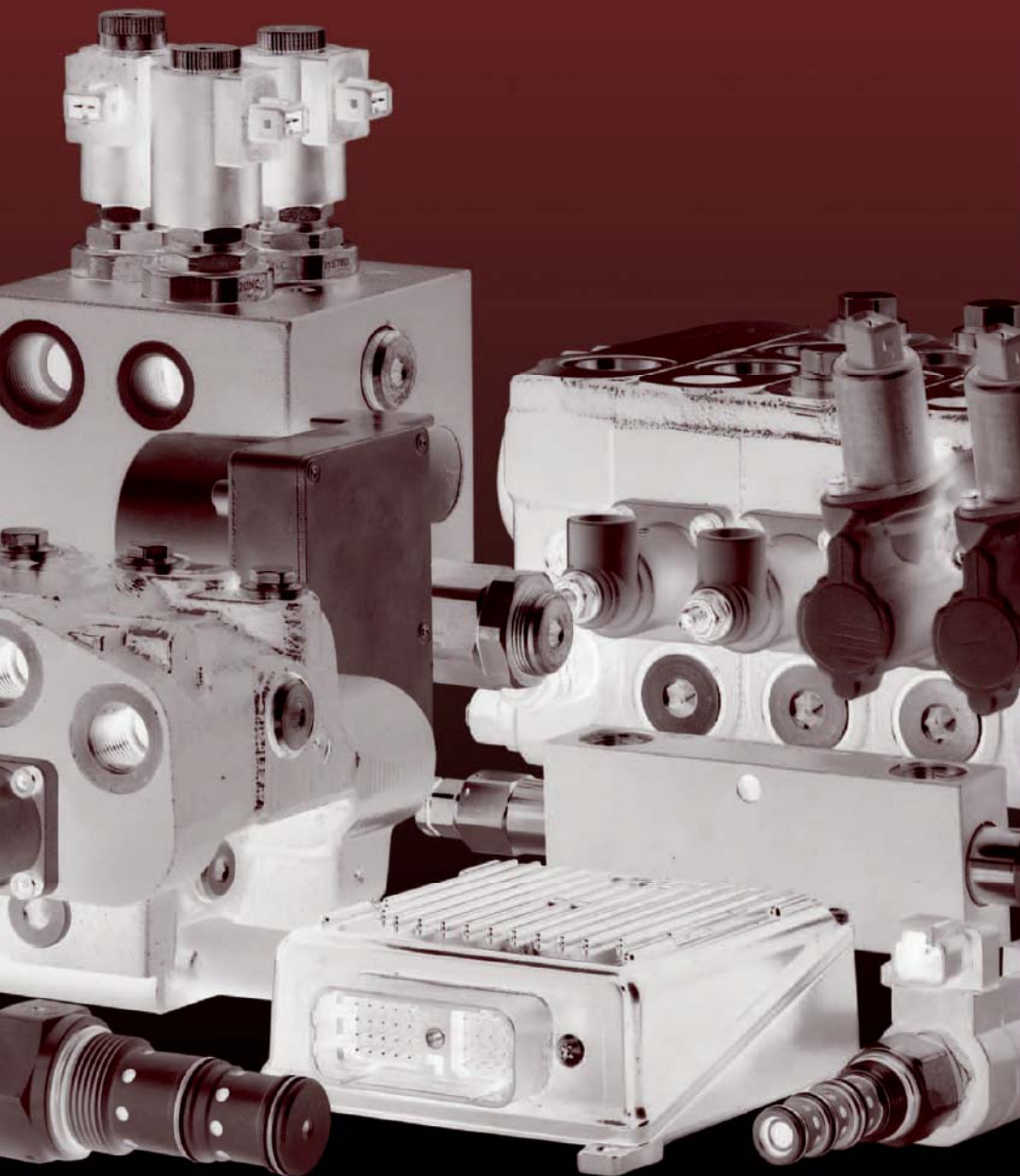


O V E R V I E W 13

PROGRAMMA DI PRODUZIONE
PRODUCT INFORMATION





W1 Sede principale
W1 Headquarters



W2 Lavorazioni meccaniche
W2 mechanical machining

"Conoscenza, competenza, etica, rispetto delle persone e dell'ambiente sono i pilastri di un'azienda che vuole essere affidabile ed avere successo sul mercato".

"Knowledge, competence, responsible care and ethics are the pillars of a company willing to be reliable and successful in the market".

Ivano Corghi
Presidente Walvoil
President of Walvoil



W3 Nuova sede
W3 New building

WALVOIL
FRANCIA: **WALVOIL FLUID POWER**

USA: **WALVOIL FLUID POWER CORP**
TULSA (OK)

COREA: **WALVOIL FLUID POWER KO**
KWANGJU (K)

INDIA: **WALVOIL FLUID POWER (INDIA) P**
BANGALORE (BA)

CINA: **WALVOIL FLUID POWER SHANGHAI COMPANY**
SHANGHAI (S)

BRASILE: **WALVOIL FLUID POWER DO**
CAXIAS DO SUL (BR)

AUSTRALASIA: **WALVOIL FLUID POWER AUSTRALIA**
MELBOURNE (ME)

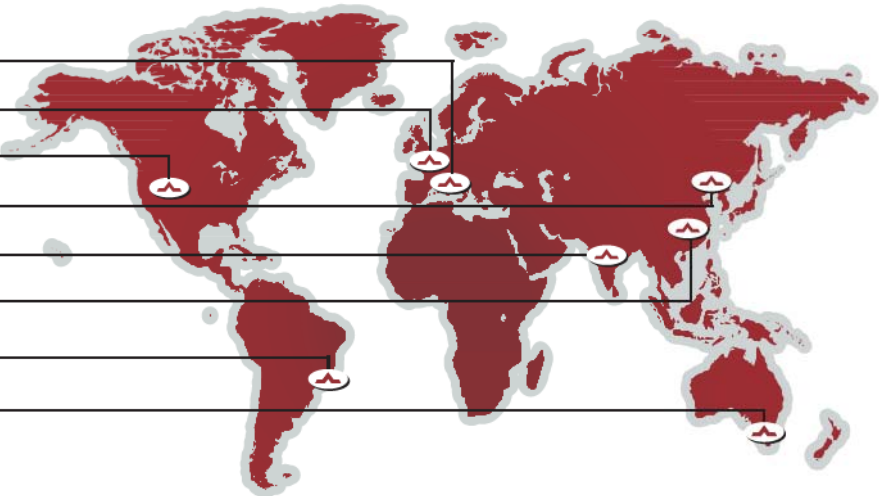
**Insieme per progettare il futuro
Together, to build the future**

Walvoil è uno dei principali produttori mondiali di valvole oleodinamiche e di sistemi mecatronici completi per il mercato del macchinario mobile. Sviluppiamo e realizziamo prodotti e sistemi per controllare idraulicamente ed elettronicamente ciò che ruota attorno al movimento. Lo facciamo attraverso l'ascolto, l'attenzione, la professionalità e le competenze in evoluzione costante, che mettiamo a disposizione di clienti e partners che operano in settori e mercati diversi.

