6813
BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12

CARATTERISTICHE SPECIFICATIONS



ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
3/8 SAE - (UNF 5/8)	8	6853	1.300	28	17	84	91,5	60	73.5	0.520
1/2 SAE - (UNF 3/4)	10	6854	1.600	28	17	84	91,5	60	73.5	0.520
ODF 10 mm	8	6861	1.300	28	17	118	91,5	60	73.5	0.460
ODF 12 mm	10	6862	1.600	28	17	118	91,5	60	73.5	0.460
ODF 3/8	8	6863	1.300	28	17	118	91,5	60	73.5	0.460
ODF 1/2	10	6864	1.600	28	17	118	91,5	60	73.5	0.460

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

							POTENZA/POWER				
							NOMINALE HOLDING	SPUNTO IN RUSH			
V~	12	24	48	110	230	400	50	60	Hz	30VA	51VA
V=	12	24	48	110						20W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coil see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
PTFE				-30+80°C
-45+125°C				

DIAGRAMMA PERDITA DI CARICO

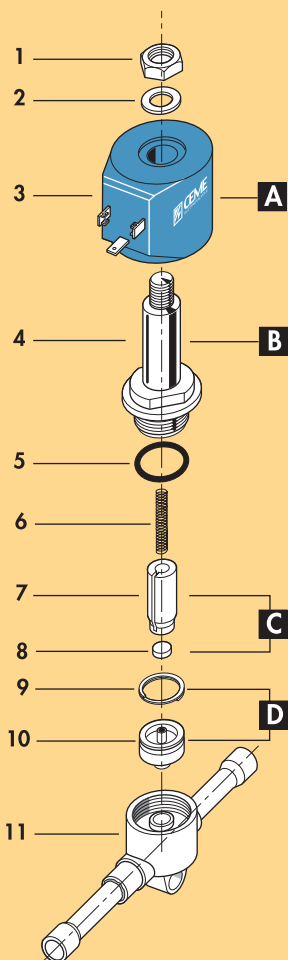
Per informazioni dettagliate sulle capacità di portata per i diversi fluidi refrigeranti, vedi capitolo "INFORMAZIONI DI PROGETTO".

PRESSURE LOSS DIAGRAM

Detailed information on the flow rate capacity for the various "refrigeration fluids" are available under chapter "PROJECT INFORMATION".

DRUCK-DURCHFLUSS DIAGRAMM

Ausführliche Informationen über spezifische Kühlmittel Eigenschaften finden Sie unter "TECHNISCHE INFORMATIONEN".



1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Nucleo fisso	Tube top	Kern
5 O-ring	O-ring	O-ring
6 Molla	Spring	Feder
7 Nucleo mobile	Plunger	Plunger
8 Pastiglia	Seal	Dichtung
9 Fascia elastica	Piston rings	Kolbenring
10 Otturatore	Shutter	Verschluss
11 Corpo	Valve body base	Grundkörper
RICAMBI SPARE PARTS ERSATZTEILE		
A Bobina	Coil	Magnetspule
B Cannotto	Tube guide	Plungerrohr
C Nucleo mobile	Plunger	Plunger
D Otturatore	Shutter	Verschluss

6853



6854



6861



6862



serie 68 SC

**ELETTROVALVOLA SERVOCOMANDATA 2/2 VIE N.C.
SOLENOID VALVE PILOT OPERATED 2/2 WAY N.C.
SERVOGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.**



I CARATTERISTICHE GENERALI
PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO 0,1 bar
PARTI A CONTATTO CON IL FLUIDO:

TENUTA PTFE
CORPO OTTONE
ORGANI INTERNI ACCIAIO INOX
FLUIDI TUTTI I TIPI DI FLUIDI REFRIGERANTI ESCLUSA AMMONIACA (NH₃).
VALVOLA UNIDIREZIONALE
VALVOLA ISPEZIONABILE
VALVOLA FORNITA CON

- CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65
- STAFFA E VITE PER IL FISSAGGIO
POSIZIONE DI MONTAGGIO: Qualsiasi; sconsigliata quella con bobina rivolta verso il basso.
TEMPERATURA AMBIENTE: -30°C +80°C
In D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.

ACCESSORI
- BOBINA B20 (30W) PER AUMENTARE LE PERFORMANCE (M.O.P.D.) IN D.C.
- BOCCHETTONI SAE PER CONNESSIONE TUBO DI RAME.
- DADO E GUARNIZIONI ANTI UMIDITÀ PER LA BOBINA.

UK GENERAL FEATURES
MINIMUM DIFFERENTIAL WORKING PRESSURE 0,1 bar
PARTS IN CONTACT WITH THE FLUID:

SEALING PTFE
BODY BRASS
INTERNAL PARTS STAINLESS STEEL
FLUIDS ALL TYPE OF REFRIGERANT FLUIDS EXCEPT AMMONIA (NH₃)
ONE WAY DIRECTION VALVE
SERVICEABLE VALVE
VALVE SUPPLIED WITH

- THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A)- IP 65
- SCREW AND MOUNTING BRACKET
MOUNTING POSITION: Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE: -30°C +80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

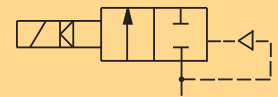
ACCESSORIES
- A SPECIAL COIL B20 (30W) IS AVAILABLE TO INCREASE PERFORMANCES (M.O.P.D.) IN D.C.
- SAE NUT FOR COPPER TUBE CONNECTION.
- NUT AND GASKET TO AID AGAINST HUMIDITY FOR THE COIL.

D ALLGEMEINE MERKMALE
MINIMALER DIFFERENTIALARBEITSDRUCK 0,1 bar
MEDIUMS BERUEHRTE ELEMENTE:

DICHTUNG PTFE
KOERPER MESSING
INNERE ELEMENTE EDELSTAHL
FLUESSIGKEITEN ALLE ARTEN VON KUEHLMITTEL AUSSER AMMONIAK (NH₃)
UNIDIREKTIONALES VENTIL
VENTIL WARTUNGSFREUNDLICH
LIEFERUMFANG

- DREIPOLIGER STECKER UNI ISO 4400 (43650A) -IP 65
- SCHRAUBE UND BEFESTIGUNGSBUEGEL
MONTAGEPOSITION: Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
UMGEBUNGSTEMPERATUR: -30°C +80°C, im D.C-Betrieb koennen Temperaturen ueber 40°C die Schaltkraefte (M.O.P.D.) des Ventils beeintraechtigen.

SONDERAUSFUEHRUNGEN ES BESTEHT DIE MOEGLICHKEIT, MITTELS EINER SONDERSPULE B20 (30W), DIE SCHALTKRAEFTE (M.O.P.D.) IN D.C. ZU ERHOEHEN, MUTTER MIT SAE GEWINDE FUER KUPFERROHR ANSCHLUSS
MUTTER UND DICHTUNG GEGEN FEUCHTIGKEIT FUER DIE SPULE

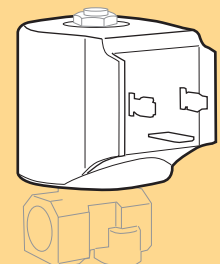


NEW

APERTURA CON MASSIMA PORTATA ANCHE CON BASSISSIME PRESSIONI DIFFERENZIALI. VALVOLA CON UN SOLO PUNTO DI GIUNZIONE PER UNA TENUTA PIÙ SICURA VERSO L'ESTERNO. PESI E DIMENSIONI RIDOTTE GRAZIE AL COMANDO A PISTONE.

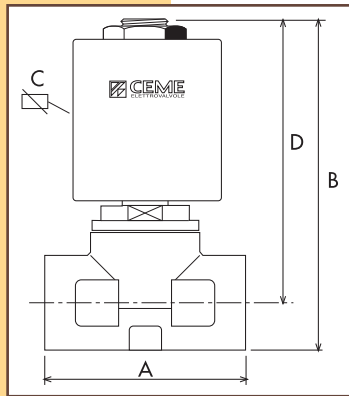
*LOW MINIMUM OPERATING DIFFERENTIAL PRESSURE TO ACHIEVE MAXIMUM FLOW RATE
VALVE WITH SINGLE JUNCTION POINT FOR SAFETY SEALING AGAINST ATMOSPHERE
REDUCED SIZE/WEIGHT ACHIEVED DUE TO PISTON CONTROL*

*OFFNET, ZU MAXIMALEM DURCHFLUSS, AUCH BEI GERINGSTEN DIFFERENTIALDRUECKEN
VENTIL MIT NUR EINER DICHTSTELLE ZUR SICHEREN DICHTUNG NACH AUSSEN
GERINGES GEWICHT UND GERINGE ABMESSUNGEN
DANK KOLBENSTEUERUNG*



**BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12**

CARATTERISTICHE SPECIFICATIONS



ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
1/4 NPT	11	8302	1.40	20	20	55	91	60	78	0.560
3/8 NPT	11	8303	1.50	20	20	55	91	60	78	0.535
1/2 NPT	11	8304	1.60	20	20	55	91	60	78	0.500
G 1/4	11	8322	1.40	20	20	55	91	60	78	0.560
G 3/8	11	8323	1.50	20	20	55	91	60	78	0.535
G 1/2	11	8324	1.60	20	20	55	91	60	78	0.500

AZIONE DIRETTA - DIRECT ACTING - DIREKTGESTEUERTES P. MIN. = 0 bar

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/4	11	8332	1.50	0.5	0.3	55	91	60	78	0.560
G 3/8	11	8333	1.60	0.5	0.3	55	91	60	78	0.535
G 1/2	11	8334	1.70	0.5	0.3	55	91	60	78	0.500

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

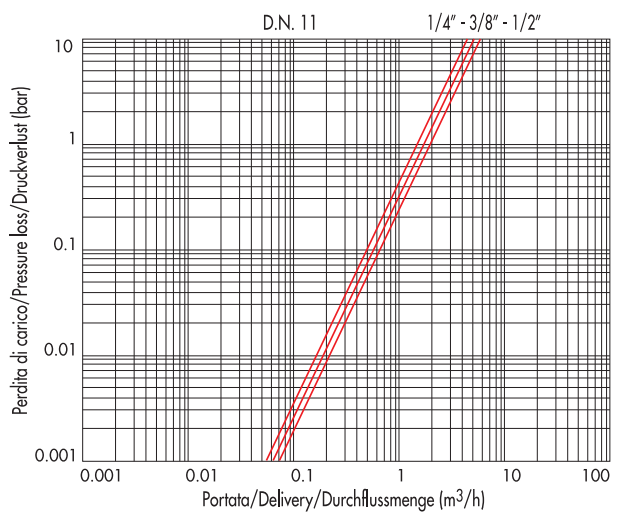
	POTENZA/POWER						
	8322-23-24 8332-33-34						
	NOMINALE HOLDING		SPUNTO IN RUSH				
V~	12	24	48	110 230 400	50 60 Hz	22VA	41VA
V=	12	24	48	110		21W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

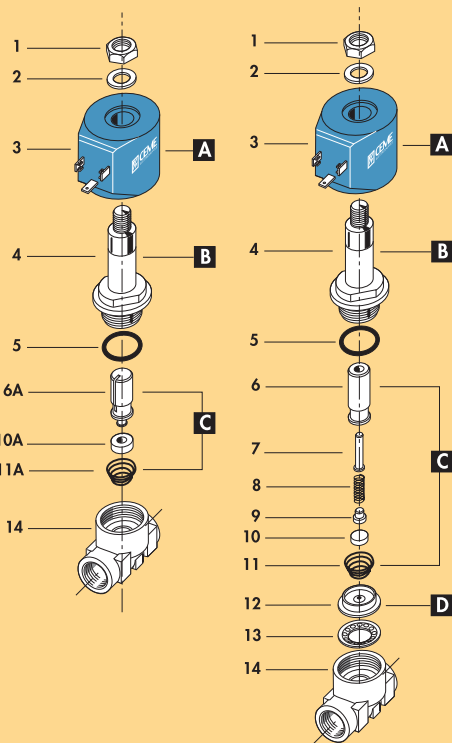
MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
NBR	FPM	EPDM	80°C
90°C	150°C	130°C	

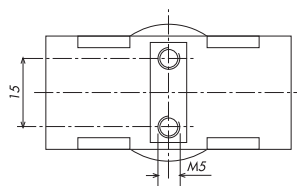
DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



8332
8333
8334



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Nucleo fisso	Tube top	Kern
5	O-ring	O-ring	O-ring
6	Nucleo mobile	Plunger	Plunger
7	Ammortizzatore	Shock-absorber	DNmpfer
8	Molla	Spring	Feder
9	Piattello	Support	Scheibe
10	Pastiglia	Seal	Dichtung
11	Molla	Spring	Feder
12	Membrana	Diaphragm	Membrane
13	Piattello	Support	Scheibe
14	Corpo	Valve body base	Grundkörper
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Cannotto	Tube guide	Plungerrohr
C	Nucleo mobile	Plunger	Plunger
D	Membrana	Diaphragm	Membrane



**ELETTROVALVOLA SERVOCOMANDATA 2/2 VIE N.C.
SOLENOID VALVE PILOT OPERATED 2/2 WAY N.C.
SERVOGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.**



I

CARATTERISTICHE GENERALI

PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO 0,1 bar (modelli 8332-33-34 0 bar)

PARTI A CONTATTO CON IL FLUIDO:

TENUTA FPM, NBR per 8332-8333-8334
CORPO OTTONE
ORGANI INTERNI ACCIAIO INOX
FLUIDI ARIA - ACQUA - GAS INERTI - OLII LEGGERI

VALVOLA UNIDIREZIONALE

VALVOLA ISPEZIONABILE

Valvola fornita con

CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A)-IP65
Qualsiasi; sconsigliata quella con bobina rivolta verso il basso
POSIZIONE DI MONTAGGIO: 80°C, in D.C. per temperature superiori ai 40°C, le performance (M.O.P.D.) potrebbero diminuire.
TEMPERATURA AMBIENTE: 80°C, in D.C. per temperature superiori ai 40°C, le performance (M.O.P.D.) potrebbero diminuire.
ESECUZIONI SPECIALI TENUTA IN EPDM, NBR

VERSIONE AD AZIONE DIRETTA: 8332, 8333, 8334
PER I MODELLI 8332, 8333, 8334 E' DISPONIBILE UNA BOBINA SPECIALE PER AUMENTARE LA PRESTAZIONE IN D.C. (M.O.P.D.) A. 0,5 bar
TIMER PER REGOLAZIONE TEMPI D'INTERVENTO (vedi accessori a pagina 95)

ACCESSORI

UK

GENERAL FEATURES

MINIMUM DIFFERENTIAL WORKING PRESSURE 0,1 bar (models 8332-33-34 0 bar)

PARTS IN CONTACT WITH THE FLUID:

SEALING FPM, NBR for 8332-8333-8334
BODY BRASS
INTERNAL PARTS STAINLESS STEEL
FLUIDS AIR - WATER - INERT GAS - LIGHT OILS

ONE WAY DIRECTION VALVE

SERVICEABLE VALVE

VALVE SUPPLIED WITH

MOUNTING POSITION THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A)-IP65
Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
SPECIAL EXECUTIONS SEALING IN EPDM, NBR

DIRECT ACTING VERSION (8332,8333,8334)
FOR MODELS 8332,8333,8334, A SPECIAL COIL IS AVAILABLE TO INCREASE PERFORMANCES (M.O.P.D.) IN D.C. TO 0,5 BAR
ADJUSTABLE TIMER TO PRESET DUTY CYCLE.
(see accessories at page 95)

ACCESSORIES

D

ALLGEMEINE MERKMALE

MINIMALER DIFFERENTIALARBEITSDRUCK 0,1 bar (Modelle 8332-33-34 0 bar)

MEDIUMS BERUEHRTE ELEMENTE

DICHTUNG FPM, NBR fuer 8332-8333-8334
KOERPER MESSING
INNERE ELEMENTE EDELSTAHL
MEDIEN LUFT-WASSER -EDELGAS—LEICHTE OELE

UNIDIREKTIONALES VENTIL

VENTIL WARTUNGSFREUNDLICH

LIEFERUMFANG

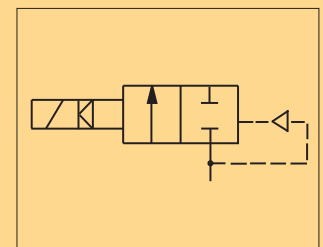
MONTAGEPOSITION DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A)-IP65
Keine Einschränkungen. Fuer die Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.

UMGEBUNGSTEMPERATUR 80°C, im D.C-Betrieb koennen Temperaturen ueber 40°C, die Schaltkraefte (M.O.P.D.) des Ventils beeintraechtigen.

SONDERAUSFUEHRUNGEN

DICHTUNG AUS EPDM, NBR
DIREKTGESTEUERTE VERSION: 8332,8333,8334
FUER DIE MODELLE 8332,8333,8334 BESTEHT DIE MOEGELICHKEIT, MITTELS EINER SONDERSPULE DIE SCHALTKRAEFTE (M.O.P.D.) IM D.C.-BEREICH AUF 0.5 BAR ZU ERHOEHE-TIMER FUER REGELUNG DER SCHALTZEITEN
(Siehe Zubehoer auf Seite 95)

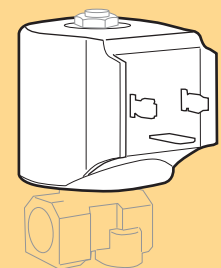
ZUBEHOER



ALTA FREQUENZA D'INTERVENTO
SCARICO CONDENSA COMPRESSORI

HIGH FREQUENCY APPLICATIONS
CONDENSATE DRAIN FOR COMPRESSORS

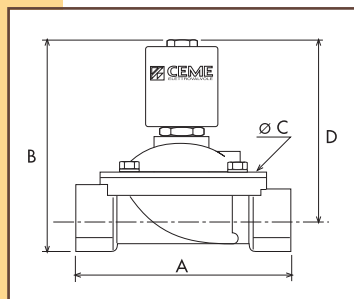
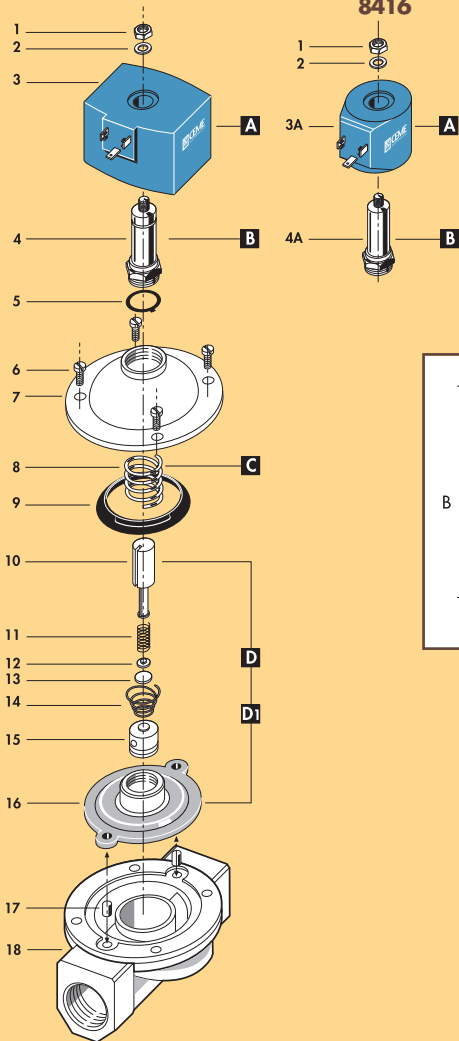
ANWENDUNGEN MIT HOHER SCHALTHÄUFIGKEIT
ABLASS KONDENSWASSER DER KOMPRESSOREN



BOBINA TIPO B12 M
COIL TYPE B12 M
SPULE TYP B12 M

8417
8418
8419

8413
8414
8415
8416



CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 3/8	12	8413	2.20	5	5	61	105	48	92	0.680
G 1/2	12	8414	2.20	5	5	61	105	48	92	0.660
G 3/4	20	8415	5.50	4	2	100	110	80	93	1.100
G 1	25	8416	7.50	4	2	100	116	80	96	1.200
G 1 1/4	36	8417	17.50	4	2	146	200	128	170	5.200
G 1 1/2	39	8418	19.00	4	2	146	200	128	170	5.000
G 2	51	8419	32.40	4	2	174	216	146	180	6.500
3/8 NPT	12	8423	2.20	5	5	61	105	48	92	0.680
1/2 NPT	12	8424	2.20	5	5	69	105	48	92	0.670

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

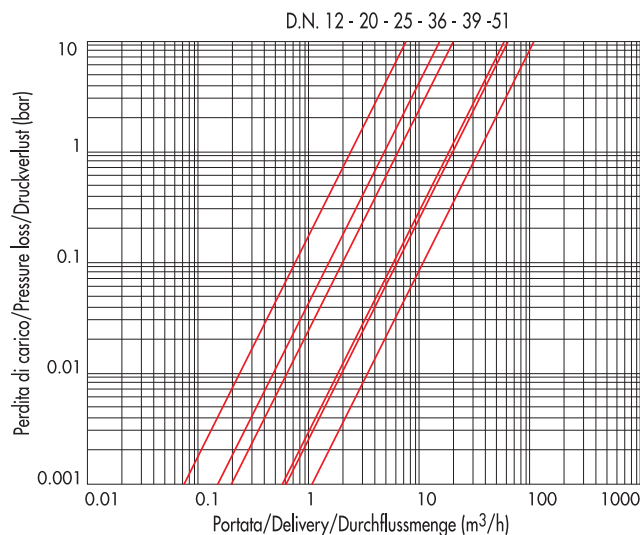
	V~	12	24	48	110	230	400	50	60	Hz	POTENZA/POWER			
											8413-14-15-16		8417-18-19	
	V=	12	24	48	110									
											NOMINALE HOLDING	SPUNTO IN RUSH	NOMINALE HOLDING	SPUNTO IN RUSH
											18VA	47VA	140VA	430VA
											21W		43W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM	EPDM-KTW	FPM	
90°C	130°C	130°C	150°C	80°C

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Magnetspule	
4	Canotto	Tube guide	Plungerrohr
5	O-ring	O-ring	O-ring
6	Vite	Screw	Schraube
7	Coperchio	Valve body top	Deckel
8	Molla	Spring	Feder
9	Anello	Ring	Ring
10	Nucleo mobile	Plunger	Plunger
11	Molla	Spring	Feder
12	Piattello	Support	Scheibe
13	Pastiglia	Seal	Dichtung
14	Molla	Spring	Feder
15	Bussola	Bush	Buchse
16	Membrana	Diaphragm	Membrane
17	Bussola	Bush	Buchse
18	Corpo	Valve body base	Grundkörper

RICAMBI	SPARE PARTS	ERSATZTEILE	
A	Bobina	Coil	Magnetspule
B	Canotto	Tube guide	Plungerrohr
C	Molla	Spring	Feder
D	Gruppo membrana (C.A.)	Diaphragm unit (A.C.)	Membrane Aggregat (A.C.)
D1	Gruppo membrana (C.C.)	Diaphragm unit (D.C.)	Membrane Aggregat (D.C.)

8413
8414
8415
8416
8423
8424



8417
8418
8419



ELETTRORVALVOLA SERVOASSISTITA 2/2 VIE N.C.
SOLENOID VALVE SERVO-ACTUATED 2/2 WAY N.C.
ZWANGSGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



I CARATTERISTICHE GENERALI

PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO 0 bar
PARTI A CONTATTO CON IL FLUIDO

TENUTA NBR a richiesta FPM - EPDM
 EPDM-KTW tenuta adatta e certificata DVGW per l'intercettazione di acqua potabile.

CORPO OTTONE
ORGANI INTERNI ACCIAIO INOX
FLUIDI ACQUA - ARIA - OLII LEGGERI

VALVOLA UNIDIREZIONALE
VALVOLA ISPEZIONABILE
VALVOLA FORNITA CON
POSIZIONE DI MONTAGGIO CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65.

Si consiglia di montare la valvola con la bobina rivolta verso l'alto. I modelli 8417, 8418, 8419 devono essere installati in posizione orizzontale con bobina rivolta verso l'alto.
TEMPERATURA AMBIENTE 80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.

ESECUZIONI SPECIALI

- VERSIONE ANTI COLPO D'ARIETE CON TEMPO DI CHIUSURA + PIU' LENTO.
- PER I MODELLI 8415 e 8416 E' DISPONIBILE LA BOBINA B20 (30 W) PER AUMENTARE LA PRESTAZIONE IN D.C. (M.O.P.D.) A 4 BAR.
- VERSIONE CON OMOLOGAZIONE KTW.

UK GENERAL FEATURES

MINIMUM DIFFERENTIAL WORKING PRESSURE: 0 bar
PARTS IN CONTACT WITH THE FLUID

SEALING NBR on request FPM - EPDM
 EPDM-KTW sealing approved and DVGW certified for interception of potable water

BODY BRASS
INTERNAL PARTS STAINLESS STEEL
FLUIDS WATER- AIR - LIGHT OILS

ONE WAY DIRECTION VALVE
SERVICEABLE VALVE
VALVE SUPPLIED WITH
MOUNTING POSITION THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A)-IP65

We advice installation of the valve with the coil vertical. Models 8417,8418,8419 must be mounted in the horizontal position with the coil vertical.
AMBIENT TEMPERATURE 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

SPECIAL EXECUTIONS

- VERSION WITH WATER HAMMER DEVICE FOR SLOWER CLOSING TIME
- FOR MODELS 8415 AND 8416 , COIL TYPE B20 (30 W) IS AVAILABLE TO INCREASE PERFORMANCES (M.O.P.D.) IN D.C. TO 4 BAR.
- VERSION WITH KTW HOMOLOGATION.

D ALLGEMEINE MERKMALE

MINIMALER DIFFERENTIALARBEITSDRUCK 0 bar
MEDIUMS BERUEHRTE TEILE

DICHTUNG NBR auf Nachfrage FPM - EPDM
 EPDM-KTW Dichtung DVGW-KTW zertifiziert fuer den Trinkwassereinsatz.

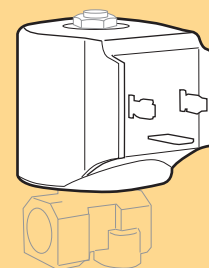
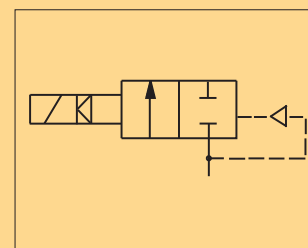
KOERPER MESSING
INNERE ELEMENTE EDELSTAHL
MEDIEN WASSER - LUFT- LEICHTE OELE

UNIDIREKTIONALES VENTIL
VENTIL WARTUNGSFREUNDLICH
LIEFERUMFANG
MONTAGEPOSITION DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A)-IP65

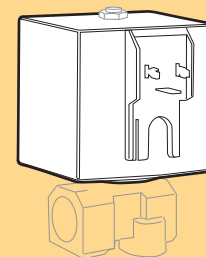
Es wird empfohlen das Ventil mit der Spule senkrecht nach oben einzubauen.
 Die Modelle 8417,8418,8419 muessen mit der Spule senkrecht nach oben eingebaut werden.
UMGEBUNGSTEMPERATUR 80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkraefte (M.O.P.D.) des Ventils beeintraechtigen.

SONDERAUSFUEHRUNGEN

- AUSFUEHRUNG LANGSAM SCHLIESSEND
- FUER DIE MODELLE 8415 UND 8416 IST DIE SPULE B20 (30 W) VERFUEGBAR UM DIE SCHALTKRAEFTE (M.O.P.D.) IN D.C. AUF 4 BAR ZU ERHOEHEN.
- VERSION MIT HOMOLOGATION KTW.



8413-8414-8415-8416-8423-8424
BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12



8417-8418-8419
BOBINA TIPO B60
COIL TYPE B60
SPULE TYP B60

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/4	10	8512	1.86	10	10	61	73	48	60	0.500
G 3/8	12	8513	1.86	10	10	61	73	48	60	0.450
G 1/2	12	8514	2.10	10	10	61	73	48	60	0.400
3/8 NPT	12	8523	1.86	10	10	61	73	48	60	0.450
1/2 NPT	12	8524	2.10	10	10	69	73	48	60	0.410

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

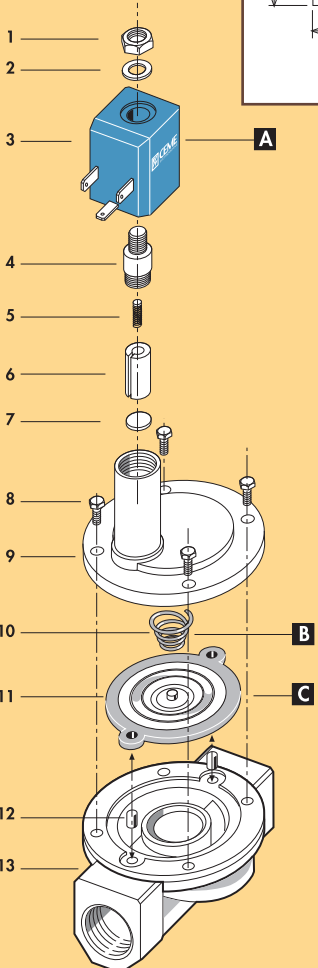
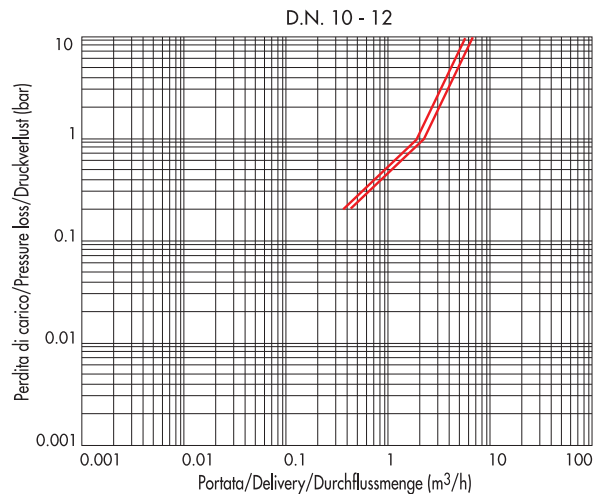
					POTENZA/POWER						
					NOMINALE HOLDING	SPUNTO IN RUSH					
V~	12	24	48	110	230	400	50	60	Hz	11VA	14,5VA
V=	12	24	48	110						9W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coil see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulnen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM	EPDM/KTW	FPM	80°C
90°C	130°C	130°C	150°C	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Nucleo fisso	Tube top	Kern
5 Molla	Spring	Feder
6 Nucleo mobile	Plunger	Plunger
7 Pastiglia	Seal	Dichtung
8 Vite	Screw	Schraube
9 Coperchio	Valve body top	Deckel
10 Molla	Spring	Feder
11 Membrana	Diaphragm	Membrane
12 Bussola	Bush	Buchse
13 Corpo	Valve body base	Grundkörper
RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule
B Molla	Spring	Feder
C Membrana	Diaphragm	Membrane



ELETTROVALVOLA SERVOCOMANDATA 2/2 VIE N.C.
SOLENOID VALVE PILOT OPERATED 2/2 WAY N.C.
SERVOGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



I

CARATTERISTICHE GENERALI

- PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO** 0,25 bar
PARTI A CONTATTO CON IL FLUIDO
TENUTA NBR a richiesta FPM - EPDM
 EPDM-KTW tenuta adatta e certificata DVGW per l'intercettazione di acqua potabile.
CORPO OTTONE
ORGANI INTERNI ACCIAIO INOX
FLUIDI ARIA - ACQUA - OLII LEGGERI
VALVOLA UNIDIREZIONALE
VALVOLA ISPEZIONABILE
VALVOLA FORNITA CON CONNETTORE TRIPOLARE UNI ISO 6952 (DIN 43650B)- IP65.
POSIZIONE DI MONTAGGIO Qualsiasi; sconsigliata quella con bobina rivolta verso il basso.
TEMPERATURA AMBIENTE 80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.
- ESECUZIONI SPECIALI**
- VERSIONE ANTI COLPO D'ARIETE CON TEMPO DI CHIUSURA PIU' LENTO.
 - VERSIONE CON OMOLOGAZIONE KTW.

UK

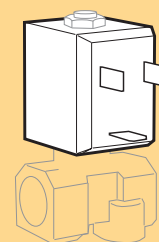
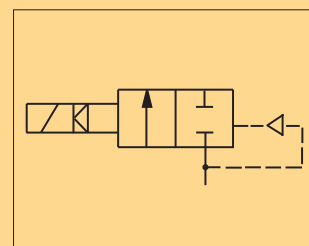
GENERAL FEATURES

- MINIMUM DIFFERENTIAL WORKING PRESSURE** 0,25 bar
PARTS IN CONTACT WITH THE FLUID
SEALING NBR on request FPM - EPDM
 EPDM-KTW sealing approved and DVGW certified for interception of potable water
BODY BRASS
INTERNAL PARTS STAINLESS STEEL
FLUIDS AIR - WATER - LIGHT OILS
ONE WAY DIRECTION VALVE
SERVICEABLE VALVE
VALVE SUPPLIED WITH THREE POLE PLUG CONNECTOR UNI ISO 6952 (DIN 43650B)-IP65
MOUNTING POSITION Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
- SPECIAL EXECUTIONS**
- VERSION WITH WATER HAMMER DEVICE FOR SLOWER CLOSING TIME.
 - VERSION WITH KTW HOMOLOGATION.

D

ALLGEMEINE MERKMALE

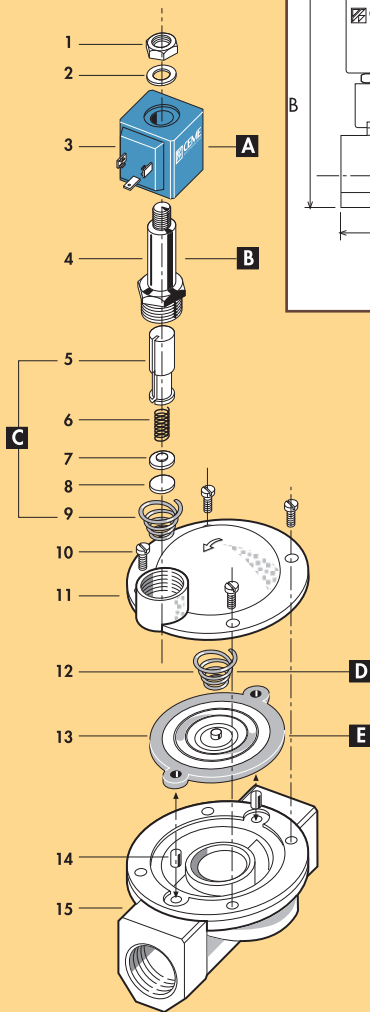
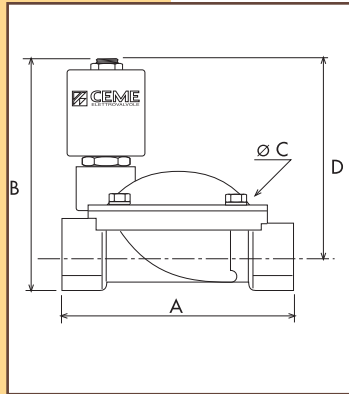
- MINIMALER DIFFERENTIALARBEITSDRUCK** 0,25 bar
MEDIUMS BERUEHRTE TEILE
DICHTUNG NBR auf Nachfrage FPM - EPDM
 EPDM-KTW Dichtung DVGW-KTW zertifiziert fuer den Trinkwassereinsatz.
KOERPER MESSING
INNERE ELEMENTE EDELSTAHL
MEDIEN LUFT - WASSER - LEICHTE OELE
UNIDIREKTIONALES VENTIL
VENTIL WARTUNGSFREUNDLICH
LIEFERUMFANG DREIPOLIGER STECKER UNI ISO 6952 (DIN 43650B) -IP65
MONTAGEPOSITION Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
UMGEBUNGSTEMPERATUR 80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkrafte (M.O.P.D.) des Ventils beeintraechtigen.
- SONDERAUSFUEHRUNGEN**
- VERSION LANGSAM SCHLIESSEND.
 - VERSION MIT HOMOLOGATION KTW.



BOBINA TIPO B4
COIL TYPE B4
SPULE TYP B4

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 3/8	12	8613	2.10	10	10	61	89	48	77	0.540
G 1/2	12	8614	2.10	10	10	61	89	48	77	0.500
G 3/4	20	8615	5.70	10	10	87	101	69	84	0.800
G 1	25	8616	9.60	10	10	100	106	80	86	1.100
G 1 1/4	32	8617	22.00	10	10	131	122	112	95	2.500
G 1 1/2	39	8618	27.00	10	10	146	128	128	98	3.000
G 2	51	8619	35.00	10	10	174	145	146	108	4.600
G 2 1/2	65	8620	63.00	10	10	245	180	184	134	9.400
G 3	75	8621	83.00	10	10	250	190	184	139	11.230
3/8 NPT	12	8623	2.10	10	10	61	89	48	77	0.540
1/2 NPT	12	8624	2.10	10	10	69	89	48	77	0.510
3/4 NPT	20	8625	5.70	10	10	87	101	69	84	0.800
1 NPT	25	8626	9.60	10	10	108	106	80	86	1.130



CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

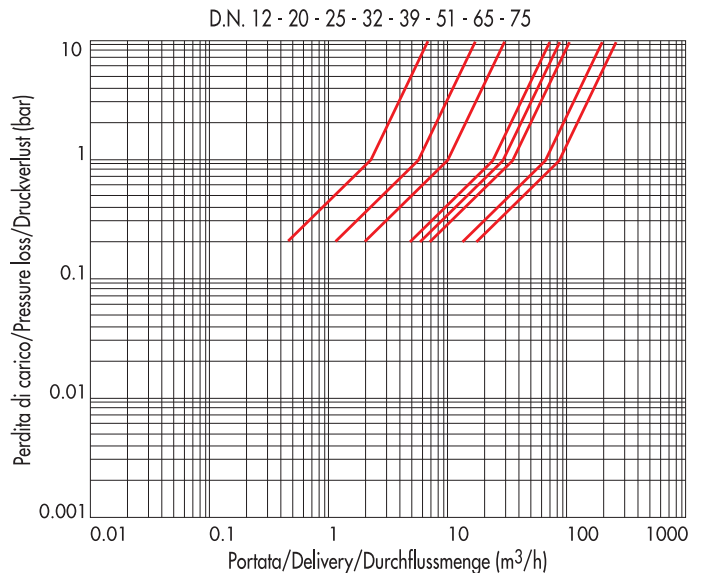
							POTENZA/POWER				
							NOMINALE HOLDING	SPUNTO IN RUSH			
V~	12	24	48	110	230	400	50	60	Hz	11VA	24VA
V=	12	24	48	110						16W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilspulnen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

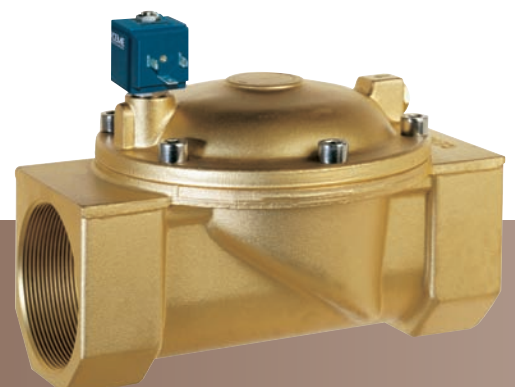
FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM	EPDM-KTW	FPM	80°C
90°C	130°C	130°C	150°C	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Cannotto	Tube guide	Plungerrohr
5 Nucleo mobile	Plunger	Plunger
6 Molla	Spring	Feder
7 Piattello	Support	Scheibe
8 Pastiglia	Seal	Dichtung
9 Molla	Spring	Feder
10 Vite	Screw	Schraube
11 Coperchio	Valve body top	Deckel
12 Molla	Spring	Feder
13 Membrana	Diaphragm	Membrane
14 Bussola	Bush	Buchse
15 Corpo	Valve body base	Grundkörper

RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule
B Cannotto	Tube guide	Plungerrohr
C Nucleo mobile	Plunger	Plunger
D Molla	Spring	Feder
E Membrana	Diaphragm	Membrane



**ELETTROVALVOLA SERVOCOMANDATA 2/2 VIE N.C.
SOLENOID VALVE PILOT OPERATED 2/2 WAY N.C.
SERVOGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.**



KTW

I CARATTERISTICHE GENERALI
PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO 0,3 bar
PARTI A CONTATTO CON IL FLUIDO

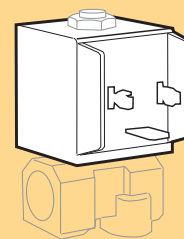
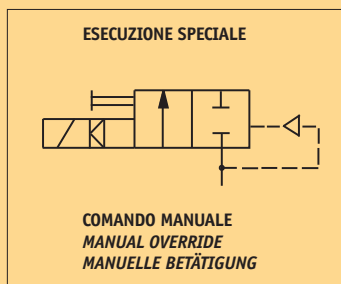
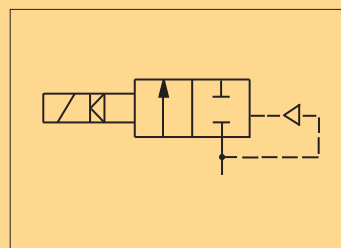
- TENUTA** NBR a richiesta FPM - EPDM
EPDM-KTW tenuta adatta e certificata DVGW per l'intercettazione di acqua potabile.
- CORPO** OTTONE
- TUBO GUIDA INOX** - Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego.
- Migliore resistenza alla corrosione.
- ORGANI INTERNI** ACCIAIO INOX
- FLUIDI** ARIA, ACQUA, OLII LEGGERI
- VALVOLA UNIDIREZIONALE** CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65.
Qualsiasi; sconsigliata quella con bobina rivolta verso il basso.
- VALVOLA ISPEZIONABILE** 80°C in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire
- VALVOLA FORNITA CON** - VERSIONE ANTI COLPO D'ARIE CON TEMPO DI CHIUSURA PIÙ LENTO.
- POSIZIONE DI MONTAGGIO** - VERSIONE CON COMANDO MANUALE APERTURA/CHIUSURA (DISPONIBILE PER I MODELLI 8616 - 8617 - 8618 - 8619 - 8620 - 8621).
- TEMPERATURA AMBIENTE** - VERSIONE CON MEMBRANA RINFORZATA PER UTILIZZO AD ALTA FREQUENZA D'INTERVENTO (DISPONIBILE PER I MODELLI 8615 - 8616 - 8617 - 8618 - 8619).
- ESECUZIONI SPECIALI** - VERSIONE CON OMOLOGAZIONE KTW.

