



# VALVES

## VALVES

- Complete monobloc and sectional directional control valves
- Open centre, power beyond or closed centre
- Load-sensing and full flow sharing
- Configurable for special applications
- From the simplest to the most sophisticated



# VALVES

## MONOBLOC VALVES

- Simple, compact and heavy-duty design
- Parallel, tandem or series circuit
- Open centre, power beyond or closed centre
- Built-in main pressure relief valve
- Wide selection of spool controls
- Prearranged for service valves
- Special design for front loaders and log-splitters
- Choice of auxiliary service valves
- Available from 1 to 8 sections on specific models



# VALVES

## MONOBLOC VALVES

Type	Nominal flow USgpm (lpm)	Max. pressure psi (bar)	Nb. of sections	Threads (SAE)		Circuit
				PT	AB	
SDM080	6,6 (25)	4600 (315)	1-6	6	6	P,S,SP
SDM081	7,9 (30)	4600 (315)	1-6	6	6	P
SD4	12 (45)	3600 (250)	1	8,10	6,8	P,S,SP
SD5	12 (45)	4600 (315)	1-7	8,10	6,8	P,S,SP
SDM105	12 (45)	4600 (315)	1-2	8,10	6,8	P
SDM110	12 (45)	4600 (315)	1-7	8,10	6,8	P,S,SP
SDM100	18 (70)	4600 (315)	1-8	10	8	P,S,SP
SD11	18 (70)	4600 (315)	1-6	10,12	8,10	P,S,SP
SDM140	21 (80)	4600 (315)	1-6	12	10,12	P,S
SD14	32 (120)	3600 (250)	1	12	12	P
SD18	42 (160)	3600 (250)	1-6	16	12,16	P,S,SP
DLM140	29 (110)	3600 (250)	1-6	12	10	LS



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## MONOBLOC VALVES

Type	Nominal flow USgpm (lpm)	Max. pressure psi (bar)	Nb. of sections	Threads (SAE)		Circuit
				PT	AB	
Front loaders						
SDM102	12 (45)	3600 (250)	2	8	6	P
SDM103	12 (45)	3600 (250)	2	8	6	S
SDM122	21 (80)	3600 (250)	2	12	10	P
SDM143	21 (80)	3600 (250)	2	12	10	P
Front loaders: Load-sensing configuration						
DLM122	21 (80)	3600 (250)	2	12	10	LS
DLM142	21 (80)	3600 (250)	2	12	10	LS



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Type	Nominal flow USgpm (lpm)	Max. pressure psi (bar)	Nb. of sections	Threads		Circuit
				PT	AB	
Log-splitters						
SDC120	12 (45)	3625 (250)	1	SAE 8	SAE 8	P
SDC200E	20 (76)	3500 (240)	1	NPT 3/4	NPT 1/2	P
SDC200S	25 (95)	3500 (240)	1	SAE 12	SAE 8 or 12	P
				NPT 3/4	NPT 1/2 or 3/4	



# VALVES

## SECTIONAL VALVES

- Simple, compact and heavy-duty design
- Parallel, tandem, or series circuit
- Open centre, power beyond or closed centre
- Load check valve on each section
- Available from 1 to 12 sections
- Intermediate sections for several types of circuits
- Choice of anti-shock + anti-cavitation valves
- Wide selection of spool controls
- Complete electrical controls with internal pilot and drain

Type	Nominal flow USgpm (lpm)	Max. pressure psi (bar)	Nb. of sections	Threads		Circuit
				PT	AB	
SD6	12 (45)	4600 (315)	1-12	8	6,8	P,S,SP
SDS100	16 (60)	4600 (315)	1-12	10	8	P,S,SP
SD8	24 (90)	4600 (315)	1-14	10,12	8,10	P,S,SP
SDS140	24 (90)	4600 (315)	1-12	12	8	P
SDS150	24 (90)	4600 (315)	1-12	12	10	P,S,SP
SDS180	42 (160)	4600 (315)	1-12	16	12,16	P,S,SP
SD25	63 (240)	4600 (315)	1-12	20	16,20	P,S,SP
SDS400	105 (400)	4600 (315)	1-10	24	20	P