Walvoil is one of the world's leading manufacturers of hydraulic valves and complete mechatronic systems for the mobile equipment market. We design and develop products and systems to provide hydraulic and electronic control of nearly any hydraulic function dealing with machine movement. To achieve these results, we listen closely and focus our attention to our clients' requirements, provide consistent communication in order to apply our technical and production skills to the benefit of our entire client and market partners.

principale
quarters

- IL S.p.a.
- FRANCE
VRITZ
- ORATION
(Oklahoma)
- AREA LCC
KYUNG-GI
- VT. LTD.
BANGALORE
- LIMITED
SHANGHAI
- BRASIL
CAXIAS DO SUL
- INDONESIA
SUKSES
- ALABAMA
MONTGOMERY



Walvoil Fluid Power Corporation
Tulsa - Oklahoma



Walvoil Fluid Power Korea LCC
Kwangju of Kyung-Gi



Walvoil Fluid Power India PVT. LTD.
Bangalore



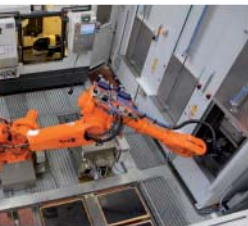
Walvoil Fluid Power Shanghai Company Limited
Shanghai



Walvoil Fluid Power Do Brasil
Caxias do Sul



nuovo polo produttivo e logistico
New production and logistic pole

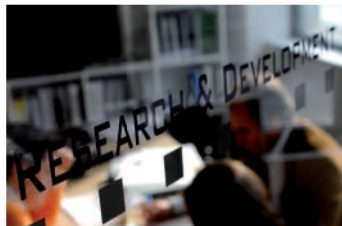


W1 Lavorazioni meccaniche
W1 mechanical machining

RETE ALTA TECNOLOGIA
EMILIA - ROMAGNA
HIGH TECHNOLOGY NETWORK

PIATTAFORMA
MECCANICA
MATERIALI

Test Department Walvoil accreditato
rete laboratori alta tecnologia E/R
Walvoil Test Department, part of the
E/R high-technology lab network



Ricerca e Sviluppo
Research & Development



I settori nei quali interveniamo, mettendo a disposizione un'ampia ed integrata gamma di prodotti sono:

- **macchine agricole**
- **macchine movimento terra**
- **macchine edili**
- **veicoli industriali**
- **sollevamento e trasporto**
- **applicazioni industriali**
- **applicazioni speciali**



Le nostre radici ci sostengono anche nel mettere in pratica una quotidiana ed autentica propensione alla flessibilità e all'efficienza, il cui risultato sono soluzioni personalizzate, ove richieste, ed elevate affidabilità e competitività. Disponiamo infatti di un'ampia ed integrata gamma di prodotti dedicati e testati per ogni singola applicazione.

Attraverso le ultime novità inserite in produzione, Walvoil ha inteso sviluppare un'importante esperienza nell'utilizzo dell'elettronica applicata all'oleodinamica. In ambito di applicazioni, la nostra offerta al mercato si arricchisce della storica partnership con Casappa Spa, produttrice di pompe, motori e filtri idraulici.



We are involved in the following market sectors we have been providing a broad and integrated range of products to:

- **agricultural machines**
- **earth moving machines**
- **construction and mining equipment**
- **industrial vehicles**
- **lifting and transport**
- **industrial equipment**
- **special applications**



Our background further enhances our vocation and commitment to implementing a consistent and authentic trend to flexibility and efficiency resulting into successful customized products and high reliability and competitiveness.

We provide a broad and integrated range of products that can always be specialized and certified for every single application.

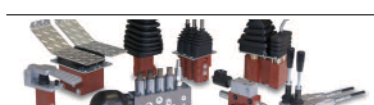
Through the last news included in production, Walvoil has intended to develop an important experience in the use of electronics applied to mobile hydraulics. Our systems approach to an application is enriched thanks to our consolidated partnership with Casappa pumps, motors and filters.



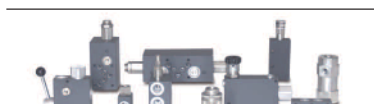
I prodotti
Product range

Distributori oleodinamici
Directional control valves

- **Monoblocco** pag. 6
Monoblock valves page 6
- **Componibili** pag. 7
Sectional valves page 7
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Pressure pre-compensated Load-Sensing and Flow Sharing valves page 8
- **Deviatori di flusso** pag. 9
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Directional control valves with direct acting solenoid page 10


Sistemi di controllo e comando
Pilot and control devices

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Pilot control valves and feeding unit page 11
- **Sistemi elettronici** pag. 13
Electronic systems page 13
- **Impugnature e accessori** pag. 14
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Valvole oleodinamiche
Hydraulic valves

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Blocchi integrati (HICs)
Hydraulic integrated circuits

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Hydraulic integrated circuits page 26

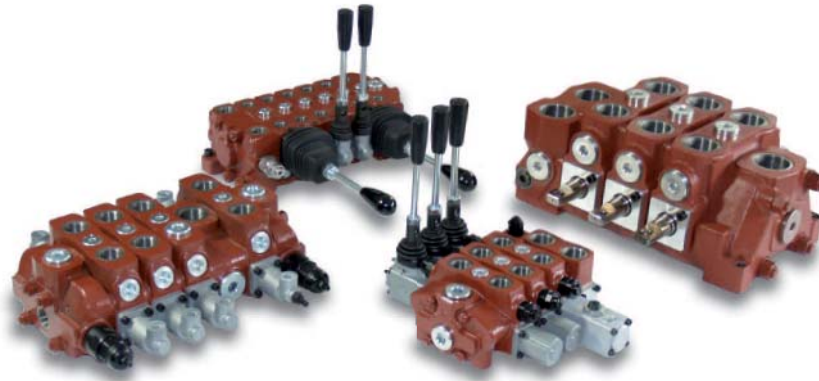
Monoblocco - Monoblock valves


Tipo Type	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)	Numero sezioni Nr. of sections	Filettature standard* Standard threads*		Catalogo di riferimento Reference catalogue
				BSP (ISO 228/1)	UN-UNF (ISO 11926-1)	
SDM080	25-6.6	315-4600	1÷6	G 1/4	SAE 6	DAT001I/E
SDM081	25-6.6	315-4600	1÷6	G 1/4	SAE 6	DAV010IE
SD4	45-12	250-3600	1	G 3/8	SAE 6	DAC002I/E
SD5	45-12	315-4600	1÷7	G 3/8	SAE 6	DAU003I/E
SDM105	45-12	315-4600	1	G 3/8	SAE 6	DAU003I/E
SDM110	45-12	315-4600	1÷6	G 3/8	SAE 6	DAV012IE
SDM100	70-18	315-4600	1÷8	G 3/8	SAE 8	D1WWDA02I/E
SD11	70-18	315-4600	1÷6	G 1/2	SAE 8	DAT004I/E
SDM140	80-21	315-4600	1÷6	G 1/2	SAE 10	DAU007I/E
SD14	120-32	250-3600	1	G 3/4	SAE 12	DAC005I/E
SD18	160-42	250-3600	1÷6	G 3/4	SAE 12	DAT006I/E
Configurazione Load-Sensing - Load-Sensing valves configuration						
DLM140	110-29	250-3600	1÷6	G 1/2	SAE 10	DAU007I/E
Specifici per applicazioni - Designed for						
Caricatori frontali - Front-loaders application						
SDM102	45-12	250-3600	2	G 3/8	SAE 6	DAT011I/E
SDM103	45-12	250-3600	2	G 3/8	SAE 6	DAV007IE
SDM122	80-21	250-3600	2	G 1/2	SAE 10	D1WWEA01I/E
SDM143	80-21	250-3600	2	G 1/2	SAE 10	DAT009I/E
Caricatori frontali: configurazione Load-Sensing - Front-loaders application: Load-Sensing configuration						
DLM122	80-21	250-3600	2	G 1/2	SAE 10	D1WWEA01I/E
DLM142	80-21	250-3600	2	G 1/2	SAE 10	DAT010I/E
Specifici per applicazioni su mini pale cariatrici - Designed for skid-steer loaders applications						
SDM141	80-21	250-3600	3	G 1/2	SAE 10	DAT008I/E

Note/Notes

(*): Filettatura metrica su richiesta/Metric thread is available on request

Comandi/Controls	Tipo/Type																			
	SDM080	SDM081	SD4	SD5	SDM105	SDM110	SDM100	SD11	SDM140	SD14	SD18	DLM140	SDM102	SDM103	SDM122	SDM143	DLM122	DLM142	SDM141	
Meccanico/Mechanical	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Idraulico/Hydraulic				•		•	•	•	•	•	•	•								•
Pneumatico/Pneumatic			•	•		•	•	•	•	•	•	•								•
Elettrico/Electric			•	•	•	•	•													•
Elettroidraulico/Electro-hydraulic			•	•		•	•	•	•	•	•	•					•			•
Elettropneumatico/Electro-pneumatic				•		•	•	•	•	•	•	•								•
Meccatronico/Mechatronic										•		•			•	•	•	•	•	•