UK GENERAL FEATURES
MINIMUM DIFFERENTIAL WORKING PRESSURE 0,3 bar
PARTS IN CONTACT WITH THE FLUID

- SEALING** NBR on request FPM - EPDM
EPDM-KTW sealing approved and DVGW certified for interception of potable water
- BODY** BRASS
- STAINLESS STEEL TUBE GUIDE** - Metallic sealing with the body for safety sealing also for high temperature applications.
- Improved corrosion resistance.
- INTERNAL PARTS** STAINLESS STEEL
- FLUIDS** AIR, WATER, LIGHT OILS
- ONE WAY DIRECTION VALVE** THREE POLE PLUG CONNECTOR UNI ISO 4400(DIN 43650A) -IP65
- SERVICEABLE VALVE** Any, the position with the coil downwards is not recommended.
- VALVE SUPPLIED WITH** 80°C in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
- MOUNTING POSITION** - VERSION WITH WATER HAMMER DEVICE FOR SLOWER CLOSING TIME.
- AMBIENT TEMPERATURE** - VERSION WITH MANUAL OVERRIDE (AVAILABLE FOR MODELS 8616-8617-8618-8619-8620 8621).
- SPECIAL EXECUTIONS** - VERSION WITH REINFORCED DIAPHRAGM FOR HIGH FREQUENCY APPLICATIONS (AVAILABLE FOR MODELS 8615-8616-8617-8618-8619).
- VERSION WITH KTW HOMOLOGATION.

D ALLGEMEINE MERKMALE
MINIMALER DIFFERENTIALARBEITSDRUCK 0,3 bar
MEDIUMS BERUEHRTE TEILE

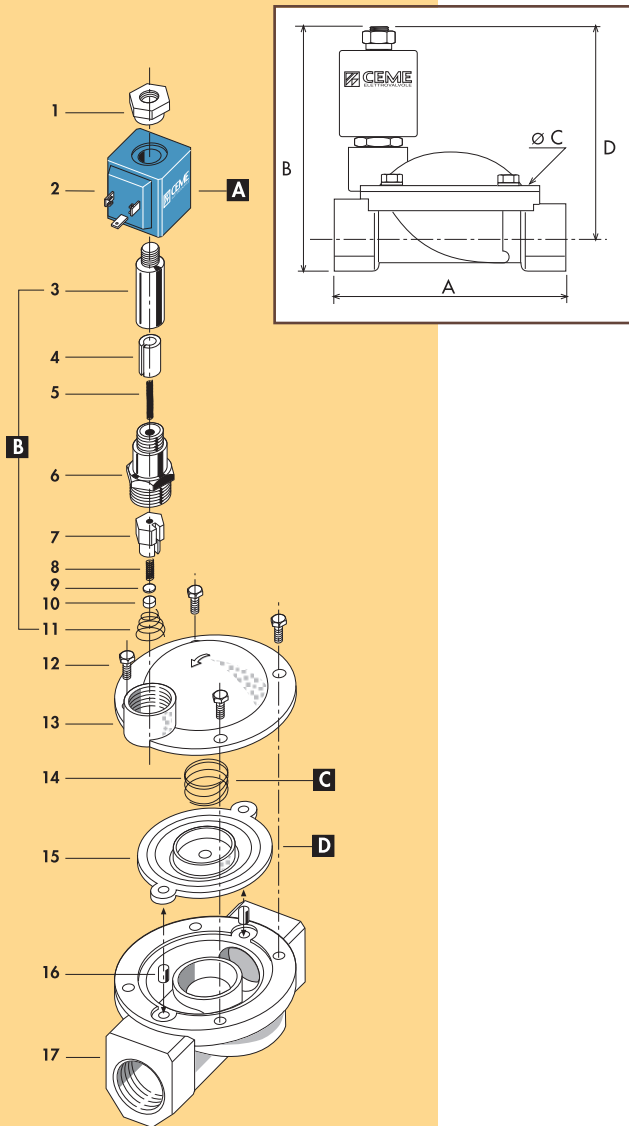
- DICHTUNG** NBR auf Nachfrage FPM - EPDM
EPDM-KTW Dichtung, DVGW-KTW zertifiziert fuer den Trinkwassereinsatz.
- KOERPER** MESSING
- PLUNGERROHR AUS EDELSTAHL** - Metallische Dichtung fuer einen sicheren Einsatz auch bei hohen Medien-temperaturen.
- Bessere Korrosionsbestaendigkeit.
- INNERE ELEMENTE** EDELSTAHL
- MEDIEN** LUFT, WASSER, LEICHTE OELE
- UNIDIREKTIONALES VENTIL**
- VENTIL WARTUNGSFREUNDLICH**
- LIEFERUMFANG** DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) -IP65
- MOUNTING POSITION** Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
- UMGEBUNGSTEMPERATUR** 80°C ,im D.C- Betrieb koennen Temperaturen ueber 40°C, die Schaltkrafte (M.O.P.D.) des Ventils beeintraechtigen.
- SONDERAUSFUEHRUNGEN** - VERSION LANGSAM SCHLIESSEND.
- VERSION MIT HANDBETAETIGUNG (VERFUEGBAR FUER MODELLE 8616-8617-8618-8619-8620-8621).
- VERSION MIT VERSTAERKTER MEMBRANE FUER DEN EINSATZ MIT HOHER SCHALTHAEUFIGKEIT (VERFUEGBAR FUER MODELLE 8615-8616-8617-8618-8619).
- VERSION MIT HOMOLOGATION KTW



**BOBINA TIPO B6
COIL TYPE B6
SPULE TYP B6**

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 3/8	10	8713	1.86	10	10	61	95	48	83	0.600
G 1/2	12	8714	2.10	10	10	61	95	48	83	0.550
G 3/4	20	8715	5.70	10	10	87	107	69	91	0.850
G 1	25	8716	9.60	10	10	100	113	80	93	1.100
G 1 1/4	32	8717	22.00	10	10	131	128	112	101	2.700
G 1 1/2	39	8718	27.00	10	10	146	135	128	105	3.000
G 2	51	8719	35.00	10	10	174	151	146	114	4.500
G 2 1/2	65	8720	63.00	10	10	245	186	184	140	9.500
G 3	75	8721	83.00	10	10	250	196	184	145	11.230
3/8 NPT	12	8723	2.10	10	10	61	95	48	83	0.600
1/2 NPT	12	8724	2.10	10	10	61	95	48	83	0.560
3/4 NPT	20	8725	5.70	10	10	87	107	69	91	0.850
1 NPT	25	8726	9.60	10	10	108	113	80	93	1.130



CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

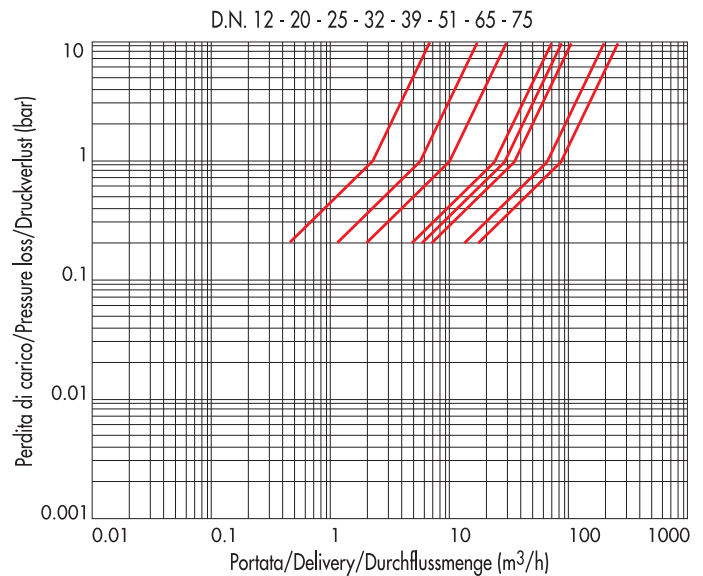
	V~					V=		POTENZA/POWER NOMINALE HOLDING SPUNTO IN RUSH			
	12	24	48	110	230	400	50	60	Hz	15VA	25VA
	12	24	48	110						16W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

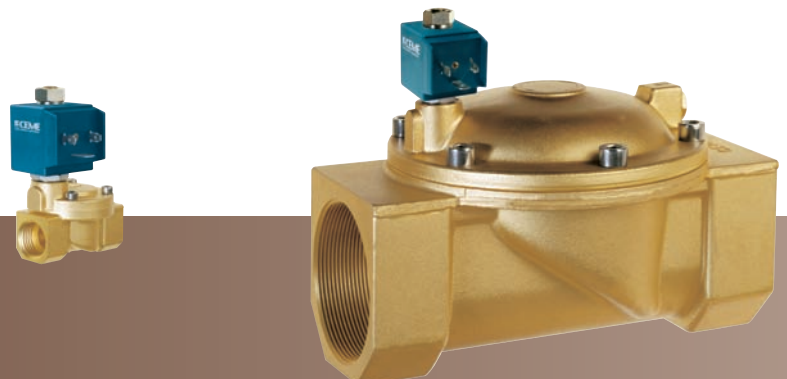
MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM	EPDM-KTW	FPM	80°C
90°C	130°C	130°C	150°C	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1	Dado	Lock nut	Mutter
2	Bobina	Coil	Magnetspule
3	Cannotto	Tube guide	Plungerrohr
4	Nucleo mobile	Plunger	Plunger
5	Molla	Spring	Feder
6	Cannotto-Nucleo fisso	Tube guide-Tube top	Plungerrohr-Kern
7	Otturatore	Shutter	Verschluss
8	Molla	Spring	Feder
9	Piattello	Support	Scheibe
10	Pastiglia	Seal	Dichtung
11	Molla	Spring	Feder
12	Vite	Screw	Schraube
13	Coperchio	Valve body top	Deckel
14	Molla	Spring	Feder
15	Membrana	Diaphragm	Membrane
16	Bussola	Bush	Buchse
17	Corpo	Valve body base	Grundkörper
RICAMBI SPARE PARTS ERSATZTEILE			
A	Bobina	Coil	Magnetspule
B	Gruppo pilota	Pilote unit	Verschleißteilsatz Komplett
C	Molla	Spring	Feder
D	Membrana	Diaphragm	Membrane



**ELETTROVALVOLA SERVOCOMANDATA 2/2 VIE N.A.
SOLENOID VALVE PILOT OPERATED 2/2 WAY N.O
SERVOGESTEUERTES MAGNETVENTIL 2/2 WEGE S.O.**



I CARATTERISTICHE GENERALI

PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO 0,3 bar

PARTI A CONTATTO CON IL FLUIDO

TENUTA	NBR a richiesta FPM EPDM EPDM-KTW tenuta adatta e certificata DVGW per l'intercettazione di acqua potabile.
CORPO	OTTONE
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	ACQUA - ARIA - OLII LEGGERI
VALVOLA UNIDIREZIONALE	CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A)-IP 65
VALVOLA ISPEZIONABILE	Qualsiasi; sconsigliata quella con bobina rivolta verso il basso.
VALVOLA FORNITA CON POSIZIONE DI MONTAGGIO	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.
TEMPERATURA AMBIENTE	

- ESECUZIONI SPECIALI**
- VERSIONE ANTI COLPO D'ARIETE CON TEMPO DI CHIUSURA PIU' LENTO.
 - VERSIONE CON MEMBRANA RINFORZATA PER UTILIZZO AD ALTA FREQUENZA DI INTERVENTO (DISPONIBILE PER MODELLI 8715 - 8716 - 8717 - 8718 - 8719).
 - VERSIONE CON OMOLOGAZIONE KTW.

UK GENERAL FEATURES

MINIMUM WORKING PRESSURE 0,3 bar

PARTS IN CONTACT WITH THE FLUID

SEALING	NBR, on request FPM - EPDM EPDM - KTW sealing approved and sealing approved and DVGW certified for interception of potable water
BODY	BRASS
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	WATER - AIR - LIGHT OILS

ONE WAY DIRECTION VALVE	THREE POLE PLUG CONNECTOR UNI ISO 4400(DIN 43650A)-IP65
SERVICEABLE VALVE	Any, the position with the coil downwards is not recommended.
VALVE SUPPLIED WITH MOUNTING POSITION	80°C, in D.C. for temperatures higher than 40°C, the performances(M.O.P.D.) could decrease.
AMBIENT TEMPERATURE	

- SPECIAL EXECUTIONS**
- VERSION WITH WATER HAMMER DEVICE FOR SLOWER CLOSING TIME.
 - VERSION WITH REINFORCED DIAPHRAGM FOR HIGH FREQUENCY APPLICATIONS (AVAILABLE FOR MODELS 8715-8716-8717-8718-8719).
 - VERSION WITH KTW HOMOLOGATION.

D ALLGEMEINE MERKMALE

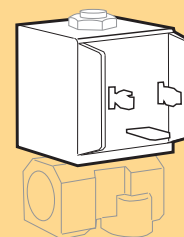
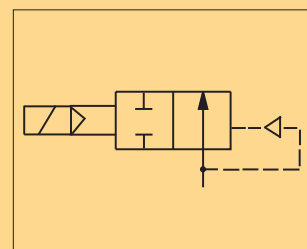
MINIMALER ARBEITSDRUCK 0,3 bar

MEDIUMS BERUEHRTE ELEMENTE

DICHTUNG	NBR, auf Nachfrage FPM -EPDM EPDM - KTW Dichtung DVGW-KTW zertifiziert fuer den Trinkwassereinsatz.
KOERPER	MESSING
INNERE ELEMENTE	EDELSTAHL
MEDIEN	WASSER - LUFT - LEICHTE OELE

UNIDIREKTIONALES VENTIL	DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) -IP65
VENTIL WARTUNGSFREUNDLICH	Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
LIEFERUMFANG	80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C ,die Schaltkrafte (M.O.P.D.) des Ventils beeintraechtigen.
MONTAGEPOSITION	
UMGEBUNGSTEMPERATUR	

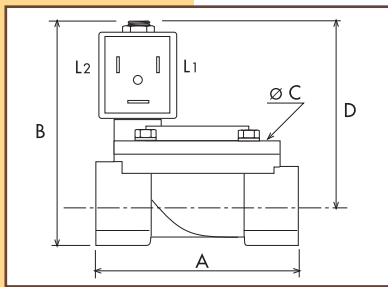
- SONDERAUSFUEHRUNGEN**
- VERSION LANGSAM SCHLIESSEND.
 - VERSION MIT VERSTAERKTER MEMBRANE FUEER DEN EINSATZ MIT HOHER SCHALTHAEUEFIGKEIT (VERFUEGBAR FUEER MODELLE 8715-8716-8717-8718-8719).
 - VERSION MIT HOMOLOGATION KTW



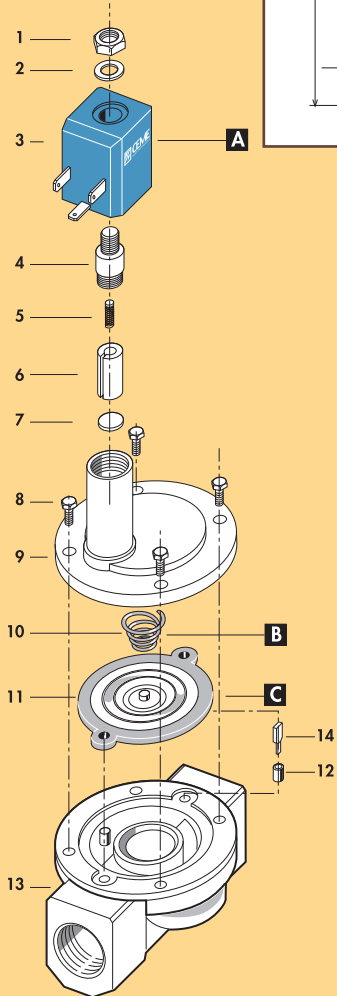
**BOBINA TIPO B6 NA
COIL TYPE B6 NA
SPULE TYP B6 NA**

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar DC	DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
					A	B	C	D	
G 3/8	10	8813	1.86	6	61	73.5	48	61	0.430
G 1/2	12	8814	2.10	6	61	73.5	48	61	0.500
3/8 NPT	10	8823	2.10	6	61	73.5	48	61	0.430
1/2 NPT	12	8824	2.10	6	69	73.5	48	61	0.510



8813
8814
8823
8824



BISTABILE

ALIMENTAZIONE:
- GENERATORE IN D.C. OPPURE PILE ELETTRICHE
DI TIPO COMUNE
- IMPULSO IN D.C. >20 millisecondi

COLLEGAMENTO: I DUE FASTON LINEA (L1, L2)
SONO INTERCAMBIABILI

FUNZIONAMENTO: TRAMITE UN CIRCUITO OSCIL-
LANTE SI DEVE INVERTIRE LA POLARITA' (+ e -)
SUI TERMINALI DELLA BOBINA PER CAMBIARE LA
POSIZIONE DELLA VALVOLA DA APERTA A CHIUSA
E VICEVERSA. QUESTO CIRCUITO OSCILLANTE NON
E' INTEGRATO NELLA VALVOLA.
LA VALVOLA QUINDI NON RIMANE SOTTO ALIMEN-
TAZIONE DURANTE IL FUNZIONAMENTO.

BI-STABLE

POWER SUPPLY:
- GENERATOR IN D.C. OR STANDARD CELL
- IMPULSE IN D.C. >20 milliseconds

CONNECTION: THE TWO LINE FASTONS (L1, L2)
ARE INTERCHANGEABLE

FUNCTIONING: ALTHOUGH AN OSCILLATING CIR-
CUIT THE POLARITY (+/-) HAS TO BE CHANGED
ON THE COIL TERMINALS TO CHANGE THE WORK-
ING OF THE VALVE FROM OPEN TO CLOSE AND
THE REVERSE, THIS OSCILLATING CIRCUIT IS NOT
INTEGRATED ON THE VALVE AND DOES NOT REQUI-
RE POWER TO BE MAINTAINED DURING FUNCTIO-
NING.

BISTABLES

STROMVERSORGUNG:
- IMPULSE IN D.C. >20 MILLISEKUNDEN
- GLEICHSPANNUNGSQUELLE IN FORM EINER
GENERATORS ODER EINER BATTERIE.

ANSCHLUSS:
DIE ZWEI FLACHSTECKER(L1, L2)
POLARITAET WECHSELBAR

BETRIEB:
UM DEN SCHALTZUSTAND DES VENTILS VON
GEOFFNET AUF GESCHLOSSEN ZU VERAENDERN,
MUSS DIE POLARITAET (+ UND -) DER
GLEICHSPANNUNGSQUELLE UMGEKEHRT WERDEN.
HAT DAS VENTIL DURCH EINEN
SPANNUNGSPULS SEINEN SCHALTZUSTAND
ERREICHT, VERBRAUCHT ES KEINE LEISTUNG
MEHR.

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

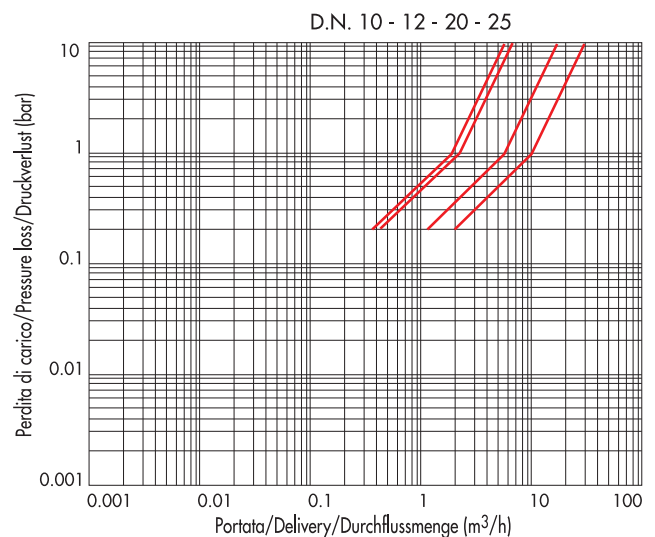
V=	6	9	12	24	POTENZA/POWER NOMINALE/HOLDING
					2,5W

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
NBR	EPDM			40°C
90°C	130°C			

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Nucleo fisso	Tube top	Kern
5	Molla	Spring	Feder
6	Nucleo mobile	Plunger	Plunger
7	Pastiglia	Seal	Dichtung
8	Vite	Screw	Schraube
9	Coperchio	Valve body top	Deckel
10	Molla	Spring	Feder
11	Membrana	Diaphragm	Membrane
12	Bussola	Bush	Buchse
13	Corpo	Valve body base	Grundkörper
14	Spillo	Plunger	Spindel
15	O-ring	O-ring	O-ring

	RICAMBI	SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Molla	Spring	Feder
C	Membrana	Diaphragm	Membrane



8813
8814
8823
8824

ELETTROVALVOLA BISTABILE SERVOCOMANDATA 2/2 VIE N.C.
BI-STABLE SOLENOID VALVE PILOT OPERATED 2/2 WAY N.C.
BISTABLES SERVOGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



I

CARATTERISTICHE GENERALI

PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO 0,25 bar

PARTI A CONTATTO CON IL FLUIDO

TENUTA NBR su richiesta FPM, EPDM, EPDM-KTW.

CORPO OTTONE

ORGANI INTERNI ACCIAIO INOX

FLUIDI ACQUA - ARIA

VALVOLA UNIDIREZIONALE

VALVOLA ISPEZIONABILE

VALVOLA CON SISTEMA ANTI COLPO D'ARIETE, TEMPO DI CHIUSURA LENTO

VALVOLA FORNITA CON CONNETTORE TRIPOLARE UNI ISO 6952 (DIN 43650B)-IP65

POSIZIONE DI MONTAGGIO Qualsiasi. Per ottenere le massime prestazioni le valvole devono essere montate con la bobina rivolta verso l'alto; si sconsiglia quella con bobina rivolta verso il basso, ed il montaggio su apparecchi che possano subire forti urti o vibrazioni.

TEMPERATURA AMBIENTE 40°C

UK

GENERAL FEATURES

MINIMUM DIFFERENTIAL WORKING PRESSURE 0,25 bar

PARTS IN CONTACT WITH THE FLUID

SEALING NBR on request FPM, EPDM, EPDM-KTW.

BODY BRASS

INTERNAL PARTS STAINLESS STEEL

FLUIDS WATER-AIR

ONE WAY DIRECTION VALVE

SERVICEABLE VALVE

VALVE WITH WATER HAMMER DEVICE FOR SLOWER CLOSING TIME

VALVE SUPPLIED WITH THREE POLE PLUG CONNECTOR UNI ISO 6952 (DIN 43650B)-IP65

MOUNTING POSITION Any, to obtain the best performance the valve has to be installed with the coil vertical. The position of the coil downwards and the mounting on machines subject of strong shocks and vibrations, is not recommended.

AMBIENT TEMPERATURE 40°C

D

CARATTERISTICHE GENERALI

MINIMALER DIFFERENTIALARBEITSDRUCK 0,25 bar

MEDIUMS BERUEHRTE ELEMENTE

DICHTUNG NBR FPM auf Anfrage, EPDM, EPDM-KTW .

KOERPER MESSING

INNERE ELEMENTE EDELSTAHL

MEDIEN WASSER- LUFT

UNIDIREKTIONALES VENTIL

VENTIL WARTUNGSFREUNDLICH

VENTIL LANGSAM SCHLIESSEND

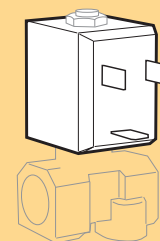
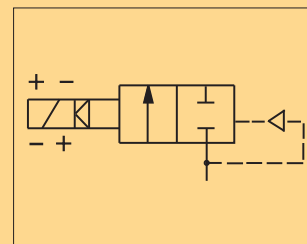
LIEFERUMFANG DREIPOLIGER STECKER UNI ISO 6952 (DIN 43650B) -IP65

MONTAGEPOSITION Keine Einschränkungen. Um beste Leistungen zu erreichen muessen die Ventile mit der Spule senkrecht nach oben eingebaut werden. Von Montagen mit dem Spulenkopf senkrecht nach unten b.z.w. auf Geraeten die starken Schlaegen oder Vibrationen ausgesetzt sind, wird abgeraten.

UMGEBUNGSTEMPERATUR 40°C



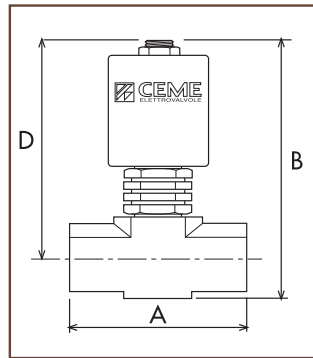
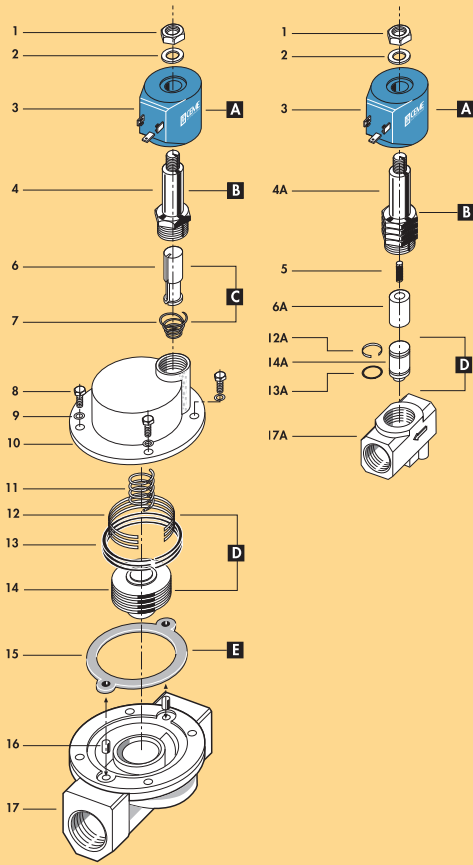
BISTABILE
BI-STABLE
BISTABLES



BOBINA TIPO B4
COIL TYPE B4
SPULE TYP B4

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 3/8	12	9003	2,4	10	5	73	118	48	105,5	0.750
G 1/2	12	9004	2,4	10	5	73	118	48	105,5	0.730
G 3/8	8,0	9013	1,08	10	5	56	99	60	81	0.470
G 1/2	8,0	9014	1,08	10	5	56	99	60	81	0.500
G 3/4	21	9015	6,3	10	5	100	134	80	116	1.450
G 1	21	9016	6,3	10	5	100	139	80	119	1.480
G 1 1/4	38	9017	20,4	10	5	146	184	128	154	4.500
G 1 1/2	38	9018	20,4	10	5	146	184	128	154	4.300
G 2	50	9019	34,8	10	5	174	219	146	184	7.200



CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

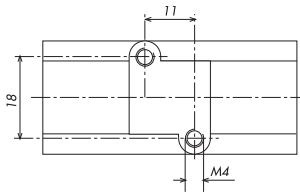
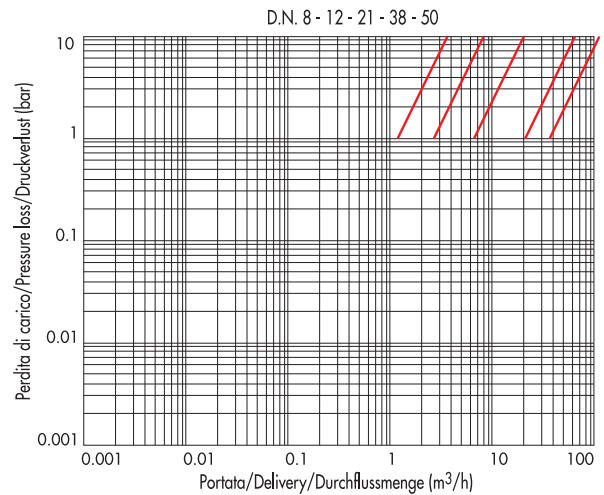
V~	NOMINALE HOLDING						SPUNTO IN RUSH				
	12	24	48	110	230	400	50	60	Hz	20VA	38VA
V=	12	24	48	110							14W

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coil see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT	
PTFE			80°C	
180°C			Versioni/Versions/Versionen 230V/50 : 120°C 230V/50-60 Hz : 120°C	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Cannotto	Tube guide	Plungerrohr
5	Molla	Spring	Feder
6	Nucleo mobile	Plunger	Plunger
7	Molla	Spring	Feder
8	Vite	Screw	Schraube
9	Rondella spaccata	Split washer	Gebrochene Scheibe
10	Coperchio	Valve body top	Deckel
11	Molla	Spring	Feder
12	Molla	Spring	Feder
13	Fascia elastica	Piston rings	Kolbenring
14	Otturatore	Piston	Verschluss
15	Guarnizione	Gasket	Dichtung
16	Bussola	Bush	Buchse
17	Corpo	Valve body base	Grundkörper
RICAMBI		SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Cannotto	Tube guide	Plungerrohr
C	Nucleo mobile	Plunger	Plunger
D	Otturatore	Piston	Verschluss
E	Guarnizione	Gasket	Dichtung

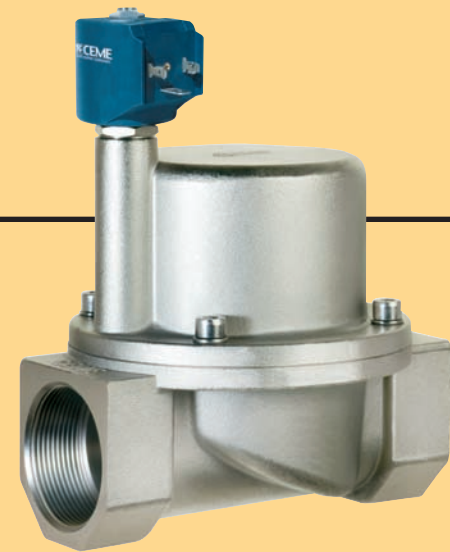


ELETTROVALVOLA SERVOCOMANDATA 2/2 VIE N.C.
SOLENOID VALVE PILOT OPERATED 2/2 WAY N.C.
SERVOGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



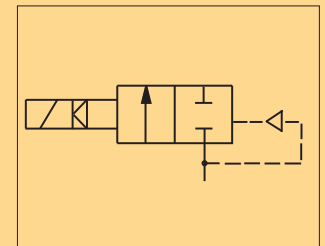
I CARATTERISTICHE GENERALI
PRESSIONE MINIMA DIFFERENZIALE DI FUNZIONAMENTO 1 bar
PARTI A CONTATTO CON IL FLUIDO

TENUTA	PTFE L'otturatore principale è un pistone in PTFE con fasce di tenuta radiale in PTFE caricato grafite autolubrificante
CORPO	OTTONE NICHELATO CON SEDE DI TENUTA INOX
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	VAPORE
VALVOLA UNIDIREZIONALE	
VALVOLA ISPEZIONABILE	
VALVOLA FORNITA CON POSIZIONE DI MONTAGGIO	CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A) - IP65 Qualsiasi; sconsigliata quella con bobina rivolta verso il basso. Per i modelli 9017, 9018, 9019 si consiglia di montare la valvola con bobina rivolta verso l'alto
TEMPERATURA AMBIENTE	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire



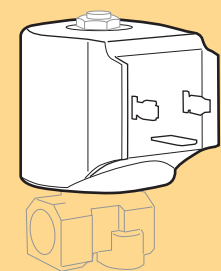
UK GENERAL FEATURES
MINIMUM DIFFERENTIAL WORKING PRESSURE 1 bar
PARTS IN CONTACT WITH THE FLUID

SEALING	PTFE The principal closing is via a PTFE piston with PTFE radial seal bands, graphite loaded, self-lubricating.
BODY	NICKEL-PLATED BRASS WITH SEALING SEAT IN STAINLESS STEEL.
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	STEAM
ONE WAY DIRECTION VALVE	
SERVICEABLE VALVE	
VALVE SUPPLIED WITH	THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A)-IP65
MOUNTING POSITION	Any, the position with the coil downwards is not recommended. For the models 9017,9018,9019 we advice to install the valve with the coil vertical.
AMBIENT TEMPERATURE	80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.



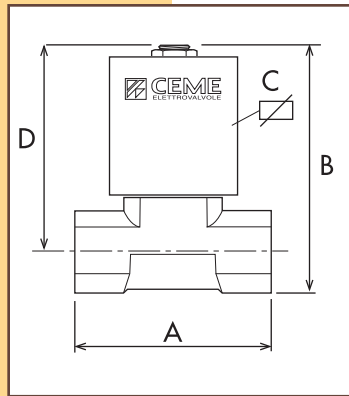
D ALLGEMEINE MERKMALE
MINIMALER DIFFERENTIALARBEITSDRUCK 1 bar
MEDIUMS BERUEHRTE ELEMENTE

DICHTUNG	PTFE Der Hauptverschluss besteht aus einem PTFE-Kolben mit PTFE Radialkolbenringen, graphitiiert, selbstschmierend.
KOERPER	VERNICKELTES MESSING MIT VENTILSITZ AUS EDELSTAHL
INNERE ELEMENTE	EDELSTAHL
MEDIEN	DAMPF
UNIDIREKTIONALES VENTIL	
VENTIL WARTUNGSFREUNDLICH	
LIEFERUMFANG	DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A)-IP65
MONTAGEPOSITION	Keine Einschränkungen, ausser fuer Montage mit dem Spulenkopf senkrecht nach unten nur auf Anfrage. Fuer die Modelle 9017,9018,9019 wird die Montage des Ventils mit dem Spulenkopf senkrecht nach oben empfohlen.
UMGEBUNGSTEMPERATUR	80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltfraefte (M.O.P.D.) des Ventils beeintraechtigen.

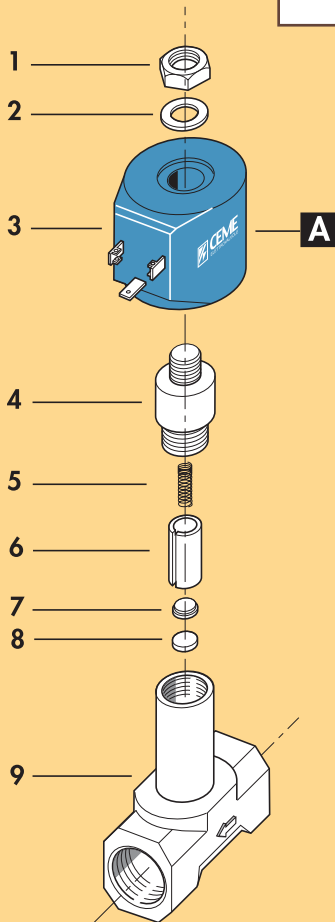


BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12

CARATTERISTICHE SPECIFICATIONS



ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
1/2 NPT	3,5	9309	0.30	15	7	56	76	60	63	0.435
G 1/4	2,8	9312	0.23	20	10	42	69	60	60	0.350
G 1/4	3,5	9312	0.27	15	7	42	69	60	60	0.350
G 3/8	2,8	9313	0.23	20	10	47	73	60	62	0.380
G 3/8	3,5	9313	0.30	15	7	47	73	60	62	0.380
G 3/8	5,0	9313	0.48	5	3	47	73	60	62	0.380
G 1/2	2,8	9314	0.23	20	10	56	76	60	63	0.435
G 1/2	3,5	9314	0.30	15	7	56	76	60	63	0.435
G 1/2	5,0	9314	0.48	5	3	56	76	60	63	0.435



CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

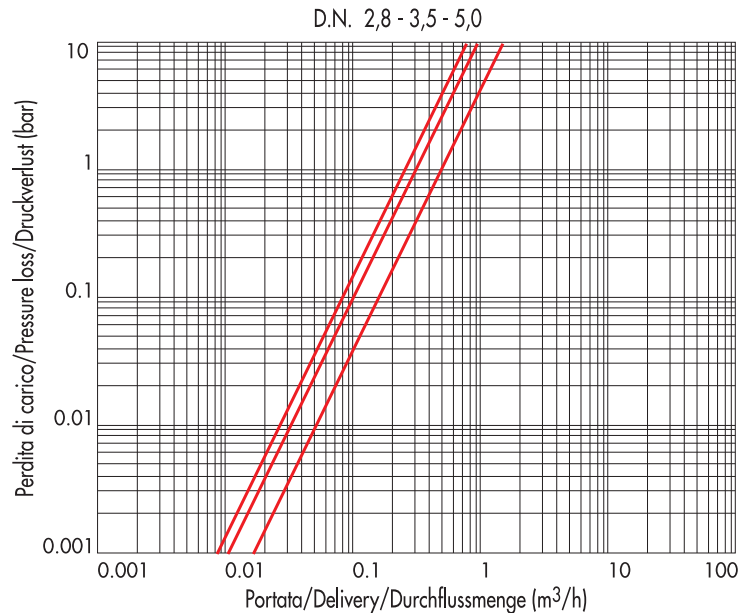
V~	12	24	48	110	230	400	POTENZA/POWER				
							NOMINALE HOLDING	SPUNTO IN RUSH			
							50	60	Hz	27VA	38VA
V=	12	24	48	110						14W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE
INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS			AMBIENTE/AMBIENT
EPDM	EPDM-KTW	FPM	80°C
155°C	130°C	150°C	

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Nucleo fisso	Tube top	Kern
5 Molla	Spring	Feder
6 Nucleo mobile	Plunger	Plunger
7 Piattello	Support	Scheibe
8 Pastiglia	Seal	Dichtung
9 Corpo	Valve body base	Grundkörper
RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule



**ELETTROVALVOLA AZIONE DIRETTA 2/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.**



I

CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO 0 bar

PARTI A CONTATTO CON IL FLUIDO

TENUTA EPDM - FPM - EPDM-KTW
CORPO OTTONE CON SEDE DI TENUTA INOX (esclusa la sede Ø 5).
ORGANI INTERNI ACCIAIO INOX

FLUIDI ACQUA - ARIA - GAS - VAPORE - GASOLIO - NAFTA

VALVOLA UNIDIREZIONALE

VALVOLA NON ISPEZIONABILE

VALVOLA FORNITA CON CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A)-IP65.

POSIZIONE DI MONTAGGIO Qualsiasi; sconsigliata quella con bobina rivolta verso il basso.

TEMPERATURA AMBIENTE 80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire.

ACCESSORI - FILTRO MECCANICO IN INGRESSO (9314).

UK

GENERAL FEATURES

MINIMUM WORKING PRESSURE 0 bar

PARTS IN CONTACT WITH THE FLUID

SEALING EPDM - FPM - EPDM-KTW
BODY BRASS WITH SEALING SEAT IN STAINLESS STEEL (except for valve Ø 5).
INTERNAL PARTS STAINLESS STEEL

FLUIDS WATER - AIR- GAS - STEAM - DIESEL OIL - NAFTA

ONE WAY DIRECTION VALVE

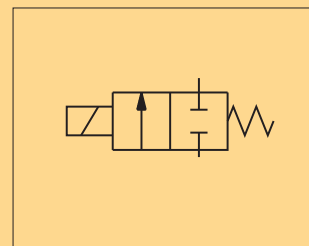
NON-SERVICEABLE VALVE

VALVE SUPPLIED WITH THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A)-IP65.

MOUNTING POSITION Any, the position with the coil downwards is not recommended.

AMBIENT TEMPERATURE 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

ACCESSORIES - MECHANICAL FILTER ON THE INLET SIDE (9314).



D

ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK 0 bar

MEDIUMS BERUEHRTE ELEMENTE

DICHTUNG EPDM - FPM - EPDM-KTW
KOERPER MESSING MIT VENTILSITZ AUS EDELSTAHL (ausser fuer Ventil Ø 5).
INNERE ELEMENTE EDELSTAHL

MEDIEN WASSER - LUFT - GAS - DAMPF - DIESEL OEL - NAFTA

UNIDIREKTIONALES VENTIL

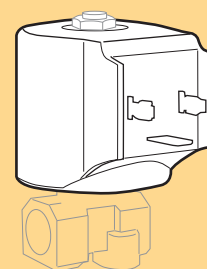
VENTIL WARTUNGSFREI

LIEFERUMFANG DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) -IP65.

MONTAGEPOSITION Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.

UMGEBUNGSTEMPERATUR 80°C, im D.C. Betrieb koennen Temperaturen ueber 40°C, die Schaltkreaefte (M.O.P.D.) des Ventils beeintraechtigen.

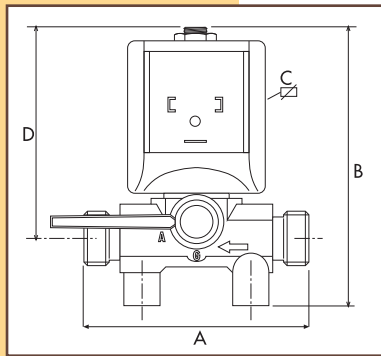
ZUBEHOER - MECHANISCHER FEINFILTER AN DER EINGANGSSEITE (9314).



**BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12**

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/2	5,7	9300	0.415	2.5	1.5	56	83.5	65	62.5	0.500
G 3/8	5,7	9301	0.415	2.5	1.5	62	79	65	59.5	0.440
G 1/2	10	9950	0.800	1.5	1	56	97	67	76	0.570
G 1	19	9399	8.400	5	4	100	190	105	170	3.000



CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

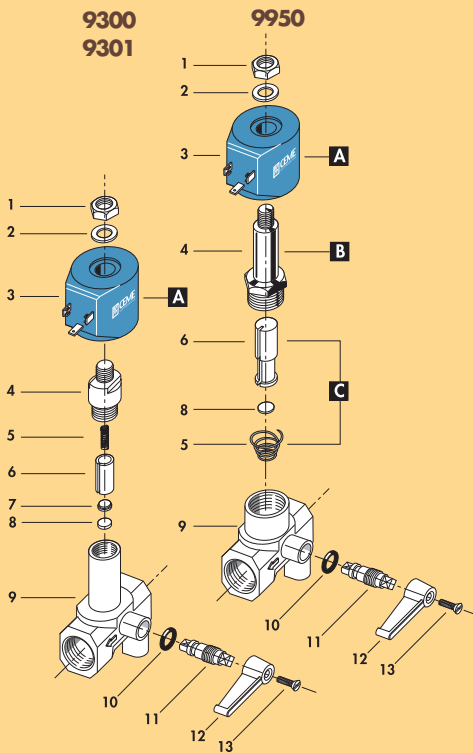
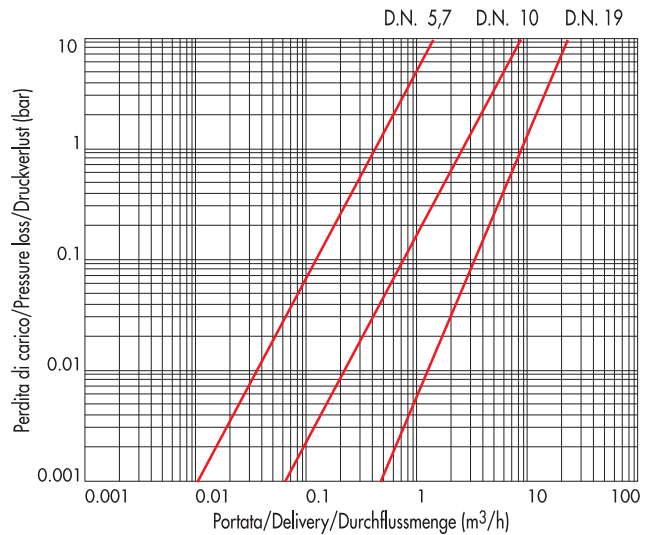
	POTENZA/POWER							
	9300-9301		9399		9950			
	NOMINALE HOLDING	SPUNTO IN RUSH	NOMINALE HOLDING	SPUNTO IN RUSH	NOMINALE HOLDING	SPUNTO IN RUSH		
V~	12 24 48 110 230 400	50 60 Hz	27VA	38VA	140VA	430VA	-	-
V=	12 24 48 110		14W		43W		14W	

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

	FLUIDI/FLUIDS	AMBIENTE/AMBIENT
FPM		80°C
150°C		

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



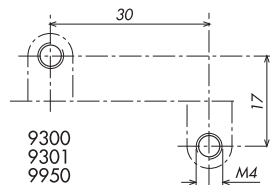
9300 - 9301 - 9950

1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Nucleo fisso	Tube top	Kern
5 Molla	Spring	Feder
6 Nucleo mobile	Plunger	Plunger
7 Piattello	Support	Scheibe
8 Pastiglia	Seal	Dichtung
9 Corpo	Valve body base	Grundkörper
10 O-ring	O-ring	O-ring
11 Perno di regolazione	Regulation bolt	Einstellungsbolzen
12 Manopola	Knob	Handrad
13 Vite	Screw	Schraube

RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule
B Cannotto	Tube guide	Plungerrohr
C Nucleo mobile	Plunger	Plunger

9399

RICAMBI	SPARE PARTS	ERSATZTEILE
Rivolgersi al nostro SERVIZIO TECNICO	Please contact our TECHNICAL SERVICE	Bitte wenden Sie sich an unsere TECHNISCHE DIENSTABTEILUNG



9300 - 9950



9301



9399



**ELETTROVALVOLA COMANDO MANUALE
AZIONE DIRETTA 2/2 VIE N.C.**

**SOLENOID VALVE MANUAL OVERRIDE
DIRECT ACTING 2/2 WAY N.C.**

**ELEKTROMAGNETISCHES BZW. HANDBETAETIGTES
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.**



I CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO	0 bar
PARTI A CONTATTO CON IL FLUIDO	
TENUTA	FPM
CORPO	OTTONE OTTONE NICHELATO (9399)
ORGANI INTERNI	ACCIAIO INOX
FLUIDI	GASOLIO, ACQUA, OLII LEGGERI
VALVOLA UNIDIREZIONALE	
VALVOLA ISPEZIONABILE	
COMANDO MANUALE DI APERTURA/CHIUSURA	
VALVOLA FORNITA CON	CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A)-IP65 (9300, 9301, 9399, 9950) STAFFA E VITE DI FISSAGGIO (9300, 9301, 9950) RACCORDO PER TUBO RAME (9301) RACCORDO PORTAGOMMA (9301)
POSIZIONE DI MONTAGGIO	Qualsiasi; sconsigliata quella con bobina rivolta verso il basso
TEMPERATURA AMBIENTE	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire

UK GENERAL FEATURES

MINIMUM WORKING PRESSURE	0 bar
PARTS IN CONTACT WITH THE FLUID:	
SEALING	FPM
BODY	BRASS NICKEL-PLATED BRASS (9399)
INTERNAL PARTS	STAINLESS STEEL
FLUIDS	DIESEL OIL, WATER, LIGHT OILS
ONE WAY DIRECTION VALVE	
SERVICEABLE VALVE	
MANUAL CONTROL FOR OPENING/CLOSING	
VALVE SUPPLIED WITH	- THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) -IP65 (9300,9301,9399,9950) SCREW AND MOUNTING BRACKET(9300, 9301, 9950) COPPER TUBE CONNECTION(9301) HOSE BIB CONNECTION (9301)
MOUNTING POSITION	Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE	80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK	0 bar
MEDIUMS BERUEHRTE ELEMENTE	
DICHTUNG	FPM
KOERPER	MESSING VERNICKELTES MESSING (9399)
INNERE ELEMENTE	EDELSTAHL
MEDIEN	DIESEL OEL, WASSER, LEICHTE OELE
UNIDIREKTIONALES VENTIL	
VENTIL WARTUNGSFREUNDLICH	
STELLHAN ZUR MANUELLEN BETAETIGUNG	
LIEFERUMFANG	DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) -IP65 (9300, 9301, 9399, 9950) SCHRAUBE UND BEFESTIGUNGSBUEGEL (9300, 9301, 9950) KUPFERROHRANSCHLUSS (9301) SCHLAUCHNIPPELANSCHLUSS (9301)
MONTAGEPOSITION	Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
UMGEBUNGSTEMPERATUR	80°C, im D.C-Betrieb koennen Temperaturen ueber 40°C die Schaltkraefte (M.O.P.D.) des Ventils beeintraechtigen.

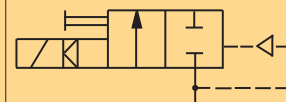


9300 - 9301 - 9950

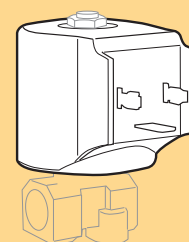


COMANDO MANUALE
MANUAL OVERRIDE
MANUELLE BETÄTIGUNG

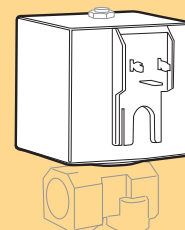
9399



COMANDO MANUALE
MANUAL OVERRIDE
MANUELLE BETÄTIGUNG



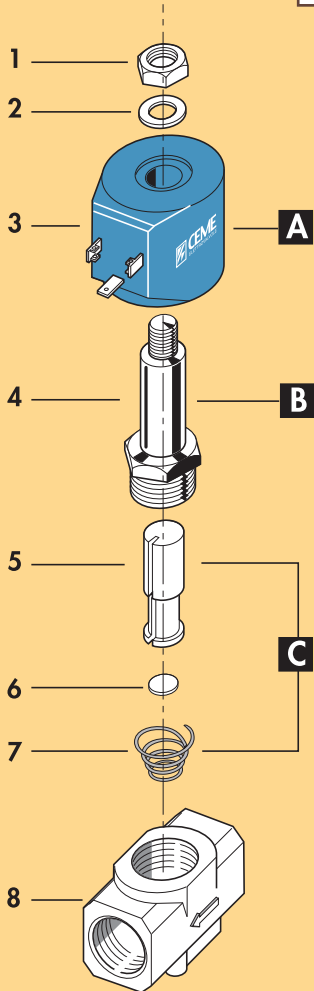
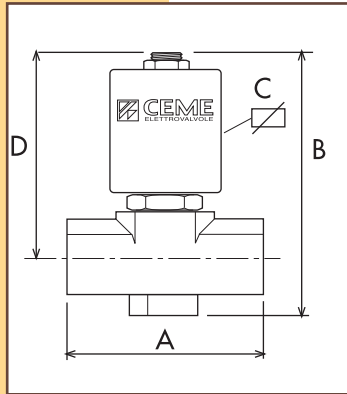
9300-9301-9950
BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12



9399
BOBINA TIPO B60
COIL TYPE B60
SPULE TYP B60

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
1/4 NPT	2,8	9902	0.250	11	6	37	82	60	73	0.410
G 1/4	2,8	9912	0.250	11	6	37	82	60	73	0.410
G 1/4	4,0	9912	0.370	10	4	37	82	60	73	0.410
G 1/4	5,5	9912	0.560	6	2	37	82	60	73	0.410
G 3/8	3,5	9913	0.360	10	5	56	87	60	69	0.540
G 3/8	4,0	9913	0.470	10	4	56	87	60	69	0.540
G 3/8	5,5	9913	0.560	6	2	56	87	60	69	0.540
G 1/2	4,0	9914	0.470	10	4	56	87	60	69	0.505
G 1/2	5,5	9914	0.560	6	2	56	87	60	69	0.505
G 1/2	7,0	9914	0.730	5	1.5	56	87	60	69	0.505
G 1/4	2,8	9942	0.240	25	8	42	82	60	73	0.400
G 1/4	4,0	9942	0.420	12	5	42	82	60	73	0.400
G 1/4	6,0	9942	0.650	6	2	42	82	60	73	0.400
1/4 NPT	6,0	9947	0.650	6	2	42	82	60	73	0.400



CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

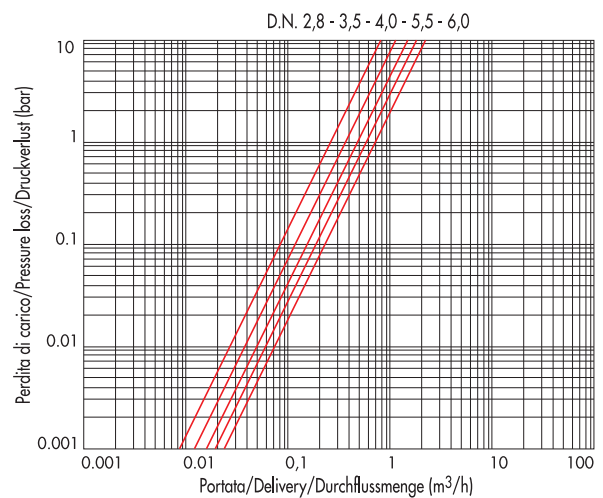
	POTENZA/POWER			
	9902-12-13-14		9942	
	NOMINALE HOLDING	SPUNTO IN RUSH	NOMINALE HOLDING	SPUNTO IN RUSH
V~	12 24 48 110 230 400	50 60	Hz	20VA 34VA 18,5VA 32VA
V=	12 24 48 110			14W 14W

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS				AMBIENTE/AMBIENT
EPDM	FPM	PTFE	RULON	80°C
155°C	150°C	180°C	180°C	Versioni/Versions/Versionen 230V/50 Hz : 120°C 230V/50-60 Hz : 120°C

DIAGRAMMA PERDITA DI CARICO PRESSURE LOSS DIAGRAM



1	Dado	Lock nut	Mutter
2	Rondella	Washer	Beilagscheibe
3	Bobina	Coil	Magnetspule
4	Cannotto	Tube guide	Plungerrohr
5	Nucleo mobile	Plunger	Plunger
6	Pastiglia	Seal	Dichtung
7	Molla	Spring	Feder
8	Corpo	Valve body base	Grundkörper
	RICAMBI	SPARE PARTS	ERSATZTEILE
A	Bobina	Coil	Magnetspule
B	Cannotto	Tube guide	Plungerrohr
C	Nucleo mobile	Plunger	Plunger

9902 - 9912



9913 - 9914



9942-9947



ELETTROVALVOLA AZIONE DIRETTA 2/2 VIE N.C.
SOLENOID VALVE DIRECT ACTING 2/2 WAY N.C.
DIREKTGESTEUERTES MAGNETVENTIL 2/2 WEGE S.G.



I CARATTERISTICHE GENERALI

PRESSIONE MINIMA DI FUNZIONAMENTO 0 bar

PARTI A CONTATTO CON IL FLUIDO

TENUTA EPDM - PTFE - RULON® - FPM
CORPO OTTONE CON SEDE DI TENUTA INOX (9912, 9913, 9914)
TUBO GUIDA INOX - Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego.
 - Migliore resistenza alla corrosione.

ORGANI INTERNI ACCIAIO INOX
FLUIDI ACQUA - ARIA - VAPORE - GAS - OLII LEGGERI

VALVOLA UNIDIREZIONALE
VALVOLA ISPEZIONABILE
VALVOLA FORNITA CON CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A)-IP65
POSIZIONE DI MONTAGGIO Qualsiasi; sconsigliata quella con bobina rivolta verso il basso
TEMPERATURA AMBIENTE 80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire

ESECUZIONI SPECIALI FORI FILETTATI PER IL FISSAGGIO DELLA VALVOLA (9912)

UK GENERAL FEATURES

MINIMUM WORKING PRESSURE 0 bar

PARTS IN CONTACT WITH THE FLUID

SEALING EPDM - PTFE - RULON® - FPM
BODY BRASS WITH SEALING SEAT IN STAINLESS STEEL (9912,9913,9914)
STAINLESS STEEL TUBE GUIDE:
 - Metallic sealing with the body for safety sealing also for high temperature applications
 - Improved corrosion resistance

INTERNAL PARTS STAINLESS STEEL
FLUIDS WATER- AIR - STEAM - GAS - LIGHT OILS

ONE WAY DIRECTION VALVE
SERVICEABLE VALVE
VALVE SUPPLIED WITH THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) -IP65
MOUNTING POSITION Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE 80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.

SPECIAL EXECUTIONS VALVE FIXING HOLES (9912)

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK 0 bar

MEDIUMS BERUEHRTE ELEMENTE

DICHTUNG EPDM - PTFE - RULON® - FPM
KOERPER MESSING MIT VENTILSITZ AUS EDELSTAHL (9912,9913,9914)
PLUNGERROHR AUS EDELSTAHL

- Metallische Dichtung fuer einen sicheren Einsatz auch bei hohen Medien-temperaturen.
 - Bessere Korrosionsbestaendigkeit .

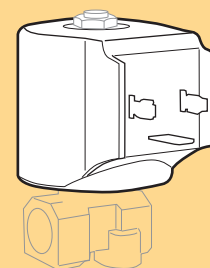
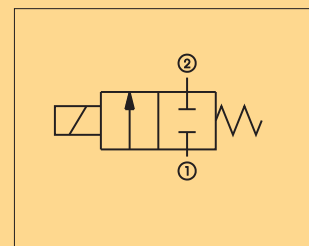
INNERE ELEMENTE EDELSTAHL
MEDIEN WASSER - LUFT - DAMPF - GAS - LEICHTE OELE

UNIDIREKTIONALES VENTIL
VENTIL WARTUNGSFREUNDLICH

LIEFERUMFANG DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A) -IP65
MONTAGEPOSITION Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.

UMGEBUNGSTEMPERATUR 80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkraefte (M.O.P.D.) des Ventils beeintraehtigen.

SONDERAUSFUEHRUNGEN BEFESTIGUNGSGEWINDE AM GRUNDKOERPER (9912)



9902-9912-9913-9914-9947
BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12

9942-9947
BOBINA TIPO B12 M
COIL TYPE B12 M
SPULE TYP B12 M

CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	Ø mm	CODICE CODE	KV m ³ /h	M.O.P.D. bar		DIMENSIONI/DIMENSIONS mm				PESO/WEIGHT Kg
				AC	DC	A	B	C	D	
G 1/4	2,8	9922	0.200	11	6	57	91	60	73	0.430
G 1/4	3,5	9922	0.220	10	5	57	91	60	73	0.430
G 1/4	5,5	9922	0.510	6	2	57	91	60	73	0.430
G 1/4	2,4	9934	0.170	25	20	66	91	60	73	0.470
G 1/4	2,8	9934	0.200	25	8	66	91	60	73	0.470

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

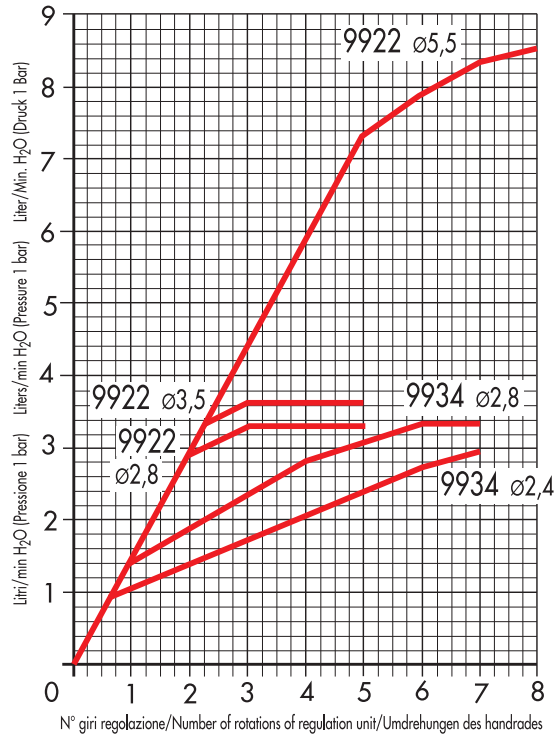
	POTENZA/POWER			
	9922		9934	
	NOMINALE HOLDING	SPUNTO IN RUSH	NOMINALE HOLDING	SPUNTO IN RUSH
V~	12 24 48 110 230 400	50 60 Hz	20VA 34VA	18,5VA 32VA
V=	12 24 48 110		14W	14W

Per dettagli costruttivi sulle bobine vedi capitolo "INFORMAZIONI DI PROGETTO"
For construction details of the coils see chapter "PROJECT INFORMATION"
Ausführliche Daten über die Ventilsolenen finden Sie unter Abschnitt "TECHNISCHE INFORMATIONEN"

MAX TEMPERATURA MAX TEMPERATURE

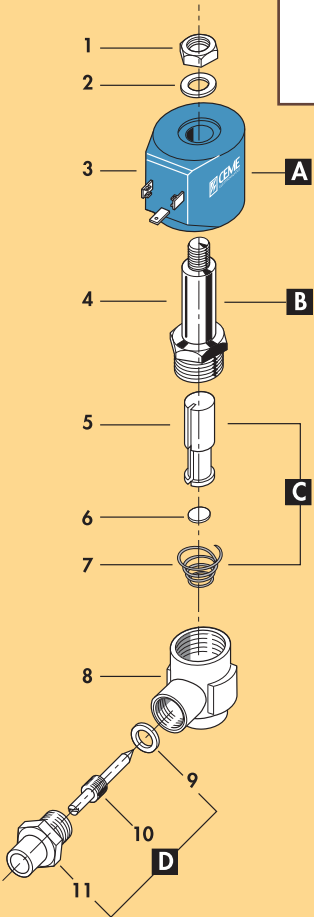
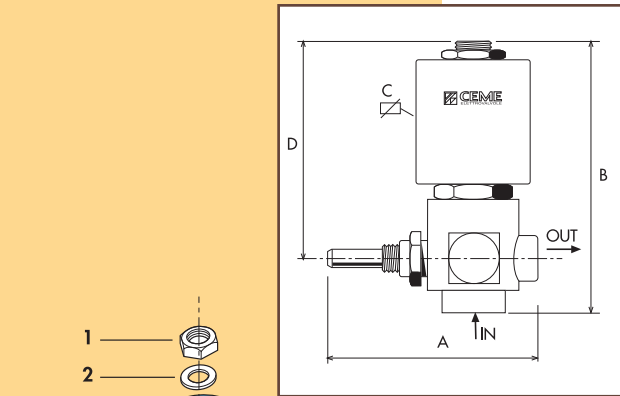
FLUIDI/FLUIDS			AMBIENTE/AMBIENT
EPDM	PTFE	RULON	80°C
155°C	180°C	180°C	Versioni/Versions/Versionen 230V/50 Hz : 120°C 230V/50-60 Hz : 120°C

DIAGRAMMA REGOLAZIONE MANUALE DI PORTATA MANUAL OVERRIDE FLOW RATE REGULATION DIAGRAM



9922

9934



1 Dado	Lock nut	Mutter
2 Rondella	Washer	Beilagscheibe
3 Bobina	Coil	Magnetspule
4 Cannotto	Tube guide	Plungerrohr
5 Nucleo mobile	Plunger	Plunger
6 Pastiglia	Seal	Dichtung
7 Molla	Spring	Feder
8 Corpo	Valve body base	Grundkörper
9 Rondella	Washer	Spindeldichtung
10 Spillo	Plunger	Spindel
11 Dado di regolazione	Regulator lock nut	Haltemutter-Spindel

RICAMBI	SPARE PARTS	ERSATZTEILE
A Bobina	Coil	Magnetspule
B Cannotto	Tube guide	Plungerrohr
C Nucleo mobile	Plunger	Plunger
D Gruppo di regolazione	Regulator unit	Spindel

Le parti di ricambio della E.V. 9934 non sono intercambiabili con quelle della EV 9922.
The spare parts of valve type 9934 are not compatible for use with valve type 9922.
Die ersatzteile des ventils 9934 sind nicht als ersatzteile fuer das ventils 9922 verwendbar.

ELETTROVALVOLA AZIONE DIRETTA CON REGOLAZIONE DI PORTATA 2/2 VE N.C.
SOLENOID VALVE WITH FLOW RATE REGULATION DIRECT ACTING 2/2 WAY N.C.
DIREKTGESTUEERTES REGELMAGNETVENTIL MIT DURCHFUSSREGELEINHEIT 2/2 WEGE S.G.



I CARATTERISTICHE GENERALI

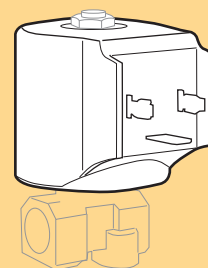
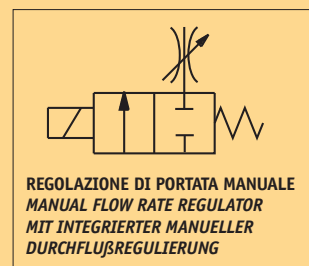
PRESSIONE MINIMA DI FUNZIONAMENTO	0 bar
PARTI A CONTATTO CON IL FLUIDO	
TENUTA	EPDM - PTFE - RULON®
CORPO	9922 OTTONE NICHELATO CON SEDE DI TENUTA INOX 9934 OTTONE
ORGANI INTERNI ACCIAIO INOX	
TUBO GUIDA INOX	- Tenuta metallica con il corpo per tenute sicure anche ad alte temperature di impiego. - Migliore resistenza alla corrosione.
REGOLAZIONE MANUALE DI PORTATA CON TENUTA TEFLON	
FLUIDI	VAPORE - ACQUA - ARIA - OLII LEGGERI
VALVOLA UNIDIREZIONALE	
VALVOLA ISPEZIONABILE	
VALVOLA FORNITA CON	- CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A)-IP65 - MANOPOLA SULLA REGOLAZIONE (9934)
POSIZIONE DI MONTAGGIO	Qualsiasi; sconsigliata quella con bobina rivolta verso il basso
TEMPERATURA AMBIENTE	80°C, in D.C. per temperature superiori a 40°C, le performance (M.O.P.D.) potrebbero diminuire
ACCESSORI	
	RACCORDO 1/4" M-PORTAGOMMA MANOPOLA PER REGOLAZIONE (9922)

UK GENERAL FEATURES

MINIMUM WORKING PRESSURE	0 bar
PARTS IN CONTACT WITH THE FLUID	
SEALING	EPDM - PTFE - RULON®
BODY	9922 NICKEL PLATED BRASS WITH SEALING SEAT IN STAINLESS STEEL 9934 BRASS
INTERNAL PARTS STAINLESS STEEL	
STAINLESS STEEL TUBE GUIDE	- Metallic sealing with the body for safety sealing also for high temperature applications. - Improved corrosion resistance
MANUAL FLOW REGULATOR WITH TEFLON SEALING	
FLUIDS	STEAM - WATER - AIR - LIGHT OILS
ONE WAY DIRECTION VALVE	
SERVICEABLE VALVE	
VALVE SUPPLIED WITH	THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) -IP65 - KNOB ON THE REGULATOR (9934)
MOUNTING POSITION	Any, the position with the coil downwards is not recommended.
AMBIENT TEMPERATURE	80°C, in D.C. for temperatures higher than 40°C, the performances (M.O.P.D.) could decrease.
ACCESSORIES	
	CONNECTION 1/4" M- HOSETAIL KNOB FOR REGULATION (9922)

D ALLGEMEINE MERKMALE

MINIMALER ARBEITSDRUCK	0 bar
MEDIUMS BERUEHRTE ELEMENTE	
DICHTUNG	EPDM - PTFE - RULON®
KOERPER	9922 MESSING VERNICKELT, MIT VENTILSITZ AUS EDELSTAHL 9934 MESSING
INNERE ELEMENTE EDELSTAHL	
PLUNGERROHR AUS EDELSTAHL	- Metallische Dichtung fuer einen sicheren Einsatz auch bei hohen Medien-temperaturen. - Bessere Korrosionsbestaendigkeit.
MANUELLE REGELEINHEIT MIT TEFLON- DICHTUNG	
MEDIEN	DAMPF - WASSER - LUFT - LEICHTE OELE
UNIDIREKTIONALES VENTIL	
VENTIL WARTUNGSFREUNDLICH	
LIEFERUMFANG	DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650A)- IP65 HANDRAD FUER REGELEINHEIT (9934)
MONTAGEPOSITION	Keine Einschränkungen. Fuer Montage mit dem Spulenkopf senkrecht nach unten, auf Anfrage.
UMGEBUNGSTEMPERATUR	80°C, im D.C.- Betrieb koennen Temperaturen ueber 40°C, die Schaltkrafte (M.O.P.D.) des Ventils beeintraechtigen.
ZUBEHOER	
	ANSCHLUSS 1/4" AUSSENGEWINDE - SCHLAUCHNIPPEL HANDRAD FUER REGELEINHEIT (9922)



9922
BOBINA TIPO B12
COIL TYPE B12
SPULE TYP B12

9934
BOBINA TIPO B12 M
COIL TYPE B12 M
SPULE TYP B12 M

- I La progettazione delle valvole con idee innovative al servizio del cliente è stato il punto di forza del nostro sviluppo. Per questo motivo, nel presente capitolo specifichiamo le nozioni tecniche più importanti, affinché i nostri clienti siano i primi collaboratori nella progettazione dei nuovi prodotti.
- UK The designing of valves with innovative ideas to be placed at the customer's service has always been a strong point of our development competence. For this reason, the present chapter specifies the main technological notions, enabling our customers to become the first collaborators in the designing of new products.
- D Der Entwurf der Ventile mittels innovativer Ideen zum Dienst am Kunden war der Schwerpunkt unserer Entwicklung. Aus diesem Grund spezifizieren wir im vorliegenden Kapitel die wichtigsten technischen Hinweise, damit unsere Kunden die ersten Mitarbeiter beim Entwurf neuer Produkte sein können.

I PRINCIPIO DI FUNZIONAMENTO

Una elettrovalvola come già visto è la combinazione di due parti fondamentali, uno è l'elettromagnete, composto da un solenoide e il suo nucleo mobile, e il secondo è il corpo valvola con i relativi attacchi per il circuito, con uno o più orifizi.

L'elettrovalvola a solenoide bobina è tale perché ha come caratteristica fondamentale un solenoide infilato sul tubo guida, all'interno del quale scorre un otturatore che può essere quello principale o di comando, che effettua quindi una totale oppure parziale intercettazione del fluido.

Nel solenoide lo spazio interno è occupato da un materiale ferromagnetico che ne costituisce il nucleo (nucleo mobile e nucleo fisso).

Quando la bobina è percorsa da corrente elettrica si genera un campo magnetico che permetterà il movimento del nucleo mobile libero di scorrere nel tubo guida (di materiale amagnetico) verso il nucleo fisso, bloccato sullo stesso tubo tramite una saldatura o un fissaggio con filetto più sigillante.

Nella versione di valvola normalmente chiusa, il nucleo mobile viene mantenuto staccato dal nucleo fisso (in posizione di chiusura) da una molla, che lo riporterà nella stessa posizione dopo che cesserà l'azione del campo magnetico.

UK OPERATION PRINCIPLES

As already mentioned, a solenoid valve is the combination of two main parts: one is the electromagnet, made up by a solenoid and its movable core, and the second is the valve's body with the relative circuit connections, with one or more orifices.

The solenoid coil valve is defined as such since it has the basic characteristic of a solenoid mounted in the guide housing into which a plunger operates. This can be the main one or it can in turn give the command for performing the partial or total fluid intercepting.

In the solenoid, the internal space is occupied by ferromagnetic material which constitutes the core (mobile core and fixed core).

When the coil is energised by an electrical current, a magnetic field is generated that will cause the movement of the mobile core, which is free to slide in the guide (made out of nonmagnetic material) towards the fixed core which in turn is fixed in the same housing by way of welding or through a finer sealing thread.

In the normally-closed valve version, the mobile core is kept apart from the fixed core (in closed position) by a spring that will return it to the same position after the action of the magnetic field will have ceased.

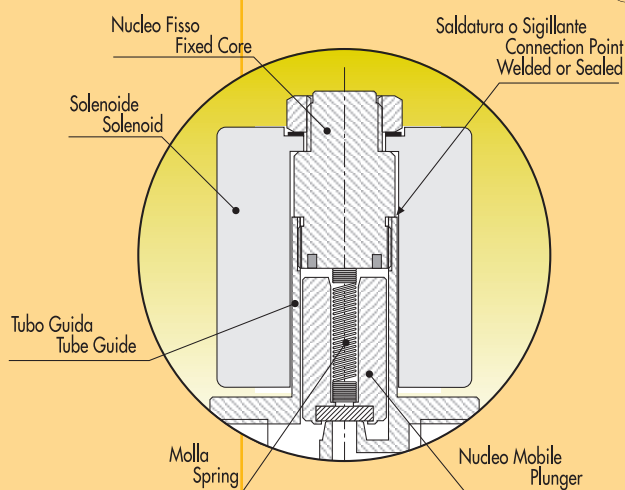
D FUNKTIONSPRINZIP

Ein Magnetventil ist, wie bereits festgestellt wurde, eine Kombination aus zwei wesentlichen Teilen: einer ist der Elektromagnet, der aus einer Magnetspule und seinem beweglichen Kern besteht, das zweite Bauteil ist der Ventilkörper mit den entsprechenden Anschlüssen für die Leitung mit einer oder mehreren Öffnungen.

Das Magnetventil ist derart ausgeführt, weil es als grundlegende Eigenschaft eine auf das Führungsrohr aufgesteckte Magnetspule besitzt. Im Inneren dieses Rohres gleitet der Verschluss, welcher der Hauptverschluss oder der Steuerverschluss sein kann. Diese Verschlüsse nehmen eine vollständige bzw. teilweise Absperrung der Flüssigkeit vor. Der Innenraum der Magnetspule ist mit einem ferromagnetischen Material ausgefüllt, das den Kern des Magneten bildet (beweglicher und fester Kern).

Wird die Spule von elektrischer Energie durchströmt wird ein Magnetfeld erzeugt, das die freie Bewegung des beweglichen Kerns im Führungsrohr (aus nichtmagnetischem Material) in Richtung des festen Kerns ermöglicht. Der feststehende Kern ist auf dem Führungsrohr mittels einer Schweißnaht oder einer Schraubbefestigung mit Dichtmittel befestigt ist.

In der Version des normalerweise geschlossenen Ventils, wird der bewegliche Kern vom festen Kern durch eine Feder entfernt gehalten (in geschlossener Position), die diesen in die gleiche Position zurückführt, nachdem die Wirkung des Magnetfeldes verlischt.



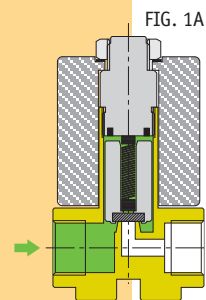


FIG. 1A

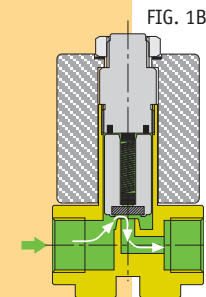


FIG. 1B

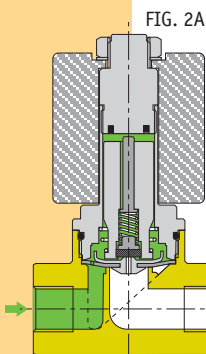


FIG. 2A

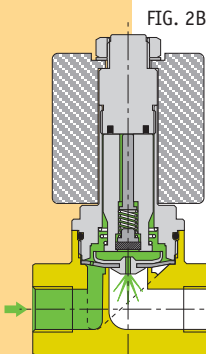


FIG. 2B

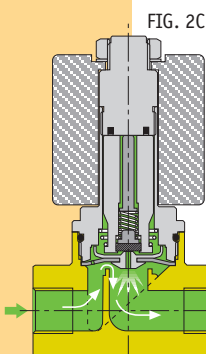


FIG. 2C

I TIPI DI FUNZIONAMENTO

A seconda del funzionamento possiamo parlare delle seguenti categorie di elettrovalvole:

AZIONAMENTO DIRETTO

POSIZIONE CHIUSA (FIG. 1A)

In posizione di riposo l'avvolgimento non è percorso da corrente, la molla del nucleo spinge, con l'aiuto della pressione del fluido, la pastiglia di tenuta sulla sede (orificio) della valvola mantenendo la chiusura della valvola.

POSIZIONE APERTA (FIG. 1B)

Quando si eccita l'elettrovalvola, il nucleo mobile viene attratto dal nucleo fisso permettendo il passaggio del fluido e l'apertura dell'elettrovalvola.

La massima differenza di pressione (M.O.P.D.) consentita diminuisce all'aumentare del diametro della sede.

AZIONAMENTO SERVO COMANDATO

POSIZIONE CHIUSA (FIG. 2A)

In posizione di riposo, il fluido, attraverso il foro di equalizzazione, esercita una pressione sull'otturatore dell'orificio principale (membrana).

L'otturatore rimane in posizione di chiusura perché a parità di pressione del fluido, la superficie superiore è maggiore di quella inferiore.

POSIZIONE APERTA (FIG. 2B)

Quando si eccita l'elettrovalvola, si apre il foro di scarico. Si provoca una caduta di pressione del fluido sulla superficie superiore della membrana principale e quindi il sollevamento della stessa tramite la pressione del fluido sulla sua superficie inferiore. (FIG. 2C)

Per un funzionamento corretto è necessario che il foro di scarico abbia un diametro maggiore di quello di equalizzazione.

Questa tipologia di valvole prevede quindi un minimo valore di pressione per garantire il funzionamento.

AZIONAMENTO SERVO ASSISTITO O MISTO

Sono della stessa tipologia di quelle servocomandate con la differenza che l'otturatore di comando (nucleo mobile) è agganciato alla membrana garantendo così una funzionalità già da 0 bar.

VALVOLE NORMALMENTE APERTE

Esiste la possibilità di avere anche la versione normalmente aperta.

Questo si ottiene andando ad invertire la posizione del nucleo mobile rispetto al fisso. (vedi SERIE 61, 65, 87)

Il nucleo mobile viene mantenuto in posizione aperta da una molla; quando viene alimentata la bobina, il nucleo mobile, attratto verso la sede dal nucleo fisso, chiude il passaggio.

UK TYPES OF OPERATION

According to the type of operation carried out, the following categories of solenoid valves can be classified:

DIRECT ACTION

CLOSED POSITION (FIG. 1A)

In rest position the coil is not energised by a current; with the help of the fluid pressure, the core's spring pushes the sealing pad against the valve seat (orifice), thus keeping the valve closed.

OPEN POSITION (FIG. 1B)

When the solenoid valve is energised the mobile core is attracted by the fixed core, thus allowing the fluid to flow through the solenoid valve opening.

The maximum pressure difference allowed (M.O.P.D.) is reduced with the increasing of the seat's diameter.

SERVO-CONTROLLED ACTION

CLOSED POSITION (FIG. 2A)

In rest position, through the equalising opening, the fluid exercises a pressure on the sealing pad of the main orifice (membrane).

The sealer pad remains in closed position since, at even fluid pressure, the upper surface is greater than the lower one.

OPEN POSITION (FIG. 2B)

When the solenoid valve is energised, the outlet hole is opened. A drop in fluid pressure is caused on the upper surface of the main membrane, which causes its lifting by way of the fluid's pressure on the lower surface. (FIG. 2C)

For correct operation it is mandatory for the outlet opening to be of a diameter greater than the equalising one. Therefore, this typology of valve foresees a minimum pressure value for correct operation to be guaranteed.

SERVO-ASSISTED OR MIXED OPERATION

These are of the same type as those servo-controlled, with the difference that the control seal element (mobile core) is close-coupled to the membrane, thus already guaranteeing proper operation from 0 bar.

NORMALLY OPEN VALVES

There is also the possibility of having the normally open version.

This is obtained by inverting the position mobile core in relation to the fixed one (see SERIES 61, 65, 87)

The mobile core is kept in the open position by a spring; when the coil is energised, the mobile core is drawn towards the seat of the fixed core, thus shutting off the outlet

ABB. 1A

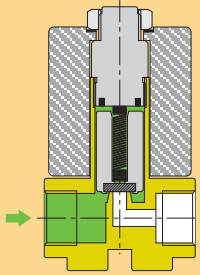


ABB. 1B

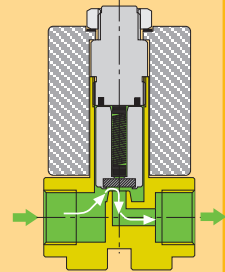


ABB. 2A

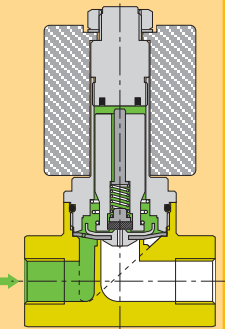


ABB. 2B

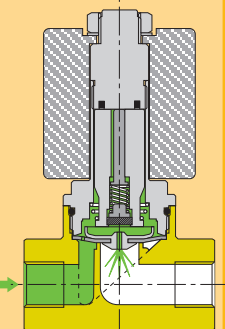
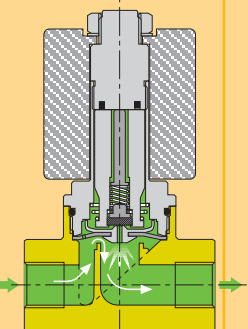


ABB. 2C



D BETRIEBSWEISEN

Entsprechend der Betriebsweise kann von einer der folgenden Arten von Magnetventilen gesprochen werden:

DIREKTER BETRIEB

GESCHLOSSENE POSITION (ABB. 1A)

In der Ruhestellung wird die Wicklung nicht von Strom durchflossen, die Feder des Kerns drückt mit Hilfe des Druckes der Flüssigkeit, die Dichtungsmembrane an ihren Platz (Öffnung) am Ventil, wobei das Ventil geschlossen bleibt.

OFFENE POSITION (ABB. 1B)

Wird das Magnetventil betätigt, wird der bewegliche Kern durch den festen Kern angezogen, somit wird ein Strömen der Flüssigkeit durch Öffnen des Magnetventils ermöglicht.

SERVO-GESTEUERT

GESCHLOSSENE POSITION (ABB. 2A)

In der Ruhestellung übt die Flüssigkeit über die Ausgleichsöffnung einen Druck auf den Verschluss der Hauptöffnung aus. (Membran). Der Verschluss verbleibt in der geschlossenen Position, weil bei gleichem Flüssigkeitsdruck, die obere Deckfläche größer ist als die untere Deckfläche.

POSITION GEÖFFNET (ABB. 2B)

Wird das Magnetventil betätigt, muß die Entleerungsbohrung geöffnet werden. Somit ergibt sich ein Druckabfall der Flüssigkeit an der oberen Deckfläche der Hauptmembran, diese wird mittels des Flüssigkeitsdrucks auf der unteren Deckfläche angehoben. (ABB. 2C)

Für eine richtige Funktionsweise ist es erforderlich, daß die Entleerungsbohrung einen größeren Durchmesser als die Ausgleichsöffnung hat.

Diese Art von Ventilen sieht somit einen minimalen Druckwert vor, um die Funktionsweise zu garantieren.

ZWANGSGESTEUERT

Diese Ventile sind von der gleichen Typologie, wie die servogesteuerten, mit dem Unterschied, daß die Steueröffnung (beweglicher Kern) mit der Membran verbunden ist, (Zwangs Verbindung) um so eine Funktionsfähigkeit bereits ab 0 bar. zu garantieren.

STROMLOS OFFENE VENTILE

Es besteht die Möglichkeit auch die Version stromlos offen zu erhalten. Dies erfolgt durch Umkehrung der Positionen des beweglichen Kerns in Bezug auf den festen (siehe SERIE 61, 65, 87).

Der Kern wird in geöffneter Position durch eine Feder gehalten. Wird die Spule unter Strom gesetzt, wird der bewegliche Kern vom festen Kern angezogen und somit die Betätigung erreicht.

I PRESSIONE

La caratteristica di pressione fondamentale per la definizione di una valvola è il DP cioè la pressione differenziale tra ingresso e uscita della stessa. Questa caratteristica si compone di due valori fondamentali la minima e la massima pressione differenziale di funzionamento.

Massima pressione differenziale di funzionamento (M.O.P.D.)

E' il valore massimo della differenza tra la pressione del fluido in ingresso e di quello in uscita che la valvola riesce ad intercettare e dipende direttamente dal diametro di passaggio e dalla potenza della bobina per le valvole ad azione diretta. Più l'orifizio è piccolo e maggiore è M.O.P.D. Per le valvole servocomandate invece il valore massimo di M.O.P.D. si determina nella maggior parte dei casi dai limiti costruttivi dell'organo di tenuta dell'orifizio, o di altri componenti della valvola.

Minima pressione differenziale di funzionamento

Per tutte le valvole ad azione diretta è uguale a 0. Per le valvole servocomandate dipende ancora dai limiti costruttivi dell'organo di tenuta sull'orifizio principale (valvole a membrana SERIE 86 è uguale a 0,3 bar, valvole a pistone SERIE 90 è uguale a 1 bar).

Questa diversità risulterà più chiara dopo aver letto il paragrafo principio di funzionamento.

UK PRESSURE

The pressure specifications, crucial for the definition of a valve, is DP, in other words the pressure differential between its inlet and outlet. This specification is made up of two fundamental values which express the minimum and maximum operating pressure differential.

Maximum operating pressure differential (M.O.P.D.)