Type	Nominal flow USgpm (lpm)	Max. pressure psi (bar)	Nb. of sections	Threads		Circuit
				PT	AB	
Load-sensing configuration						
DLS7	16 (60)	4600 (315)	1-10	8	6,8	LS
DLS8	26 (100)	4600 (315)	1-10	10	8,10	LS
DLS180	42 (160)	4600 (315)	1-10	16	12,16	LS



# VALVES

## PROPORTIONAL LOAD-SENSING VALVES

- Pre-compensation and flow sharing
- For fixed displacement pumps (LSA) or variable displacement pumps (LSC)
- Flow-calibrated spools
- Available from 1 to 12 sections
- Wide selection of spool controls
- Choice of anti-shock + anti-cavitation valves
- Proportional hydraulic or electronic controls
- Stroke limiters for fine-tuning

Type	Pre-compensated							Circuit
	Nominal flow			Max. pressure psi (bar)	Nb. of sections	Threads (SAE)		
	on inlet USgpm (lpm)	on ports				PT	AB	
		not compensated USgpm (lpm)	compensated USgpm (lpm)					
DPC130	40 (150)	34 (130)	26 (100)	4600 (315)	1-10	12	10	LS
DPC200	69 (260)	63 (240)	53 (200)	6100 (420)	1-10	20	16	LS



Type	Flow sharing				Threads (SAE)		Circuit
	Nominal flow		Max. pressure psi (bar)	Nb. of sections	PT	AB	
	on inlet USgpm (lpm)	on ports USgpm (lpm)					
DPX050	21 (80)	13 (50)	4350 (300)	1-12	8	6	LS
DPX100	32 (120)	24 (90)	4350 (300)	1-12	10	8	LS
DPX160	61 (230)	42 (160)	4350 (300)	1-10	16	12	LS
DPX100HP	32 (120)	24 (90)	6100 (420)	1-12	10	8	LS
DPX160HP	61 (230)	42 (160)	6100 (420)	1-10	16	12	LS
EX38	40 (150)	26 (100)	5075 (350)	1-10	12	10	LS
EX46	58 (220)	48 (220)	5075 (350)	1-10	16	12	LS
EX54	79 (300)	66 (250)	5075 (350)	1-8	20	16	LS
EX72	119 (450)	92 (350)	5075 (350)	1-8	1-1/4"-SAE 6000	1" - SAE 6000	LS

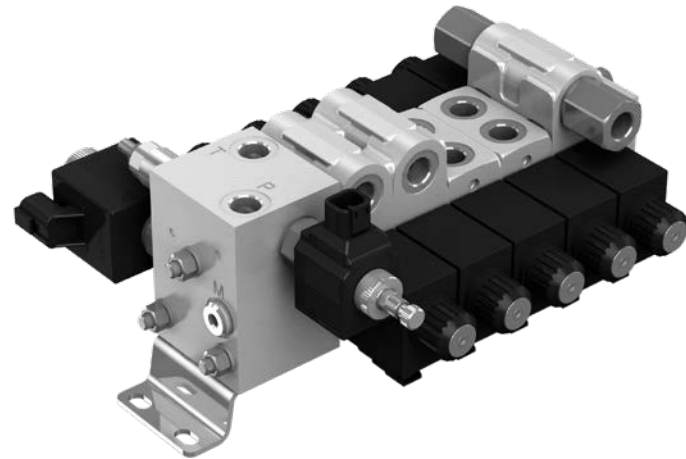


# VALVES

## BANKABLE SOLENOID VALVES

- Simple and flexible solution for all applications
- Capable of high flow in a compact design
- On/Off and proportional controls with emergency hand lever option
- Parallel or series circuit
- Predisposed for flanged service valves
- Inlet with unloader and flow control valves
- Compensated sections available

Type	Nominal flow USgpm (lpm)	Max. pressure psi (bar)	Nb. of sections	Threads (SAE)		Circuit
				PT	AB	
SDE030	8 (30)	3600 (250)	1-10	8	6	P,S
SDE060	16 (60)	4600 (315)	1-10	8	6,8	P,S
SDX060	21 (80)	4350 (300)	1-8	8	6	LS