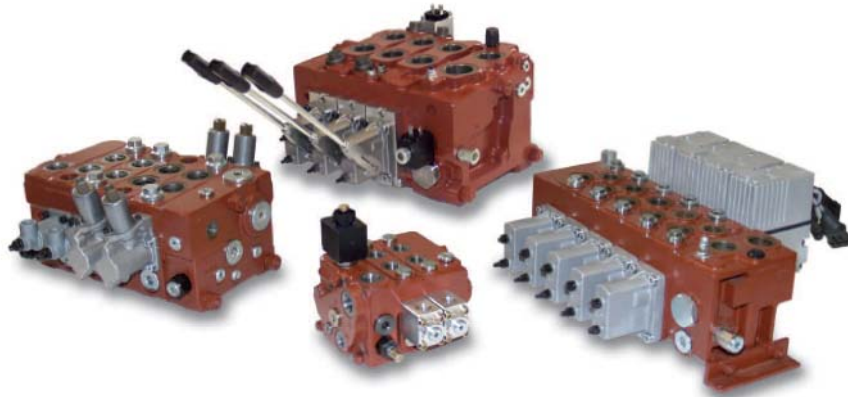
Componibili - Sectional valves


Tipo Type	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)	Numero sezioni Nr. of sections	Filettature standard* Standard threads*		Catalogo di riferimento Reference catalogue
				BSP (ISO 228/1)	UN-UNF (ISO 11926-1)	
SD6	45-12	315-4600	1÷12	G 3/8	SAE 6	DBU001I/E
SDS100	60-16	315-4600	1÷10	G 3/8	SAE 8	DBT001I/E
SD8	80-21	315-4600	1÷12	G 1/2	SAE 8	DBU002I/E
SDS150	90-24	315-4600	1÷12	G 1/2	SAE 10	DBC003I/E
SDS180	160-42	315-4600	1÷12	G 3/4	SAE 10	D1WWEB01I/E
SD25	240-63	315-4600	1÷12	G 1	SAE 16	DBC005I/E
SDS400	400-105	315-4600	1÷10	G 1 1/4	SAE 20	D1WWCB02I/E
Configurazione Load-Sensing - Load-Sensing valves configuration						
DLS7	60-16	315-4600	1÷10	G 3/8	SAE 6	DBU001I/E
DLS8	100-26	315-4600	1÷10	G 1/2	SAE 8	DBU002I/E
DLS180	160-42	315-4600	1÷10	G 3/4	SAE 12	D1WWEB01I/E

Note/Notes

(*): Filettatura metrica su richiesta/Metric thread is available on request

Comandi / Controls	Tipo / Type									
	SD6	SDS100	SD8	SDS150	SDS180	SD25	SDS400	DLS7	DLS8	DLS180
Meccanico/Mechanical	•	•	•	•	•	•	•	•	•	•
Idraulico/Hydraulic	•	•	•	•	•	•	•	•	•	•
Pneumatico/Pneumatic	•	•	•	•	•	•		•		
Elettrico/Electric	•	•	•					•		
Elettroidraulico/Electro-hydraulic	•	•	•	•	•	•		•		
Elettropneumatico/Electro-pneumatic	•	•	•	•	•	•				

Load-Sensing pre-compensati e Flow Sharing - Pressure pre-compensated Load-Sensing and Flow Sharing

Distributori Load-Sensing pre-compensati - Pressure pre-compensated Load-Sensing valves

Tipo Type	Portata nominale Nominal flow sugli utilizzi-on ports			Pressione massima Max. pressure	Numero sezioni Nr. of sections	Filettature standard* Standard threads*		Catalogo di riferimento Reference catalogue
	in ingresso on inlet	non compensati not compensated	compensati compensated			BSP	UN-UNF	
	(l/min-US gpm)	(l/min-US gpm)	(l/min-US gpm)			(ISO 228/1)	(ISO 11926-1)	
DPC130	150-40	130-34	100-26	315-4600	1÷10	G 1/2	SAE 10	DDT010I/E
DPC200	260-68	240-63	200-53	420-6100	1÷10	G 1	SAE 10	D1WWCD02I/E

Distributori Flow Sharing - Flow Sharing valves

Tipo Type	Portata nominale Nominal flow sugli utilizzi on ports		Pressione massima Max. pressure (bar-psi)	Numero sezioni Nr. of sections	Filettature standard* Standard threads*		Catalogo di riferimento Reference catalogue
	in ingresso on inlet	(l/min-US gpm)			BSP	UN-UNF	
	(l/min-US gpm)	(l/min-US gpm)			(ISO 228/1)	(ISO 11926-1)	
PTD DPX050	80-21	50-13	300-4350	1÷12	G 3/8	SAE 8	D1WWED01I/E
PTD DPX100	120-32	90-24	300-4350	1÷12	G 3/8	SAE 8	D1WWED01I/E
PTD DPX100HP	120-32	90-24	420-6100	1÷12	G 3/8	SAE 8	D1WWED01I/E
PTD DPX160	230-61	160-42	300-4350	1÷10	G 3/4	SAE 12	D1WWED01I/E
PTD DPX160HP	230-61	160-42	420-6100	1÷10	G 3/4	SAE 12	D1WWED01I/E

Note/Notes

(*): Filettatura metrica su richiesta/Metric thread is available on request

Comandi / Controls	Tipo / Type						
	DPC130	DPC200	DPX050	DPX100	DPX100HP	DPX160	DPX160HP
Meccanico/Mechanical	•	•	•	•	•	•	•
Idraulico/Hydraulic	•	•	•	•	•	•	•
Pneumatico/Pneumatic				•	•		
Elettrico/Electric				•	•		
Elettroidraulico/Electro-hydraulic	•	•	•	•	•	•	•
Elettropneumatico/Electro-pneumatic				•	•		
Elettroidraulico con elettronica a bordo Electro-hydraulic with electronic on board	•			•	•		

Deviatori di flusso - *Diverter valves*

Tipo Type	Portata nominale (condizioni statiche) <i>Nominal flow (static working conditions)</i>	Pressione nominale (condizioni statiche) <i>Operating pressure (static working conditions)</i>	Nr. di vie Nr. of ways	Filettature standard Standard threads		Catalogo di riferimento Reference catalogue
	(l/min-US gpm)	(bar-psi)		BSP (ISO 228/1)	UN-UNF (ISO 11926-1)	
A comando meccanico rotativo - Mechanical rotary spool control ▲						
DH5	60-16	315-4600	3/4/6/8	G 3/8	SAE 8	DGR002I/E
DH10	90-24	315-4600	3/4/6/8	G 1/2	SAE 10	DGR002I/E
DH20	140-37	315-4600	3/4/6/8	G 3/4	SAE 12	DGR002I/E
DH25	200-53	250-3600	3/4/6/8	G 1	SAE 16	DGR002I/E
DH30	280-74	210-3050	3/6	G 1 1/2	SAE 24	DGR002I/E
A comando meccanico - Mechanical spool control						
DF5	60-16	315-4600	2/3/6	G 3/8	SAE 8	DGR002I/E
DF10	90-24	315-4600	2/3/6	G 1/2	SAE 10	DGR002I/E
DF20	140-37	315-4600	2/3/6	G 3/4	SAE 12	DGR002I/E
DF25	280-74	315-4600	3	G 1	SAE 16	DGR002I/E
A comando elettrico monoblocco - Solenoid operated monoblock type						
DFE052	60-16	200/315*-2900/4600*	2/3/6/8	G 3/8	SAE 8	DGR002I/E
DFE10	90-24	200/315*-2900/4600*	3/6	G 1/2	SAE 10	DGR002I/E
DFE20	140-37	200/315*-2900/4600*	3/6	G 3/4	SAE 12	DGR002I/E
A comando elettrico componibile - Solenoid operated sectional type						
DFE080	25-6.6	200/315*-2900/4600*	6/8/10	G 1/4	SAE 4	DGR002I/E
DFE100	50-13	200/315*-2900/4600*	6/8/10	G 3/8	SAE 8	DGR002I/E
DFE140	80-21	200/315*-2900/4600*	6/8/10	G 1/2	SAE 10	DGR002I/E
Specifici per applicazioni su caricatori frontali - Designed for front-loaders application						
DFE141	80-21	315-4600	6/8	G 1/2		DGV005IE
DFE110	90-24	200/315*-2900/4600*	12	G 1/2	SAE 10	DGR002I/E
Specifici per applicazioni sterzature - Designed for steering application						
DFE085	25-6.6	210-3050	4	G 3/8	SAE 8	D1WWCG01I/E
Specifico per selezione logica di comando - Designed for joystick pattern selection						
DHV080	10-2,6	100-1450	8	G 1/4	SAE 4	DGV001IE

Note/Notes: (*): Con drenaggio/With drain.