It is the maximum value of the difference between the pressure of the fluid at the inlet and of that at the outlet, which the valve is able to intercept and depends directly on the flow through diameter and the power of the direct action valves coil. The smaller this orifice the greater the M.O.P.D. For servo-controlled valves instead, the maximum of M.O.P.D. value is controlled in the majority of cases by the manufacturing ties of the orifice pump seal or of other components of the valve.

Minimum operating pressure differential

For all direct-action valves this is equal to 0. For servo-controlled valves, it again depends on the manufacturing ties of the pump seal for the main orifice (for membrane valves of SERIES 86 it is equal to 0.3 bar, for piston valves of SERIES 90 it is equal to 1 bar).

This difference will become clearer after having read the paragraph dealing with the operation principles.

D DRUCK

Die wesentliche Eigenschaft des Drucks zur Definition eines Ventils ist das DP, d.h. der Differenzdruck zwischen Ein- und Ausgang des Ventils. Diese Eigenschaft setzt sich aus zwei grundlegenden Werten, dem minimalen und dem maximalen Betriebsdifferenzdruck, zusammen.

Maximaler Betriebsdifferenzdruck (M.O.P.D.)

Es handelt sich um den Maximalwert aus der Differenz zwischen dem Druck der Flüssigkeit am Ein- und Ausgang, der mittels des Ventils abgesperrt werden kann. Dieser Wert ist bei direktem Antrieb unmittelbar von der Leistung der Spule bzw. vom Durchflußdurchmesser abhängig. Je kleiner die Öffnung ist desto größer ist der M.O.P.D. Bei den servogesteuerten Ventilen wird der Maximalwert des M.O.P.D. im Großteil der Fälle durch die Konstruktionsgrenzen des Dichtungsorgans oder anderen Bauteilen des Ventils bestimmt.

Minimaler Betriebsdifferenzdruck

Bei allen Ventilen mit direktem Antrieb ist dieser Wert gleich 0. Bei den servogesteuerten Ventilen hängt dies noch von den baulichen Grenzen des Hauptöffnungs-dichtungsorgans ab. (bei Membranventil SERIE 86 gleich 0,3 bar, bei Kolbenventilen SERIE 90 1 bar)

Diese Unterschiede werden deutlicher, wenn der Abschnitt über die Betriebsweise gelesen wird.

I PORTATA

Tra il raccordo ed il \emptyset di passaggio (flusso) c'è una relazione: il fattore KV serve a stabilire se la valvola "porta" abbastanza flusso.

Per coefficiente di flusso KV si intende la portata Q in metri cubi ora di acqua a 20°C che genera una perdita di carico $\Delta P = 1$ bar per una determinata apertura della valvola. I valori KV indicati in tabella si intendono per valvola completamente aperta e sono stati determinati secondo i parametri della norma VDI/VDE 2173. Il KV viene quindi espresso in m^3/h ed è una caratteristica internazionale per la comparazione delle elettrovalvole. Tuttavia per tradizione o altro esistono anche ulteriori coefficienti di portata dei quali riportiamo di seguito le rispettive conversioni:

KV l/min. o 0,06 =	KV m ³ /h	KV m ³ /h o 16,7 = KV l/min.
CV USA (gallone/min.) o 0,863 =	KV m ³ /h	KV m ³ /h o 1,16 = CV USA (gallone/min.)
CV UK (gallone imperiale/min.) o 1,04 =	KV m ³ /h	KV m ³ /h o 0,975 = CV UK (gallone imperiale/min.)

Su tutti i modelli è riportato un grafico (DIAGRAMMA PERDITA DI CARICO) che mostra la relazione tra pressione e portata, cosicché possiate individuare la valvola giusta per il punto di lavoro richiesto.

Tutti i valori di portata sono quindi determinati per acqua oppure fluidi liquidi con viscosità fino a 3° ENGLER.

Per altri tipi di fluidi contattare il nostro servizio tecnico.

Sulle valvole adatte per fluidi refrigeranti (SERIE 59, 68) sono state calcolate le varie capacità di portata in funzione delle diverse applicazioni sul circuito frigorifero (aspirazione, gas caldo, fluido). Vedi tabelle alla fine di questo capitolo.

UK FLOW-RATE

Between the connection and the flow through \emptyset there is a ratio: factor KV serves to define whether the valve "carries" enough flow.

The KV flow coefficient defines the flow rate Q in cubic meters an hour of water at 20°C which generates a loss load $\Delta P = 1$ bar for a determined opening of the valve. The KV values indicated in the table are intended to refer to a totally open valve and have been determined according to the parameters of norm VDI/VDE 2173. The KV is therefore expressed in m^3/h and is an international specification for the comparison of solenoid valves. Nevertheless, due to tradition or other pertinent factors, there are also further flow-rate coefficients, listed as follows with the relative conversion values:

KV l/min. o 0.06 =	KV m ³ /h	KV m ³ /h o 16.7 = KV l/min.
CV USA (gallon/min.) o 0.863 =	KV m ³ /h	KV m ³ /h o 1.16 = CV USA (gallon/min.)
CV UK (imperial gallon /min.) o 1.04 =	KV m ³ /h	KV m ³ /h o 0.975 = CV UK (imperial gallon/min.)

For all models a diagram is provided (PRESSURE DROP DIAGRAM) showing the ratio between pressure and flow-rate, so that the correct valve for the correct work point can be defined.

All the flow-rate values for water or fluids with viscosity up to 3° ENGLER are therefore determined.

For other types of fluids our service engineer should be contacted.

For valves suitable for refrigeration fluids (SERIES 59, 68), the various flow-rate capacity values relative to the different applications on the refrigeration circuit (suction, hot gas, fluids), have been calculated. Refer to the tables at end of this chapter.

D LEISTUNG

Zwischen dem Anschluß und dem \emptyset des Durchflusses (Strömung) besteht eine Beziehung: der Faktor KV dient zur Feststellung, ob das Ventil ausreichend Strömung "leistet".

Unter dem Flußkoeffizienten KV wird die Leistung Q in Kubikmeter Wasser pro Stunde bei 20°C verstanden, wodurch ein Energiegefälle $\Delta P = 1$ bar bei einer bestimmten Ventilöffnung hervorgerufen wird. Die in der Tabelle angegebenen Werte für KV gelten für ein vollständig offenes Ventil und werden entsprechend den Parametern der Vorschrift VDI/VDE 2173 festgelegt. KV wird somit in m^3/h ausgedrückt und stellt eine internationale Eigenschaft für den Vergleich von Magnetventilen dar. Jedoch bestehen aus traditionellen oder anderen Gründen auch noch weitere Leistungskoeffizienten, von denen wir hier die entsprechenden Umrechnungsverhältnisse angeben:

KV l/Min. o 0,06 =	KV m ³ /h	KV m ³ /h o 16,7 = KV l/Min.
CV USA (Gallone/Min.) o 0,863 =	KV m ³ /h	KV m ³ /h o 1,16 = CV USA (Gallone/Min.)
CV UK (Kaisergallone /Min.) o 1,04 =	KV m ³ /h	KV m ³ /h o 0,975 = CV UK (Kaisergallone/Min.)

Zu allen Modellen ist eine graphische Darstellung vorhanden (DIAGRAMM ENERGIEGEFÄLLE), die das Verhältnis zwischen Druck und Leistung zeigt, so daß man das richtige Ventil für den geforderten Einsatzort bestimmen kann.

Alle Werte für die Leistung gelten somit für Wasser oder flüssige Stoffe mit einer Viskosität bis zu 3° ENGLER.

Für andere Arten von Flüssigkeiten setzen Sie sich mit unserem Technischen Service in Verbindung.

Bei den für Kühlflüssigkeiten geeigneten Ventilen (SERIE 59, 68) wurden die verschiedenen Leistungen in Abhängigkeit von den verschiedenen Anwendungsbereichen des Kühlkreislaufes berechnet (Ansaugen, warmes Gas, Flüssigkeit). Siehe Tabellen am Ende dieses Kapitels.

I MATERIALI

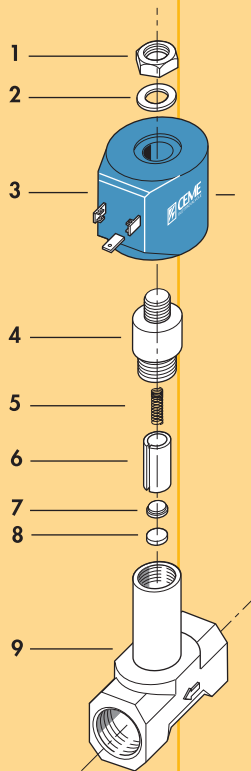
Abbiamo già visto come i diversi componenti dell'elettrovalvola debbano avere una certa natura per permettere il funzionamento quindi, di seguito riportiamo i materiali costituenti:

UK MATERIALS

We have already seen that the different components of the solenoid valve must be made out of certain materials to permit their operation. The following is a list of the materials used for this purpose:

D MATERIAL

Wir haben bereits gesehen, daß die einzelnen Bauteile des Magnetventils eine bestimmte Eigenschaft haben müssen um den Betrieb zu ermöglichen und führen im Folgenden die zur Betriebsweise nötigen Materialien an:



N°	DENOMINAZIONE	SPECIFICATIONS
1	Dado per bobina: Nut for coil:	Acciaio al piombo con zincatura bianca Lead steel with white zinc coating
2	Rondella elastica per bobina: Spring washer for coil:	Acciaio per molle con zincatura bianca Spring steel with white zinc coating
3	Bobine: Coils:	Servizio continuo 100% ED Classe F-H-N 100% continuous service and Class F-H-N
4-6	Nuclei (fisso e mobile): Cores (fixed and movable):	Acciaio Inox AISI 430 F CEME 1822 Ferritico Stainless steel AISI 430 F CEME 1822 Ferritic
5	Molle per nucleo: Springs for core:	Acciaio Inox AISI 302 Stainless steel AISI 302
7	Piattello per pastiglia: Plate for pad:	Acciaio inox AISI 303 - Ottone Stainless steel AISI 303 - Brass
8	Organi di tenuta (guarnizioni-pastiglie -membrane): Sealing elements (washers-pads -membranes):	NN = NBR NERO NN = NBR BLACK NB = NBR BIANCO NB = NBR WHITE ND = NBR OMOL.DVGW ND = NBR OMOL.DVGW HN = H-NBR IDROGENATO HN = H-NBR HYDROGENATED EN = EPDM NERO EN = EPDM BLACK EA = EPDM ALIMENTARE EA = EPDM FOODSTUFFS EK = EPDM OMOL.KTW PER ACQUA POTABILE EK = EPDM OMOL.KTW FOR DRINKABLE WATER VN = VITON NERO VN = VITON BLACK VV = VITON VERDE VV = VITON GREEN SN = SILICONE NEUTRO SN = NEUTRAL SILICONE SH = SILICONE ALTA TEMP. SH = HIGH TEMP. SILICONE CN = NEOPRENE NERO CN = BLACK NEOPRENE TE = TEFLON TE = TEFLON RW = RULON NERO RW = BLACK RULON RU = RUBINO RU = RUBY
9	Corpo valvola: Valve body:	Ottone stampato Brass printed UNI EN 12165-CW617N

I TEMPO DI RISPOSTA

Il tempo di risposta di una valvola è equivalente al tempo che impiega la pressione, a monte della valvola, a raggiungere il 90% della differenza tra pressione a valvola chiusa e aperta.

Di seguito alcuni valori di riferimento in funzione delle diverse tipologie e dimensioni di valvola.

DIAMETRI PICCOLI	0÷4 mm	-AZIONE DIRETTA	10÷15 millisecondi
DIAMETRI MEDI	4÷7 mm	-AZIONE DIRETTA	20÷40 millisecondi
DIAMETRI MEDI	0÷25 mm	-AZIONE SERVOCOMANDATA	20÷60 millisecondi
DIAMETRI GRANDI	25÷75 mm	-AZIONE SERVOCOMANDATA	50÷80 millisecondi
DIAMETRI GRANDI	20÷50 mm	-AZIONE SERVOCOMANDATA (PISTONE)	100÷200 millisecondi

I tempi di risposta suddetti, sono però solo indicativi dato che oltre alle caratteristiche costruttive della valvola, un ruolo fondamentale nella variazione di questi tempi è dato dalle diverse caratteristiche di applicazione (fluido, densità, temperatura, pressione, etc.)

UK RESPONSE TIME

The valve response time is equivalent to the time taken by the pressure upstream from the valve, to reach 90% of the difference between the pressure of the closed and open valve.

The following are reference values relating to the different typologies and dimensions of valves.

SMALL DIAMETERS	0÷4 mm	-DIRECT ACTION	10÷15 milliseconds
MEDIUM DIAMETERS	4÷7 mm	-DIRECT ACTION	20÷40 milliseconds
MEDIUM DIAMETERS	0÷25 mm	-SERVO-CONTROLLED ACTION	20÷60 milliseconds
LARGE DIAMETERS	25÷75 mm	-SERVO-CONTROLLED ACTION	50÷80 milliseconds
LARGE DIAMETERS	20÷50 mm	-SERVO-CONTROLLED ACTION (PISTON)	100÷200 milliseconds

The above response times are however only indicative, since over and above the valve's manufacturing specifications, an important role in the variation of these times is played by the different specifications pertaining to the application (fluid, density, temperature, pressure, etc.).

D RÜCKKOPPLUNGSZEIT

Die Rückkopplungszeit eines Ventils ist gleich der Zeit, die der Druck oberhalb des Ventils benötigt, um 90% der Druckdifferenz zwischen geschlossenem und offenem Ventil zu erreichen.

Im folgenden werden einige Bezugswerte in Abhängigkeit von den verschiedenen Arten und Abmessungen der Ventile angegeben.

KLEINE DURCHM.	0÷4 mm	-DIREKTER BETRIEB	10÷15 ms
MITTLERE DURCHM.	4÷7 mm	-DIREKTER BETRIEB	20÷40 ms
MITTLERE DURCHM.	0÷25 mm	-SERVOGESTEUERTER BETRIEB	20÷60 ms
GROßE DURCHM.	25÷75 mm	-SERVOGESTEUERTER BETRIEB	50÷80 ms
GROßE DURCHM.	20÷50 mm	-SERVOGESTEUERTER BETRIEB (KOLBEN)	100÷200 ms

Die oben genannten Rückkopplungszeiten sind jedoch nur indikativ, da außer den baulichen Eigenschaften des Ventils, eine wesentliche Rolle bei der Veränderung dieser Zeiten durch die verschiedenen Anwendungseigenschaften gegeben wird (Flüssigkeit, Dichte, Temperatur, Druck, etc.)

I COMPATIBILITA'/FLUIDI

La molteplicità delle tenute e le diverse conformazioni meccaniche-applicative anche per lo stesso tipo di mescola, rendono difficile dare una completa e valida informazione di compatibilità delle valvole con i diversi fluidi. Quindi riteniamo più opportuno dare una breve descrizione delle caratteristiche generali delle varie tenute, rimandando ad un contatto diretto con il nostro Servizio Tecnico qualsiasi ulteriore informazione a riguardo di specifiche compatibilità con le nostre valvole.

ATTENZIONE: l'utilizzo con composti azotati (es. Ammoniaca) può causare la corrosione e la frattura dei componenti in Ottone.

NBR	Elastomero. La tenuta più utilizzata per le sue buone performance meccaniche comparate alle ottime caratteristiche di compatibilità con la maggior parte dei fluidi (acqua, olii, grassi e gas). Temperatura di esercizio standard	-20°C +90°C
EPDM	Elastomero. L'alto valore di resistenza alla temperatura lo hanno reso indispensabile nell'intercettazione di vapore e acqua calda. Sconsigliato l'uso per fluidi con presenza di olii.	
ETILENE		-30°C +155°C
PROPYLENE	Temperatura di esercizio standard	
FPM	Elastomero. Per le sue ottime caratteristiche di compatibilità e resistenza alle alte temperature è la soluzione giusta per le applicazioni dove rispettivamente EPDM ed NBR non sono adeguati.	
FLUORO		-10°C +150°C
ELASTOMERO (VITON®)	Temperatura di esercizio standard	
PTFE	Materiale solido ed inerte, per questo motivo è praticamente compatibile con tutti i tipi di fluidi.	
POLITETRA	Nella produzione CEME è stato adottato per garantire, tramite un sistema personalizzato, una "perfetta" tenuta nelle valvole per fluidi frigorigeni oltre al classico utilizzo in vapore.	
FLUORO ETILENE	Temperatura di esercizio standard	-40°C +200°C

Le indicazioni di compatibilità con i fluidi riportati per ogni singolo modello s'intendono per una viscosità max. di 3° ENGLER.

UK COMPATIBILITY/FLUIDS

The multiple natures of the sealing modalities required for the different mechanical and application structures, even in relation to the same type of material mix, make it difficult to give complete and valid information on the compatibility of valves with the different fluids.

We therefore judge it more effective to provide a brief description of the general specifications of the various sealing elements, referring any further requests for information concerning the compatibility specifications of valves, directly to our Technical service.

ATTENTION: the use with nitrogen compounds (for ex. Ammoniac) can cause the corrosion and breaking of the brass components.

NBR BUNA	Elastomer. The most utilised sealing element, due to its good mechanical performance coupled with optimal compatibility specifications with the greater part of fluids (water, oils, greases and gas). Standard operative temperature	-20°C+90°C
EPDM ETHYLENE PROPYLENE	Elastomer. The high value of resistance to temperature have made it indispensable for intercepting steam and hot water. The use is not advised for fluids in which oils are present. Standard operative temperature	-30°C+155°C
FPM FLUORINE ELASTOMER (VITON®)	Elastomer. For its optimum specifications of compatibility and resistance to high temperatures, this is the correct solution for applications in which EPDM and NBR are respectively not suitable. Standard operative temperature	-10°C+150°C
PTFE POLYTETRA FLUORINE ETHYLENE	Solid and inert material; for this reason is practically compatible with all the types of fluids. Aside from the "classical" use in steam, by way of a personalised system within CEME productions, it was adopted for guaranteeing "perfect" sealing in valves for refrigerating fluids. Standard operative temperature	-40°C+200°C

The indications of compatibility with the fluids listed for each single model are intended to cover a max. viscosity of 3° ENGLER.

D KOMPATIBILITÄT / FLÜSSIGKEITEN

Die Vielfältigkeit der Dichtungen und die verschiedenen mechanisch-applikativen Beschaffenheiten auch bei der gleichen Art des Gemisches, erschweren eine vollständige und zutreffende Information über die Kompatibilität der Ventile zu den verschiedenen Medien.

Wir halten es deshalb für erforderlich, eine kurze Beschreibung der allgemeinen Eigenschaften der verschiedenen Dichtungen zu geben und verweisen auf einen direkten Kontakt mit unserem Kundendienst für jegliche weiteren Informationen in Bezug auf die spezifische Kompatibilität mit unseren Ventilen.

ACHTUNG: die Verwendung mit Stickstoffverbindungen (z. B. Ammoniak) kann die Korrosion und den Bruch der Messingteile verursachen.

NBR BUNA	Elastomer. Die auf Grund ihrer guten mechanischen Leistungen am häufigsten verwendete Dichtung, die optimale Kompatibilitätseigenschaften mit dem Großteil der Flüssigkeiten aufweist (Wasser, Öle, Fette und Gas). Standardbetriebstemperatur	-20°C+90°C
EPDM ÄTHYLEN PROPYLEN	Elastomer. Die hohe Widerstandsfähigkeit gegenüber der Temperatur haben sie bei der Absperrung von Dampf und Heißwasser unerläßlich werden lassen. Abgeraten wird von einem Einsatz bei Flüssigkeiten mit Ölgehalt. Standardbetriebstemperatur	-30°C+155°C
FPM FLUOR ELASTOMER (VITON®)	Elastomer. Auf Grund seiner optimalen Kompatibilitäts- und Widerstandseigenschaften bei hohen Temperaturen ist sie die richtige Lösung für Anwendungen wo die jeweiligen EPDM und NBR nicht geeignet sind. Standardbetriebstemperatur	-10°C+150°C
PTFE POLYTETRA FLUOR ÄTHYLEN	Festes und beständiges Material, aus diesem Grund ist es mit allen Flüssigkeitsarten kompatibel. Bei der Produktion von CEME wurde es eingesetzt, um außer seiner klassischen Anwendung bei Dampf mittels eines personalisierten Systems eine "perfekte" Abdichtung der Ventile für Kühlflüssigkeiten zu garantieren. Standardbetriebstemperatur	-40°C+200°C

Die Angaben zur Kompatibilität für die bei jedem einzelnen Modell aufgeführten Flüssigkeiten beziehen sich auf eine maximale Viskosität von 3° ENGLER.

I ISPEZIONABILITÀ

Ispezionabilità significa che l'operazione di smontaggio della valvola può essere effettuato senza compromettere la funzionalità del prodotto.

Se nell'applicazione è necessario poter smontare l'elettrovalvola per pulizia o manutenzione, si deve verificare che nelle caratteristiche generali del modello scelto non sia riportato "valvola non ispezionabile".

UK INSPECTION EASE

Inspection ease means that the operation of dismantling the valve can be carried out without compromising the functions of the product.

If the application makes it necessary to dismantle the solenoid valve for cleaning or maintenance reasons, one must check that in the general specifications for the selected model, the caption "non-serviceable valves", should not be present.

D WARTUNGSFREUNDLICHKEIT

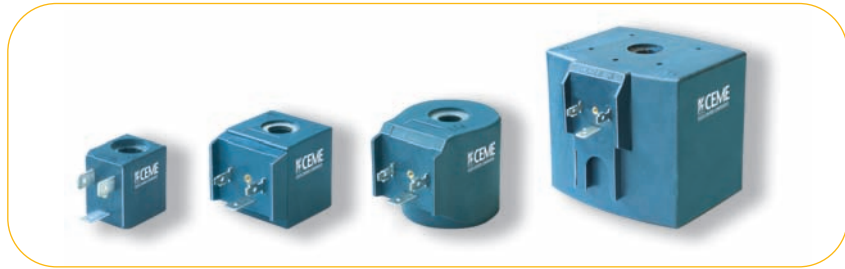
Wartungsfreundlich bedeutet, daß die Demontage des Ventils vorgenommen werden kann, ohne daß die Funktionsfähigkeit des Produktes gefährdet wird.

Ist es bei der Anwendung notwendig das Ventil für Reinigungs- oder Wartungsarbeiten ausbauen zu können, muß sichergestellt werden, daß unter den allgemeinen Eigenschaften des Modells nicht "Wartungsfrei" angegeben ist.

I CARATTERISTICHE ELETTRICHE

I solenoidi sono costruiti secondo le direttive europee e le normative internazionali, per funzionare in servizio continuo ED 100%.

COLORE BLU



Frequenza: Le valvole vengono fornite in versione standard a 50 Hz, i dati riportati a catalogo come M.O.P.D. si riferiscono all'utilizzo della valvola con questo tipo di bobina.
A richiesta le valvole possono essere fornite anche in versione 50/60 Hz, in questo caso i valori di M.O.P.D. dovranno essere richiesti al nostro servizio tecnico:

Tolleranze: -15% +6% V nom. AC
- 5% +10% V nom. DC

Classe termica F (155°C), H (180°C), N (200°C):

Materiali:

- filo di rame smaltato in classe H (180°C) oppure N (200°C)
- rocchetto ed inglobamento
 - CLASSE F: polibutiltereftalato (PBT) + 30% fibre di vetro
 - CLASSE H: corto periodo 5000 H (PBT) lungo periodo 20000 H (PPS)
 - CLASSE N: solfuro di polifenilene (PPS)
- FAST-ON TERRA: acciaio P02 + stagnatura
- FAST-ON LINEA: ottone + stagnatura
- ARMATURA MAGNETICA: steel P04 + zincatura

Esecuzioni speciali: Per ogni prodotto sono riportate a catalogo le prestazioni con le bobine di tipo standard per ED 100%.
Sono disponibili per lotti consistenti, bobine speciali a consumo ridotto oppure bobine potenziate, per servizi discontinui.

UK ELECTRICAL SPECIFICATIONS

The solenoids are manufactured in observance of European directives and international norms, to operate in 100% continuous service.

COLOUR BLUE



Frequency: The valves are supplied in standard version at 50 Hz. Mopd data on catalogue refer to 50 Hz coils. On request, the valves can be supplied with 50/60 Hz or just 60 Hz coils. In this case, the Mopd data must be requested to our technical office.

Tolerances: -15% +6% V nom. AC
- 5% +10% V nom. DC

Thermal Class F (155°C), H (180°C), N (200°C):

Materials:

- varnished copper wire in class H (180°C) or N (200°C)
- encapsulated coil
 - CLASS F: polibutiltereftalato (PBT) + 30% glass fibre
 - CLASS H: short period 5000 H (PBT) long period 20000 H (PPS)
 - CLASS N: polifenilene sulphide (PPS)
- FAST-ON EARTH: P02 steel + tinning
- FAST-ON LINE: brass + tinning
- MAGNETIC ARMATURE: P04 steel + zinc plating

Special implementations: For each product, the catalogue lists the performance with standard-type coils for 100%.
For sizeable lots, special low-consumption coils for non-continuous services are available.

D ELEKTRISCHE EIGENSCHAFTEN

Die Magnetspulen werden entsprechend den europäischen Richtlinien und den internationalen Vorschriften gebaut, um unter Dauerbetrieb ED 100% zu funktionieren.

FARBE BLAU



Frequenz: Die Magnetventile werden als Standardausführung in 50 Hz verwendet. Die M.O.P.D. Daten, die im Katalog angegeben werden, beziehen sich auf solche Spule. Wunschgemäß werden die Ventile in Version 50/60 Hz bzw. 60 Hz verwendet. In diesem Fall soll man die M.O.P.D. Werte an unserer Technische Abteilung angefragt werden.

Toleranzen: -15% +6% V nom. AC

-5% +10% V nom. DC

Temperaturklasse F (155°C), H (180°C), N (200°C):

Materialien:

- emaillierter Kupferdraht der Klasse H (180°C) oder N (200°C)

- Spule und Anziehvorrichtung

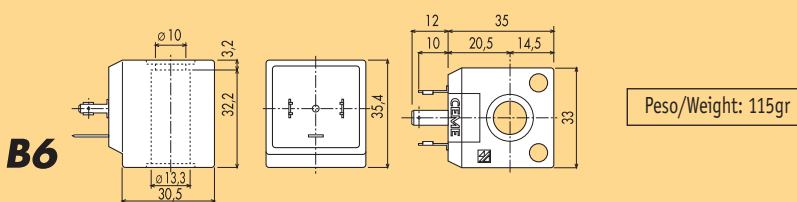
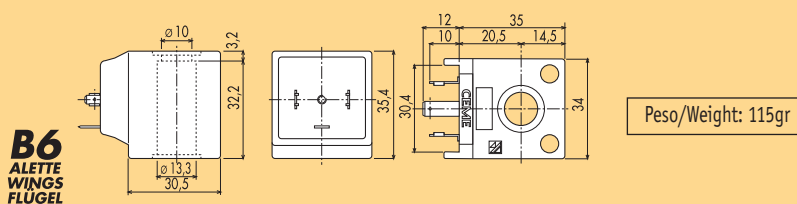
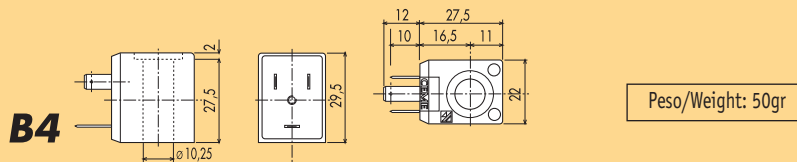
- KLASSE F: Polybutylentereftalat (PBT) + 30% Glasfaser
- KLASSE H: kurzzeitig 5000 H (PBT) langfristig 20000 H (PPS)
- KLASSE N: Polyäthylensulfid (PPS)

- FAST-ON ERDE: Stahl PO2 + Verzinnung

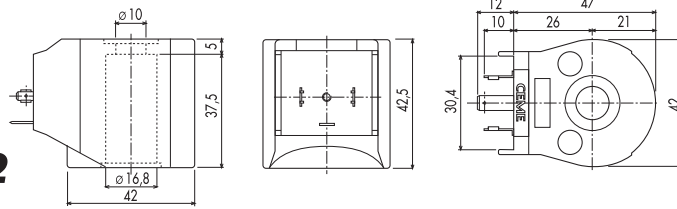
- FAST-ON LEITUNG: Messing + Verzinnung

- MAGNETKERN: Stahl PO4 + Verzinkung

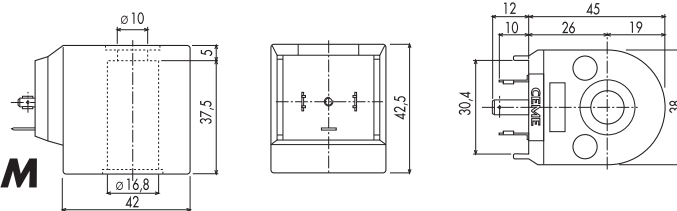
Spezialausführungen: Für jedes Produkt werden im Katalog die Leistungen bei Standardspulen ED 100% angegeben. Für umfangreiche Produktionslose sind Spezialspulen mit niedrigem Verbrauch oder Spulen mit gesteigerter Leistung für Dauerbetrieb erhältlich.



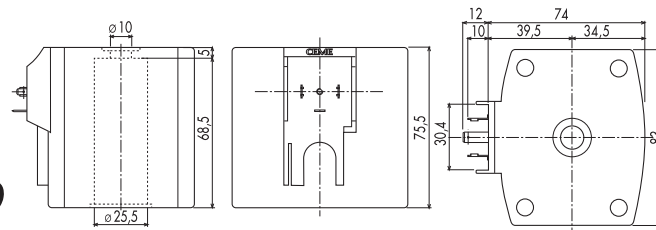
-A richiesta
-On request
-Sonderzubehör

B12

Peso/Weight: 220gr

B12 M

Peso/Weight: 220gr

B60

Peso/Weight: 1350gr

I Note

Per ruotare la posizione della bobina è necessario allentare il dado. Nella fase di rifissaggio del dado non superare una forza di serraggio pari a 3 Nm per la serie 55, 59, 85 ed 88, 4 Nm per tutte le altre serie.

UK Note

To turn the coil position, it is necessary to slack the lock nut. When you lock again the nut, don't overcome a force of 3 Nm for the series 55, 59, 85, 88, and a force of 4 Nm for all other series has not to be overcome.

D Hinweis

Fuer die Serien 55/66/85, im Falle einer Drehung der Spule, Mutter lockern. Beim festziehen der Mutter soll die Anzugskraft von 3 Nm fuer die Serien 55, 59, 85 und 88, und die Anzugskraft von 4 Nm fuer alle andere Reiheserie nicht ueberschritten werden.

I AFFIDABILITA'

Le elettrovalvole sono progettate e costruite per soddisfare i requisiti nelle varie applicazioni per lungo tempo. Per verificare ciò la CEME ha predisposto circuiti di prova professionali per i diversi tipi di fluidi: aria, acqua, vapore, freon in condizioni normali o estreme (camera climatica).

UK RELIABILITY

The solenoid valves are designed and manufactured to satisfy requisites in various applications for long operating times.





To prove this, CEME has made available professional testing circuits for the different types of fluids: air, water, steam and freon under normal or extreme conditions (climatic chamber).

D ZUVERLÄSSIGKEIT

Die Magnetventile wurden zur langzeitigen Befriedigung der Anforderungen bei den verschiedenen Anwendungen entwickelt und gebaut.

Um dies zu überprüfen, hat CEME professionelle Testkreisläufe für die verschiedenen Flüssigkeitsarten bereitgestellt: Luft, Wasser, Dampf, Freon unter normalen und extremen Bedingungen (Klimakammer).

CERTIFICAZIONE DI PRODOTTO - PRODUCTS APPROVALS

	TENSIONE VOLTAGE	RIFERIMENTO REFERENCE	SERIE ELETTROVALVOLE SOLENOID VALVES SERIE
	A.C. 230V	588	52-53-55-59-85
		688	61-62-65-66-67-6806-6807-6812-6825-86-87
	A.C. 230V	778	84-90-99
		788	6810-6811-6813-83-93
 File n° MH 18065	A.C. 12V A.C. 24V A.C. 42-48V A.C. 110-120V A.C. 208-220V A.C. 208-240V D.C. 12V D.C. 24V	SERIE 5	52-55-59
		SERIE 6	66-67-6806-6807-6812-6825
		SERIE 9*	93-99
 File n° E 211247	A.C. 12V A.C. 24V A.C. 42-48V A.C. 110-120V A.C. 208-220V A.C. 208-240V D.C. 12V D.C. 24V	SERIE 5C	Tutti i modelli con bobina B4 All models with coil B4
		SERIE 6C	Tutti i modelli con bobina B6 All models with coil B6
		SERIE 9C*	Tutti i modelli con bobina B12M All models with coil B12M

* - PER LA "SERIE 9" E LA "SERIE 9C" DEVE ESSERE UTILIZZATA LA BOBINA TIPO B12 "SERIE M".

* - FOR THE "9 SERIES" AND "9C SERIES" THE COIL TYPE B12 "M SERIES" HAS TO BE USED.

LA CERTIFICAZIONE DI PRODOTTO UR NON E' UNO STANDARD PER LE SERIE DI ELETTROVALVOLE SUDDETTE, MA UNA ESECUZIONE SPECIALE DA RICHIEDERE SPECIFICATAMENTE.

THE PRODUCT CERTIFICATION UR IS NOT STANDARD FOR THE ABOVE MENTIONED VALVES, BUT A SPECIAL EXECUTION TO BE REQUESTED APART.

EINE UR-ZERTIFIZIERUNG FUER DIE OBEN GENANNTEN VENTILTYPEN IST KEINE STANDARDPRUEFUNG. WIR BITTEN SIE DAHER, DIESE ZERTIFIZIERUNG GEGEBENENFALLS ANZUFAGEN.

CAPACITA' VALVOLA -FLUIDO		$Q_N = KW$		VALVE CAPACITY-MEDIUM				
TIPO/TYPE	KV	FLUIDO/MEDIUM	ΔP 0,1	ΔP 0,2	ΔP 0,3	ΔP 0,4	ΔP 0,5	ΔP 0,6
6806	0,17	R134a	2.55	3.62	4.43	5.10	5.73	6.22
6807		R22	2.75	3.90	4.78	5.50	6.18	6.71
6812		R407C	2.50	3.55	4.35	5.00	5.62	6.10
6825		R404A/R507	1.90	2.70	3.30	3.80	4.27	4.63
6810	0,23	R134a	3.50	4.96	6.09	7.00	7.87	8.54
6811		R22	3.75	5.32	6.52	7.50	8.43	9.15
6813		R407C	3.50	4.96	6.09	7.00	7.87	8.54
		R404A/R507	2.60	3.69	4.52	5.20	5.84	6.34
6853	1,3	R134a	19.50	27.66	33.91	39.00	43.82	47.56
6861		R22	21.13	29.96	36.74	42.25	47.47	51.52
6863		R407C	21.13	29.96	36.74	42.25	47.47	51.52
		R404A/R507	20.70	29.36	36.00	41.40	46.52	50.49
6854	1,6	R134a	24.00	34.04	41.74	48.00	53.93	58.54
6862		R22	26.00	36.88	45.22	52.00	58.43	63.41
6864		R407C	25.50	36.17	44.35	51.00	57.30	62.20
		R404A/R507	17.95	25.46	31.22	35.90	40.34	43.78

TEMPERATURA DI CONDENSAZIONE: +25°C / CONDENSING TEMPERATURE: +25°C
TEMPERATURA DI EVAPORAZIONE: -10°C / EVAPORATING TEMPERATURE: -10°C

Per condizioni diverse di temperatura di condensazione si può determinare la relativa capacità delle elettrovalvole nel seguente modo:

For different condensing temperatures, the relative capacity of the valves could be determined in the following way:

$$Q = Q_N \cdot C_1$$

Tabella C₁ - Fattore di correzione della temperatura di condensazione
 Table C₁ - Correction factor of the condensing temperature

TAB C₁

Fluido/Medium	→°C	0	+10	+20	+30	+40	+50
R134a		0.80	0.87	0.95	1.06	1.19	1.37
R22		0.82	0.88	0.96	1.05	1.15	1.29
R407C		0.80	0.90	0.90	1.00	1.20	1.40
R404A/R507		0.73	0.82	0.93	1.08	1.32	1.70

CAPACITA' VALVOLA -GAS CALDO		Q _N =KW		VALVE CAPACITY-HOT GAS				
TIPO/TYPE	KV	FLUIDO/MEDIUM	TEMP.CONDENSAZIONE / CONDENSING TEMP.	ΔP 0,2	ΔP 0,5	ΔP 1,0	ΔP 1,5	ΔP 2,0
6806 6807 6812 6825	0,17	R134a	+25	0.54	0.83	1.12	1.31	1.44
			+30	0.55	0.86	1.17	1.38	1.52
			+40	0.57	0.89	1.23	1.47	1.64
			+50	0.58	0.90	1.25	1.50	1.70
		R22	+25	0.68	1.06	1.46	1.74	1.94
			+30	0.70	1.10	1.51	1.81	2.04
			+40	0.74	1.15	1.60	1.93	2.19
			+50	0.76	1.19	1.67	2.01	2.29
		R407C	+25	0.62	0.98	1.39	1.71	1.96
			+30	0.65	1.02	1.44	1.77	2.04
			+40	0.68	1.08	1.52	1.87	2.15
			+50	0.70	1.11	1.57	1.93	2.22
		R404A/R507	+25	0.60	0.93	1.29	1.54	
			+30	0.60	0.93	1.29	1.55	
			+40	0.58	0.90	1.26	1.52	
			+50	0.53	0.83	1.16	1.41	
6810 6811 6813	0,23	R134a	+25	0.72	1.12	1.51	1.77	1.94
			+30	0.75	1.16	1.58	1.86	2.06
			+40	0.78	1.21	1.67	1.98	2.22
			+50	0.78	1.22	1.69	2.03	2.30
		R22	+25	0.80	1.43	1.98	2.35	2.64
			+30	0.95	1.48	2.05	2.45	2.76
			+40	1.00	1.56	2.17	2.61	2.96
			+50	1.03	1.62	2.25	2.72	3.10
		R407C	+25	0.84	1.33	1.88	2.31	2.66
			+30	0.87	1.38	1.95	2.39	2.76
			+40	0.92	1.46	2.06	2.52	2.91
			+50	0.95	1.50	2.13	2.61	3.01
		R404A/R507	+25	0.80	1.26	1.74	2.08	
			+30	0.80	1.26	1.74	2.09	
			+40	0.78	1.22	1.70	2.05	
			+50	0.71	1.12	1.57	1.90	
6853 6861 6863	1,3	R134a	+25	4.08	6.29	8.54	9.98	10.94
			+30	4.22	6.52	8.91	10.50	11.62
			+40	4.38	6.81	9.39	11.19	12.47
			+50	4.41	6.88	9.55	11.45	12.96
		R22	+25	5.17	8.06	11.15	13.28	14.88
			+30	5.33	8.31	11.50	13.78	15.50
			+40	5.60	8.77	12.19	14.64	16.61
			+50	5.78	9.08	12.67	15.25	17.47
		R407C	+25	4.93	7.69	10.64	12.69	14.21
			+30	5.08	7.93	10.97	13.15	14.80
			+40	5.34	8.37	11.63	13.97	15.85
			+50	5.52	8.67	12.10	14.55	16.67
		R404A/R507	+25	4.48	7.09	9.83	11.80	
			+30	4.48	7.09	9.95	11.80	
			+40	4.35	6.96	9.70	14.08	
			+50	3.97	6.77	8.83	10.69	
6854 6862 6864	1,6	R134a	+25	5.04	7.77	10.50	12.30	13.50
			+30	5.21	8.07	11.00	13.00	14.30
			+40	5.40	8.40	11.60	13.80	15.50
			+50	5.44	8.50	11.80	14.10	16.00
		R22	+25	6.40	9.97	13.70	16.40	18.40
			+30	6.60	10.30	14.30	17.10	19.20
			+40	6.94	10.90	15.10	18.20	20.60
			+50	7.17	11.20	15.70	19.00	21.60
		R407C	+25	5.86	9.27	13.10	16.05	18.53
			+30	6.07	9.60	13.57	16.63	19.20
			+40	6.41	10.14	14.33	17.56	20.27
			+50	6.62	10.47	14.81	18.13	20.94
		R404A/R507	+25	5.60	8.76	12.10	14.50	
			+30	5.60	8.76	12.10	14.60	
			+40	5.44	8.52	11.80	14.30	
			+50	4.96	7.80	10.90	13.20	

TEMPERATURA DI EVAPORAZIONE: -10°C / EVAPORATING TEMPERATURE: -10°C

Per condizioni diverse di temperatura di evaporazione si può determinare la relativa capacità delle elettrovalvole nel seguente modo:

For different evaporation temperatures, the relative capacity of the valves could be determined in the following way:

$$Q = Q_N \cdot C_3$$

Tabella C₃-Fattore di correzione della temperatura di evaporazione/ Table C₃-Correction factor of the evaporation temperature

TAB C₃

Fluido/Medium ↓	→ °C	-40	-30	-20	-10	±0	+10
R134a		0.85	0.90	0.95	1	1.05	1.09
R22		0.90	0.94	0.97	1	1.03	1.05
R407C		0.88	0.92	0.95	1	1.01	1.06
R404A/R507		0.81	0.88	0.13	1	1.05	-

CAPACITA' VALVOLA -LINEA ASPIRAZIONE		$Q_N=KW$		VALVE CAPACITY-SUCTION LINE				
TIPO/TYPE	KV	FLUIDO/MEDIUM	TEMP. EVAPORAZIONE / EVAPORATING TEMP.	ΔP 0,05	ΔP 0,10	ΔP 0,15	ΔP 0,20	ΔP 0,5
6853 6861 6863	1,3	R134a	-40	0.62	0.87	1.06	1.23	1.95
			-30	0.75	1.07	1.30	1.50	2.37
			-20	1.01	1.43	1.74	2.02	3.18
			-10	1.25	1.77	2.16	2.48	3.93
			0	1.53	2.16	2.63	3.04	4.80
			+10	1.85	2.63	3.18	3.66	5.84
		R22	-40	0.86	1.23	1.49	1.72	2.73
			-30	1.06	1.50	1.83	2.10	3.33
			-20	1.42	2.01	2.44	2.83	4.46
			-10	1.75	2.48	3.03	3.48	5.51
			0	2.15	3.03	3.70	4.27	6.73
			+10	2.59	3.70	4.46	5.14	8.19
		R407C	-40	0.79	1.12	1.36	1.57	2.50
			-30	0.97	1.37	1.67	1.92	3.04
			-20	1.29	1.83	2.23	2.59	4.07
			-10	1.60	2.27	2.77	3.18	5.04
			0	1.96	2.77	3.38	3.90	6.16
			+10	2.37	3.38	4.07	4.69	7.49
		R404A, R507	-40	0.72	1.02	1.24	1.43	2.26
			-30	0.94	1.33	1.63	1.87	2.95
			-20	1.20	1.71	2.08	2.41	3.82
			-10	1.50	2.13	2.60	2.99	4.73
			0	1.82	2.57	3.13	3.61	5.78
			+10	2.22	3.17	3.82	4.41	7.03
6854 6862 6864	1,6	R134a	-40	0.77	1.09	1.33	1.53	2.43
			-30	0.94	1.34	1.63	1.88	2.97
			-20	1.26	1.79	2.18	2.52	3.97
			-10	1.56	2.21	2.70	3.10	4.91
			0	1.91	2.70	3.29	3.80	6.00
			+10	2.31	3.29	3.97	4.58	7.30
		R22	-40	1.03	1.46	1.77	2.05	3.24
			-30	1.25	1.78	2.17	2.50	3.96
			-20	1.68	2.38	2.90	3.36	5.29
			-10	2.08	2.95	3.60	4.14	6.55
			0	2.55	3.60	4.39	5.07	8.00
			+10	3.08	4.39	5.29	6.10	9.73
		R407C	-40	0.97	1.38	1.68	1.94	3.08
			-30	1.19	1.69	2.06	2.38	3.76
			-20	1.60	2.26	2.76	3.20	5.03
			-10	1.98	2.80	3.42	3.93	6.22
			0	2.43	3.42	4.17	4.82	7.60
			+10	2.92	4.17	5.03	5.80	9.24
		R404A, R507	-40	0.90	1.28	1.56	1.80	2.85
			-30	1.10	1.56	1.90	2.19	3.47
			-20	1.48	2.09	2.55	2.95	4.65
			-10	1.83	2.59	3.16	3.63	5.75
			0	2.24	3.16	3.85	4.45	7.02
			+10	2.70	3.85	4.65	5.36	8.54

TEMPERATURA DI CONDENSAZIONE: +25°C / CONDENSING TEMPERATURE: +25°C

Per condizioni diverse di temperatura di condensazione si può determinare la relativa capacità delle elettrovalvole nel seguente modo:

For different condensing temperatures, the relative capacity of the valves could be determined in the following way:

$$Q=Q_N \cdot C_2$$

Tabella C₂ - Fattore di correzione della temperatura di condensazione / Table C₂ - Correction factor of the evaporation temperature

TAB C₂

Fluido/Medium ↓	→ °C	+20	+30	+40	+50
R134a, R22, R407C		0.96	1.05	1.16	1.29
R404A/R507		0.94	1.07	1.26	1.57

guida alla selezione ELETTROPOMPE

1 DEFINIZIONE E PRINCIPIO DI FUNZIONAMENTO

La produzione CEME è composta principalmente da due diversi modelli di elettropompe:

1. -POMPE A SOLENOIDE CON PISTONE OSCILLANTE
2. -POMPE A MOTORE ELETTRICO DI TIPO PERIFERICO

1. Le pompe elettromagnetiche a solenoide funzionano tramite un'oscillazione del pistone generata dal campo magnetico della bobina, collegata in serie ad un diodo.