# VALVES

## SOLENOID OPERATED DIRECTIONAL CONTROL VALVES

- High performance and reliability
- NFPA D03, D05, D05H, D07, D08 and D10 configurations
- Powerful wet armature
- Designed for mobile hydraulic or industrial applications
- Wide range of spool selection
- Soft-shift type, pilot choke or stroke limiters available
- DIN connectors or terminal box as standard
- AC or DC voltage



Solenoid-operated directional control valves					
Type	Description	Size	Activation	Flow USgpm (lpm)	Pressure psi (bar)
DSG-01	Subplate	D03	Solenoid	16 (60)	5000 (345)
DSG-03	Subplate	D05	Solenoid	30 (114)	5000 (345)
DMG-01	Subplate	D03	Lever	16 (60)	4500 (310)
DMG-03	Subplate	D05	Lever	30 (114)	4500 (310)
DCG-01	Subplate	D03	Cam	8 (30)	3000 (210)
DMT-03	Threaded	3/8	Lever	15 (57)	3625 (250)










Solenoid pilot-operated directional control valves					
Type	Description	Size	Activation	Flow USgpm (lpm)	Pressure psi (bar)
DSHG-03	Subplate	D05H	Solenoid	40 (150)	4500 (310)
DSHG-04	Subplate	D07	Solenoid	60 (227)	4500 (310)
DSHG-06	Subplate	D08	Solenoid	80 (303)	4500 (310)
DSHG-10	Subplate	D10	Solenoid	130 (492)	4500 (310)
DHG-03	Subplate	D05H	Hydraulic	40 (150)	4500 (310)
DHG-04	Subplate	D07	Hydraulic	60 (227)	4500 (310)
DHG-06	Subplate	D08	Hydraulic	80 (303)	4500 (310)
DHG-10	Subplate	D10	Hydraulic	130 (492)	4500 (310)
DMT-04	Threaded	1/2	Lever	25 (95)	3625 (250)
DMT-06	Threaded	3/4	Lever	50 (189)	3625 (250)
DMT-10	Threaded	1-1/4	Lever	80 (303)	3625 (250)








# VALVES

## MODULAR VALVES

- Complete integration of the hydraulic circuit
- Full range to meet your system requirements
- Space-saving system
- Mounted on NFPA D03, D05, D07 and D08
- Plastic hand knobs with locknuts

Type	Description	Size	Flow USgpm (lpm)	Pressure psi (bar)	
MBP-01, MBA-01, MBB-01	Relief on P, A or B	D03, D05, D07, D08	13,2 (50)	3600 (250)	
MBP-03, MBA-03, MBB-03			26,5 (100)		
MBP-04, MBA-04, MBB-04			50,2 (190)		
MBP-06, MBA-06, MBB-06			79,3 (300)		
MBW-01	Relief on A and B	D03, D05	13,2 (50)	3600 (250)	
MBW-03			26,5 (100)		
MRP-01, MRA-01, MRB-01	Pressure reducing on P, A or B	D03, D05, D07, D08	13,2 (50)	3600 (250)	
MRP-03, MRA-03, MRB-03			26,5 (100)		
MRP-04, MRA-04, MRB-04			50,2 (190)		
MRP-06, MRA-06, MRB-06			79,3 (300)		
MSP-01	Flow control on P	D03, D05, D08	13,2 (50)	3600 (250)	
MSP-03			26,5 (100)		
MSP-06			79,3 (300)		
MSA-01, MSB-01	Flow control with check on A or B	D03, D05, D07, D08	13,2 (50)	3600 (250)	
MSA-03, MSB-03			26,5 (100)		
MSA-04, MSB-04			50,2 (190)		
MSA-06, MSB-06			79,3 (300)		
MSW-01	Flow control with check on A and B	D03, D05, D07, D08	13,2 (50)	3600 (250)	
MSW-03			26,5 (100)		
MSW-04			50,2 (190)		
MSW-06			79,3 (300)		
MCP-01, MCT-01, MCA-01, MCB-01	Check valve on P, T, A or B	D03, D05, D08	13,2 (50)	3600 (250)	
MCP-03, MCT-03, MCA-03, MCB-03			26,5 (100)		
MCP-06, MCT-06, MCA-06, MCB-06			79,3 (300)		
MSCA-01, MSCB-01	Solenoid check valve on A or B	D03, D05	5,3 (20)	3045 (210)	
MSCA-03, MSCB-03			10,5 (40)		
MSCW-01	Solenoid check valve on A and B	D03, D05	5,3 (20)	3045 (210)	
MSCW-03			10,5 (40)		