(▲): i deviatori DH possono essere azionati solo in assenza di pressione (max. 25 bar)/DH rotary spool diverter valves can only be operated without pressure (max 25 bar/360 psi).

Direzionali elettrici - *Directional control valves with direct acting solenoid*



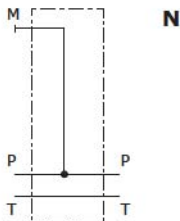
Tipo Type	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)	Numero sezioni Nr. of sections	Filettature standard* Standard threads*		Catalogo di riferimento Reference catalogue
				BSP (ISO 228/1)	UN-UNF (ISO 11926-1)	
SDE030	30-8	315-4600	1÷9	G 3/8	SAE 8	D1WWEB02I/E
SDE060	60-16	315-4600	1÷9	G 3/8	SAE 8	D1WWEB02I/E

Note/Notes (*):

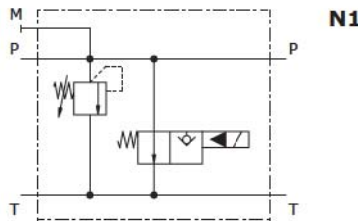
(*): Filettatura metrica su richiesta/Metric thread is available on request.

Molteplicità di fiancate realizzabili su misura per le varie richieste ed applicazioni.
Custom inlet covers are available for different applications.

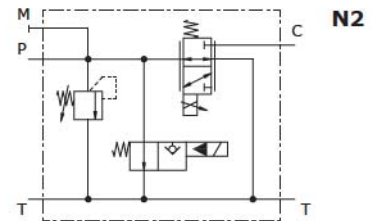
Sezioni di entrata:
Basic inlet sections:



N senza valvole in ingresso
N without valves



N1 con valvola di massima e valvola di messa a scarico a pilotaggio elettrico
N1 Inlet section with main relief valve and solenoid unloader valve



N2 con valvola di massima e regolatore di portata compensato a 3 vie proporzionale a comando elettrico/manuale
N2 inlet section with main relief valve and compensated flow control with 3 way proportional manual/solenoid control

Servocomandi e unità di alimentazione - *Pilot control valves and feeding unit*

Servocomandi idraulici - Hydraulic pilot control valves

Tipo <i>Type</i>	Caratteristiche <i>Features</i>	Nr. utilizzi <i>Nr. of ports</i>	Portata nominale <i>Nominal flow (l/min-Us gpm)</i>	Pressione di alimentazione* <i>Inlet pressure* (bar-psi)</i>	Filettature standard** <i>Standard threads**</i>	
					BSP (ISO 228/1)	UN-UNF (ISO 11926-1)
Con azionamento a leva lineare - Linear operation type						
SVM100	componibile 1÷10 sezioni, P-T laterali <i>sectional 1÷10 sections, side P-T</i>	2÷20	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM101	componibile 1÷10 sezioni <i>sectional 1÷10 sections</i>	2÷20	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM150	aggancio elettromagnetico <i>electromagnetic detent</i>	2	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
Con azionamento a joystick - Joystick operation type						
SVM400	leva joystick - <i>joystick</i>	4	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
PTD SVM400-EMD	aggancio elettromagnetico <i>electromagnetic detent</i>	4	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM430		4	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM431		4	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM432		4	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM450	aggancio elettromagnetico <i>electromagnetic detent</i>	4	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
Con azionamento combinato - Linear and joystick operation type						
SVM600	aggancio elettromagnetico <i>electromagnetic detent</i>	6	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
Con azionamento a pedale - Foot-pedal operation type						
SVM500	pedale basculante - <i>rocker pedal</i>	2	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM510	pedale singolo, P-T laterali <i>single pedal, side P-T</i>	1	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM520	pedale doppio, P-T laterali <i>double pedal, side P-T</i>	2	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
PTD SVM540	doppio pedale basculante, bocche laterali <i>double rocker pedal, side ports</i>	4	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
Con azionamenti vari - Several operation type						
SVM700	a volantino, P-T laterali <i>hand wheel, side P-T</i>	1	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4
SVM710	a spintore, P-T laterali <i>pusher, side P-T</i>	1	da 5 a 20 <i>1.3 to 5.3</i>	da 30 a 100 <i>435 to 1450</i>	G 1/4	SAE 4

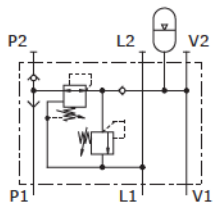
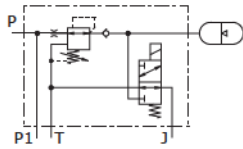
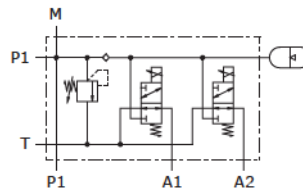
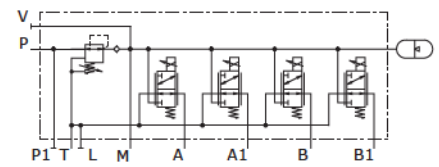
Note/Notes: Dove non diversamente specificato le bocche sono posizionate sul lato inferiore del comando/Ports are positioned on the pilot control valve bottom side if not differently specified. (*): Pmax = 30 bar, con aggancio elettromagnetico/Pmax = 30 bar/435 psi with electromagnetic detent. (**): filettature metriche disponibili a richiesta/Metric thread is available on request.

Catalogo di riferimento: D1WWEF01I - Ref. catalogue: D1WWEF01E

Servocomandi e unità di alimentazione - *Pilot control valves and feeding unit*
Unità di alimentazione - *Feeding unit*

Tipo <i>Type</i>	Nr. max ingressi <i>Nr. of inlets</i>	Pressione ingresso <i>Max. input pressure</i> (bar-psi)	Pressione secondaria <i>Secondary pressure</i> (bar-psi)	Nr. uscite <i>Nr. of outlets</i>	Capacità accumulatore <i>Accumulator capacity</i> (cm ³ -in ³)
AVN020	2	350-5100	30/40/50 435/580/725		35/75/90/150 2.13/4.58/5.49/9.15
FU/1	2	210-3050	30/40/50 435/580/725	1	320/19.53
FU/2	2	350-5100	30/40/50 435/580/725	2	320/19.53
FU/4	2	350-5100	30/40/50 435/580/725	4	320/19.53

Catalogo di riferimento AVN: D1WWEF01I - AVN ref. catalogue: D1WWEF01E


AVN020

**FU-AC(11)-RB08A(30)-
A-NV/1**

**FU-AC(11)-RB08A(35)-
F-NV/2RPT2**

**FU-AC(11)-RB08A(35)-
F-NV/4RPT2**
Servocomandi pneumatici - *Pneumatic pilot control valves*

Tipo <i>Type</i>	Esecuzione <i>Configuration</i>	Nr. utilizzi <i>Nr. of ports</i>	Posizione bocche <i>Ports location</i>		Portata nominale <i>Nominal flow</i> (dm ³ /min-ft ³ /min)	Pressione di alimentazione <i>Inlet pressure</i> (bar-psi)	Filettature standard <i>Standard threads</i> NPTF (SAE J476A)
			P-T	Utilizzi-Users			