Il movimento oscillatorio associato all'impiego di due valvole di ritenuta crea delle fasi di compressione e decompressione tali da generare lo spostamento del liquido o, dell'aria nella fase di autoinnesco.

2. Nelle pompe periferiche, tramite una girante, messa in movimento da un motore elettrico, il fluido viene portato in pressione dall'ingresso verso l'uscita.

Entrambe servono per la MOVIMENTAZIONE di liquidi non aggressivi.

Maggiori dettagli sulle particolarità di costruzione e diversità di funzionamento si possono trovare nelle pagine successive.

Di seguito riportiamo invece le caratteristiche principali di queste elettropompe che possono servire per una corretta identificazione del modello più idoneo al proprio utilizzo.

CLASSIFICAZIONE

Le elettropompe vengono classificate secondo le seguenti caratteristiche:

- ALIMENTAZIONE ELETTRICA
- TIPO DI SERVIZIO
- AUTODESCANTE
- PORTATA-PRESSIONE

-ALIMENTAZIONE ELETTRICA

Le pompe a solenoide sono disponibili solo nella versione in corrente alternata. Dato il tipo di funzionamento, in corrente continua sarebbe indispensabile alimentare la pompa con un generatore di impulsi. Le pompe periferiche sono disponibili anche in versione corrente continua.

-TIPO DI SERVIZIO

S'intende la durata del servizio, cioè se c'è la possibilità di far funzionare la pompa ininterrottamente, oppure se è necessario avere dei tempi di riposo. Per ED 50% s'intende che può funzionare per 1 minuto quindi deve rimanere ferma per 1 minuto come tempi standard.

Per alcune pompe a servizio discontinuo questi tempi possono anche essere più lunghi, previa consultazione del nostro Servizio Tecnico.

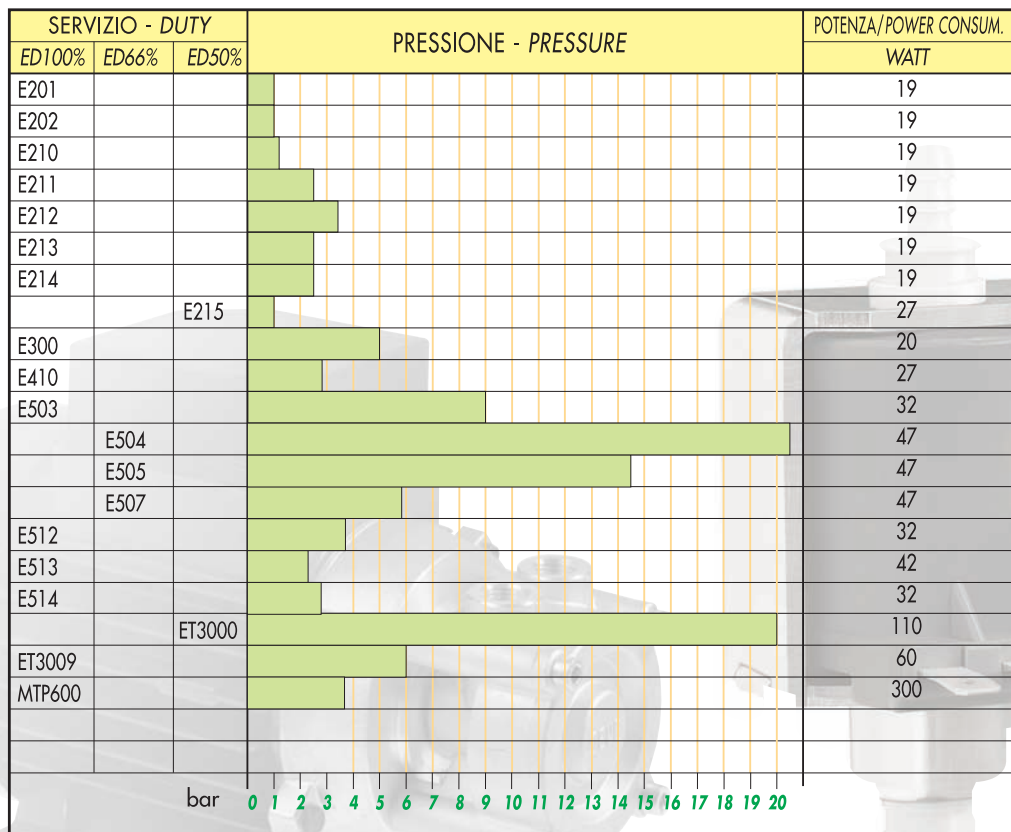
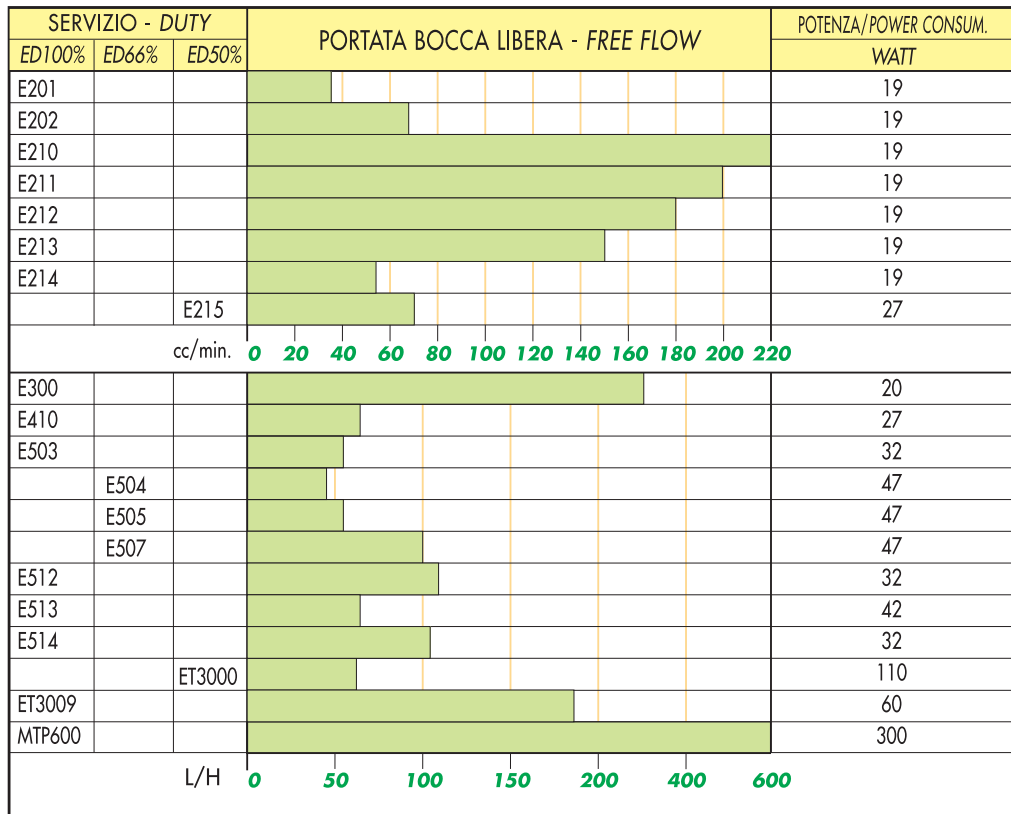
-AUTODESCANTE

E' la caratteristica che permette alla pompa di partire senza nessuna precauzione di "invasamento" della stessa con il fluido da movimentare. Ovviamente questa caratteristica dipende dalla differenza di livello esistente tra la pompa e il serbatoio (vedi valore max in tabella).

-PORTATA E PRESSIONE

Sono le grandezze caratteristiche di una pompa per liquidi. La portata è la quantità di liquido pompato nell'unità di tempo.

La pressione, detta anche prevalenza, è l'altezza massima alla quale può sollevare il liquido pompato.



guide to select ELECTROPUMPS

UK DEFINITION AND OPERATION PRINCIPLE

CEME's production is mainly made up by two different models of electropumps:

1. – SOLENOID-DRIVEN PUMPS WITH OSCILLATING PISTON
2. – PERIPHERAL-TYPE ELECTRICAL MOTOR PUMPS

1. The solenoid-driven electromagnetic pumps operate by way of a piston stroke generated by the coil's magnetic field.

The oscillating movement associated with the action of two retaining valves generates compression and de-compression phases, in this way causing the movement of the liquid or air during the self-priming phase.

2. In peripheral pumps, by way of a rotor operated by an electrical motor, the fluid is brought to pressure from the inlet towards the outlet.

Both of these are used for the FLOW of non-aggressive liquids.

Further details on the manufacturing specifications and on the different operation aspects, are found in the next few pages.

The following points instead, outline the main specifications of these electropumps, which can be used for the correct identification of the model most suited to one's own requirements.

CLASSIFICATION

Electropumps are classified according to the following specifications:

- ELECTRICAL POWER SUPPLY
- TYPE OF SERVICE
- SELF-PRIMING
- FLOW RATE-PRESSURE

- ELECTRICAL POWER SUPPLY

Solenoid pumps are available only in the alternate current version. According to the operation type in direct current, it would be indispensable to supply the pump through an impulse generator.

Peripheral pumps are also available in the direct current version.

- TYPE OF SERVICE

This means the duration of the service, in other words if there is the possibility of operating the pump uninterruptedly, or if it is necessary to provide rest times. A 50% definition implies that the device can operate for 1 minute after which it must be stopped for 1 minute, as far as standard times are concerned.

By prior consultation with our technical department, for some pumps these discontinuous times could be longer.

- SELF-PRIMING

This is the specification that allows the pump to start without having to "prime" it with the fluid to be pumped. Obviously this specification item depends on the height level difference existing between the pump and the tank (see max. values in table).

- FLOW-RATE AND PRESSURE

These are the specification values pertaining to pumps for liquids. The flow-rate is the quantity of liquid pumped in the time unit.

The pressure, also called head, is the maximum height to which the pumped liquid can be raised.

Erläuterung zur Artikelwahl ELEKTROPUMPEN

D DEFINITION UND FUNKTIONSWEISE

Die Firma CEME stellt im Wesentlichen zwei verschiedenen Funktionsprinzipien von Elektropumpen her:

1. – SCHWINGKOLBEN PUMPEN (Magnetkolben Antrieb)
2. – ELEKTROMOTOR PUMPEN (Flügelzellen Laufrad)

1. Die Funktionsweise der Schwingkolben Pumpe basiert auf einem durch die Magnetspule hervorgerufenen Kraftfeld, welches den Magnetkolben gegen eine Feder spannt und dann wieder entläßt. Dieser Vorgang wiederholt sich entsprechend der angelegten Frequenz mit der Herzzeit des Netzes, wobei eine vorgeschaltete Diode eine Sinus Halbwellen der Versorgungsspannung eliminiert.

Zwei im Inneren der Pumpe befindliche Ventile steuern diesen Pulsationsprozeß und verhindern ein Rückströmen des Mediums.

2. Bei einer Elektromotor Pumpe wird die Flüssigkeit mittels eines Laufrades, in unserer Produktionsform peripherale Geometrie, welches durch einen Elektromotor in Bewegung versetzt wird, unter Druck vom Ein- zum Ausgang geleitet.

Beide Funktionsprinzipien dienen der BEWEGUNG von nicht aggressiven bzw. abrasiven Flüssigkeiten. Weitere Details über die Besonderheiten dieser Pumpentypen, sowie Unterschiede in Ihrer Betriebsweise sind auf den folgenden Seiten erklärt.

Nachfolgend aufgeführt finden Sie die Standardmerkmale beider Pumpentypen was Ihnen zur leichteren Produktwahl verhelfen soll.

KLASSIFIZIERUNG

Die Elektropumpen werden entsprechend den folgenden Eigenschaften charakterisiert:

- STROMVERSORGUNG
- EINSCHALTDAUER (Betriebszeit ohne Unterbrechung)
- ANSAUGLEISTUNG (SELBST bzw. Zwangsweise)
- LEISTUNGSKARAKTERISTIK (DRUCK bzw. Durchfluß)

-STROMVERSORGUNG

Die Schwingkolbenpumpen sind nur in Wechselspannungsausführung erhältlich. Auf Grund der Funktionsweise wäre es bei Gleichspannung erforderlich, die Pumpe über einen Impulsgenerator zu speisen. Die Elektromotorpumpen sind auch für den Betrieb mit Gleichspannung erhältlich.

-EINSCHALTDAUER

Unter dem Begriff Einschaltdauer versteht man die Zeit die eine Pumpe ohne Ruhephase betrieben werden kann. Grundsätzlich bestehen zwei Belastbarkeits-typen, ED100% diese Pumpe benötigt keine Stillstandsphasen und einen Typ 50% welcher nach einer Minute Betrieb eine Minute Stillstandszeit benötigt. Bei Pumpen deren Einschaltdauer mit ED50% angegeben sind bitten wir Sie, sich bei Einschaltzyklen abweichend von der obigen Angabe, mit unserer technischen Abteilung in Verbindung zu setzen.

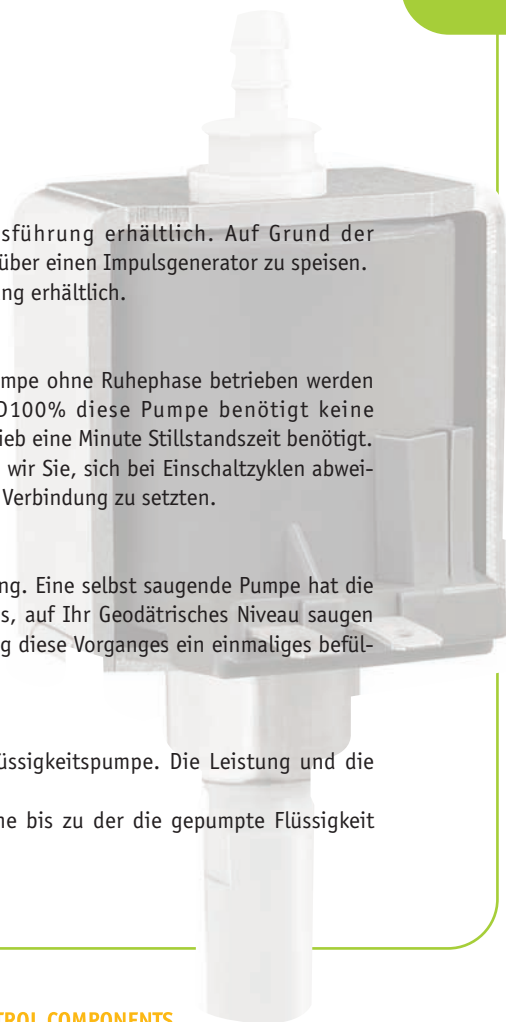
-ANSAUGLEISTUNG

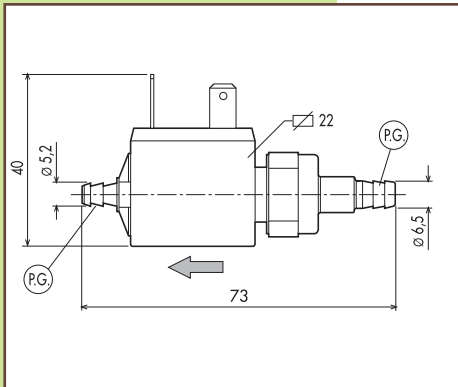
Man unterscheidet hier zwischen selbst saugend und Zwangsbefüllung. Eine selbst saugende Pumpe hat die Eigenschaft, eine Flüssigkeitssäule, durch Erzeugung eines Vakuums, auf Ihr Geodätisches Niveau saugen zu können. Bei manchen Peripheralrad Pumpen ist zur Unterstützung diese Vorganges ein einmaliges befüllen nötig. (Siehe Maximalwerte in Tabelle).

-LEISTUNG UND DRUCK

Dabei handelt es sich um die charakteristischen Größen einer Flüssigkeitspumpe. Die Leistung und die Menge der gepumpten Flüssigkeit pro Zeiteinheit.

Der Druck, auch als Förderhöhe bezeichnet, ist die maximale Höhe bis zu der die gepumpte Flüssigkeit angehoben werden kann.





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CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	CODICE CODE	PORTATA / FLOW cc/min									
		PRESSIONE / PRESSURE bar									
P.G. - P.G.	E 201	35	27	20	13	5	0				
		0	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9
P.G. - P.G.	E 202	63	55	48	23	5	0				
		0	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9
P.G. - P.G.	E 210	220	120	87	60	35	8	0			
		0	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9
P.G. - P.G.	E 211	200	160	127	83	50	0				
		0	0,5	1	1,5	2	2,5				
P.G. - P.G.	E 212	180	140	120	100	75	50	10	0		
		0	0,5	1	1,5	2	2,5	3	3,4		
P.G. - P.G.	E 213	150	85	65	50	30	0				
		0	0,5	1	1,5	2	2,5				
P.G. - P.G.	E 214	53	42	30	22	10	0				
		0	0,5	1	1,5	2	2,5				
P.G. - P.G.	E 215	70	40	25	15	0					
		0	0,3	0,5	0,8	1					

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

CODICE CODE	TENSIONE VOLTAGE	TEMPO DI LAVORO DUTY	CONSUMO CONSUMPTION		PESO WEIGHT Kg	
			220V±240V	120V		
E 201	AC 220V±240V/50Hz	100%	19W	15W	0.080	
E 202	AC 220V±240V 50Hz	AC 120V 60Hz	100%	19W	15W	0.080
E 210	AC 220V±240V 50Hz	AC 120V 60Hz	100%	19W	15W	0.080
E 211	AC 220V±240V 50Hz	AC 120V 60Hz	100%	19W	15W	0.080
E 212	AC 220V±240V 50Hz	AC 120V 60Hz	100%	19W	15W	0.080
E 213	AC 220V±240V 50Hz	AC 120V 60Hz	100%	19W	15W	0.080
E 214	AC 220V±240V 50Hz	AC 120V 60Hz	100%	19W	15W	0.080
E 215	AC 220V±240V/50Hz	50%	27W		0.080	

DIAGRAMMA PORTATA/PRESSIONE FLOW RATE/PRESSURE DIAGRAM

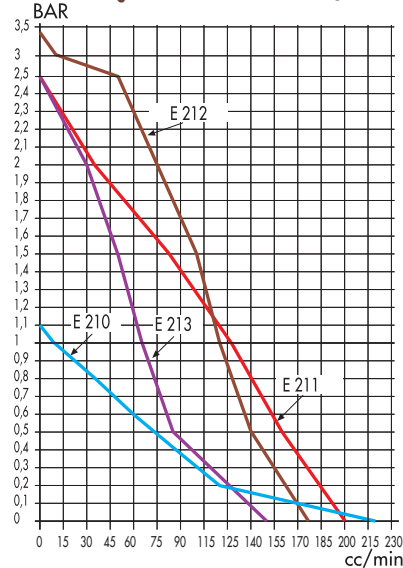
E 201 - E 202

"Dosatrici"
"Dosing pump"



E 210

"Scarico condensa"
"Condensate discharge"

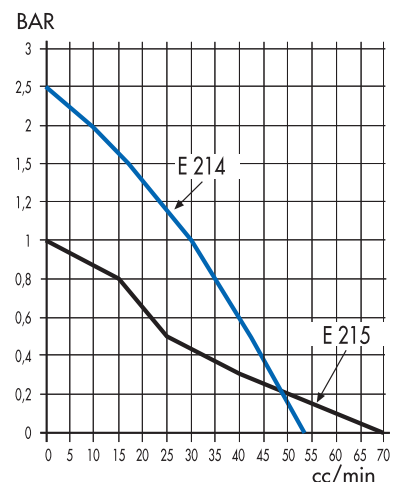


E 211 - E 212 - E 213

"Stiro"
"Steam gun"

E 214 - E 215

"Stiro"
"Steam gun"



POMPA A SOLENOIDE
SOLENOID PUMP
SCHWINGKOLBENPUMPE



201 - 202 - 210 - 211
212 - 213 - 214

201 - 202 - 210 - 211
212 - 213 - 214

I CARATTERISTICHE GENERALI

COLLEGAMENTO ELETTRICO

- (C.A. \sim) tramite un diodo. Il collegamento deve essere effettuato come da schema a lato.
- (C.C. =) è richiesto l'uso di un convertitore per impulsi ad onde quadre.
- CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650B) - IP 65

BOBINA

- polibutilentaraftalato con fibra vetro
- classe di isolamento: I
- classe termica: H (180°C: VDE), F (155°C: UR)

INSTALLAZIONE

in qualsiasi posizione

TUBO GUIDA

ottone

PISTONE E MOLLA

acciaio inossidabile alta resistenza alla corrosione

GUARNIZIONI

SILICONE

GUIDA DI SCORRIMENTO

NBR

TEMPERATURA AMBIENTE

80°C (VDE), 25°C (UR)

TEMP. FLUIDO

35°C

FLUIDI

acqua e liquidi non corrosivi

PREVALENZA DI ASPIRAZIONE

50 cm

TOLLERANZA

tutte le prestazioni sono da intendersi con una tolleranza del $\pm 15\%$

ACCESSORI

VEDI CAPITOLO ACCESSORI

UK GENERAL FEATURES

ELECTRICAL CONNECTION

- (A.C. \sim) through a diode. The connection has to be made as shown on the diagram.
- (D.C. =) requires the use of a square waves impulse converter
- THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650B) - IP 65

COIL

- polybutylene terephthalate glassfibre loaded
- insulation class: I
- thermic class: H (180°C: VDE), F (155°C: UR)

MOUNTING POSITION

any

TUBE GUIDE

brass

PISTON AND SPRING

stainless steel high corrosion resistance

SEALINGS

SILICONE

SLIDING GUIDE

NBR

AMBIENT TEMPERATURE

80°C (VDE), 25°C (UR)

FLUID TEMPERATURE

35°C

FLUIDS

water and non corrosive media

SUCTION PREVALENCE

50 cm

TOLERANCE

all the performances apply within a tolerance of $\pm 15\%$

ACCESSORIES

SEE CHAPTER ACCESSORIES

D ALLGEMEINE MERKMALE

ELEKTRISCHER ANSCHLUSS

- (A.C. \sim) Das Verwenden einer Diode ist für das Funktionsprinzip zwingend. Bitte beachten Sie bei der Verschaltung der Diode den auf dieser Seite abgebildeten Schaltplan.
- (D.C. =) Die zur Verfügung stehende Gleichspannung muss mittels eines Impulskonverters in eine der Wechselspannung ähnlichen Rechteckspannung gebracht werden.
- DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650B) - IP 65

SPULE

- Polybutylenterephthalat mit Glasfaseranteilen
- Isolationsklasse: I
- Thermische Klasse: H (180°C: VDE), F (155°C: UR)

MONTAGEPOSITION

Keine Einschränkungen

FUEHRUNGSRÖHR

Messing

KOLBEN UND FEDER

Edelstahl mit hoher Korrosionsbeständigkeit

DICHTUNGEN

SILIKON

GLEITUNGSFUEHRUNG

NBR

UMGEBUNGSTEMPERATUR

80°C (VDE), 25°C (UR)

MEDIENTEMPERATUR

35°C

FÖRDERMEDIEN

Wasser und nicht korrosive bzw. abrasive Flüssigkeiten

ANSAUGFÖRDERHOEHE

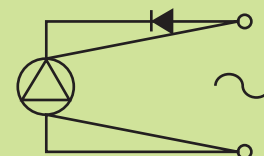
50 cm

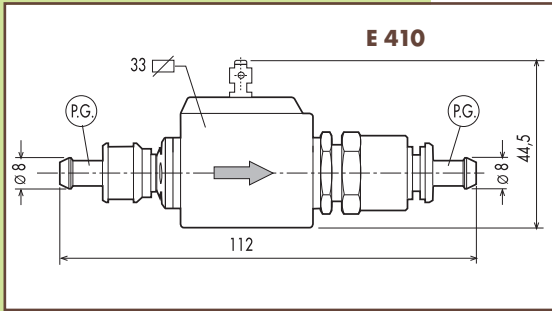
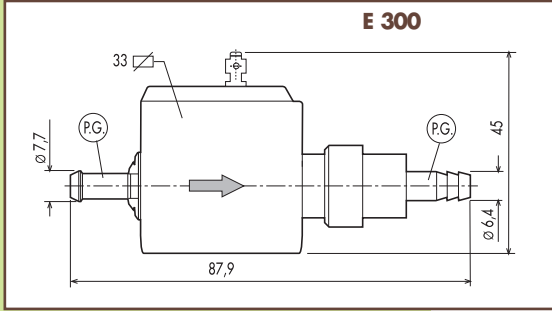
TOLERANZ

Alle Leistungsdaten sind mit einer Serientoleranz von $\pm 15\%$ angegeben.

ZUBEHOER

SIEHE ABSCHNITT ZUBEHOER





CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	CODICE CODE	PORTATA / FLOW LpH										
		PRESSIONE / PRESSURE bar										
P.G. - P.G.	E 300	20,0	17,0	14,0	12,5	11,0	9,25	7,5	5,25	4,0	2,0	0
		0	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5
P.G. - P.G.	E 410	64,0	56,0	50,0	44,0	39,0	36,0	23,0	19,0	14,0	7,5	0
		0	0,2	0,4	0,6	0,8	1	1,6	1,8	2,0	2,2	2,5

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

CODICE CODE	TENSIONE VOLTAGE	TEMPO DI LAVORO DUTY	CONSUMO CONSUMPTION	PESO WEIGHT Kg
E 300	AC 220V=240V/50Hz	-	20W	0.155
E 410	AC 220V=240V/50Hz	-	27W	0.155

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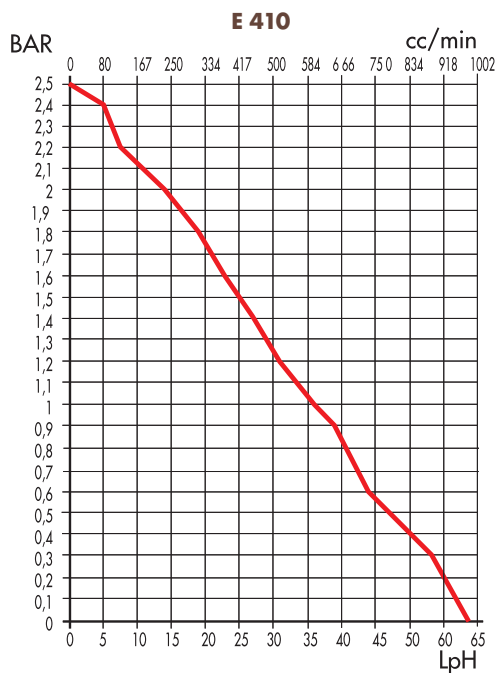
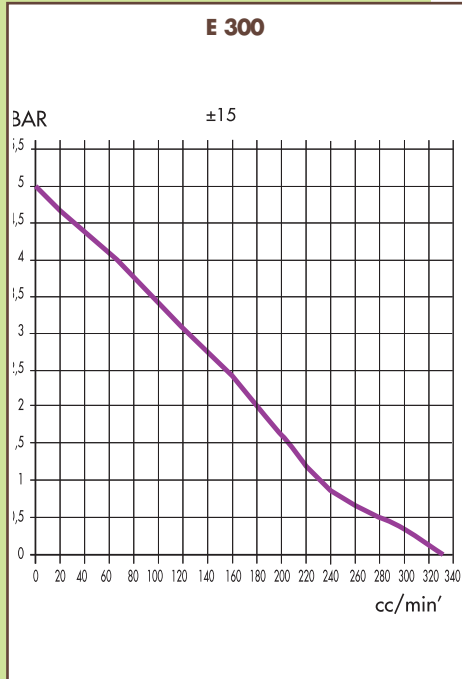


E 410



E 300

DIAGRAMMA PORTATA/PRESSIONE FLOW RATE/PRESSURE DIAGRAM



POMPA A SOLENOIDE
SOLENOID PUMP
SCHWINGKOLBENPUMPE



E 300 - E410



E 300 - E410



I

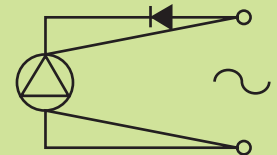
CARATTERISTICHE GENERALI

COLLEGAMENTO ELETTRICO	- (C.A. ~) tramite un diodo. Il collegamento deve essere effettuato come da schema a lato. - (C.C. =) è richiesto l'uso di un convertitore per impulsi ad onde quadre.
BOBINA	- polibutilentarftalato (PBT) - classe di isolamento: II - classe termica: F (155°C)
INSTALLAZIONE	in qualsiasi posizione
TUBO GUIDA	poliammide (PA)
PISTONE E MOLLA	acciaio inossidabile alta resistenza alla corrosione
GUARNIZIONI	NBR
GUIDA DI SCORRIMENTO	PTFE o NBR
TEMPERATURA AMBIENTE	70°C
TEMP. FLUIDO	60°C
FLUIDI	acqua e liquidi non corrosivi
PREVALENZA DI ASPIRAZIONE	1 m
TOLLERANZA	tutte le prestazioni sono da intendersi con una tolleranza del ± 15%
ACCESSORI	VEDI CAPITOLO ACCESSORI

UK

GENERAL FEATURES

ELECTRICAL CONNECTION	- (A.C. ~) through a diode. The connection has to be made as shown on the diagram. - (D.C. =) requires the use of a square waves impulse converter
COIL	- polybutylene terephthalate (PBT) - insulation class: II - thermic class: F (155°C)
MOUNTING POSITION	any
TUBE GUIDE	polyamide (PA)
PISTON AND SPRING	stainless steel high corrosion resistance
SEALINGS	NBR
SLIDING GUIDE	PTFE or NBR
AMBIENT TEMPERATURE	70°C
FLUID TEMPERATURE	60°C
FLUIDS:	water and non corrosive media
SUCTION PREVALENCE	1 meter
TOLERANCE	all the performances apply within a tolerance of ± 15%
ACCESSORIES	SEE CHAPTER ACCESSORIES



D

ALLGEMEINE MERKMALE

ELEKTRISCHER ANSCHLUSS	- (A.C. ~) Das Verwenden einer Diode ist für das Funktionsprinzip zwingend. Bitte beachten Sie bei der Verschaltung der Diode den auf dieser Seite abgebildeten Schaltplan. - (D.C. =) Die zur Verfügung stehende Gleichspannung muss mittels eines Impulsconverters in eine der Wechselfspannung ähnlichen Rechteck- spannung gebracht werden.
SPULE	- Polybutylenterephthalat (PBT) - Isolationsklasse: II - Thermische Klasse: F (155°C)
MONTAGEPOSITION	Keine Einschränkungen
FUEHRUNGSROHR	Polyamid (PA)
KOLBEN UND FEDER	Edelstahl mit hoher Korrosionsbestaendigkeit
DICHTUNGEN	NBR
GLEITUNGSFUEHRUNG	PTFE bzw. NBR
UMGEBUNGSTEMPERATUR	70 °C
MEDIENTEMPERATUR	60 °C
FÖRDERMEDIEN	Wasser und nicht korrosive bzw. abrasive Fluessigkeiten
ANSAUGFÖRDERHOEHE	1 Meter
TOLERANZ	Alle Leistungsdaten sind mit einer Serientoleranz von ± 15 % angegeben.
ZUBEHOER	SIEHE ABSCHNITT ZUBEHOER

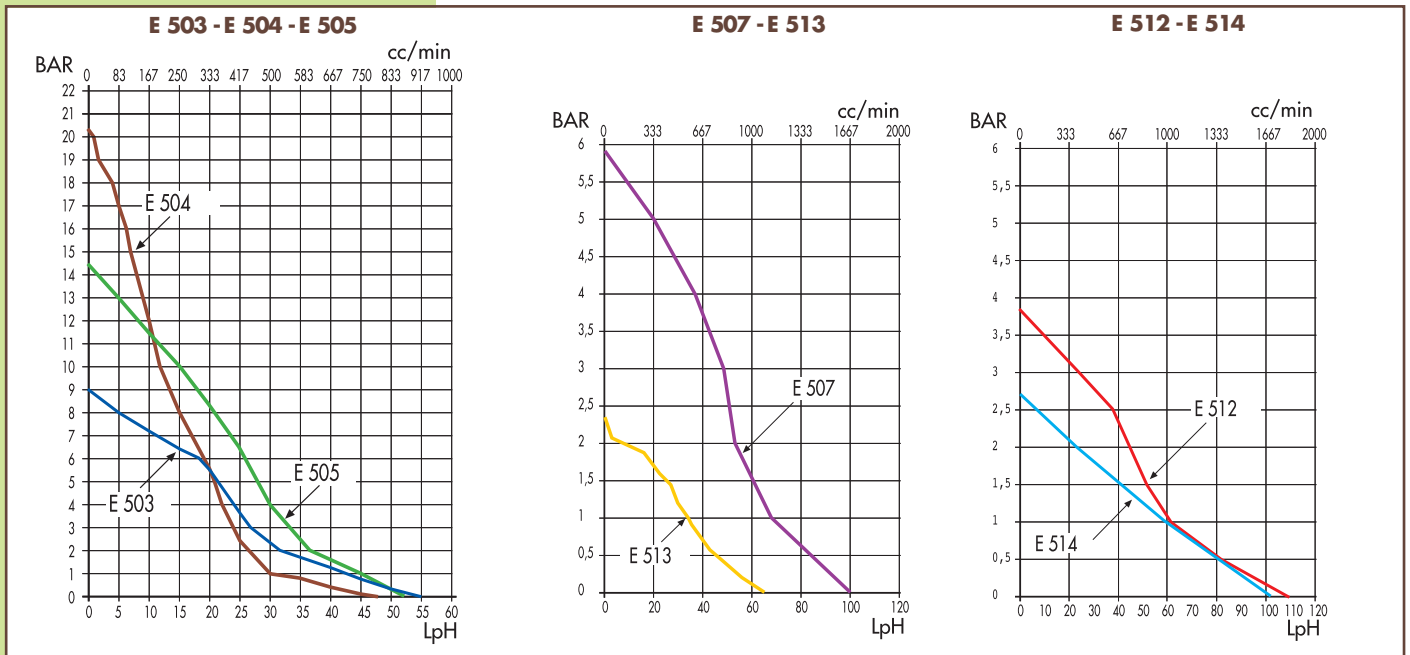
CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	CODICE CODE	PORTATA / FLOW LpH																						
		PRESSIONE / PRESSURE bar																						
P.G. - G 1/8	E 503	55	42	32	27	24	21	18	11	5	0													
		0	0,5	1	1,5	2	2,5	2,8	3	3,2	4	5	6	7	8	9								
P.G. - G 1/8	E 504	48	30	26	24	22	21	19	17	15	13	12	11	10	9	8	7	6,3	5,2	4	1,8	0,8	0	
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20,5	
P.G. - G 1/8	E 505	52	45	37	33	30	28	26	24	21	18	15	12	9	5	0								
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14,5								
P.G. - G 1/8	E 507	100	68	52	44	38	20	0																
		0	1	2	3	4	5	5,9																
P.G. - G 1/8	E 512	110	82	61	52	44	38	24	0															
		0	0,5	1	1,5	2	2,5	3	3,8															
P.G. - G 1/8	E 513	64	56	48	42	35	34	30	27	22	16,5	8	4	1,5	0									
		0	0,2	0,4	0,6	0,9	1,0	1,2	1,4	1,6	1,8	2,0	2,1	2,2	2,3									
P.G. - G 1/8	E 514	102	59	23	0																			
		0	1	2	2,7																			

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

CODICE CODE	TENSIONE VOLTAGE		TEMPO DI LAVORO DUTY		CONSUMO CONSUMPTION Watt	PESO WEIGHT Kg
	VDE	UR	VDE	UR		
E 503	AC 220÷240V/50Hz	AC 120V/60Hz	100%	40%	32W	0.95
E 504	AC 220÷240V/50Hz	AC 120V/60Hz	66%	33%	47W	0.95
E 505	AC 220÷240V/50Hz	AC 120V/60Hz	66%	33%	47W	0.95
E 507	AC 220÷240V/50Hz	AC 120V/60Hz	66%	33%	47W	0.95
E 512	AC 220÷240V/50Hz	AC 120V/60Hz	100%	40%	32W	0.95
E 513	AC 220÷240V/50Hz	AC 120V/60Hz	66%	33%	42W	0.95
E 514	AC 220÷240V/50Hz	AC 120V/60Hz	100%	40%	32W	0.95

DIAGRAMMI PORTATA/PRESSIONE FLOW RATE/PRESSURE DIAGRAMS



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DIENSTABTEILUNG



POMPA A SOLENOIDE
SOLENOID PUMP
SCHWINGKOLBENPUMPE



I CARATTERISTICHE GENERALI

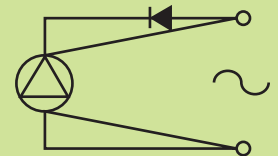
COLLEGAMENTO ELETTRICO	- (C.A. ~) tramite un diodo. Il diodo può essere già incorporato nella bobina - (C.C. =) è richiesto l'uso di un convertitore per impulsi ad onde quadre.
BOBINA	- poliammide (PA) o polibutilentereftalato (PBT) o poliestere (PET) - classe di isolamento: II - classe termica: F (155°C: VDE), A (105°C: UR) La bobina è dotata di tasca per termoprotettore che collegato in serie al faston linea previene surriscaldamenti della stessa.
INSTALLAZIONE	in qualsiasi posizione
TUBO GUIDA	poliammide + fibra vetro
PISTONE E MOLLA	acciaio inossidabile alta resistenza alla corrosione
GUARNIZIONI	EPDM, NBR (514)
GUIDA DI SCORRIMENTO	PTFE, EPDM (503, 504, 505)
TEMPERATURA AMBIENTE	70°C (VDE - UR), 50°C (VDE - UR: 504, 505, 507)
TEMP. FLUIDO	60°C (VDE - UR), 35°C (VDE - UR: 504, 505, 507)
FLUIDI	acqua e liquidi non corrosivi
PREVALENZA DI ASPIRAZIONE	1 m
TOLLERANZA	tutte le prestazioni sono da intendersi con una tolleranza del ± 15%
ESECUZIONI SPECIALI	tubo in uscita in ottone
ACCESSORI	VEDI CAPITOLO ACCESSORI

UK GENERAL FEATURES

ELECTRICAL CONNECTION	- (A.C. ~) through a diode. The diode could already be incorporated in the coil - (D.C. =) requires the use of a square waves impulse converter.
COIL	- polyamide (PA) or polybutylene terephthalate (PBT) or polyester (PET) - insulation class: II - thermic class: F (155°C: VDE), A (105°C: UR) The coil is provided with a pocket for the thermoswitch in series connected to the line terminal to prevent overheating of the coil
MOUNTING POSITION	any
TUBE GUIDE	polyamide (PA) glass fibre
PISTON AND SPRING	stainless steel high corrosion resistance
SEALINGS	EPDM, NBR (514)
SLIDING GUIDE	PTFE, EPDM (503, 504, 505)
AMBIENT TEMPERATURE	70°C (VDE - UR), 50°C (VDE - UR: 504, 505, 507)
FLUID TEMPERATURE	60°C (VDE - UR), 35°C (VDE - UR: 504, 505, 507)
FLUIDS	water and non corrosive media
SUCTION PREVALENCE	1 meter
TOLERANCE	all the performances apply within a tolerance of ± 15%
SPECIAL EXECUTIONS	outlet tube in brass
ACCESSORIES	SEE CHAPTER ACCESSORIES