Type	Description	Size	Flow USgpm (lpm)	Pressure psi (bar)	
MPA-01, MPB-01	Pilot-operated check valve on A or B	D03, D05, D07, D08	13,2 (50)	3600 (250)	
MPA-03, MPB-03			26,5 (100)		
MPA-04, MPB-04			50,2 (190)		
MPA-06, MPB-06			79,3 (300)		
MPW-01	Pilot-operated check valve on A and B	D03, D05, D07, D08	13,2 (50)	3600 (250)	
MPW-03			26,5 (100)		
MPW-04			50,2 (190)		
MPW-06			79,3 (300)		
MHP-01	Sequence valve on P	D03, D05, D08	13,2 (50)	3600 (250)	
MHP-03			26,5 (100)		
MHP-06			79,3 (300)		
MDC	Blank cover plate	D03, D05	-	-	
DNM-P, A, B (040K)	Pressure switch on P, A or B	D03, D05	-	87-580 (6-40)	
DNM-P, A, B (100K)			-	220-1450 (15-100)	
DNM-P, A, B (250K)			-	580-3600 (40-250)	
DNM-W (040K)	Pressure switch on A and B	D03, D05	-	87-580 (6-40)	
DNM-W (100K)			-	220-1450 (15-100)	
DNM-W (250K)			-	580-3600 (40-250)	
VT-18	Shuttle valve	D03, D05	5,3 (20)	3045 (210)	

# VALVES

## SUBPLATES AND BAR MANIFOLDS

- Offered in aluminum, cast iron or steel
- NFPA D03, D05, D07, D08 and D10 configurations
- Parallel or series circuit of up to 10 stations
- Bottom or side ported subplates
- Incorporated relief valve, high/low circuit or unloader available

Series	Type	Size	Sections	Pressure psi (bar)	Porting
M01	Steel subplate	D03	1	5100 (350)	Bottom and side, NPT and SAE
M03		D05			
M04		D07			
M06	Cast iron subplate	D08	1	4565 (315)	Bottom and side, NPT and SAE
M10		D10			
PBLD03	Aluminum subplate with optional relief	D03	1	3045 (210)	Side, SAE
PBLD05		D05			
PBLD07		D07			
PBLD08		D08			
PBLD03/VEP	Aluminum subplate with hi-low	D03	1	3045 (210)	Side, SAE
PBLD05/VEP		D05			
PBLD07/VEP		D07			
PBLD08/VEP		D08			
PBLD03P	Aluminum manifold with optional relief, parallel circuit	D03	2-10	5100 (350)	Side, SAE
PBLD05P		D05	2-6		
PBLD03S	Aluminum manifold with optional relief, series circuit	D03	2-4	3045 (210)	Side, SAE
PBLD05S		D05	2-3		
MSSD03	Steel subplate with optional relief	D03	1	5100 (350)	Side, SAE
MSSD05		D05			
MMSD03	Steel manifold with optional relief and unloader	D03	2-8	5100 (350)	Side, SAE
MMSD05		D05			

# VALVES

## PILOT CONTROL VALVES

- Hydraulic control joysticks, single or double axis
- Cable remote control, single or double axis
- Arranged for coupling with different types of handles
- Pedal hydraulic pilot valves
- For fine proportional control



Hydraulic pilot control valves					
Type	Features	Nb. of ports	Nominal flow USgpm (lpm)	Inlet pressure psi (bar)	Threads (SAE)
<b>Single axis</b>					
SVM100	1-10 sections, side P-T	2-20	1,3 to 5,3 (5 to 20)	435 to 1450*	4
SVM101	1-10 sections	2-20	1,3 to 5,3 (5 to 20)	(30 to 100)	4
<b>Double axis</b>					
SVM400	Joystick	4	1,3 to 5,3 (5 to 20)	435 to 1450*	4
SVM400-EMD	Electromagnetic detent	4	1,3 to 5,3 (5 to 20)	(30 to 100)	4
<b>Single and Double axis</b>					
SVM600	Electromagnetic detent	6	1,3 to 5,3 (5 to 20)	435 to 1450*	4
<b>Foot-pedal</b>					
SVM500	Rocker pedal	2	1,3 to 5,3 (5 to 20)	435 to 1450* (30 to 100)	4
SVM510	Single pedal, side P-T	1	1,3 to 5,3 (5 to 20)		4
SVM520	Double pedal, side P-T	2	1,3 to 5,3 (5 to 20)		4
SVM540	Double rocker pedal, side ports	4	1,3 to 5,3 (5 to 20)		4
<b>Manual</b>					
SVM700	Hand wheel, side P-T	1	1,3 to 5,3 (5 to 20)	435 to 1450*	4
SVM710	Pusher, side P-T	1	1,3 to 5,3 (5 to 20)	(30 to 100)	4