 Con azionamento a joystick - *Joystick operation type*

SP01	monoblocco <i>monoblock</i>	4	inferiore <i>bottom</i>	inferiore <i>bottom</i>	350-12.4	10-145	1/8 27
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 Con azionamento a leva lineare - *Linear operation type*

SP10	monoblocco <i>monoblock</i>	2	laterale <i>side</i>	inferiore <i>bottom</i>	350-12.4	10-145	1/8 27
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SP30	componibile 1÷8 sezioni <i>sectional 1÷8 sections</i>	4÷16	laterale <i>side</i>	inferiore <i>bottom</i>	350-12.4	10-145	1/8 27
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Catalogo di riferimento: DFC020I - Ref. catalogue: DFC020E

Comandi meccanici a cavo flessibile - *Flexible cable remote controls*

Tipo <i>Type</i>	Esecuzione <i>Configuration</i>	Nr. di sezioni <i>Nr. of sections</i>	Interasse sezioni <i>Section distance</i> (mm - in)	Catalogo di riferimento <i>Reference catalogue</i>
TCC5	componibile-sectional	1÷7	40-1.57	DFC030I/E
TCC10	componibile-sectional	1÷7	45-1.77	DFC030I/E
SCF031	monoblocco-monoblock	2	/	DFV010IE

Note/Notes: cavo flessibile disponibile/flexible cables are available in different length.

Servocomandi elettronici - *Electronic joysticks*

Caratteristiche Features	MDN	UPD220	AJW	CJW
Analogico - <i>Analogic</i>	•	-	•	-
CAN-bus	-	•	-	•
Segnale di uscita <i>Signal range</i>	25% ÷ 75% V batteria 25% ÷ 75% V battery	-	0.5 ÷ 4.5 V	-
Assi proporzionali <i>Prop. axis</i>	1 ÷ 2	2	2 ÷ 5	2 ÷ 5
Pulsanti <i>Push-buttons</i>	-	3	fino a 9 up to 9	fino a 9 up to 9
Sensore di centro <i>Center tap</i>	•	-	•	-
Gamma impugnature <i>Handles range</i>	-	-	•	•

Centraline elettroniche - *Digital control units*

Caratteristiche Features	CED110	CED252	CED040X	CED100X	CED160X	CED400X
Ingressi analogici <i>analogic inlet</i>	6	10	3	4	3	4
Ingressi digitali <i>digital inlet</i>	2	1	5	4	6	4
Uscite proporzionali <i>proportional output</i>	2	6	-	2	2	8
Uscite ON/OFF <i>ON/OFF outlet</i>	1	4	4	-	6	-
CAN bus	•	•	•	•	•	•
CAN open	-	•	•	•	•	•
SACJ1939	•	•	•	•	•	•
RS232	•	•	-	•	-	•
ISOBUS	-	•	•	-	•	-

Impugnature e accessori - *Handles and accessories*

Impugnature e aste leva - *Handles and handlevers*

Tipo <i>Type</i>	Funzioni ON/OFF * <i>ON/OFF functions *</i>		Funzioni proporzionali * <i>Proportional functions *</i>	Uomo presente "Dead man" switch	Catalogo di riferimento <i>Reference catalogue</i>
	pulsante - <i>push-button</i>	rockers			
Serie 10	1	1			DHR001I/E
Serie J	1	1			DHR001I/E
Serie V	4	2			DHR001I/E
Serie H	8	2	1	•	DHR001I/E
Serie P	8	3	3	•	DHV008IE
Serie S	2		1		DHV009IE

Note/Notes: Le impugnature configurate con dispositivi elettrici sono progettate per essere alimentate esclusivamente in tensione continua; per le caratteristiche dei dispositivi di comando richiedere la documentazione tecnica relativa/handles with electric components accept direct current only. For control devices features ask for related technical catalogue.

(*): Si intende il numero massimo di funzioni/Ref. to max. number of functions.


Sensori - *Sensors*

Tipo <i>Type</i>	Tensione nominale <i>Voltage rating</i>	Indice di protezione <i>Weather protection</i>	Interruttore a sfera <i>Ball switch</i>	Effetto hall <i>Hall effect</i>	LVDT	Uscita digitale <i>Digital output</i>	Uscita lineare <i>Linear output</i>	Portata uscita <i>Output load</i>
8MG3	da 5 a 24 VDC <i>from 5 to 24 VDC</i>	IP67	•			•		10 mA / 4A
SPSD	da 9 a 32 VDC <i>from 9 to 32 VDC</i>	IP67/IP69K		•		•		1 mA
SPSL	da 9 a 32 VDC <i>from 9 to 32 VDC</i>	IP67/IP69K		•			•	1 mA
8LZ3		IP67			•		•	

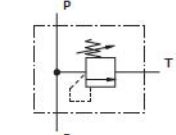
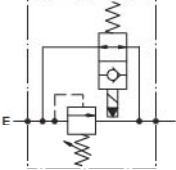
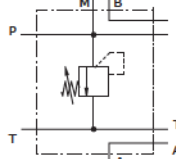
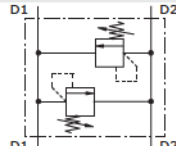
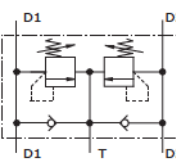
Catalogo di riferimento: D1WWCE01I - Ref. catalogue: D1WWCE01E

Valvole con corpo - Parts in body



Valvole limitatrici di pressione - Pressure relief valves

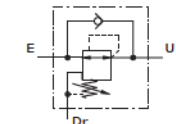
Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VMP/B/L		azionamento diretto - <i>direct acting</i>	100-40
VMPP/B/L		azionamento pilotato - <i>pilot operated</i>	250-66
VMPD/B		azionamento differenziale - <i>differential piston type</i>	180-48
VMP/VE		pilotate con venting <i>electric venting</i>	250-66
PBL../VMP		piastra base con VMP cetop 3 / cetop 5 <i>subplate with VMP cetop 3 / cetop 5</i>	60-16
VAIL		antiurto diretta <i>direct acting, shock-resistant</i>	180-48
VADDL		antiurto differenziale <i>differential piston type, shock-resistant</i>	220-58
VAIL/VA		antiurto, anticavitazione, diretta <i>shock-resistant, anticavitation, direct acting</i>	100-26
VADDL/VA		antiurto, anticavitazione, differenziale <i>shock-resistant, anticavitation, differential</i>	180-48
VAA/RU/DL		antiurto, anticavitazione, regolazione unica <i>shock-resistant, anticavitation, single adjustment</i>	200-53

Catalogo di riferimento: D1WWEM01I - Ref. catalogue: D1WWEM01E

Valvole riduttrici di pressione - Pressure reducing valves

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VRPRL		con funzione di relieving sull'utilizzo e ritorno libero <i>with relieving and reverse free-flow check</i>	50-13
VRPRL/U		con funzione di relieving sull'utilizzo e unidirezionale <i>with relieving</i>	50-13

Catalogo di riferimento: D1WWEN01I - Ref. catalogue: D1WWEN01E

Valvole con corpo - Parts in body
Valvole di sequenza - Sequence valves

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VDSRL		azionamento diretto <i>direct acting</i>	120-32
VDSRL../APP		diretto ad annullamento della pressione primaria <i>back-pressure proof</i>	120-32
VDSDB../		differenziale <i>differential</i>	200-53

Catalogo di riferimento: D1WWE001I - Ref. catalogue: D1WWE001E

Valvole di disinserzione automatica - Unloader valve, built-in check, face mounting

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VDA		in linea <i>single acting</i>	100-26
VDA/FL		flangiate <i>face mounting</i>	50-13

Catalogo di riferimento: D1WWE001I - Ref. catalogue: D1WWE001E

Valvole rigeneratrici di circuito - Regenerative valves

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VRCL/KD		in linea <i>single acting</i>	150-40

Catalogo di riferimento: D1WWE001I - Ref. catalogue: D1WWE001E

Valvole di esclusione alta-bassa pressione - Two pump "hi-low" unloading valves


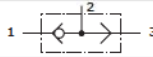
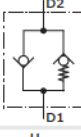