D ALLGEMEINE MERKMALE

ELEKTRISCHER ANSCHLUSS	- (A.C. ~) Das Verwenden einer Diode ist fuer das Funktionsprinzip zwingend. Die Diode kann bereits in der Pumpenspule vergossen sein. - (D.C. =) Die zur Verfuegung stehende Gleichspannung muss mittels eines Impulskonverters in eine der Wechselspannung aehnliche Rechteckspannung gebracht werden.
SPULE	- Polyamid (PA) oder Polybutylenterephthalat (PBT) oder Polyester (PET) - Isolationsklasse: II - Thermische Klasse: F (155°C: VDE), A (105°C: UR) Die Spule ist mit einer Tasche fuer den Thermoschutz ausgeruestet. Dieser muss in Reihe mit der Spannungsversorgung an der Pumpe angeschlossen werden, um eine Ueberheizung der Spule zu vermeiden.
MONTAGEPOSITION	Keine Einschraenkungen
FUEHRUNGSRÖHR	Glasfaser Polyamid (PA)
KOLBEN UND FEDER	Edelstahl mit hoher Korrosionsbestaendigkeit
DICHTUNGEN	EPDM, NBR (514)
GLEITUNGSFUEHRUNG	PTFE, EPDM (503, 504, 505)
UMGEBUNGSTEMPERATUR	70°C (VDE - UR), 50°C (VDE - UR: 504, 505, 507)
MEDIENTEMPERATUR	60°C (VDE - UR), 35°C (VDE - UR: 504, 505, 507)
MEDIEN	Wasser und nicht korrosive bzw. abrasive Fluessigkeiten
ANSAUGFOERDERHOEHE	1 m
TOLERANZ	Alle Leistungsdaten sind mit einer Serientoleranz von ± 15% angegeben.
SONDERAUSFUEHRUNGEN	Ausgangsrohr aus Messing.
ZUBEHOER	SIEHE ABSCHNITT ZUBEHOER



POMPA A SOLENOIDE
SOLENOID PUMP
SCHWINGKOLBENPUMPE



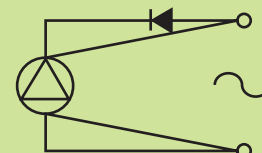
3009



I	CARATTERISTICHE GENERALI	
	COLLEGAMENTO ELETTRICO	- (C.A. ~) tramite un diodo - (C.C. =) è richiesto l'uso di un convertitore per impulsi ad onde quadre. - viene fornito il CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650A)-IP 65, che incorpora il diodo.
	BOBINA	- polibutilentaraftalato (PBT) - classe di isolamento: I - classe termica: H (180°C) La bobina è dotata di tasca per termoprotettore che collegato in serie al faston linea previene surriscaldamenti della stessa. in qualsiasi posizione, preferibilmente in orizzontale
	INSTALLAZIONE	acciaio inossidabile
	TUBO GUIDA	acciaio inossidabile alta resistenza alla corrosione
	PISTONE E MOLLA	FKM, H-NBR
	GUARNIZIONI	PTFE, FKM (3000)
	GUIDA DI SCORRIMENTO	50°C (3000), 70°C (3009)
	TEMPERATURA AMBIENTE	25°C (3000), 60°C (3009)
	TEMP. FLUIDO	acqua e liquidi non corrosivi
	FLUIDI	1 m
	PREVALENZA DI ASPIRAZIONE	tutte le prestazioni sono da intendersi con una tolleranza del ± 15%
	TOLLERANZA	VOLTAGGIO 120V 60Hz
	ESECUZIONI SPECIALI	VEDI CAPITOLO ACCESSORI
	ACCESSORI	

UK	GENERAL FEATURES	
	ELECTRICAL CONNECTION	- (A.C. ~) through a diode - (D.C. =) requires the use of a square waves impulse converter - supplied with THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650A) - IP 65 with included diode.
	COIL	- polybutylene terephthalate (PBT) - insulation class: I - thermic class: H (180°C) The coil is provided with a pocket for the thermostat in series connected to the line terminal to prevent overheating of the coil in any position, preferable the horizontal one
	MOUNTING POSITION	stainless steel
	TUBE GUIDE	stainless steel high corrosion resistance
	PISTON AND SPRING	FKM, H-NBR
	SEALINGS	PTFE, FKM (3000)
	SLIDING GUIDE	50°C (3000), 70°C (3009)
	AMBIENT TEMPERATURE	25°C (3000), 60°C (3009)
	FLUID TEMPERATURE	water and non corrosive media
	FLUIDS	1 meter
	SUCTION PREVALENCE	all the performances apply within a tolerance of ± 15%
	TOLERANCE	VOLTAGE 120V 60 HZ
	SPECIAL EXECUTIONS	SEE CHAPTER ACCESSORIES
	ACCESSORIES	

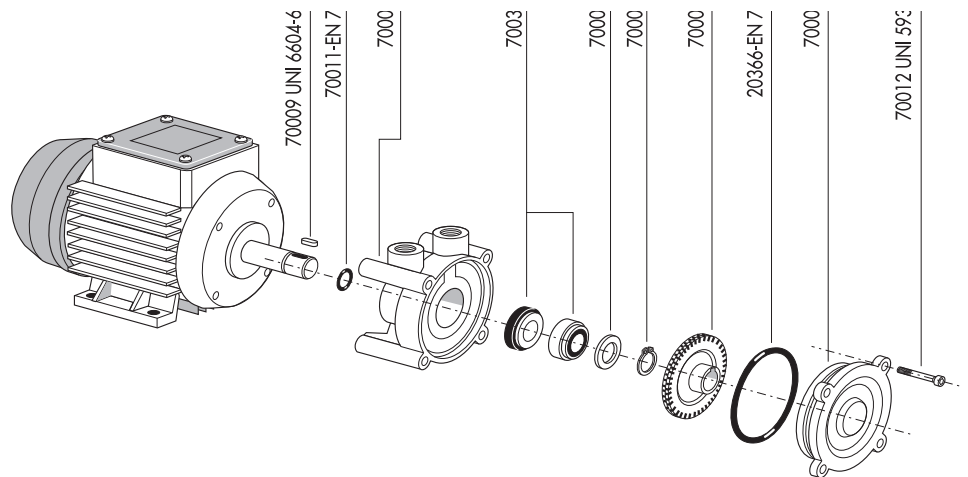
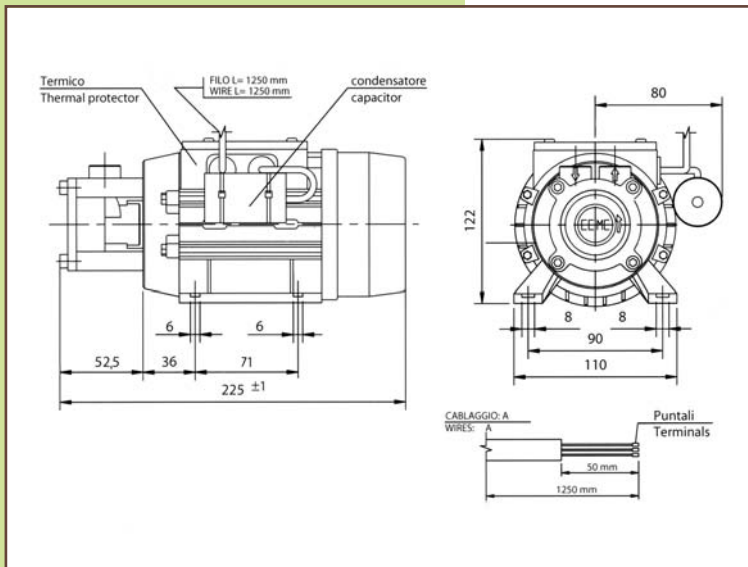
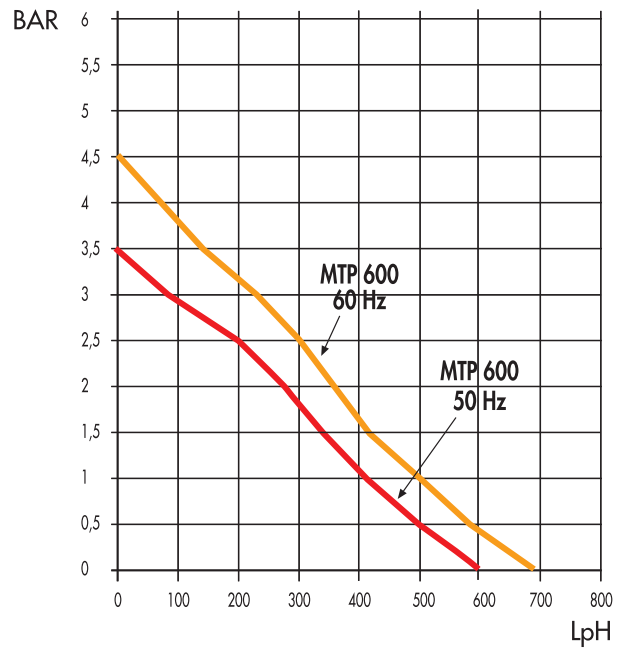
D	ALLGEMEINE MERKMALE	
	ELEKTRISCHER ANSCHLUSS	- (A.C. ~) Das Verwenden einer Diode ist fuer das Funktionsprinzip zwingend - (D.C. =) Die zur Verfügung stehende Gleichspannung muss mittels eines Impulsconverters in eine der Wechselfspannung ähnlichen Rechteckspannung gebracht werden. - Ausgeliefert mit DREIPOLIGEM STECKER UNI ISO 4400 (DIN 43650A) - IP 65. Der Stecker ist mit Diode ausgeruestet.
	SPULE	- Polybutylenterephthalat (PBT) - Isolationsklasse: I - Thermische Klasse: H (180 °C) Die Spule ist mit einer Tasche fuer den Thermoschutz ausgeruestet. Dieser muss in Reihe mit der Spannungsversorgung an der Pumpe angeschlossen werden, um eine Ueberhitzung der Spule zu vermeiden. Keine Einschraenkungen, bevorzugt horizontal
	MONTAGEPOSITION	Edelstahl
	FUEHRUNGSRÖHR	Edelstahl mit hoher Korrosionsbestaendigkeit
	KOLBEN UND FEDER	FKM, H-NBR
	DICHTUNGEN	PTFE, FKM (3000)
	GLEITUNGSFUEHRUNG	50 °C (3000), 70 °C (3009)
	UMGEBUNGSTEMPERATUR	25 °C (3000), 60 °C (3009)
	MEDIENTEMPERATUR	Wasser und nicht korrosive bzw. abrasive Fluessigkeiten
	FÖRDERMEDIEN	1 Meter
	ANSAUGFÖRDERHOEHE	Alle Leistungsdaten sind mit einer Serientoleranz von ± 15% angegeben.
	TOLERANZ	SPANNUNG 120V 60 HZ
	SONDERAUSFUEHRUNGEN	SIEHE ABSCHNITT ZUBEHOER
	ZUBEHOER	



CARATTERISTICHE SPECIFICATIONS

ATTACCHI PIPES in → out	CODICE CODE	PORTATA / FLOW LpH									PESO WEIGHT Kg
		PRESSIONE / PRESSURE bar									
G 1/4	MTP 600 230/50	540	500	410	340	280	200	90	0		4.000
		0	0,5	1	1,5	2	2,5	3	3,5		
G 1/4	MTP 600 120/60	680	580	500	420	360	300	230	145	0	4.000
		0	0,5	1	1,5	2	2,5	3	3,5	4,5	

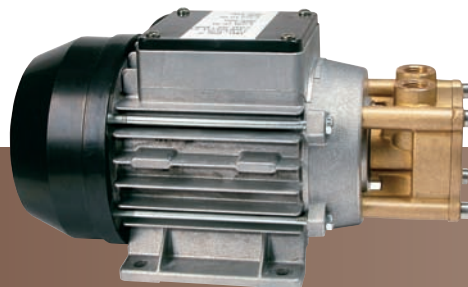
DIAGRAMMA PORTATA/PRESSIONE FLOW RATE/PRESSURE DIAGRAM



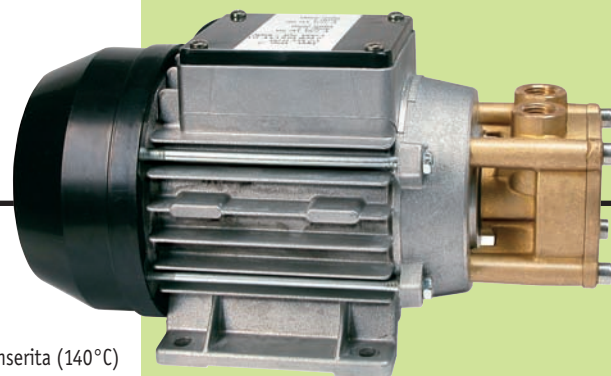
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POMPA PERIFERICA
PERIPHERAL ELECTRICAL PUMP
PERIPHERALRADKREISELPUMPE



I CARATTERISTICHE GENERALI	
VOLTAGGIO STANDARD	120V 60Hz, 230V 50-60Hz, 400V 50Hz, 100V 50-60Hz
CLASSE TERMICA	F (155°C)
COLLEGAMENTO ELETTRICO	IP44 Cavo standard lunghezza 120 cm. Esecuzioni speciali su richiesta.
INSTALLAZIONE	orizzontale
MOTORE	monofase o trifase 2 poli ad induzione
ESECUZIONE	con ventola, MEC 56 - con condensatore (5 µF) montato - protezione termica inserita (140°C)
MATERIALI	albero: acciaio inossidabile con alta resistenza alla corrosione girante: ottone trattato nichel - teflon
GUARNIZIONI	EPDM
TENUTA MECCANICA	grafite ceramica - EPDM
IMPIEGO	100%ED
TEMPERATURA AMBIENTE	50°C
TEMP. FLUIDO	60°C
PREVALENZA DI ASPIRAZIONE	0
FLUIDI	acqua e liquidi non corrosivi
PRESSIONI E PORTATE	vedi diagrammi
ALIMENTAZIONE	C.A. (~)
ESECUZIONI SPECIALI	- LUNGHEZZA VARIABILE DEL CAVO, DIAMETRO VENTOLE. PER ULTERIORI ESECUZIONI SPECIALI CONTATTARE IL NOSTRO UFFICIO TECNICO.
POTENZA 50 Hz	180W (0 bar) - 250W (3,5 bar)
POTENZA 60 Hz	200W (0 bar) - 320W (4 bar)

UK GENERAL FEATURES	
STANDARD VOLTAGES	120V 60Hz, 230V 50-60Hz, 400V 50Hz, 100V 50-60Hz
THERMIC CLASS	F (155°C)
ELECTRICAL CONNECTION	IP44 Standard cable length 120 cm. Special executions on request.
MOUNTING POSITION	horizontal
MOTOR	singlephase or threephase, 2 pole induction
EXECUTION	with fan, MEC 56 - with mounted capacitor (5 µF) - built-in overload motor protection (140°C)
MATERIALS	shaft: stainless steel with improved corrosion resistance impeller: brass nickel -teflon loaded
SEALINGS	EPDM
MECHANICAL SEALING	graphite-ceramic-EPDM
EMPLOYMENT	100% ED
AMBIENT TEMPERATURE	50°C
FLUID TEMPERATURE	60°C
SUCTION PREVALENCE	0
FLUIDS	water and non corrosive media
PRESSURE AND FLOW RATE	see diagram
POWER SUPPLY	A.C. (~)
SPECIAL EXECUTIONS	- LENGTH OF THE CABLE, FAN DIAMETERS. FOR OTHERS PLEASE CONTACT OUR TECHNICAL OFFICE.
POWER 50 Hz	180W (0 bar) - 250W (3,5 bar)
POWER 60 Hz	200W (0 bar) - 320W (4 bar)

D ALLGEMEINE MERKMALE	
STANDARD SPANNUNG	120V 60Hz, 230V 50-60Hz, 400V 50Hz, 100V 50-60Hz
THERMISCHE KLASSE	F (155°C)
ELEKTRISCHER ANSCHLUSS	IP44 Kabellaenge Standard 120 cm. Sonderausfuehrungen auf Anfrage.
MONTAGEPOSITION	Waagrecht
MOTOR	2 poliger ,Einphasenmotor oder Drehstrommotor
AUSFUEHRUNG	Mit Luefterrad, MEC 56 - Mit eingebautem Kondensator (5 µF) - Eingebautem Ueberlastungsschutz (140°C)
WERKSTOFFE	Welle: Edelstahl mit hoher Korrosionsbestaendigkeit Lauftrad: Nickel -Teflon behandeltes Messing
DICHTUNGEN	EPDM
GLEITRINGDICHTUNG	Graphit-Keramik - EPDM
EINSATZ	100%ED
UMGEBUNGSTEMPERATUR	50°C
MEDIENTEMPERATUR	60°C
ANSAUGFOERDERHOEHE	0
MEDIEN	Wasser und nicht korrosive bzw. abrasive Fluessigkeiten
DRUECKE UND FOERDERMENGEN	Siehe Diagramm
STROMVERSORGUNG	A.C. (~)
SONDERAUSFUEHRUNGEN	- KABELLAENGE, VENTILATORENGROESSE. FUER WEITERE SONDERAUSFUEHRUNGEN SETZEN SIE SICH BITTE MIT UNSEREM TECHNISCHEN BUERO IN VERBINDUNG.
LEISTUNGS-AUFNAHME 50 Hz	180W (0 bar) - 250W (3,5 bar)
LEISTUNGS-AUFNAHME 60 Hz	200W (0 bar) - 320W (4 bar)

APPLICAZIONI E VANTAGGI

Queste elettropompe periferiche, con un motore relativamente piccolo, riescono a raggiungere un'alta portata. Grazie alle loro dimensioni ridotte sono particolarmente indicate per essere collocate in apparecchi e macchine per aumento di pressione, raffreddamento temperature. Facilmente ispezionabili con la possibilità di riparare la pompa ed il motore separatamente. La parte pompante può essere ruotata di 90° in 90°. Possono essere utilizzate per acque pulite, liquidi chimicamente non abrasivi e senza solidi.

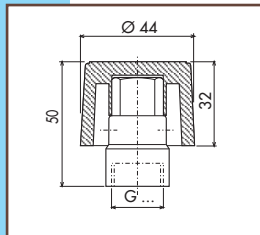
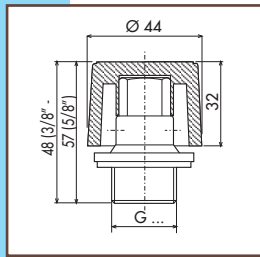
APPLICATIONS AND ADVANTAGES

These peripheral pumps are made to reach a high flow, even with a relatively small motor. Thanks to their reduced dimensions, they're particularly suitable to be set on apparatus and machines to increase pressure, cooling of temperatures. Easy to be examined, there's the possibility to repair the pump and the motor separately. The pumping part can be turned 90° in 90°. These pumps are made to handle clean water only, chemically non abrasive liquids and without solids.

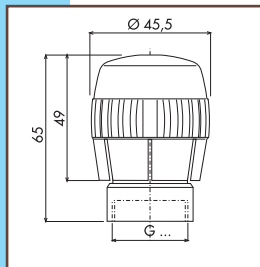
ANWENDUNGEN UND VORTEILE

Diese Peripheralradkreiselumpen koennen mit einem relativ kleinen Motor einen hohen durchflussmenge erreichen. Dank der geringen Abmessungen sind sie fuer den Einsatz in jegliche Apparaten und Maschinen wo Druckerhoehung oder Kuehlung des Mediums erforderlich ist, besonders geeignet. Sie sind sehr wartungsfreundlich da die Moeglichkeit besteht die Pumpe separat vom Motor zu reparieren. Der Pumpenkopf ist jeweils um 90° drehbar. Die Pumpen koennen mit sauberem Wasser und mit chemisch nicht korrosiven bzw. abrasiven partikelfreien Fluessigkeiten eingesetzt werden.

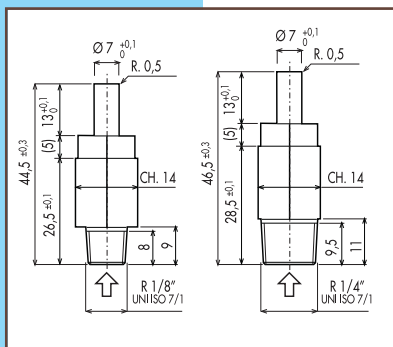
CARATTERISTICHE SPECIFICATIONS



TAM



ATTACCHI PIPES	CODICE CODE	Ø	PESO WEIGHT Kg
G 3/8" M	3113	7 mm	0.090
G 1/2" M	3114	7 mm	0.110
G 5/8" M	3117	7 mm	0.145
G 1/2" F	3214	7 mm	0.120
G 3/4" F	3215	7 mm	0.130
G 3/4" F	3915	7 mm	0,150



CODICI		VALORI DI TARATURA		
		Tenuta (bar)	APERTURA (inizio o completa)	
			P minimo (bar)	P Massimo (bar)
11300-2/3	11450-2/3	2	2,1	3
11300-2,5/3,5	11450-2,5/3,5	2,5	2,6	3,5
11300-3/4	11450-3/4	3	3,1	4
11300-3,5/4,5	11450-3,5/4,5	3,5	3,6	4,5
11300-4/5	11450-4/5	4	4,1	5
11300-4,5/5,5	11450-3,5/4,5	4,5	4,6	5,5
11300-5/6	11450-5/6	5	5,1	6
11300-5,5/6,5	11450-5,5/6,5	5,5	5,6	6,5

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/ FLUIDS		AMBIENTE/ AMBIENT
MVQ-SR	MVQ-N 55	80°C
130°C	160°C	

VALVOLE DI SICUREZZA
SAFETY VALVES
SICHERHEITSVENTIL



0497

Marcatura CE in conformità alla DIRETTIVA 97/23/CE (PED)
 CE marked in conformity to the EUROPEAN DIRECTIVE 97/23/CE (PED)

I CARATTERISTICHE GENERALI
PRESSIONE TARATURA
PARTI A CONTATTO CON IL FLUIDO

- 3 ÷ 5,5 bar
- TENUITA: silicone
 - CORPO: ottone
 - MOLLA: acciaio inox AISI 302
 - MANOPOLA (SERIE 3): poliestere con fibra vetro, poliammide colore nero
 - vapore - acqua - aria (serie 4)
 - vapore aria (serie 3)

FLUIDI

VALVOLA UNIDIREZIONALE
POSIZIONE DI MONTAGGIO

Qualsiasi.

APPLICAZIONI

Valvola atta a scaricare il vapore che genera una caldaia con una resistenza di 3500 W.

UK GENERAL FEATURES
SETTING PRESSURE
PARTS IN CONTACT WITH THE FLUID

- from 3 up to 5,5 bar
- SEALING: silicon
 - BODY : brass
 - SPRING : stainless steel AISI 302
 - KNOB (SERIES 3): Polyester glassfibre loaded, Polyamide color black
 - steam - water - air (serie 4)
 - steam- air (serie 3)

FLUIDS

ONE WAY DIRECTION VALVE
MOUNTING POSITION

any

APPLICATIONS

Valve suitable to discharge the steam generated by a boiler with a resistance of 3500 W

D ALLGEMEINE MERKMALE
EICHUNGSDRUCK
MEDIUMS BERUEHRTE ELEMENTE

- Von 3 bis 5,5 Bar
- DICHTUNG: Silikon
 - KOERPER : Messing
 - FEDER : Edelstahl AISI 302
 - DREHKNOPF (SERIE 3): Polyester mit Glasfaser, Polyamid Farbe: schwarz
 - Dampf - Wasser - Luft (Serie 4)
 - Dampf- Luft (Serie 3)

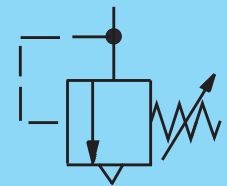
MEDIEN

UNIDIREKTIONALES VENTIL
MONTAGEPOSITION

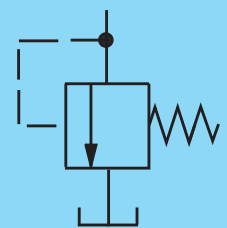
Keine Einschränkungen

SONDERAUSFUEHRUNGEN

Ventil geeignet fuer das Abblasen von Dampf, erzeugt von einem Dampfkessel mit Spannungswiderstand von 3500W



SERIE 3



SERIE 4

CARATTERISTICHE SPECIFICATIONS

Pressostati per applicazioni a vapore *Switches for steam applications*

TIPO TYPE	CODICE CODE	ATTACCO	PRESSOSTATO INTERRUTTORE PRESSURE SWITCH INT	PRESSOSTATO DEVIATORE PRESSURE COMMUTATION VAP	TARATURA CALIBRATION	PESO WEIGHT Kg
PC	54100N00	R 1/8"		•	Da 0.5 a 3,5 bar ±0,1	0,045
PN	56100N00	R 1/8"		•	Da 0.5 a 4,5 bar ±0,2	0,050
PC	53100N00	R 1/8"	•		Da 0.5 a 3,5 bar ±0,1	0,045
PN	58100N00	R 1/8"	•		Da 0.5 a 4,5 bar ±0,2	0,050
PC	54110N00	G 1/8"		•	Da 0.5 a 3,5 bar ±0,1	0,045
PN	56110N00	G 1/8"		•	Da 0.5 a 4,5 bar ±0,2	0,050
PC	53110N00	G 1/8"	•		Da 0.5 a 3,5 bar ±0,1	0,045
PN	58110N00	G 1/8"	•		Da 0.5 a 4,5 bar ±0,2	0,050
PC	54120N00	G 1/4"		•	Da 0.5 a 3,5 bar ±0,1	0,055
PN	56120N00	G 1/4"		•	Da 0.5 a 4,5 bar ±0,2	0,060
PC	53120N00	G 1/4"	•		Da 0.5 a 3,5 bar ±0,1	0,055
PN	58120N00	G 1/4"	•		Da 0.5 a 4,5 bar ±0,2	0,060

Pressostati per applicazioni ad acqua *Switches for water applications*

TIPO TYPE	CODICE CODE	ATTACCO	PRESSOSTATO INTERRUTTORE PRESSURE SWITCH INT	PRESSOSTATO DEVIATORE PRESSURE COMMUTATION VAP	TARATURA	PESO WEIGHT Kg
PC	5410*N000	R 1/8"		•	Da 0.2 a 6 bar ±0,1	0,045
PC	5411*N000	G 1/8"		•	Da 0.2 a 6 bar ±0,1	0,045
PB	6011*N000	G 1/8"		•	Da 0.2 a 6 bar ±0,1	0,025
PC	5412*N000	G 1/4"		•	Da 0.2 a 6 bar ±0,1	0,055
PB	5612*N000	G 1/4"		•	Da 0.2 a 6 bar ±0,1	0,030

- * = 0 per diff. Fisso
- * = 2 per diff. reg. 0,2
- * = 3 per diff. reg. 0,3
- * = 4 per diff. reg. 0,4
- * = 5 per diff. reg. 0,5
- * = 6 per diff. reg. 0,6
- * = 7 per diff. reg. 0,7
- * = 8 per diff. reg. 0,8

MAX TEMPERATURA MAX TEMPERATURE

FLUIDI/FLUIDS		AMBIENTE/AMBIENT
PB	PC/PN	120°C
90°C	155°C	

ACCESSORI

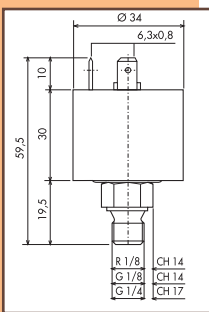
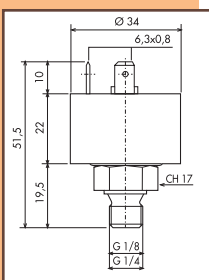
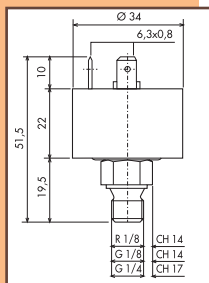
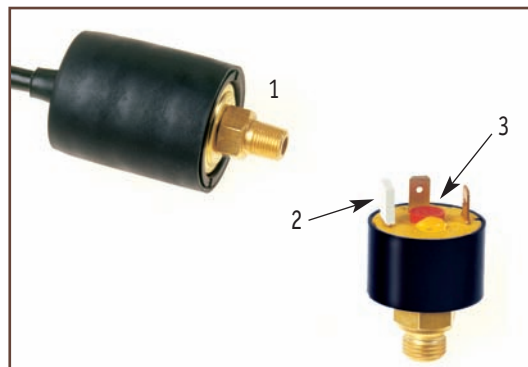
- 1- CAPPUCCIO IN GOMMA COPRICONTATTI COD. 3335
- 2- PROTEZIONE COPRIFASTON IN PLASTICA COD. 20009
- 3- COPRIVITE DI PROTEZIONE E IDENTIFICAZIONE TARATURA.

ACCESSORIES

- 1- RUBBER CAP TO COVER CONNECTIONS COD. 3335
- 2- PLASTIC PROTECTIONS TO COVER FASTONS COD. 20009
- 3- PROTECTION SCREW COVER AND CALIBRATION IDENTIFICATION.

ZUBEHOER

- 1- GUMMIKAPPEN FUER STECKKONTAKTE COD. 3335
- 2- PLASTIKSCHUTZ FUER FLACHSTECKER COD. 20009
- 3- SCHUTZKAPPE FUER DRUCKEINSTELLSCRAUBE.



**PRESSOSTATO
PRESSURE SWITCHES
DRUCKSCHALTER**



**I CARATTERISTICHE GENERALI
PRESSIONE DI TARATURA**

da 0,2÷6 bar
La taratura viene eseguita durante la fabbricazione sul valore richiesto dal cliente.

**STATICA
ISTERESI
PARTI A CONTATTO CON IL FLUIDO
FLUIDI
DATI ELETTRICI**

12 bar
ΔP fisso 0,1 ÷ 0,4 - ΔP regolabile 0,2 ÷ 0,8
membrana acciaio inox AISI 301 - raccordo ottone (PN, PC) - poliarilammide (PB) - Rivetto interno ottone
acqua - olio- aria - vapore (serie PC, PN) • acqua - aria (serie PB)
faston 6,3x0,8
microinterruttore: N.C. ≤ 15 A carico resistivo ≤ 1,5 Induttivo/250V
N.O. ≤ 9 A carico resistivo ≤ 0,9 Induttivo/250V

**POSIZIONE DI MONTAGGIO
ESECUZIONI SPECIALI**

vita dei contatti elettrici: 100.000 cicli
Qualsiasi. Consigliata quella con i faston rivolti verso l'alto
- TARATURA 0,2÷10 bar (MEMBRANA RINFORZATA)
- MATERIALE IGNIFUGO (AUTOESTINGUENTE)
- ATTACCHI O FILETTI SPECIALI
- CONTATTI TRATTATI CON BISSIDO DI STAGNO
- LOGO PERSONALIZZATO (esente marchi di qualità)
- COPRIVITE DI PROTEZIONE E IDENTIFICAZIONE TARATURA
- SIGILLO ANTIMANOMISSIONE
- TIMBRO DELLA DATA DI PRODUZIONE O NUMERO LOTTO

NOTA: L'uso del pressostato in apparecchi dotati di elettropompa a pistone per ricariche automatiche (generatori di vapore, ferri da stiro, lavapavimenti e macchine da caffè espresso) prevede il montaggio in posizione idonea affinché le vibrazioni generate dalla pompa non compromettano le caratteristiche del pressostato.

**UK GENERAL FEATURES
RATING PRESSURE**

from 0,2÷6 bar
The switching adjustment range is pre-set during production to the customers specification

**STATIC
HYSTERESIS
PARTS IN CONTACT WITH THE FLUID
FLUIDS
ELECTRICAL DATA**

12 bar
ΔP fixed 0,1 ÷ 0,4 - ΔP adjustable 0,2 ÷ 0,8
diaphragm in stainless steel AISI 301 - brass connection (PN, PC) - poliarilamid connection (PB) - Internal rivet brass
water - oil- air - steam (series PC, PN) • water - air (series PB)
faston 6,3x0,8
microswitch: N.C. ≤ 15 A resistance load ≤ 1,5 inductive/250V
N.O. ≤ 9 A resistance load ≤ 0,9 inductive/250V

**MOUNTING POSITION
SPECIAL EXECUTIONS**

Life of the electrical contacts: 100.000 cycles
Any. Preferred the position with the fastons upwards
- RATING 0,2÷10 bar (REINFORCED DIAPHRAGM)
- FIRE-PROOF MATERIAL (SELF-EXTINGUISHING)
- SPECIAL THREADS OR CONNECTIONS
- CONNECTIONS TIN DIOXIDE TREATED
- CUSTOMISED MARK (exclusion of quality marks)
- PROTECTION SCREW COVER AND CALIBRATION IDENTIFICATION
- SEAL AGAINST TAMPERING
- PRODUCTION DATE STAMP OR BATCH NUMBER

NOTE: The use of the pressure switch on machines which use solenoid pumps for continuous refilling (steam generators, steam irons, vacuum cleaners, espresso coffee makers) foresees the mounting in a correct position to avoid that the vibrations generated by the pump will not compromise the pressure switch performance.

**D ALLGEMEINE MERKMALE
DRUCKEINSTELLBEREICH**

von 0,2÷6 bar
Der Schaltpunkt wird waehrend der Produktion auf Kundenwunsch eingestellt

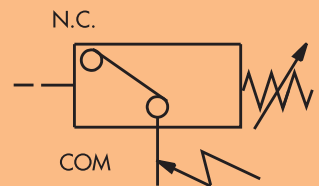
**BERSTDRUCK
HYSTERESE
MEDIUMS BERUEHRTE ELEMENTE
MEDIEN
ELEKTRISCHE DATEN**

12 Bar
ΔP fest 0,1 ÷ 0,4 - ΔP einstellbar 0,2 ÷ 0,8
Edelstahlmembrane AISI 301 - Anschluss aus Messing (PN, PC) - oder Poliarilamid (PB) - Innere Niet aus Messing
Wasser - Oel - Luft - Dampf (Serie PC, PN) • Wasser - Luft (Serie PB)
Flachstecker 6,3x0,8
Mikroschalter: S.G. ≤ 15 A Ohmsche Last ≤ 1,5 Induktive Last/250V
S.O. ≤ 9 A Ohmsche Last ≤ 0,9 Induktive Last/250V

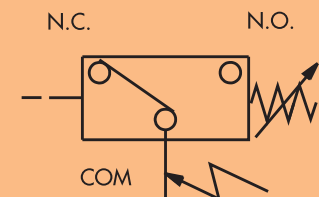
**MONTAGEPOSITION
SONDERAUSFUEHRUNGEN**

Lebensdauer der elektrischen Kontakte: 100.000 Schaltungen
Keine Einschränkungen. Die Montage mit den Flachsteckern nach oben, wird empfohlen.
- DRUCKEINSTELLBEREICH 0,2÷10 Bar (VERSTAERKTE MEMBRAN)
- FEUERHEMMENDES MATERIAL (SELBSTVERLOESCHEND)
- SONDERANSCHLUESSE-GEWINDE
- ZINNDIOXYD BEHANDELTE ELEKTRISCHE KONTAKTE
- KUNDENBEZOGENES WARENZEICHEN (Ausgeschlossen sind Qualitaetsmarken)
- SCHUTZKAPPE SUEER DRUCKEINSTELLSCHRAUBE
- SIEGELLACK ZUM SICHERN DER VOREINSTELLUNG
- STEMPEL MIP PRODUKTIONSdatum ODER PRODUKTIONSLOS

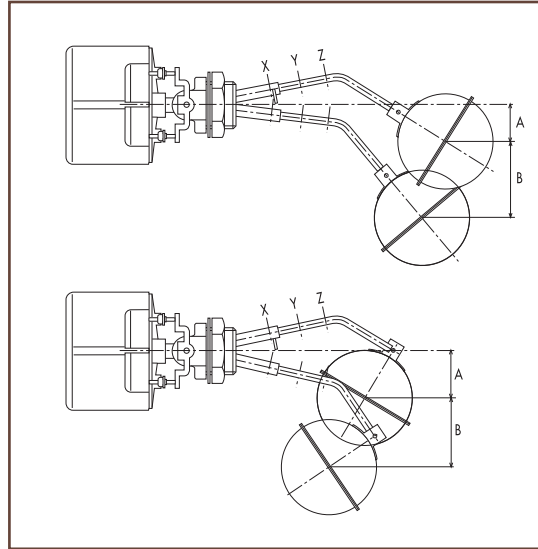
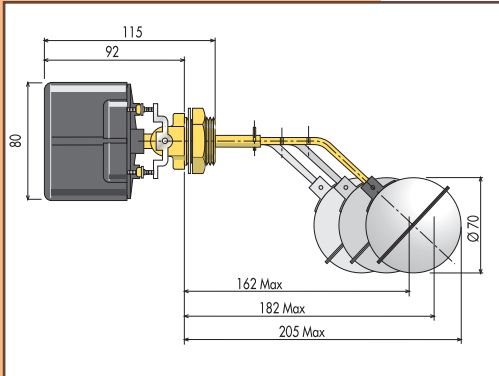
HINWEIS: Beim Einsatz des Druckschalters in Verbindung mit einer Schwingkolbenpumpe (Dampfgeneratoren, Bueegeleisen, Bodenreiniger und Kaffee Maschinen) ist auf eine geeignete Einbauposition zu achten, um Pulsationseinflüsse auf das Ansprechverhalten des Druckschalters zu vermeiden.



**PRESSOSTATO INTERRUTTORE
PRESSURE SWITCH
DRUCKSCHALTER**

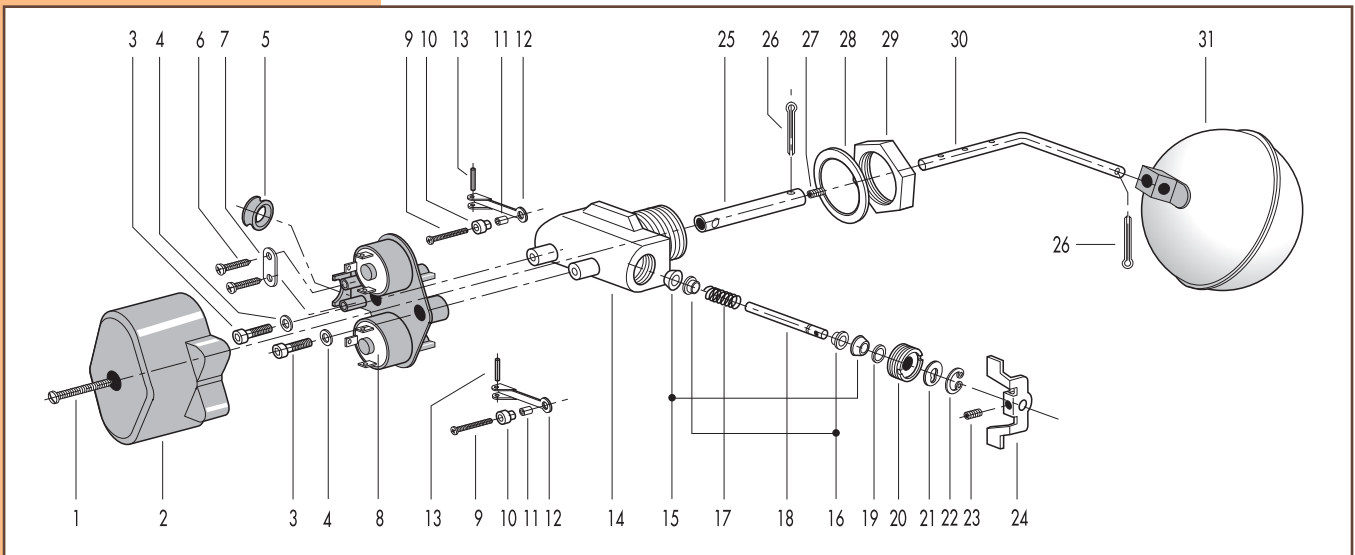


**PRESSOSTATO DEVIATORE
PRESSURE COMMUTATION
WECHSELSCHALTER**



POS. SPINA CLIP POSITION	A	B
X	28	56
Y	32	53
Z	35	50

POS. SPINA CLIP POSITION	A	B
X	36	53
Y	33	57
Z	33	61



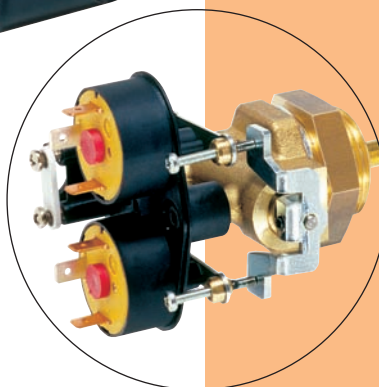
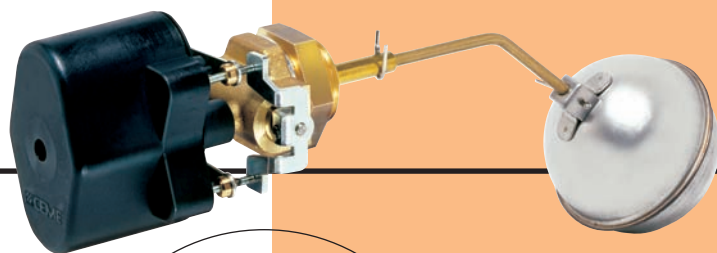
RICAMBI
RIVOLGERSI AL NOSTRO
SERVIZIO TECNICO

SPARE PARTS
PLEASE CONTACT OUR
TECHNICAL SERVICE

ERSATZTEILE
BITTE WENDEN SIE SICH AN
UNSERE TECHNISCHE
DIENSTABTEILUNG

1	Vite autofilettante	Self-tapping	Selbstschneidende Schraube
2	Coperchio	Cover	Abdeckhülse
3	Vite	Screw	Schraube
4	Rondella	Washer	Beilagscheibe
5	Passacavo	Core hitch	Verschraubung mit Zugentlastung
6	Vite autofilettante	Self-tapping	Selbstschneidende Schraube
7	Piastrina fissacavo	Core hitch plate	Kabelhalterung
8	Base-Microinterruttore	Plate-Micro switch	Grundplatte-Mikroschalter
9	Vite	Screw	Schraube
10	Boccola	Bushing	Buchse
11	Bussola	Bushing	Buchse
12	Leva	Lever	Hebel
13	Spina	Pin	Stift
14	Corpo	Valve body base	Grundkörper
15	Cono teflon	Teflon cone	Teflonkegel
16	Rondella	Washer	Beilagscheibe
17	Molla	Spring	Feder
18	Perno inox	Inox pin	Bolzen aus rostfreiem Stahl
19	Rondella	Washer	Beilagscheibe
20	Tappo	Plug	Buchse
21	Rondella	Washer	Beilagscheibe
22	Anello	O-Ring	O-Ring
23	Grano	Grain	Stift
24	Braccio	Overarm	Schaltarm
25	Tubo guida asta	Stem housing	Spindelführung
26	Copiglia	Split pin	Splint
27	Grano	Grain	Stift
28	Guarnizione alluminio	Aluminium sealing	Aluminium dichtung
29	Dado	Lock nut	Mutter
30	Asta piegata	Folder rod	Schalthebel
31	Sfera galleggiante	Floating ball	Schwimmerkugel

REGOLATORE DI LIVELLO SERIE RL 21
LEVEL REGULATOR SERIE RL 21
SCHWIMMERSCHALTER SERIE RL 21



I CARATTERISTICHE GENERALI

FLUIDI	Vapore, acqua, liquidi non corrosivi, liquidi non infiammabili.
MATERIALI	Base: PBT Supporto micro: Poliarilamide Contatti elettrici: Cu Ag Corpo: Ottone stampato Tenuta dei leverismi: Coni in teflon Sfera: Acciaio inossidabile AISI 304 Contatto N.C.: 15(1,5)A Contatto N.A.: 9(0,9)A Attacchi (fast-on): 6,30 x 0,8 Vita elettrica: Circa 50.000 manovre norma CEI EN 60730 -2 -15/A1
PARTI A CONTATTO CON IL FLUIDO	
DATI ELETTRICI	
REALIZZATO IN CONFORMITÀ VITA MECCANICA PESO ESECUZIONI SPECIALI	

- CON ASTA PIEGATA IN ACCIAIO
- CONNETTORE A CAPPUCIO IN GOMMA 90°
- CONNETTORE A CAPPUCIO IN GOMMA DIRITTO
- CORPO NICHELATO

APPLICAZIONI

Da montare su flange attacco 1" con dado di bloccaggio.
 La regolazione è data dall'avvitamento/svitamento di due viti (una per micro)
 Il materiale PBT caricato vetro, è atto a resistere ad alte temperature con alto grado di isolamento
 Il gruppo dispone di un pressacavo a norme di sicurezza.