\*: Pmax = 30 bar/435 psi with electromagnetic detent

Flexible cable remote controls			
Type	Configuration	Nb. of sections	Section distance in (mm)
TCC5	Sectional, single axis	1-10	1,57 (40)
TCC10	Sectional, single axis	1-10	1,77 (45)
SCF031	Double axis	2	-

Note: Flexible cables are available in different lengths.



# VALVES

## PNEUMATIC CONTROL VALVES

- Single or double axis
- Stackable with up to 8 sections
- Easily fitted in consoles
- Different handles available

Type	Configuration	Nr. of ports	Port location		Nominal flow ft <sup>3</sup> /min (dm <sup>3</sup> /min)	Inlet pressure psi (bar)	Threads (NPT)
			P-T	Users			
Double axis							
SP01	Monobloc	4	bottom	bottom	12,4 (350)	145 (10)	1/8-27
Single axis							
SP30	Sectional, large size	2-16	side	bottom	12,4 (350)	145 (10)	1/8-27
SPM100CX	Sectional, medium size	2-16	side	bottom	11,7 (312)	142 (9.8)	1/8-27
SPM400CX	Sectional, medium size	2	side	bottom	11,7 (312)	142 (9.8)	1/8-27



# VALVES

## HYDRAULIC VALVES

- Relief, reducing and sequence
- Unloader and hi-low
- Check and pilot-operated check
- Needle and flow control
- Counterbalance
- Solenoid and automatic reversing
- Aluminum or steel body

Pressure relief			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VMP/B/L	Direct-acting	26 (100)	5100 (350)
VMPP/B/L	Pilot-operated	32 (120)	5100 (350)
VMP/VE	Electric venting	66 (250)	5100 (350)
VAIL - VAIL/T	Direct-acting, shock-resistant	48 (180)	5100 (350)
VADDL	Differential, piston-type, shock-resistant	48 (180)	5100 (350)
VAIL/VA	Shock-resistant, anti-cavitation, direct-acting	26 (80)	5100 (350)
VADDL/VA	Shock-resistant, anti-cavitation, differential	48 (180)	5100 (350)
DT-01	Direct-acting, NPT 1/8" , NPT 3/8"	4,2 (16)	3600 (250)
DT-02	Direct-acting, NPT 1/4"	4,2 (16)	3600 (250)
BT-03	Pilot-operated, NPT 3/8"	12 (45)	3600 (250)
BT-04	Pilot-operated, NPT 1/2"	25 (95)	3600 (250)
BT-06	Pilot-operated, NPT 3/4"	40 (150)	3600 (250)
BT-10	Pilot-operated, NPT 1-1/4"	80 (303)	3600 (250)
VMD5J	Direct-acting, SAE 8	10 (40)	5100 (350)
VMD10Y	Direct-acting, SAE 10	26 (100)	5100 (350)
VMD20Y	Direct-acting, SAE 12	42 (160)	5100 (350)
VMD25Y	Direct-acting, SAE 16	53 (200)	5100 (350)
VMP150	Pilot-operated, SAE 10	24 (90)	5100 (350)
VMP20	Pilot-operated, SAE 12	53 (200)	5100 (350)
VMP25	Pilot-operated, SAE 16	66 (250)	5100 (350)