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VEP		in linea <i>single acting</i>	250-66
VEP/FC		flangiate su pompa <i>face mounting on gear pump</i>	150-40
VEP/FL		flangiatura cetop 3-5-7 <i>cetop base 3-5-7</i>	100-26

Catalogo di riferimento: D1WWE001I - Ref. catalogue: D1WWE001E

Valvole con corpo - Parts in body

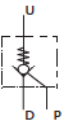
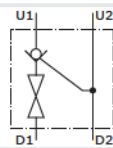
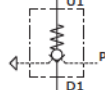
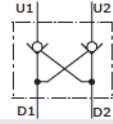
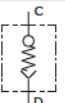
Valvole unidirezionali - Check valves

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)
VUS		a sfera-ball type	350-92	400-5800
VUC		a cono-poppet type	350-92	400-5800
VUS/INC		da incasso cartridge check valves	80-21	350-5100
VT		acciaio-steel	150-40	400-5800
VBD		bidirezionali -double acting	70-18	350-5100
VBD/VP		bidirezionali -double acting	70-18	350-5100
VUI		tenuta a cono - poppet type	160-42	400-5800

Catalogo di riferimento: D1WWEP01I - Ref. catalogue: D1WWEP01E

Valvole di blocco pilotate - Pilot operated check valves

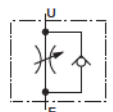
Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VUPLS		single in linea 3 attacchi single acting 3 ports	150-40
VBPSL-VBPSL/T-VBPSL/SO		single in linea - single acting	100-26
VBPSF		single in linea flangiate single acting, face mounting	100-26
VBPSL/R		single con rubinetto single acting with shut-off valves	50-13
VBPSL/PS/..		single insensibili alla contropressione external pilot operated type	50-13
VBPDL-VBPDL/T-VBPDL/SO		doppie in linea-double acting	100-26
VBPDF		doppie flangiate double acting, face mounting	100-26
VB/M - VB/F		paracadute con colonnetta M-F o F-F hose burst valve with M-F or F-F housing	150-40

Catalogo di riferimento: D1WWEP01I - Ref. catalogue: D1WWEP01E

Valvole regolatrici di portata non compensate - Needle valves

Pressione massima/Max. pressure: 450 bar/6500 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VSRU		ritenuta a sfera-ball type	150-40
VSRU/C		ritenuta a cono-poppet type	250-66
VSRB		bidirezionale-double acting	250-66

Catalogo di riferimento: D1WWET01I - Ref. catalogue: D1WWET01E

Valvole con corpo - Parts in body

Valvole regolatrici di portata compensate - Flow control pressure compensated valves

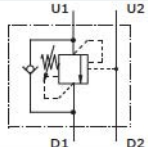
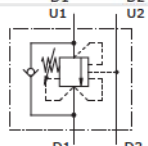
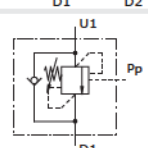
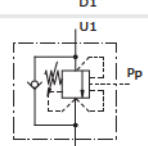
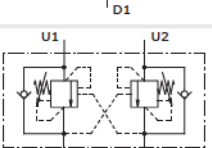
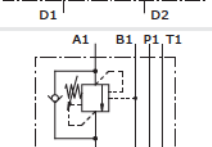
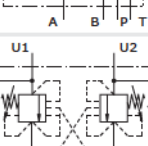
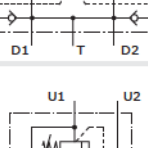
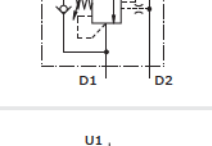
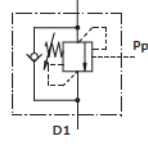
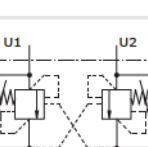
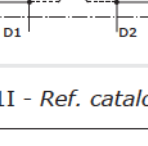

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
VPR/2/RL VPR/2/U		a 2 vie compensate 2 ways, variable constant flow	150-40
VPF/3/EP		a 3 vie con eccedenza in pressione con portata in "c" fissa 3 ways, exceeding flow to pressure with constant flow in "c"	150-40
VPF/3/EP...+VMP		a 3 vie con eccedenza in pressione con VMP 3 ways, exceeding flow to pressure with VMP	150-40
VPR/3/ET		a 3 vie-3 ways	350-92
VPR/3/ET/RL		a 3 vie con ritorno libero 3 ways with reverse free - flow check	350-92
VPR/3/ET/VMP		a 3 vie con VMP 3 ways with VMP	150-40
VPR/3/ET/RL/ VMP		a 3 vie con ritorno libero 3 ways with reverse free - flow check	150-40
VPR/3/EP		a 3 vie con eccedenza in pressione 3 ways, exceeding flow to pressure	450-118
VPR/3/ET.../ VMP+VE		a 3 vie con venting 3 ways, electric venting	240-63
VPR/3/EP... VMP+VE		a 3 vie con eccedenza in pressione con venting 3 ways, exceeding flow to pressure electric venting	450-118
VPR/3/EP... VMP+VE/LPD		a 3 vie con eccedenza in pressione con venting 3 ways, exceeding flow to pressure electric venting	450-118
VDR/F-VDR/M		regolatrici di discesa colonnetta M-F o F-F for descent control M-F or F-F	150-40
VDFR		divisori di flusso flow divider - combiners	150-40
VDR/CO VDR/CO/M VDR/CO/F		taratura fissa fixed setting	13-3.4

Catalogo di riferimento: D1WWEU01I - Ref. catalogue: D1WWEU01E

Valvole con corpo - Parts in body

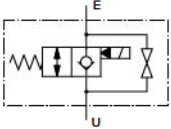
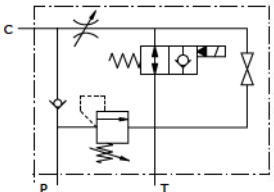
Valvole di controllo movimento - Counterbalance (overcenter) valves

Tipo Type	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)	Press. massima Max. pressure (bar-psi)
VOSL... VOSL/SC...		single in linea single acting	fino a 180 up to 48	350-5100
VOSL/CC... VOSL/SC/CC...		centro chiuso closed center	fino a 180 up to 48	350-5100
VOSLP... VOSLP/SC...		pilotaggio esterno external pilot	fino a 180 up to 48	350-5100
VOSLP/CC... VOSLP/SC/CC...		pilotaggio esterno external pilot	fino a 180 up to 48	350-5100
VODL... VODL/SC...		doppie in linea double acting	fino a 180 up to 48	350-5100
VODL/CC VODL/SC/CC		doppie in linea double acting	180-48	350-5100
VOSL/ML		modulari cetop 3-5 sandwich mounting cetop 3-5	70-18	350-5100
VODL/ML		modulari cetop 3-5 sandwich mounting cetop 3-5	70-18	350-5100
VABAL VABAL/SF		anticavitazione anticavitation	180-48	350-5100
VOSL/N1116 VOSL/N1516		load sensitive	fino a 150 up to 40	350-5100
VOSL/R1116		relief compensated	fino a 60 up to 16	350-5100
VOSL/V1116 VOSL/V1516		vented	fino a 150 up to 40	350-5100
VOSLP/N1116		load sensitive con pilotaggio esterno load sensitive with external pilot	fino a 60 up to 16	350-5100
VOSLP/R1116		relief compensated con pilotaggio esterno relief compensated with external pilot	fino a 60 up to 16	350-5100
VODL/N1116 VODL/N1516/CS		load sensitive	fino a 150 up to 40	350-5100
VODL/R1116		relief compensated	fino a 60 up to 16	350-5100
VODL/V1116/CS VODL/V1516/CS		vented	fino a 150 up to 40	350-5100