NUOVO MECCANISMO DI REGOLAZIONE
NEW REGULATION SYSTEM
NEUE REGELEINHEIT

UK GENERAL FEATURES

FLUIDS	Steam, water, non corrosive media, non-flammable fluids.
MATERIALS	Base: PBT Micro support: Polyarylamide Electric contacts: Cu Ag Body: Printed brass Levers sealing: Teflon cones Sphere: Stainless steel AISI 304 N.C. contact: 15(1,5)A N.O. contact: 9(0,9)A Connection (fast-on): 6,30 x 0,8 Electrical life: Approx. 50.000 impulses standard CEI EN 60730 -2 -15/A1
PARTS IN CONTACT WITH THE FLUIDS	
ELECTRICAL DATA	
MADE ACCORDING TO MECHANICAL LIFE WEIGHT SPECIAL EXECUTIONS	

- WITH FOLDED ROD IN STAINLESS STEEL
- RUBBER CUP 90° FOR FAST-ON CONNECTION
- RUBBER CUP FOR FAST-ON CONNECTION
- NICKEL-PLATED BRASS

APPLICATIONS

To be set up on 1" flanges with a fastening nut.
 The regulation is done by screwing/unscrewing two screws (one per each microswitch).
 The PBT material is able to withstand high temperatures with a high degree of insulation. The regulator has a fastener for the cable as a precautionary measure.

D ALLGEMEINE MERKMALE

MEDIEN	Dampf, Wasser, nicht korrosive bzw. abrasive Flüssigkeiten, nicht entzündbare Flüssigkeiten .
MEDIUMSUNBERÜHRTE TEILE	Gehäuse: PBT Mikroschalterhalterung: Polyarylamide Elektrische Kontakte: Cu Ag
MEDIUMSBERÜHRTE TEILE	Grundkörper: Messing Dichtung: Teflonkegel Schwimmerkugel: Edelstahl AISI 304
ELEKTRISCHE DATEN	Kontakt normal geschlossen: 15(1,5)A Kontakt normal offen: 9(0,9)A Anschlusse (Fast-on): 6,30 x 0,8 Elek.Schaltheufigkeit: ca. 50.000 Schaltungen Normen: DIN EN 60730 -2 -15/A1
PRODUZIERT GEMÄSS MECHANISCHE SCHALTHEÜFIGKEIT GEWICHT	
SONDERAUSFUEHRUNGEN	

- VERSION MIT SCHWIMMERARM AUS EDELSTAHL
- GUMMISTECKER 90° C
- GUMMISTECKER GERADE
- VERNIKELTES MESSING

BESONDERHEITEN/EIGENSCHAFTEN

Auf Flansche mit 1" Befestigungsmutter montieren.
 Die Regelung ergibt sich vom Einschrauben/Ausschrauben zwei Schrauben (eine Schraube je Mikro). Der Werkstoff Mikroschalter besitzt eine Kabelbefestigung mit Zugentlastung.



N.O.

RICAMBI
SENSORE FLUSSO
COD. 11020

SPARE PARTS
FLOW SENSOR
COD. 11020

ERSATZTEILE
STRÖMUNG SMESSWERTGEBER
COD. 11020

FLUSSOSTATO FLOW CONTROL DURCHFLOSSWAECHTER

CARATTERISTICHE ELETTRICHE ELECTRICAL INFORMATION

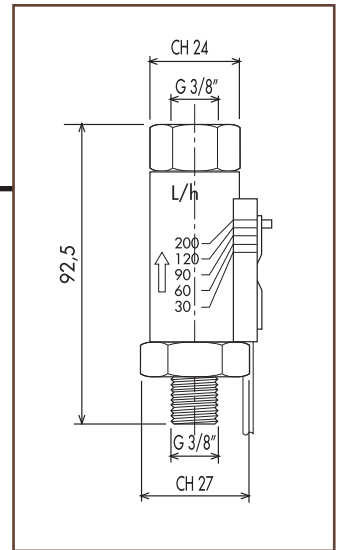
A.C. Tensione/Voltage:	0-250 Volt
D.C. Tensione/Voltage:	0-250 Volt
Corrente a 25°C/Current:	3 Amp.
Carico induttivo/Inductive load:	15 VA
Carico resistivo/Resistance load:	50 Watt
Vita elettrica/Electrical life:	10 ⁷ impulsi
Resistenza di contatto/Contact resistance:	0,1 W

CARATTERISTICHE IDRAULICHE HYDRAULIC FEATURES

CAMPO DI LAVORO/OPERATION RANGE	
Q MIN =	30 LpH
Q MAX =	200 LpH
TOLL./TOLERANCE =	± 15 LpH
ISTERESI/HYSTERESIS =	10 LpH

PERDITE DI CARICO/PRESSURE LOSS DIAGRAM
0.0 bar ÷ 0.45 bar

PRESSIONE DI SCOPPIO = 200 bar
BURSTING PRESSURE = 200 bar



I CARATTERISTICHE GENERALI

INSTALLAZIONE

- montare verticalmente lontano almeno 50 mm da eventuali campi magnetici
- impiegare fluidi scevri da impurità

MATERIALI

- Corpo: Ottone nichelato
- Otturatore: PTFE
- Molla: Acciaio inossidabile
- O-ring: EPDM

CONNESSIONE

- 3/8" G maschio-femmina

APPLICAZIONI

I flussostati vengono normalmente impiegati per controllare il passaggio di un fluido in un circuito e trasmettere un allarme elettrico a distanza in caso si registri una variazione dell'entità del flusso.

UK GENERAL FEATURES

MOUNTING POSITION

- to be installed vertically at least 50 mm. position as far as possible from magnetic fields
- use fluids exempt from impurities

MATERIALS

- Body: Nickel plated brass
- Shutter: PTFE
- Spring: Stainless steel
- O-ring: EPDM

CONNECTION

- 3/8" G male-female

APPLICATIONS

The flow controls are normally used to control the passage of a fluid in a circuit and to transmit an electrical signal when a change in flow rate is detected.

D ALLGEMEINE MERKMALE

MONTAGEPOSITION

- Senkrecht einbauen mit einem Abstand von mindestens 50 mm von eventuell vorhandenen Magnetfeldern.
- Fuer Einsatz mit partikelfreien Fluessigkeiten

WERKSTOFFE

- Koerper: Vernickeltes Messing
- Verschluss: PTFE
- Feder: Edelstahl
- O-Ring: EPDM

ANSCHLUSS

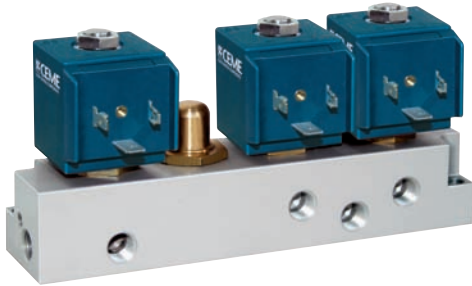
- 3/8" G Innen-Aussengewinde

EINSATZBEREICHE

Die Durchflusswaechter werden normalerweise zur Gewaehrleistung einer Mindestdurchflussmenge eingesetzt. Ein elektrisches Signal wird freigegeben bei Unterschreitung der gewuenschten Durchflussmenge.

6002

- BLOCCHETTO FREON
- MANIFOLD FREON



6006

- BLOCCHETTO PER STERILIZZATORI
- MANIFOLD FOR STERILIZERS



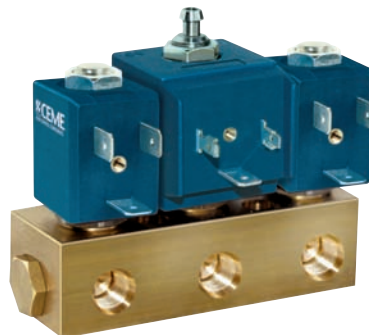
6790

- VALVOLA IN ACCIAIO
- STEEL VALVE



6005

- BLOCCHETTO VENDING
- MANIFOLD VENDING



LA **CEME** COLLABORA CON I CLIENTI NELLA PROGETTAZIONE E NELLA FABBRICAZIONE DI PRODOTTI SPECIALI.

CEME WORKS TOGETHER WITH THE CUSTOMERS IN THE DEVELOPMENT AND PRODUCTION OF SPECIAL PRODUCTS.

CEME ENTWICKELT IN ZUSAMMENARBEIT MIT DEN KUNDEN BEI DER NEUENTWICKLUNG VON SONDERPRODUKTEN.

**ESECUZIONI SPECIALI
SPECIAL EXECUTIONS-SONDERAUSFUEHRUNGEN**

ESECUZIONI SPECIALI SPECIAL EXECUTIONS - SONDERAUSFUHRUNGEN

P6W

- MAGNETE DI TIRO
- PUSHING VALVE



5902

- VALVOLA PER VUOTO
- VACUUM VALVE



8215-8216-8218

- VALVOLA DI SOFFIAGGIO
- DUST BUG SOLENOID VALVE



51..

- TRASDUTTORE ELETTRONICO PER ACQUA
- WATER TRANSDUCER



44..

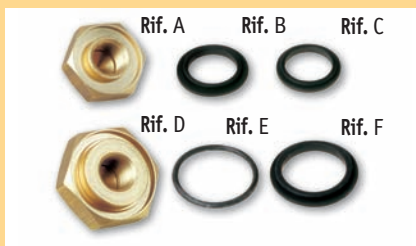
- ELETTROVALVOLA PER VAPORE - 4,5 BAR
- STEAM SOLENOID VALVE - 4,5 BAR



LA **CEME** COLLABORA CON I CLIENTI NELLA PROGETTAZIONE E NELLA FABBRICAZIONE DI PRODOTTI SPECIALI.

CEME WORKS TOGETHER WITH THE CUSTOMERS IN THE DEVELOPMENT AND PRODUCTION OF SPECIAL PRODUCTS.

CEME ENTWICKELT IN ZUSAMMENARBEIT MIT DEN KUNDEN BEI DER NEUENTWICKLUNG VON SONDERPRODUKTEN.



-DADO E GUARNIZIONI ANTI UMIDITA' PER LA BOBINA.
 -NUT AND GASKETS TO AID AGAINST HUMIDITY FOR THE COIL.
 -MUTTER UND DICHTUNGEN GEGEN FEUCHTIGKEIT FUER DIE SPULE.

PESO/WEIGHT: B6=20 gr. - B12= 30 gr.

Rif. A: Cod.3294 Rif. B: Cod.3298 Rif. C: Cod.3299
 Rif. D: Cod.3293 Rif. E: Cod.3300 Rif. F: Cod.3295



Rif.2

-BOBINA B20 (30W).
 PER MAGGIORI DETTAGLI VEDI CAPITOLO "INFORMAZIONI DI PROGETTO".

-COIL B20 (30W).
 FOR FURTHER DETAILS SEE CHAPTER "PROJECT INFORMATION".

-SPULE B20 (30W).
 AUSFUEHRICHE DATEN UEBER DIE VENTILSPULEN FINDEN SIE UNTER ABSCHNITT "TECHNISCHE INFORMATIONEN".

PESO/WEIGHT: 550 gr.



Rif.3

Cod. 122-09-N

-CONNETTORE TRIPOLARE UNI ISO 6952 (DIN 43650 B)- IP65.

-THREE POLE PLUG CONNECTOR UNI ISO 6952 (DIN 43650 B)-IP65.

-DREIPOLIGER STECKER UNI ISO 6952 (DIN 43650 B)-IP65.

PESO/WEIGHT: 20 gr.



Rif.4

Cod. 182-09-N

-CONNETTORE TRIPOLARE UNI ISO 4400 (DIN 43650 A)- IP65.

-THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN 43650 A)-IP65.

-DREIPOLIGER STECKER UNI ISO 4400 (DIN 43650 A)-IP65.

PESO/WEIGHT: 27 gr.



Cod. TEMP/AEC13

-TIMER PER REGOLAZIONE TEMPI D'INTERVENTO.

TEMPO: OFF 0,5÷45 minuti REGOLABILI
 ON 0,5÷10 secondi REGOLABILI
 VOLTAGGIO: 24V÷240V D.C., A.C. 50/60Hz ±10%
 CONSUMO: 4mA MAX
 TEMPERATURA: -40°C +60°C
 PROTEZIONE: IP65 CON CONNETTORE TRIPOLARE UNI ISO 4400 (DIN43650 A)-IP65

-ADJUSTABLE TIMER TO PRESET DUTY CYCLE.

TIME: OFF 0,5÷45 minutes ADJUSTABLE
 ON 0,5÷10 seconds ADJUSTABLE
 VOLTAGES: 24V÷240V D.C., A.C. 50/60Hz ±10%
 POWER CONSUMPTION: 4mA MAX
 TEMPERATURE: -40°C +60°C
 PROTECTION CLASS: IP65 WITH THREE POLE PLUG CONNECTOR UNI ISO 4400 (DIN43650 A)-IP65

-TIMER FUER REGELUNG DER SCHALTZEITEN.

SCHALTZEITEN: OFF 0,5÷45 Minuten EINSTELLBAR
 ON 0,5÷10 Sekunden EINSTELLBAR
 SPANNUNGEN: 24V÷240V D.C., A.C. 50/60Hz ±10%
 STROMVERBRAUCH: 4mA MAX
 TEMPERATUR: -40°C +60°C
 ISOLATIONSKLASSE: IP65 MIT DREIPOLIGEM STECKER UNI ISO 4400 (DIN43650 A)-IP65

PESO/WEIGHT: 550 gr.



Cod. 0858

-RACCORDO 1/4" M PORTAGOMMA.

-CONNECTION 1/4" M- HOSETAIL.

-ANSCHLUSS 1/4" AUSSENGEWINDE- SCHLAUCHNIPPEL.

PESO/WEIGHT: 25 gr.



Cod. 0562

-MANOPOLA PER REGOLAZIONE. ADATTA PER MODELLI 6660, 6724, 9922.

-KNOB FOR REGULATION. QUALIFIED FOR MODELS 6660, 6724, 9922.

-DREHKNOPF GEEIGNET FUER MODELLE 6660, 6724, 9922.

PESO/WEIGHT: 10 gr.

ACCESSORI ELETTROPOMPE - ELECTRICAL PUMPS ACCESSORIES ZUBEHÖR ELEKTROPUMPEN



E2
Rif. 1



E4
Rif. 2



E5
Rif. 3



E5
Rif. 4



E5
Rif. 5



E5
Rif. 6



ET30
Rif. 7

E2-E4-E5 Rif. 8



E2-E4-E5-ET30 Rif. 9



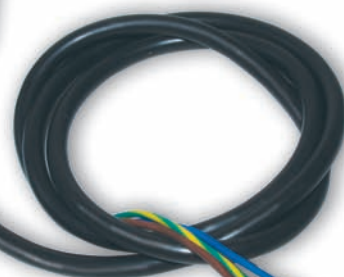
ET30
Rif. 10



ET30
Rif. 11



ET30
Rif. 12



MTP600
Rif. 13



MTP600 Rif. 14





MTP600 Rif. 15



MTP600 Rif. 16


SERIE E 2..

Cod. 122-09-N CONNETTORE CONNECTOR STECKER Rif. 1	Cod. 10277 CONNETTORE CON DIODO CONNECTOR WITH DIODE STECKER MIT DIODE Rif. 1	Cod. 10023 DIODO 1A DIODE 1A DIODE 1A  Rif. 8	Cod. 10023-3A DIODO 3A per pompe 12V A.C. DIODE 3A for 12V A.C. pumps DIODE 3A für 12V A.C. Pumpen  Rif. 8
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SERIE E 4..

Cod. 10814-EN60 ADATTATORE PER SUPPORTO MOUNTING BRACKETS ADAPTER ANPASSUNG FÜR HALTERUNG Rif. 2	Cod. 10413 SUPPORTO STANDARD STANDARD MOUNTING BRACKETS STANDARD HALTERUNG Rif. 3	Cod. 10330-1 SUPPORTO STANDARD STANDARD MOUNTING BRACKET STANDARD HALTERUNG Rif. 4
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SERIE E 5..

Cod. 12480 SUPPORTO STANDARD STANDARD MOUNTING BRACKETS STANDARD HALTERUNG Rif. 3	Cod. 10019 SUPPORTO SPECIALE SPECIAL MOUNTING BRACKETS SPEZIELL HALTERUNG Rif. 3	Cod. 12479 SUPPORTO STANDARD STANDARD MOUNTING BRACKETS SANDARD HALTERUNG Rif. 4	Cod. 10330 SUPPORTO SPECIALE SPECIAL MOUNTING BRACKETS SPEZIELL HALTERUNG Rif. 4	Cod. 10148-110C TERMOPROTEETTORE THERMAL PROTECTOR THERMOSCHUTZ Rif. 9
Cod. 10023-6A DIODO 6A per pompe 24V A.C. DIODE 6A for 24V A.C. pumps DIODE 6A für 24V A.C. Pumpen  Rif. 8	Cod. DEACAL DEAREATORE DEAREATOR ENTLÜFTER Rif. 5	Cod. 10801 RACCORDO PER INGRESSO INLET CONNECTION ANSCHLUSSTÜCK FÜR EINGANGSSEITE Rif. 6		

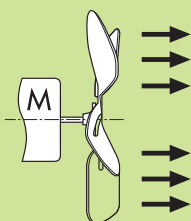
SERIE ET 30..

Cod. DEA 300 DEAREATORE DEAREATOR ENTLÜFTER Rif. 10	Cod. 10148-110C TERMOPROTEETTORE THERMAL PROTECTOR THERMOSCHUTZ Rif. 9	Cod. 10206 CONNETTORE CON DIODO CONNECTOR WITH DIODE STECKER MIT DIODE Rif. 7	Cod. PA-23427 POLMONE ANTIVIBRAZIONE VIBRATIONN ABSORBER DÄMPFUNGSDOSE Rif. 11	Cod. E 352 CONNETTORE CABLATO CON DIODO WIRED CONNECTOR WITH DIODE VERDRAHTETER STECKER MIT DIODE Rif. 12
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MTP 600 (*)

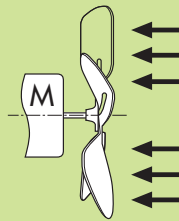
VENTOLE IN ALLUMINIO / ALLUMINIUM FANS / LÜFTERRAD AUS ALLUMINIUM

ASM 70024
 KIT PER FISSAGGIO
 FIXING KIT
 MONTAGEKIT LÜFTERRAD



ASPIRANTE **Cod. 70018** Ø 150
 SUCKING **Cod. 70019** Ø 170
 SAUGEND **Cod. 70020** Ø 200

Rif. 14



PREMENTE **Cod. 70021** Ø 150
 BLOWING **Cod. 70022** Ø 170
 DRÜCKEND **Cod. 70023** Ø 200

Rif. 14

Cod. 11750
 RACCORDO G 1/4 M PORTAGOMMA
 CONNECTION G 1/4 M- HOSETAIL
 ANSCHLUSS G 1/4 AUSSENGEWINDE- SCHLAUCHNIPPEL

Rif. 13

Cod. 4757
 VENTOLA IN PLASTICA Ø 90
 PLASTIC FAN Ø 90
 LÜFTERRAD AUS PLASTIK Ø 90

Rif. 15

Cod. 4708
 COPRI VENTOLA IN PLASTICA
 PLASTIC FAN COVER
 PLASTIK VENTILATOR ABDECK

Rif. 16

(*) MTP 600

- Per conoscere i modelli di motore/pompa predisposti rivolgersi al nostro Servizio Tecnico.
- Pls refer to our technical dept in order to identify the motor/pump models fitted for the Kit assembling.
- Sie können unsere technische Abteilung die geeigneten Motoren/Pumpen fragen.

UNITA' DI MISURA - UNIT OF MEASURE MASSEINHEITEN

CONVERTIONS			CONVERSIONI		
Multiply to obtain			Moltiplicare per ottenere		
MEASURES			MISURE		
inch	25,4	mm	mm	0,0394	inch
gallone (USA)	3,785	liters	liters	0,264	gallone (USA)
ft	0,3048	m	m	3,281	ft
in ²	645	mm ²	mm ²	0,00156	in ²
ft ²	0,0929	m ²	m ²	10,764	ft ²
in ³	16,4	ml	ml	0,0610	in ³
ft ³	0,0283	m ³	m ³	35,336	ft ³
ft ³	28,3	l	l	0,0355	ft ³
pinta (USA)	473	ml	ml	0,00215	pinta (USA)
lb	0,454	Kg	Kg	2,203	lb
gallone imperiale	4,546	l	l	0,220	gallone imperiale
oncia	29,6	ml	ml	0,034	oncia
PRESSURE			PRESSIONE		
psi	0,0703	Kg/cm ²	Kg/cm ²	14,225	psi
inch of mercury (60°F)	3,38	Kpa	Kpa	0,300	inch di mercurio (60°F)
inch of water (60°F)	249	Pa	Pa	0,00402	inch di acqua (60°F)
psi	6,89	KPa	Kpa	0,1451	psi
psi	0,0689	bar	bar	14,514	psi
KPa	0,01	bar	bar	100	KPa
lbF/ft ²	47,9	Pa	Pa	0,0209	lbF/ft ²
VACUUM			VUOTO		
torr	1	mm mercury	mm mercurio	1	torr
micron	0,001	torr	torr	1000	micron
Pa	133,3	torr	torr	0,00750	Pa
FLOW RATE			PORTATA		
lb/h	0,000126	Kg/sec	Kg/sec	7936,5	lb/h
gpm (USA)	3,785	l/min	l/min	0,2642	gpm (USA)
gpm (imperiale)	4,546	l/min	l/min	0,220	gpm (imperiale)
l/min	0,06	m ³ /h	m ³ /h	16,6666	l/min
f ³ m	28,317	l/min	l/min	0,0353	f ³ m
KV l/min	0,06	KV m ³ /h	KV m ³ /h	16,7	KV l/min
CV USA (gallone/min)	0,863	KV m ³ /h	KV m ³ /h	1,16	CV USA (gallone/min)
CV UK (gallone imperiale/min)	1,04	KV m ³ /h	KV m ³ /h	0,975	CV UK (gallone imperiale/min)
REFRIGERATION CAPACITY			CAPACITA' (REFRIGERAZIONE)		
US Ton (TR)	3,5172		Kw	0,2843	US Ton (TR)
TR	12000		Btu/h	0,000083	TR
Btu/h	0,0002931	Kw	Kw	3411,6	Btu/h
Btu/h	0,252	Kcal/h	Kcal/h	3,968	Btu/h
Kcal/h	0,001163	Kw	Kw	859,845	Kcal/h
TEMPERATURE			TEMPERATURA		
°F = 32+(9/5 x °C)			°C = 5/9 (°F - 32)		
TORQUE			COPPIA (FORZA)		
1 in lb.	0,113	Nm	Nm	8,850	1 in lb.
1 in lb.	1,15	cm Kg	cm Kg	0,870	1 in lb.

CSQ **IQNet**

CERTIFICATO N. **9105.CEM1**
 CERTIFICATE N. **9105.CEM1**

SI CERTIFICA CHE IL SISTEMA QUALITÀ DI
 WE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY

CEME SPA
 VIA TORTONA 25 - 20144 MILANO (MI)

UNITÀ OPERATIVE
 OPERATIVE UNITS
 VIA TORTONA 25 - 20144 MILANO (MI)
 Vedere gli Allegati per le altre Unità Operative (n° 1 pagina)
 View the Annexes for the other Operative Units (n° 1 page)

E' CONFORME ALLA NORMA
 IS IN COMPLIANCE WITH THE STANDARD

ISO 9001:2008

PER LE SEGUENTI ATTIVITÀ
 FOR THE FOLLOWING ACTIVITIES

Progettazione, produzione, commercializzazione di elettrovalvole, elettropompe, elettropiloti, pressostati, valvole di sicurezza, raccordi.
 Lavorazioni a disegno su transfer
 Design, production, trading of solenoid valves, solenoid pumps, electro-pilots, pressure switches, safety valves, fittings.
 Design workings on transfer

Ritornarsi al manuale della qualità per l'applicabilità dei requisiti della norma ISO 9001:2008
 Refer to quality manual for details of applications to ISO 9001:2008 requirements

IL PRESENTE CERTIFICATO È SOGGETTO AL RISPETTO DEL
 REGOLAMENTO PER LA CERTIFICAZIONE DEI SISTEMI DI GESTIONE
 THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE
 REQUIREMENTS OF THE RULES FOR CERTIFICATION OF MANAGEMENT SYSTEMS

DATA:	PRIMA CERTIFICAZIONE FIRST CERTIFICATION	EMISSIONE CORRENTE CURRENT ISSUE	SCADENZA EXPIRY
	1997-02-17	2013-09-17	2015-05-24

CSQ è la Federazione Italiana di Organismi di Certificazione del settore di gestione aziendale.
CSQ is the Italian Federation of management system Certification Bodies.

ACCREDIA EA: 19.18

CSQ

IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and its partner
CISQ/IMO-CSQ
 hereby certify that the organization

CEME SPA
 VIA TORTONA 25 - 20144 MILANO (MI) Italy
CEME APPLIANCES DIVISION - VIA GARIBOLDI 67 - 20061 CARUGATE (MI) Italy
CEME APPLIANCES DIVISION - VIA RAFFAELLO SANDO' - 01016 TARQUIA (VT) Italy
CEME INDUSTRIAL DIVISION - VIA SAN FRANCESCO D'ASSISI 324 - 20861 BRUGHERIO (MB) Italy
CEME ULIA COFFEE DIVISION - VIA DELL'INDUSTRIA 8 - 27020 TRIVULZIO (PV) Italy
CEME ZHONGSHAN CO. LTD. - INDUSTRIAL ROAD 38 - 55415 SUJUAN TOWN ZHONGSHAN CITY - GUANGDONG CHINA
CEME DISTRIBUZIONE ITALIA SRL - VIA TORTONA 25 - 20144 MILANO (MI) Italy

for the following field of activities

Design, production, trading of solenoid valves, solenoid pumps, electro-pilots, pressure switches, safety valves, fittings. Design workings on transfer

Refer to quality manual for details of applications to ISO 9001:2008 requirements

has implemented and maintains a
Quality Management System
 which fulfills the requirements of the following standard

ISO 9001:2008

Issued on: 2013 - 09 - 17 Expiry date: 2015 - 05 - 24

Registration Number: IT - 319

IQNet **CSQ**

Michael Drechsel
 President of IQNET

Ing. Claudio Privetti
 President of CISQ

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 CSQ Italy CQC China CQM China CQS Czech Republic Cto Cert Croatia DQS Holding GmbH Germany DS Denmark
 FCV Brazil FONDUNORMA Venezuela ICONTEC Colombia INC Mexico INNORPI Tunisia
 Inspecta Certification Finland IRAM Argentina IQA Japan KQF Korea MIBTEC Greece MSZT Hungary Nemko AS Norway
 NSAI Ireland PCBC Poland Quality Austria Austria RR Russia SII Israel SIQ Slovenia SIRIM QAS International Malaysia
 SGS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey YUQS Serbia
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CSQ **eco** **IQNet**

CERTIFICATO N. **9191.CEM8**
 CERTIFICATE N. **9191.CEM8**

SI CERTIFICA CHE IL SISTEMA DI GESTIONE AMBIENTALE DI
 WE HEREBY CERTIFY THAT THE ENVIRONMENTAL MANAGEMENT SYSTEMS OPERATED BY

CEME SPA
 VIA TORTONA 25 - 20144 MILANO (MI)

SITI
CEME APPLIANCES DIVISION
 VIA DEL LAVORO 1, 2, 5 - 20061 CARUGATE (MI)
CEME APPLIANCES DIVISION
 VIA GARIBOLDI 67 - 20061 CARUGATE (MI)
CEME INDUSTRIAL DIVISION
 VIA SAN FRANCESCO D'ASSISI 324 - 20861 BRUGHERIO (MB)

E' CONFORME ALLA NORMA
 IS IN COMPLIANCE WITH THE STANDARD

ISO 14001:2004

PER LE SEGUENTI ATTIVITÀ
 FOR THE FOLLOWING ACTIVITIES

Progettazione e produzione di componenti elettromeccanici, componenti per pompe a solenoide ed elettrovalvole attraverso operazioni di: lavorazione con macchine transfer di tornitura, fresatura, rettificazione, avvolgimento, incapsulamento bobine mediante stampaggio materiali termoplastici, assemblaggio e collaudo elettrovalvole, elettropompe, pressostati, trasduttori, valvole di sicurezza, gestione magazzino entrata ed uscita
 Design and production of electro-mechanical components, solenoid pumps, electric valves, pressure switches, transducers and safety valves through following operations: turning, milling, rectification, winding, encapsulating coil through injection moulding of thermoplastic materials, assembling and testing, warehouses management and expedition

Certificazione rilasciata in conformità al Regolamento Tecnico ACCREDIA RT-09

IL PRESENTE CERTIFICATO È SOGGETTO AL RISPETTO DEL
 REGOLAMENTO PER LA CERTIFICAZIONE DEI SISTEMI DI GESTIONE
 THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE
 REQUIREMENTS OF THE RULES FOR CERTIFICATION OF MANAGEMENT SYSTEMS

DATA:	PRIMA CERTIFICAZIONE FIRST CERTIFICATION	EMISSIONE CORRENTE CURRENT ISSUE	SCADENZA EXPIRY
	2011-03-23	2013-04-22	2014-03-22

CSQ è la Federazione Italiana di Organismi di Certificazione del settore di gestione aziendale.
CSQ is the Italian Federation of management system Certification Bodies.

ACCREDIA EA: 18.19

CSQ

IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and its partner
CISQ/IMO-CSQ
 hereby certify that the organization

CEME SPA
 VIA DEL LAVORO 1, 2, 5 - 20061 CARUGATE (MI)
CEME APPLIANCES DIVISION
 VIA GARIBOLDI 67 - 20061 CARUGATE (MI)
CEME INDUSTRIAL DIVISION
 VIA SAN FRANCESCO D'ASSISI 324 - 20861 BRUGHERIO (MB)

for the following field of activities

Design and production of electro-mechanical components, solenoid pumps, electric valves, pressure switches, transducers and safety valves through following operations: turning, milling, rectification, winding, encapsulating coil through injection moulding of thermoplastic materials, assembling and testing, warehouses management and expedition

has implemented and maintains a
Environmental Management System
 which fulfills the requirements of the following standard

ISO 14001:2004

Issued on: 2013 - 04 - 22 Expiry date: 2014 - 03 - 22

Registration Number: IT - 74148

IQNet **CSQ**

Michael Drechsel
 President of IQNET

Ing. Claudio Privetti
 President of CISQ

IQNet Partners*
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 CSQ Italy CQC China CQM China CQS Czech Republic Cto Cert Croatia DQS Holding GmbH Germany DS Denmark
 FCV Brazil FONDUNORMA Venezuela ICONTEC Colombia INC Mexico INNORPI Tunisia
 Inspecta Certification Finland IRAM Argentina IQA Japan KQF Korea MIBTEC Greece MSZT Hungary Nemko AS Norway
 NSAI Ireland PCBC Poland Quality Austria Austria RR Russia SII Israel SIQ Slovenia SIRIM QAS International Malaysia
 SGS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey YUQS Serbia
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 * The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

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The data given in this leaflet are offered in good faith. CEME reserve the right to carry out any modification.

Die Daten dieses Kataloges sind nach bestem Wissen und Gewissen angegeben worden. Die Firma CEME behält sich vor Änderungen jederzeit vorzunehmen.



REV. 09 del 10.2013



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e-mail: industrial@cemegroup.com - www.cemegroup.com

Headquarters Site:

Via Del Lavoro, 2 - 20061 CARUGATE - MI - ITALY
Tel. +39 02921562.1 - Fax +39 0292157316
www.cemegroup.com - info@cemegroup.com



CEME a Win-Win Partner

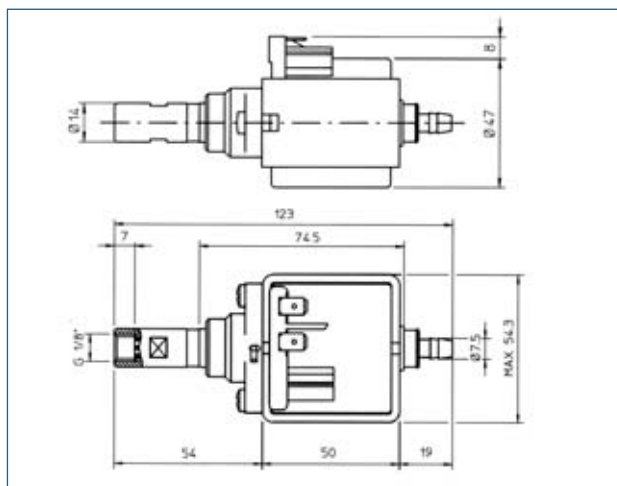
ITALIAN PUMPS FOR COFFEE WORLDWIDE



ULKA

COFFEE DIVISION

GENERAL CATALOGUE



EP USCITA IN PLASTICA
PLASTIC OUTLET

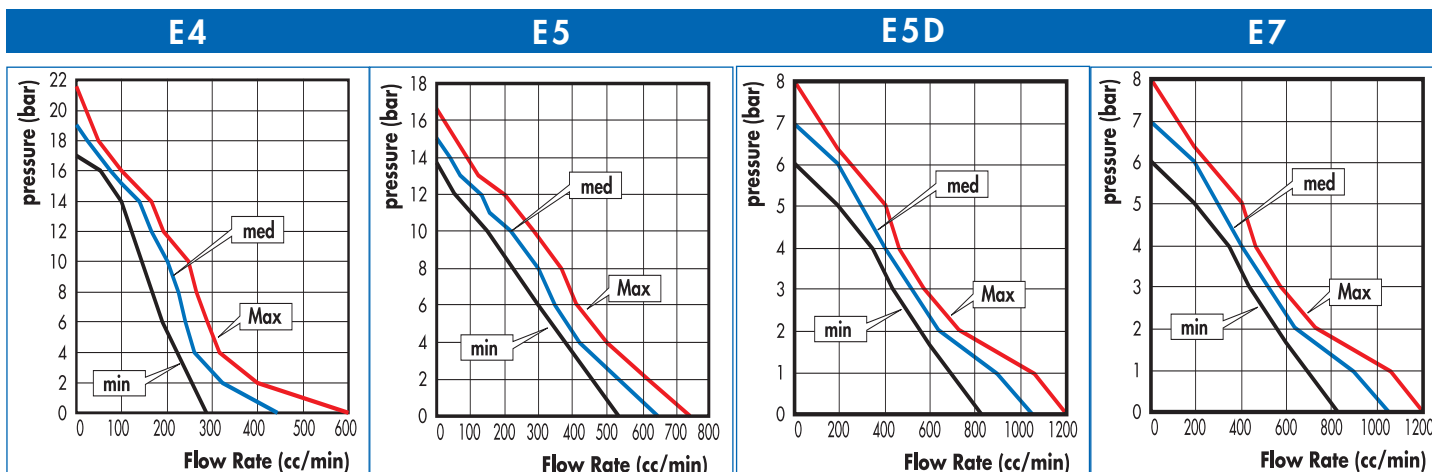
EX USCITA IN OTTONE
BRASS OUTLET

Models	E4	E4R	E5	E5D	EK	EK2	E7	E77	E8	E8S	E8R	E8LT
Average Pressure (Bar)	20	9	15	15	16	15,5	7	4	2,5	2,5	2,2	2
Average Flow Rate (cc/min)	450	350	650	300	700	650	1000	900	1200	1200	650	1100
Noise [dB(A)] at p=0 Bar/20cm	58	60	64,5	60	67,2	67,2	67,8	65,8	60	73	58	55,5

POMPA EVOLUZIONE	EVOLUTION PUMP
Corrente alternata	Alternating current
Fluido ideale: acqua	Ideal fluid:water
Autoinnescante a pressione 0	Self-priming at 0 bar
Non idonea all'utilizzo a secco tranne che per i normali interventi di innesco	Suitable to dry-use only during priming
Diode integrato	Integrated diode
Faston 6.3 x 0,8	Electrical connections: 6.3 x 0,8
Raccordo uscita snodato	A joint making the pump independent from the hydraulic connection at the delivery is provided
Tasca per termoprotettore	Thermal cutout pocket
Produzione e collaudo automatizzati e computerizzati	Computer-based production and inspection
Test elettrici e idraulici al 100%	Full detailed electrical and hydraulic inspection

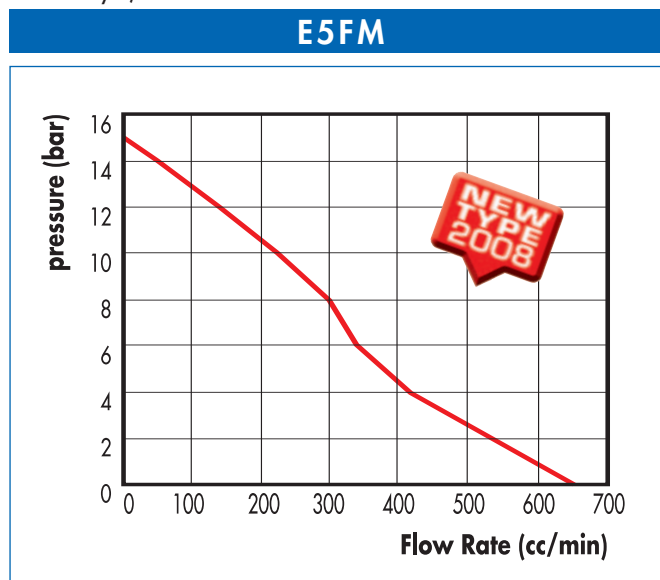
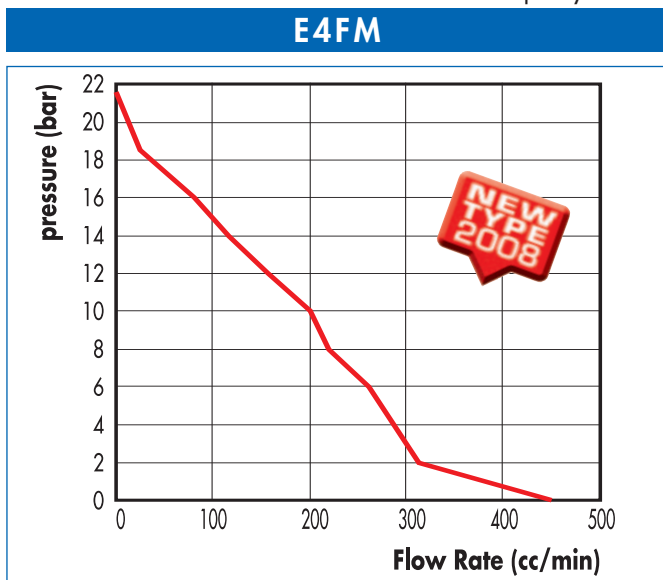
Prestazione a bobina fredda	Cold coil performances
V=Vn	V=Vn
Temperatura ambiente 25°C	Room temperature at 25°C
Fluido: acqua a 20°C	Fluid: water at 20°C

Models		E4 - E5 - E7	Voltage	ON/OFF (min)	Class	W	Certificates
EP4, EP5, EP7, EP5 D	EX4, EX5, EX7, EX5 D		240V~50Hz	2/1	F	48	IMQ
			230V~50Hz	2/1	F	48	IMQ/VDE
			220V~50Hz	2/1	F	48	IMQ
EAP4, EAP5, EAP7, EAP5 D	EAX4, EAX5, EAX7, EAX5 D		220V~60Hz	1/2	A	64	c-UL
EP4, EP5, EP7, EP5 D	EX4, EX5, EX7, EX5D		200V~50-60Hz	2/1	F	48	-
			120V~60Hz	1/1	A	41	c-UL
EAP4, EAP5, EAP7, EAP5 D	EAX4, EAX5, EAX7, EAX5 D		120V~60Hz	1/1,5	A	52	c-UL
EFP4, EFP5, EFP7, EFP5 D	EFX4, EFX5, EFX7, EFX5 D		120V~60Hz	2/1	F	52	c-UL
EP4, EP5, EP7, EP5 D	EX4, EX5, EX7, EP5 D		100V~50-60Hz	2/1	F	55	-
			24V~50-60Hz	2/1	F	48	-

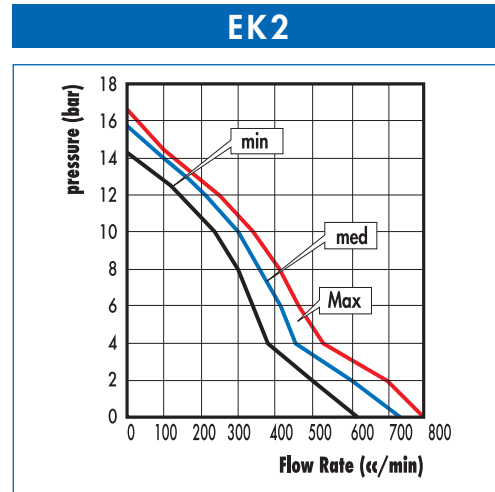
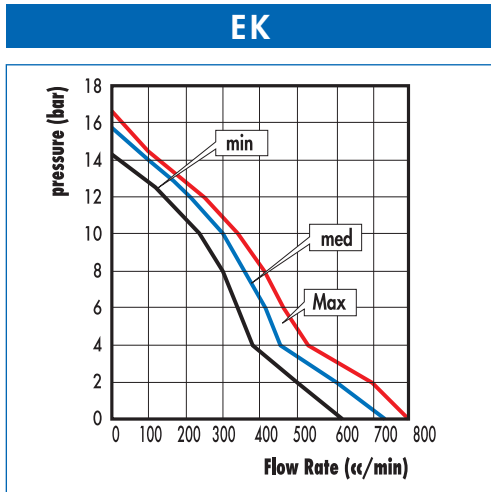


Models		E4FM - E5FM	Voltage	ON/OFF (min)	Class	W	Certificates
EP4FM-EP5FM			230V~50Hz	2/1	F	40	VDE
EP4FM-EP5FM			120V~60Hz	2/1	F	46	c-UL

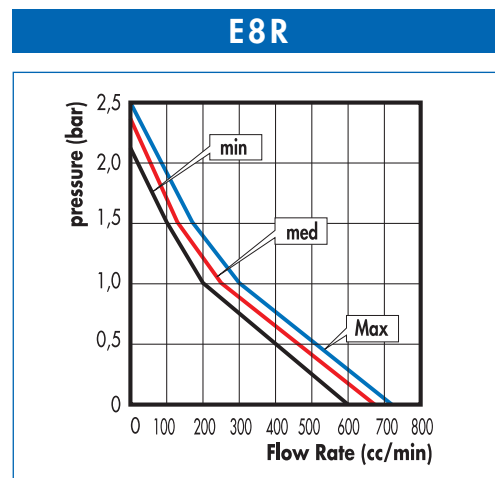
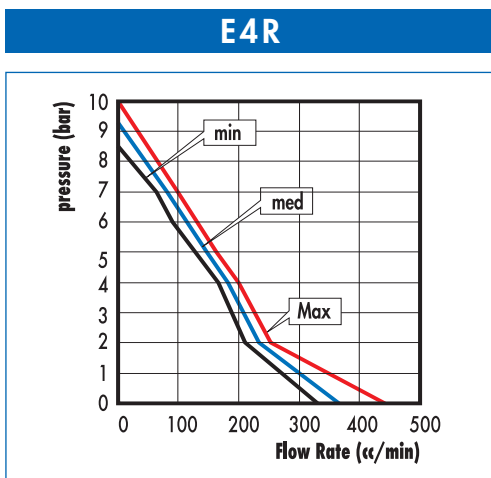
Temporary - Values to be set up - Tolerancy +/- 15%



EK		EK2			
Models	Voltage	ON/OFF (min)	Class	W	Certificates
EK	220V~50Hz	1/1	F	54	IMQ
EK2	230V~50Hz	1/1	F	56	IMQ/VDE



ER						
Models		Voltage	ON/OFF (min)	Class	W	Certificates
EP4R, EP8R	EX4R, EX8R	230V~50Hz	1/1	F	42	VDE
		120V~60Hz	1/1	F	46	c-UL
		100V~50-60Hz	1/1	F	46	-

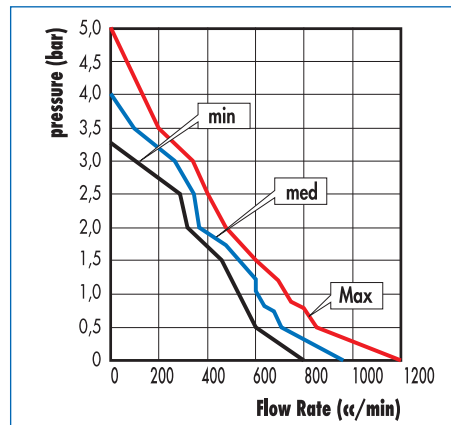


Prestazione a bobina fredda	Cold coil performances
V=Vn	V=Vn
Temperatura ambiente 25°C	Room temperature at 25°C
Fluido: acqua a 20°C	Fluid: water at 20°C

E77

Models	Voltage	ON/OFF (min)	Class	W	Certificates	
EP77	EX77	230V~50Hz	100%	F	28	VDE
		220V~50-60Hz	100%	F	35	-
		120V~60Hz	100%	A	27	UL
		100V~50-60Hz	100%	F	31	-

E77



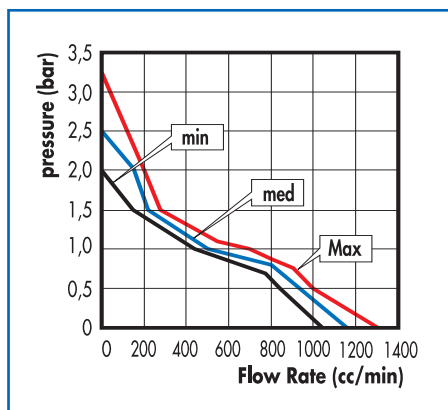
E8 - E8S

Models	Voltage	ON/OFF (min)	Class	W	Certificates	
EP8, EP8S	EX8, EX8S	230V-240V~50Hz	100%	F	26	VDE
		220V~50-60Hz	100%	F	33	-
		120V~60Hz	100%	F	29	c-UL
		100V~50-60Hz	100%	F	28	-
		24V~50Hz	100%	F	28	-

E8 - E8S

Per funzionamento continuo.
E8S anche a secco fino a 30 minuti.

Suitable for continuous working.
E8S even up-to-30-minute dry-working.



Prestazione a bobina fredda	Cold coil performances
V=Vn	V=Vn
Temperatura ambiente 25°C	Room temperature at 25°C
Fluido: acqua a 20°C	Fluid: water at 20°C

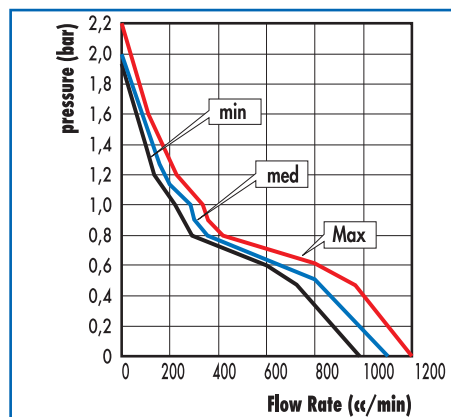
E8LT

Models	Voltage	ON/OFF (min)	Class	W	Certificates	
EP8LT	EX8LT	230-240V~50Hz	100%	F	20	VDE
		120V~60Hz	100%	F	23	c-UI

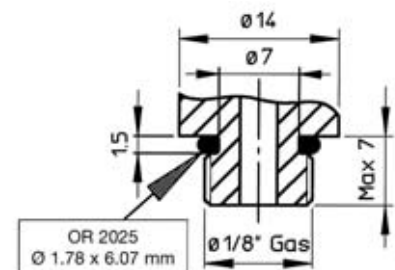
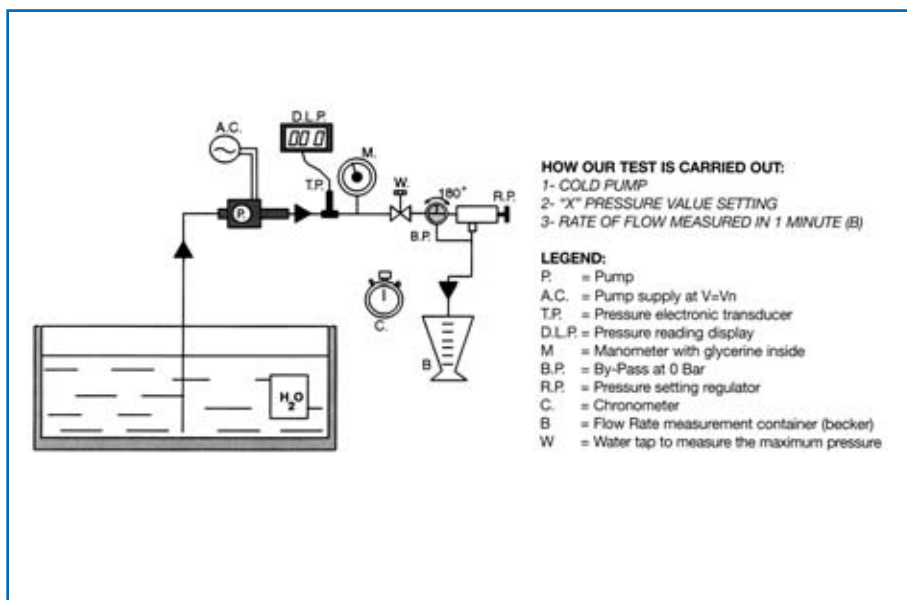
E8LT

Per funzionamento continuo senza termoprotettore, anche a secco!

Suitable for continuous working without thermal protection, even dry!



SCHEMA DI PROVA - TEST PROCEDURE



Schema di connessione e tenuta idraulica ideale da applicare alla mandata delle pompe E

Drawing showing the ideal junction and hydraulic seal to be applied at the delivery of the pump type E



Ø A	Description
6.6	Standard
5.0	R5
M10x1	RF

IN COMPLIANCE WITH THE 2002/95/CE ROHS DIRECTIVE

Class F					Integrated Diode 1 N 4007 1000V Without Diode, description: ND							
Voltage available and Relative Certification					TYPES	NME 1	NME 1C	NME 1S	NME 2	NME 3	NME 4	NME 5 (*)
Voltage	Hz	ON/OFF (min)	W	Certificates	Average Flow-rate (cc/min)	200	220	180	110	90	50	20-30
230-240	50	100%	16	VDE	Max pressure (Bar)	2,5	2,0	3,2	2,5	2,5	2,5	1
220	60	100%	16	-	dB(A) at p=0 Bar/20cm	50	44	51	40	39	36	-
120	60	100%	16	c-UR								
100	50-60	100%	16	-								
24	50-60	100%	16	-								

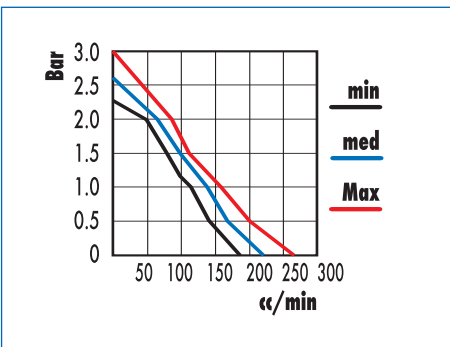


(*) Temporary - Values to be set up - Tolerancy +/- 15%

NME1

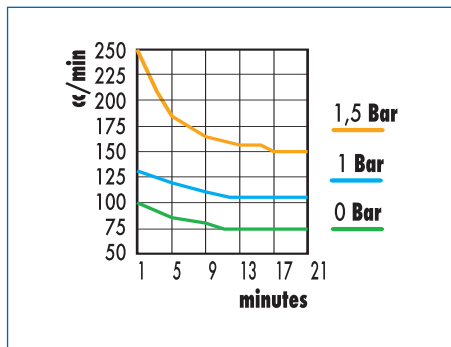
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



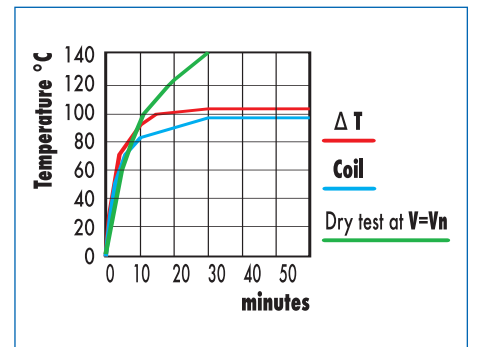
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

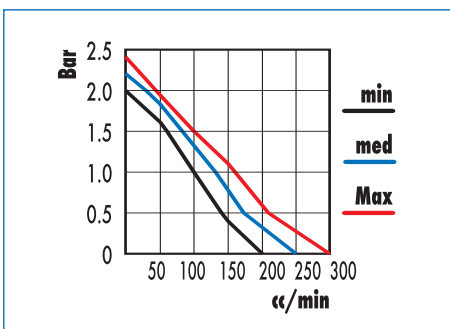
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME1C

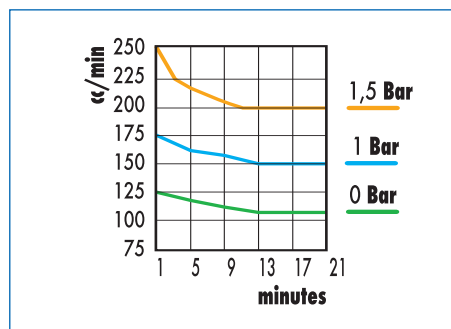
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



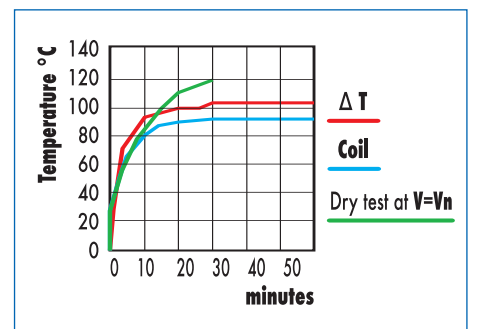
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

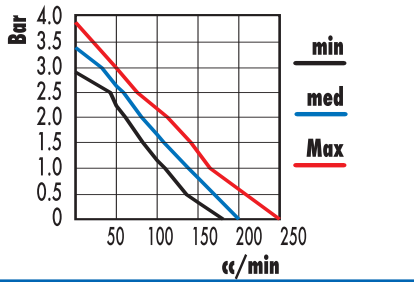
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME1S

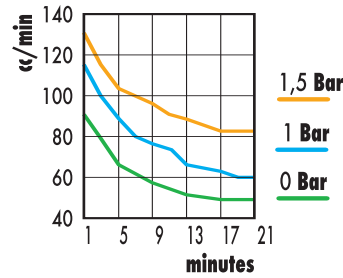
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



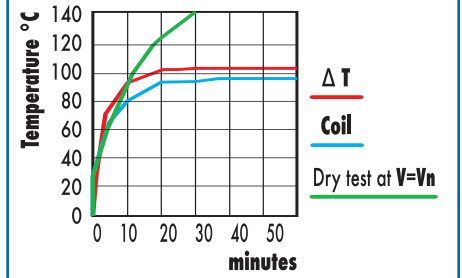
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

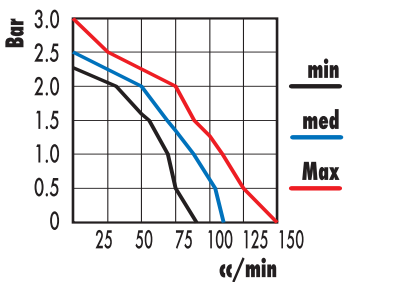
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME2

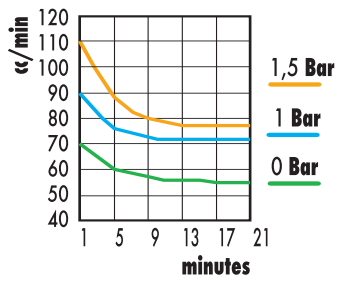
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



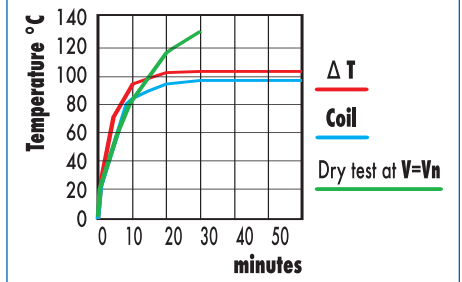
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

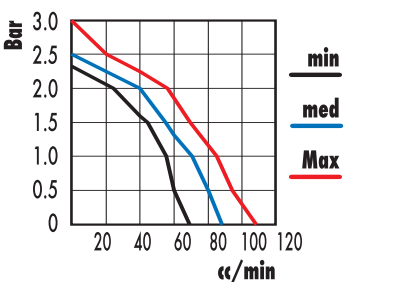
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME3

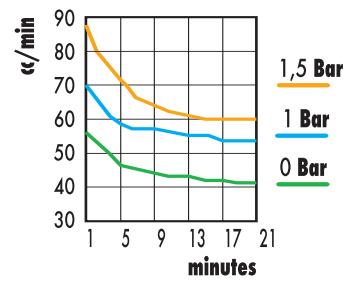
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



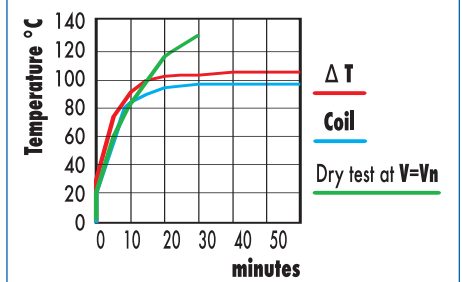
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

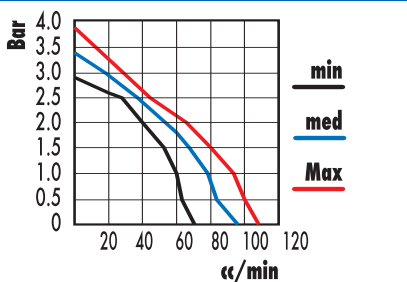
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME3S

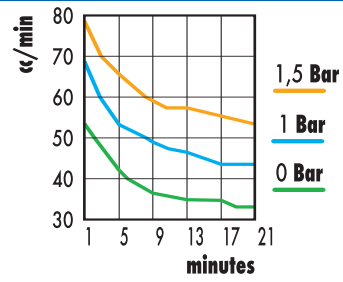
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



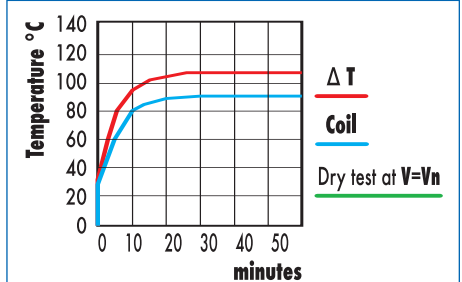
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

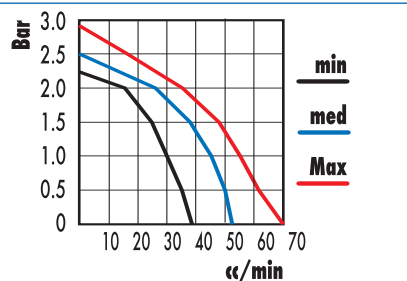
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME4

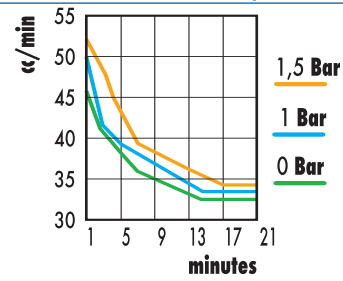
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



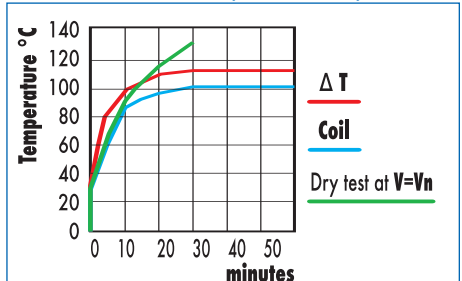
Flow rate/Time:

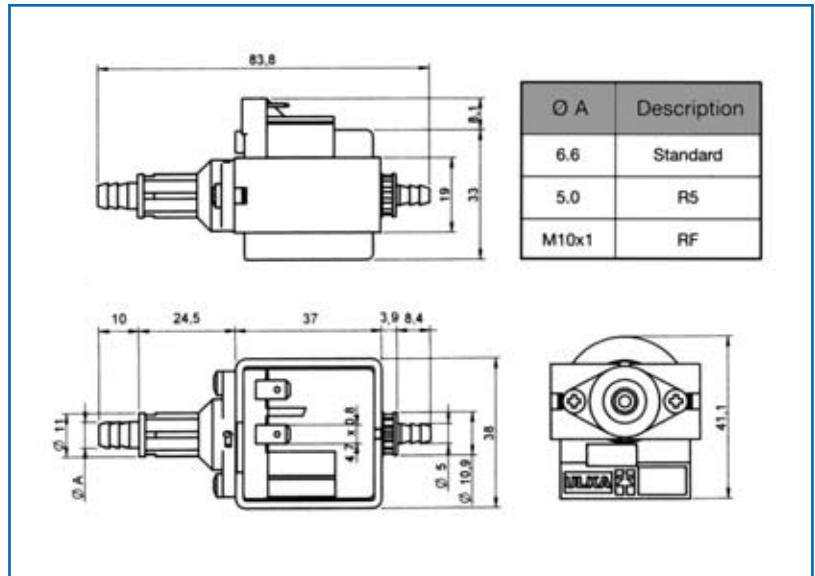
V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar





CERTIFIED

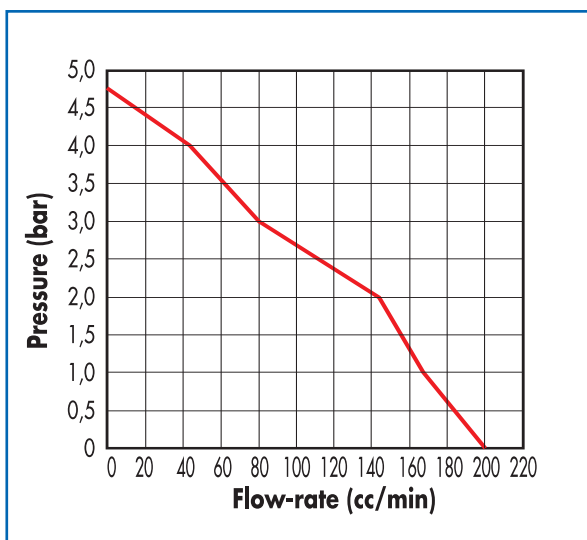
IN COMPLIANCE WITH
THE 2002/95/CE
ROSH DIRECTIVE

Class F	Integrated Diode 1 N 4007 1000V Without Diode, description: ND				
	Voltage	Hz	ON/OFF (min)	W	Certificates
Voltage available and Relative Certification	230-240	50	100%	21	VDE
	120	60	100%	17	c-UR
	220	60	100%	21	-
	100	50-60	100%	21	-
	24	50-60	100%	17	-

Tolerancy +/- 15%

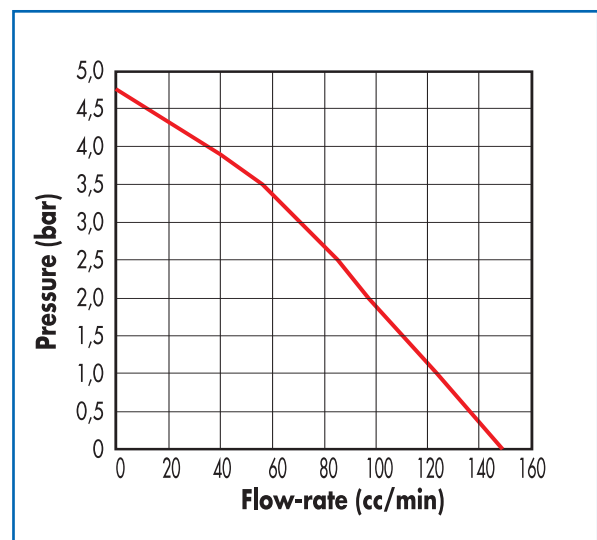
NMEHP1

Cold Performance:
V=Vn - Water 20°C - Ambient temperature 25°C



NMEHP2

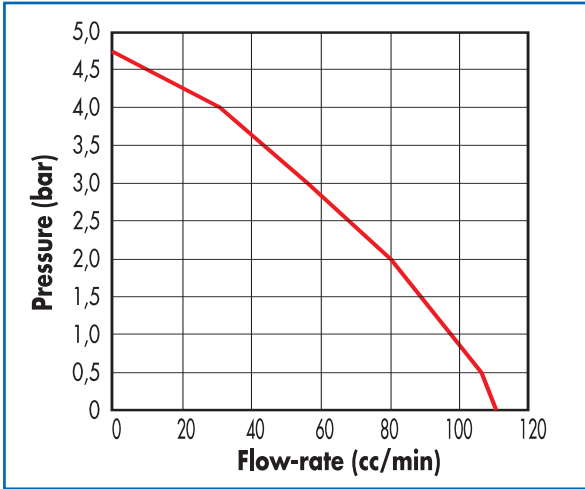
Cold Performance:
V=Vn - Water 20°C - Ambient temperature 25°C



NMEHP3

Cold Performance:

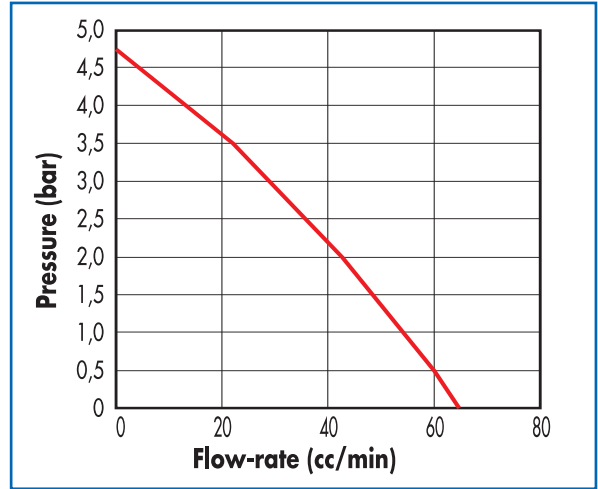
V=Vn - Water 20°C - Ambient temperature 25°C



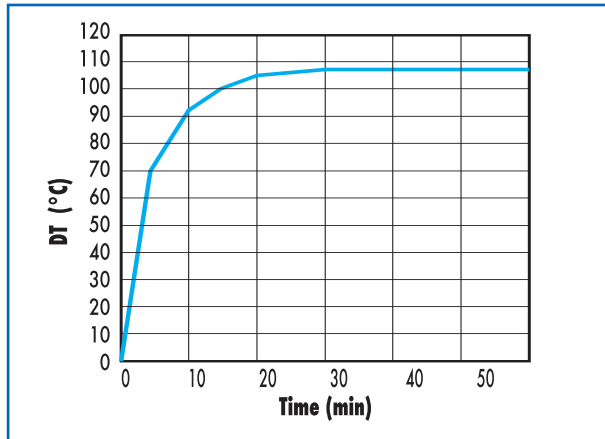
NMEHP4

Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



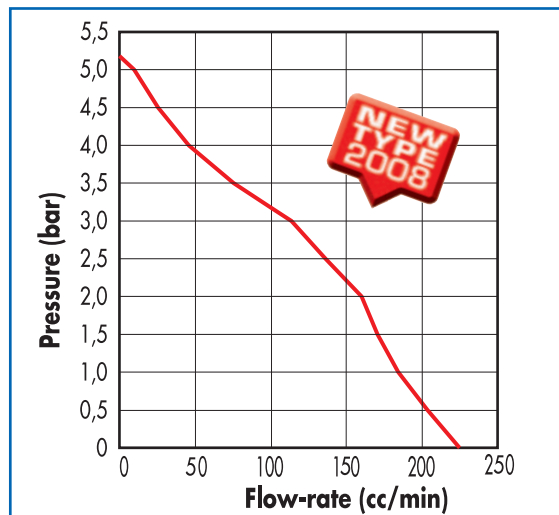
Heating test: Water 20°C - Ambient temperature 25°C V=Vn+6°C-p=0 Bar

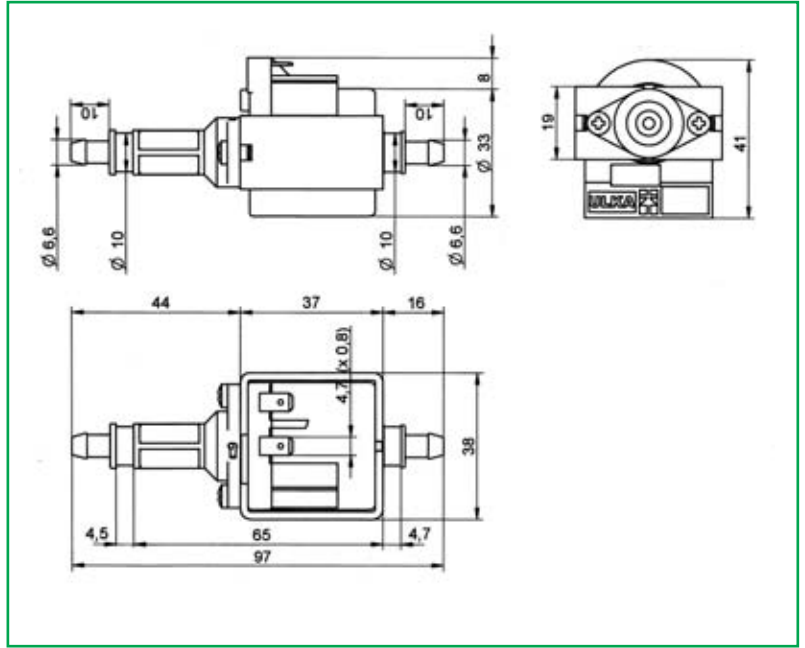


NMEHP1S

Cold Performance: V=Vn - Water 20°C - Ambient temperature 25°C

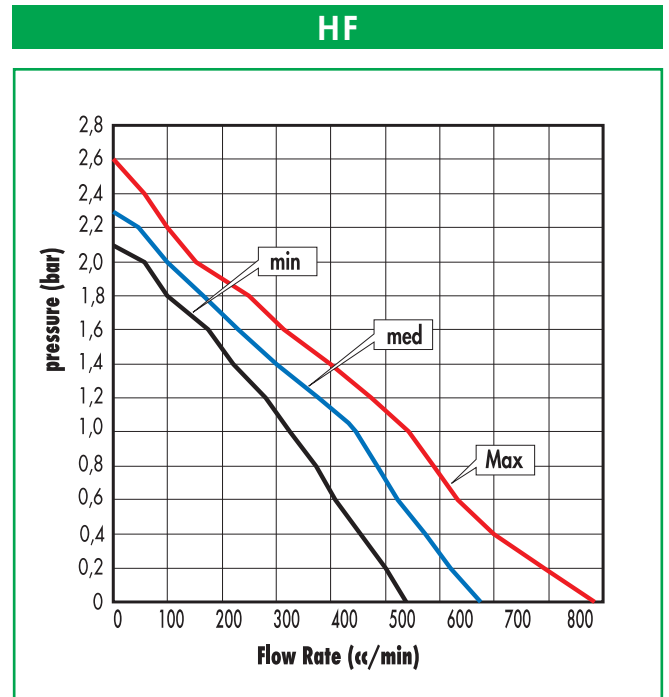
Class F	Integrated Diode 1 N 4007 1000V Without Diode, description: ND				
	Voltage	Hz	ON/OFF (min)	W	Certificates
Voltage available and Relative Certification	230-240	50	1/1	16	VDE

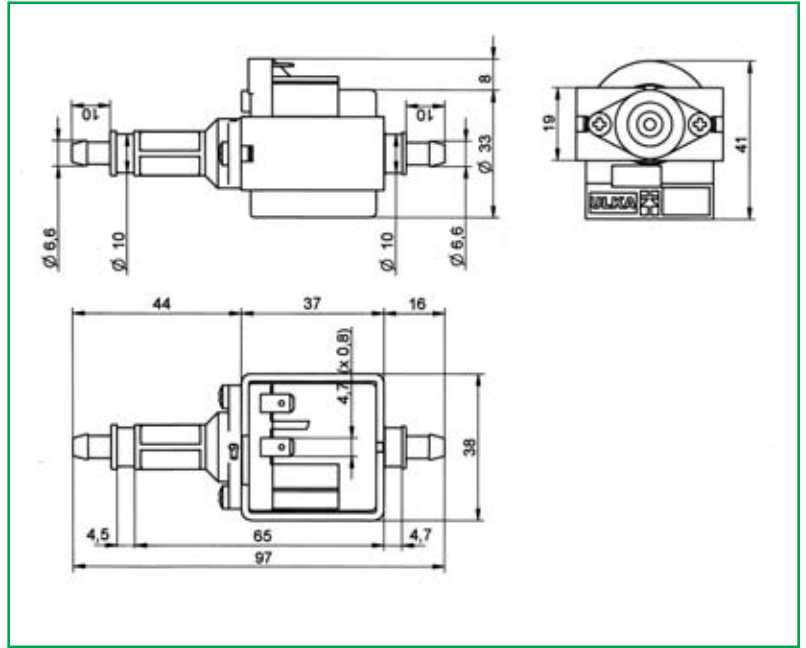





HF					
Models	Voltage	ON/OFF (min)	Class	W	Certificates
HF	230V~50Hz	2/1	F	22	VDE
	120V~60Hz	2/1	F	23	c-UI
	100V~50-60Hz	2/1	F	22	-
	220V~60Hz	2/1	F	22	-

- Double Insulation
- Self-priming without counterpressure
- Suitable to dry-use only during priming
- "ND"=Without integrated Diode in case the pumps is supplied by an electronic management
- $\Delta T=110^{\circ}\text{C}$ Max at $V=V_n+6\%$ - 2 min ON/1 min OFF - $p=0$ bar

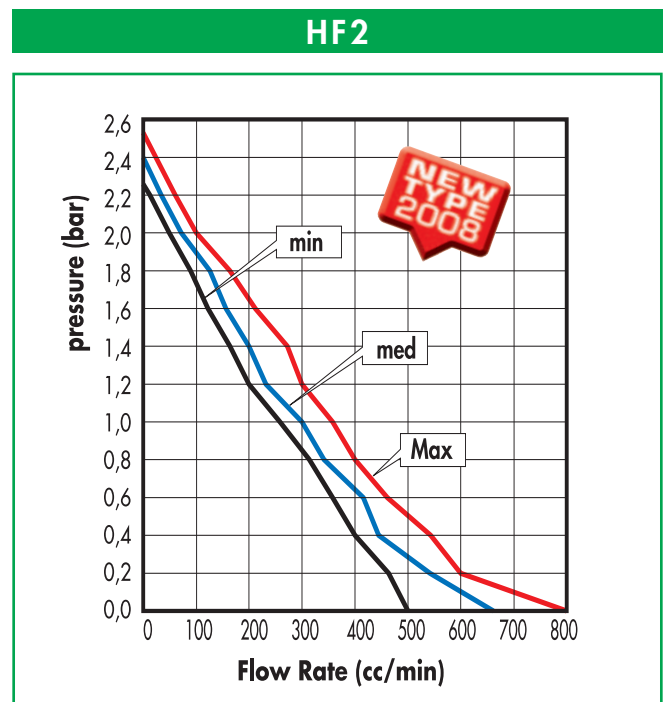




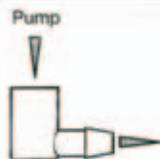

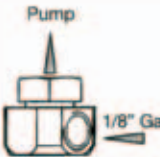


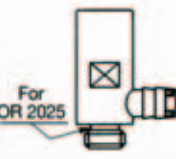





HF2					
Models	Voltage	ON/OFF (min)	Class	W	Certificates
 HF2	230V~50Hz	100%	F	18	-
	120V~60Hz	100%	F	18	-

Temporary - Values to be set up


- Double Insulation
- Self-priming without counterpressure
- Suitable to dry-use only during priming
- "ND"=Without integrated Diode in case the pumps is supplied by an electronic management
- $\Delta T=110^{\circ}\text{C}$ Max at $V=V_n+6\%$ - ED 100% - $p=0$ bar



FITTING E MODELS

	ACCESSORI	FITTINGS
	Lato Aspirazione Pompa	Suction head
 	Aspirazione a pressione atmosferica: Pipetta in Santoprene	Atmospheric pressure suction: Pipetta in Santoprene
 	Aspirazione mediante allacciamento alla rete idrica: Raccordo Bar in ottone	Suction through water pipe network connection: Raccordo Bar in brass
	Lato Mandata Pompa	Delivery head
	Raccordo 90° Connessione a 90°	Raccordo 90° Connecting device
 	Valvola "S2": Autoinnesco in contropressione Valvola "S22": Autoinnesco in contropressione e ripristino pressione atmosferica in caldaia	Valve "S2": Self-priming in counter pressure conditions Valve "S22": Self-priming in counter pressure conditions and restoration of the atmospheric pressure in the boiler
 	Valvola "S3": Autoinnesco in contropressione, ripristino pressione atmosferica in caldaia e valvola di sicurezza integrata	Valve "S3": Self-priming valve in counter pressure conditions, restoration of the atmospheric pressure in the boiler and integrated safety valve
 	Valvola "S3BP": Autoinnesco in contropressione, ripristino pressione atmosferica in caldaia e by-pass	Valve "S3BP": Self-priming valve in counter pressure conditions, restoration of the atmospheric pressure in the boiler and by-pass

FITTING NMEHP MODELS

ACCESSORI	FITTINGS
Lato Mandata Pompa	Delivery head
	
Valvola "S4" Autoinnesco in contropressione	Valve "S4" Self-priming in counter pressure conditions




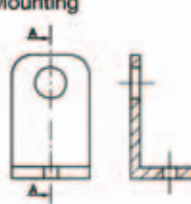


FITTING NME MODELS

ACCESSORI	FITTINGS
Lato Aspirazione Pompa	Suction head
	
Pipetta NME	

FITTING HF MODELS

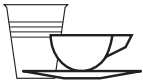



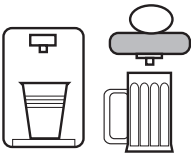
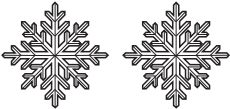
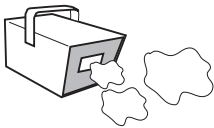
ACCESSORI	FITTINGS
Lato Aspirazione Pompa	Suction head
	
PIPETTA	

FITTING E MODELS

<p>Standard Rubber Mounting 8.01.017</p>  	<p>Square Rubber Mounting 8.01.022</p>  	<p>"ST" Square Rubber Mounting 8.01.039</p>  
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FITTING HF MODELS

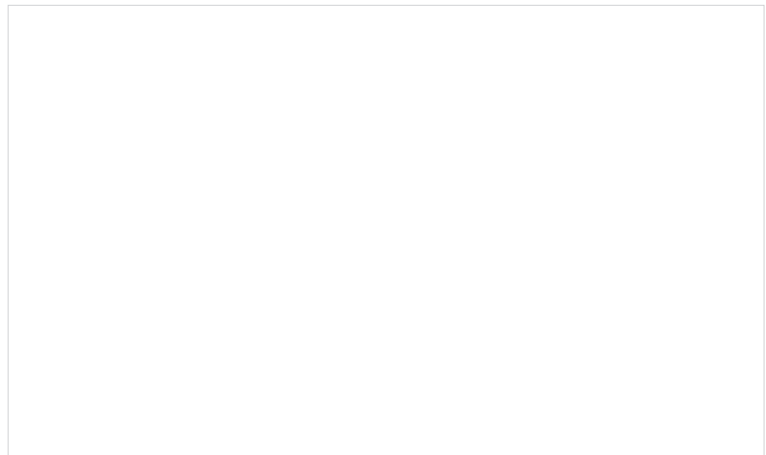
<p>Square Rubber Mounting</p> 

Esempi di APPLICAZIONI TIPICHE		APPLIANCES
	Macchine da Caffè	Coffee Machines
	Lavamoquette Sistemi di Pulizia a Vapore	Carpet Cleaners Steam Cleaning Systems
	Ferri da Stiro / Sistemi Stiranti Presse per Stiratura	Steam Irons / Steam Stations Ironing Presses
	Apparecchi Medicali Apparecchi Odontoiatrici	Medical Equipment Dental Equipment
	Gasificatori d'Acqua Distributori di Bevande	Water Gasifying Equipment Vending Multi-Beverage
	Condizionatori d'Aria	Air Conditioners
	Macchine per Fumo Scenico	Disco Smoke Machines

EVOLUTION PUMP

- Doppio isolamento
 - Alimentazione a corrente alternata come da dati di targa
 - Fluido ideale: acqua alla temperatura di 25°C
 - Funzionamento e potenza assorbita secondo dati di targa
 - Autoinnescante purchè priva di contropressione alla mandata; prevalenza 3mt
 - Non idonea all'utilizzo a secco tranne che per i normali interventi di innesco
 - La bobina è dotata di un marsupio per ospitare un eventuale termoprotettore
 - I componenti sono sottoposti a severi controlli di qualità
- La produzione e il collaudo sono effettuati da un impianto automatizzato e computerizzato che ne garantisce e certifica la qualità nonchè la indispensabile tempestività d'evasione degli ordini.
 - Le prove al 100% comprendono:
 - 1) Prova di rigidità dielettrica verso massa a 2500V per 2 secondi
 - 2) Prova di idraulica, di innesco, di portata, di pressione

- Double insulation
 - AC supply as per label data
 - Ideal fluid: water at 25°C (maximum temperature)
 - Working time and absorbed power as per label data
 - Self-priming without counterpressure at delivery head; 3 mt height
 - Suitable to dry-use only during priming
 - The coil is equipped with a pocket for the possible fitting of a thermal cutout
 - The components are subjected to strict quality controls
- Both production and test are carried out by an automated and computerised system assuring and certifying not only its quality but also the indispensable promptness in executing orders.
 - The full detailed inspection includes:
 - 1) Dielectric strenght test towards mass at 2500V per 2 seconds
 - 2) Hydraulic, Self-priming, Flow-rate and Pressure Tests





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