Valvole con corpo - Parts in body

Valvole direzionali a solenoide - Directional solenoid valves

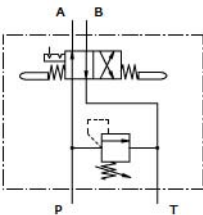
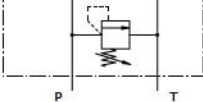
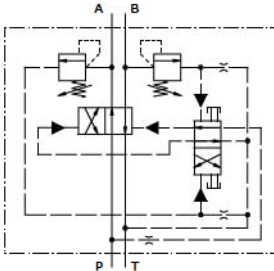
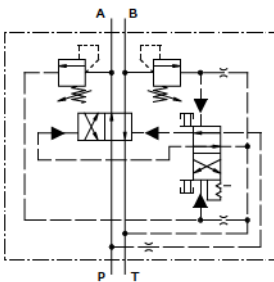
Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo <i>Type</i>	Schema idraulico <i>Hydraulic circuit</i>	Caratteristiche <i>Features</i>	Portata nominale <i>Nominal flow</i> (l/min-US gpm)
VE/B		con emergenza <i>with emergency</i>	160-42
VE/B/VMP/VUI/SR		per controllo cilindri a semplice effetto <i>for single acting cylinder</i>	150-40

Catalogo di riferimento: D1WWES01I - Ref. catalogue: D1WWES01E

Invertitori automatici - Automatic reversing valves

Pressione massima/Max. pressure: 210 bar/3050 psi

Tipo <i>Type</i>	Schema idraulico <i>Hydraulic circuit</i>	Caratteristiche <i>Features</i>	Portata nominale <i>Nominal flow</i> (l/min-US gpm)
SD4/IAM		meccanico in linea <i>mechanical control</i>	35-9.2
SD11/IAM		meccanico in linea <i>mechanical control</i>	65-17
VIA/AP/....		idraulico flangiato cetop 3 - 5 <i>hydraulic face mounting cetop 3 - 5</i>	60-16
VIA/AP CMEB		idraulico e meccanico in linea <i>mechanical and hydraulic control in line</i>	60-16

Catalogo di riferimento: D1WWE001I - Ref. catalogue: D1WWE001E

Cartucce cavità SAE - SAE cartridge valves



Valvole limitatrici di pressione - Pressure relief valves

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
MC	8-10-12		azionamento diretto - <i>direct acting</i>	100-26
MG	10-12		azionamento differenziale - <i>differential</i>	100-26
MC..Y	8		proporzionale (NA) - <i>proportional (NO)</i>	1-0.3
MC..T	10		proporzionale (NC) - <i>proportional (NC)</i>	3-0.79
MC..X	10		proporzionale (NA) - <i>proportional (NO)</i>	3,5-0.92
MP..A	10-12-16		azionamento pilotato - <i>pilot operated</i>	180-48
MP..Y	16		azionamento pilotato (NA) - <i>pilot operated (NO)</i>	150-40
MP..T	10-12		azionamento pilotato (NC) - <i>pilot operated (NC)</i>	120-31.70
MP..X	10-12		azionamento pilotato (NA) - <i>pilot operated (NO)</i>	120-31.70
MD..M	10-12		valvola diretta smorzata <i>direct valves, damped</i>	100-26

PTD

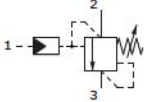
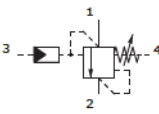
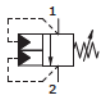
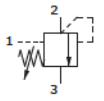
Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

Valvole riduttrici di pressione - Pressure reducing valves


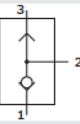
Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)
RB	8-10		diretta senza funzione di relieving <i>direct acting without relieving</i>	30-8	350-5100
RD	8-10		diretta con funzione di relieving <i>direct acting with relieving</i>	30-8	350-5100
RD..W	8		diretta con funzione di relieving (NA) <i>direct acting with relieving (NO)</i>	4-1	350-5100
RD..T	8		diretta con funzione di relieving (NA) <i>direct acting with relieving (NO)</i>	4-1	210-3050
RD..S	8		diretta con funzione di relieving (NA) <i>direct acting with relieving (NO)</i>	12-3	210-3050
RM..A	10-12-16		pilotata senza funzione di relieving <i>pilot operated without relieving</i>	150-40	350-5100
RP..A	10-12-16		pilotata con funzione di relieving <i>pilot operated with relieving</i>	150-40	350-5100
RM..W	10-12-16		pilotata senza funzione di relieving (NA) <i>pilot operated without relieving (NO)</i>	150-40	350-5100
RP..W	10-12-16		pilotata con funzione di relieving (NA) <i>pilot operated with relieving (NO)</i>	150-40	350-5100
RP..X	8		pilotata con funzione di relieving (NA) <i>pilot operated with relieving (NO)</i>	15-4	350-5100

Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

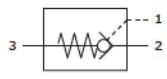
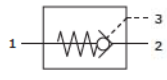
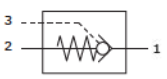
Cartucce cavità SAE - SAE cartridge valves

Valvole di sequenza - Sequence valves					
Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)
SE	8-10		pilotaggio esterno external pilot	20-5	210-3050
SG	12		pilotaggio esterno e drenaggio esterni external pilot and drain	50-13	300-4350
SW	10-12-16		messa a scarico kick down	180-48	350-5100
SP..A	10			50-13	350-5100

Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

Valvole unidirezionali - Check valves					
Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)
UC	8-10-12-16		tenuta a cono poppet type	100-26	350-5100
UT	8-10		valvola di commutazione shuttle valves	20-5	350-5100

Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

Valvole di blocco pilotate - Pilot operated check valves					
Pressione massima/Max. pressure: 350 bar/5100 psi					
Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Rapporti di pilotaggio disponibili Available pilot ratio	Portata nominale Nominal flow (l/min-US gpm)	
BC..A	8-10-12-16		1:3-1:4	100-26	
BC..C	10			60-16	
BC..B	10-12-16		pilotata in chiusura pilot to close	100-26	

Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

Cartucce cavità SAE - SAE cartridge valves

Valvole regolatrici di portata non compensate - Needle valves

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
NB	8-10-12-16		NT disponibili versioni sensibilizzate available with different metering spool	100-26
NU	8-10-12-16		disponibili versioni sensibilizzate available with different metering spool	100-26
NT	8-10-12-16		disponibili versioni sensibilizzate available with different metering spool	100-26

Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

Valvole regolatrici di portata compensate - Flow control pressure compensated valves

Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)
PW-PU	8-10-12-16		disponibili versioni sensibilizzate available with different metering spool	90-24	350-5100
PU..X	8-10-12-16		a 2 vie 2 ways	90-24	315-4600
PP	8-10-12-16		disponibili versioni sensibilizzate available with different metering spool	90-24	350-5100
PP..X	8-10-12-16		con eccedenza in pressione exceeding flow to pressure	90-24	315-4600
PD	10-12-16		divisore di flusso flow divider	150-40	210-3050

Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

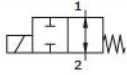
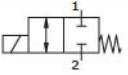
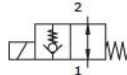
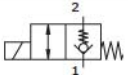
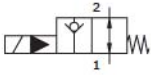
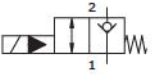
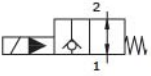
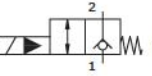
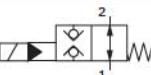
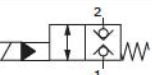
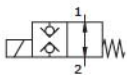
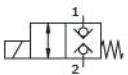
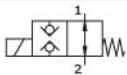
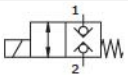
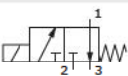
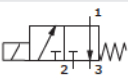
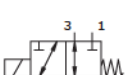
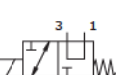
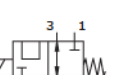
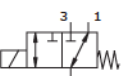
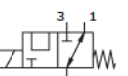
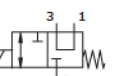
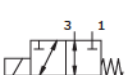
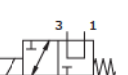
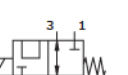
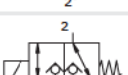
Valvole di controllo movimento - Counterbalance (overcenter) valves

Pressione massima/Max. pressure: 350 bar/5100 psi

Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Caratteristiche Features	Portata nominale Nominal flow (l/min-US gpm)
CA	10-12-16		CA	90-24
CC	10-12-16-20		insensibile alle contropressioni not affected by back-pressure	150-40

Catalogo di riferimento: D1WWEI01I - Ref. catalogue: D1WWEI01E

Cartucce cavità SAE - SAE cartridge valves

Valvole direzionali a solenoide - Directional solenoid valves							
Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit		Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)		
EE	8-10-12		NA		NC	40-11	210-3050
EA	8		NA		NC	1-0.3	350-5100
EC..M	8-10-12-16		NA		NC	150-40	380-5500
EF..M	8-10-12-16		NA		NC	150-40	380-5500
EH..M	8-10-12-16		NA		NC	150-40	380-5500
EW	8-10-12		NA		NC	150-40	210-3050
EW..M	8-10		NA		NC	40-11	350-5100
EJ08F	8					12-3	50-700
EJ08G	8					3-0.9	350-5100
EJ../M	8-10	SPOOL 1	SPOOL 2	SPOOL 3		40-11	210-3050
							
		SPOOL 4	SPOOL 5	SPOOL 6			
							
EJ12A	12	SPOOL 1	SPOOL 2	SPOOL 4		40-11	210-3050
							
EL	8-10					20-5.3	210-3050

Bobine - note generali: sono disponibili bobine con differenti tipologie di connettori elettrici: contattare il Servizio Commerciale o vedere il catalogo di riferimento: D1WWEI01I

Coils - general notes: coils are available with different types of solenoids: please contact our Sales Department or consult the reference catalogue: D1WWEI01E

Cartucce cavità SAE - SAE cartridge valves

Valvole direzionali a solenoide - Directional solenoid valves

Tipo Type	Cavità SAE SAE cavity	Schema idraulico Hydraulic circuit	Portata nominale Nominal flow (l/min-US gpm)	Pressione massima Max. pressure (bar-psi)
ER../M	8-10	<p>SPOOL 1</p> <p>SPOOL 2</p> <p>SPOOL 3</p>	40-11	210-3050
		<p>SPOOL 4</p> <p>SPOOL 5</p> <p>SPOOL 6</p>		
		<p>SPOOL 7</p> <p>SPOOL 8</p>		
ER12A	12	<p>SPOOL 1</p> <p>SPOOL 2</p> <p>SPOOL 3</p>	40-11	210-3050
		<p>SPOOL 4</p> <p>SPOOL 5</p> <p>SPOOL 6</p>		
		<p>SPOOL 7</p> <p>SPOOL 8</p>		
ET../M	8-10	<p>SPOOL 1</p> <p>SPOOL 2</p>	40-11	210-3050
		<p>SPOOL 3</p> <p>SPOOL 4</p>		
		<p>SPOOL 1</p> <p>SPOOL 2</p>		
ET12A	12	<p>SPOOL 1</p> <p>SPOOL 2</p>	40-11	210-3050
		<p>SPOOL 3</p> <p>SPOOL 4</p>		
		<p>SPOOL 1</p> <p>SPOOL 2</p>		

Bobine - note generali: sono disponibili bobine con differenti tipologie di connettori elettrici: contattare il Servizio Commerciale o vedere il catalogo di riferimento: D1WWEI01I

Coils - general notes: coils are available with different types of solenoids: please contact our Sales Department or consult the reference catalogue: D1WWEI01E

Blocchi integrati (HICs) - Hydraulic integrated circuits



L'utilizzo dei circuiti idraulici integrati chiamati HICs (hydraulic integrated circuits) offre sostanziali vantaggi sia nel settore mobile che industriale.

Per questo Walvoil studia e realizza blocchi/manifold speciali per le diverse applicazioni e in base alle necessità del cliente. In particolare questi manifold speciali possono richiedere flangiature di valvole direzionali e filtri oltre che essere loro stessi flangiabili a pompe, motori e trasmissioni.

The usage of integrated hydraulic circuits HIC (hydraulic integrated circuits) offers important advantages both in the mobile and in the industrial sector.

Walvoil therefore studies and realizes special manifolds for the different applications and as per the customer needs.

These customized manifolds can need flanges of directional valves and filters, besides being face mounting to pumps, motors and transmissions.



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Headquarters, Subsidiaries and Representative Offices

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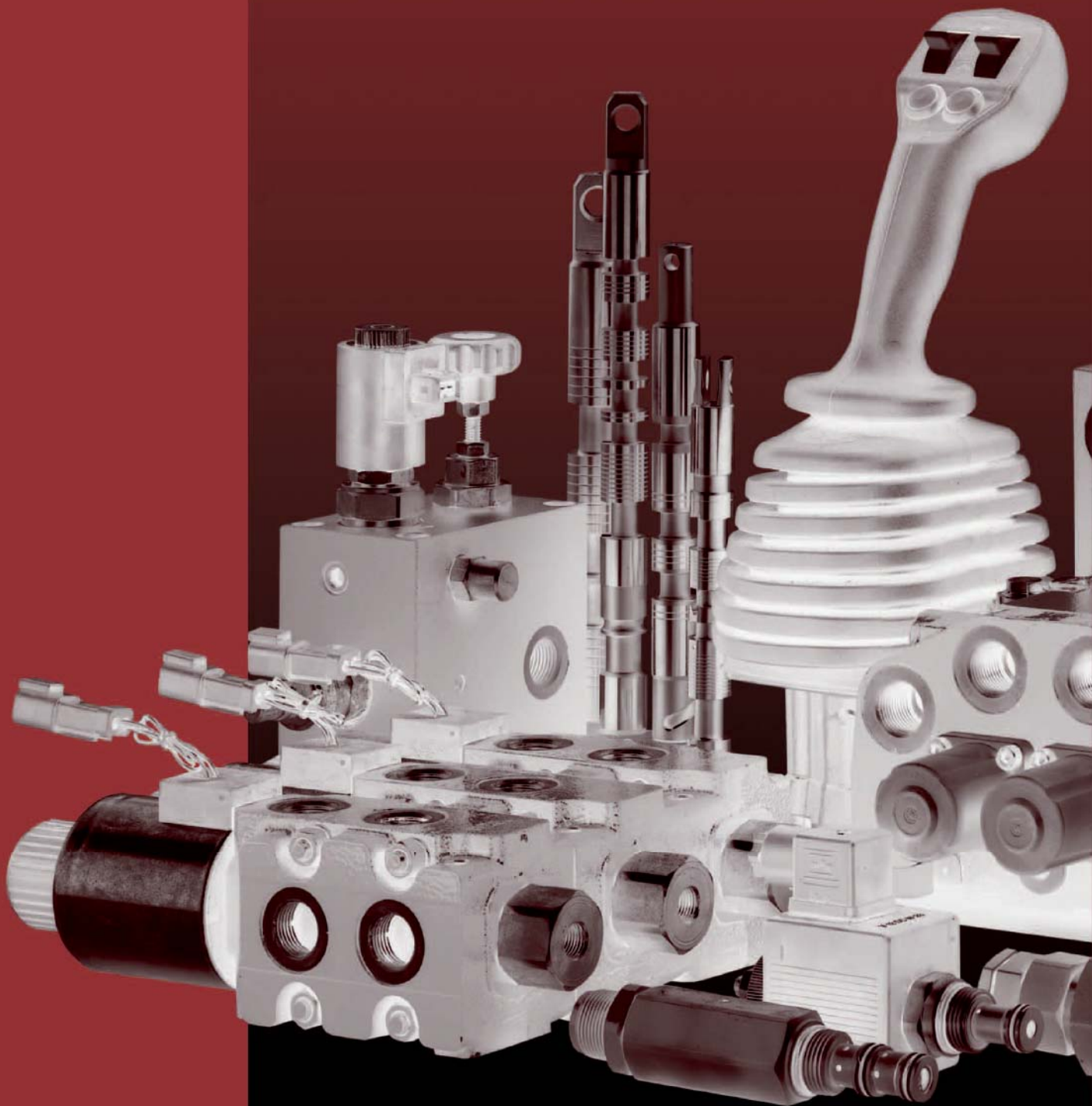
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