# VALVES

## HYDRAULIC VALVES

Pressure reducing			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VRPRL	With relieving and reverse free-flow check	13 (50)	5100 (350)
VRPRL/U	With relieving	13 (50)	5100 (350)
RCT-03	Reducing, NPT 3/8"	12 (45)	3600 (250)
RCT-06	Reducing, NPT 3/4"	32 (121)	3600 (250)
RCT-10	Reducing, NPT 1-1/4"	65 (246)	3600 (250)



# VALVES

## HYDRAULIC VALVES

Sequence			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VDS/B..	Differential	53 (200)	5100 (350)



Unloader			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VDA	Single-acting	26 (100)	5100 (350)



Two pump "hi-low" unloading			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VEP	Single-acting	66 (250)	5100 (350)



Check			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VUS	Ball type	40 (150)	5800 (400)
VUC	Poppet type	92 (350)	5800 (400)
VUS/INC	Cartridge type	21 (80)	5100 (350)
VT	Shuttle	40 (150)	5800 (400)
VBD	Double-acting	18 (70)	5100 (350)
CVT	Poppet type	100 (379)	3600 (250)



# VALVES

## HYDRAULIC VALVES

Pilot-operated check			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VUPSL	Single-acting, in-line	40 (150)	5100 (350)
VBPSL-VBPSL/T	Single-acting	26 (100)	3050 (210)
VBPSL/R	Single-acting with shut-off valves	13 (50)	3050 (210)
VBPDL-VBPDL/T	Double-acting	26 (100)	3050 (210)
VBPDF	Double-acting, face-mounting	26 (100)	3050 (210)



Needle			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VSRU	Ball type	40 (150)	6500 (450)
VSRU/C	Poppet type	66 (250)	5800 (400)
VRFB	Bidirectional	29 (110)	5100 (350)
FT	Throttle	21 (80)	3600 (250)
FTC	Throttle with free flow	21 (80)	3600 (250)
UT	Throttle	25 (95)	5000 (345)
GCT	Needle	80 (303)	4500 (310)
SRCT	One-way restrictor	60 (227)	3600 (250)



# VALVES

## HYDRAULIC VALVES

Pressure-compensated flow control			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VPR/2/RL/EX	2-way	9.2 (35)	4350 (300)
VPR/3/ET	3-way	92 (350)	5100 (350)
VPR/3/ET/RL	3-way with reverse free flow	40 (150)	5100 (350)
VPR/3/ET/VMP	3-way with VMP	92 (350)	5100 (350)
VPR/3/ET/RL/VMP	3-way with reverse free flow	40 (150)	5100 (350)
VPR/3/EP	3-way, exceeding flow to pressure	118 (450)	5100 (350)
VPR/3/ET...+VE	3-way, electric venting	63 (240)	5100 (350)
VPR/3/EP...+VE	3-way, exceeding flow to pressure, electric venting	118 (450)	5100 (350)
VPR/3/...+VE/LPD	3-way, exceeding flow to pressure, electric venting	118 (450)	5100 (350)
VFCR	3-way, cast iron, built-in relief	30 (114)	3000 (210)
VDFR	Flow divider/combiner	66 (250)	5100 (350)



# VALVES

## HYDRAULIC VALVES

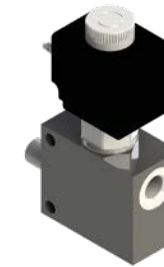
Counterbalance (overcentre)			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VOSL, VOSL/SC	Single-acting	48 (180)	5100 (350)
VODL, VODL/SC	Double-acting	48 (180)	5100 (350)
VOSL/N1116-N1516	Load sensitive	40 (150)	5100 (350)
VOSL/R1116	Relief-compensated	16 (60)	5100 (350)
VOSL/V1116-V1516	Vented	40 (150)	5100 (350)
VOSLP/N1116	Load sensitive with external pilot	16 (60)	5100 (350)
VOSLP/R1116	Relief-compensated with external pilot	16 (60)	5100 (350)
VODL/N1116-N1516	Load sensitive	40 (150)	5100 (350)
VODL/R1116	Relief-compensated	16 (60)	5100 (350)
VODL/V1116-V1516	Vented	40 (150)	5800 (400)



# VALVES

## HYDRAULIC VALVES

Directional solenoid			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
VE/B	2-way with emergency	42 (160)	5100 (350)
VE/B/VMP/VUI/SR	Block for single-acting cylinder	40 (150)	5100 (350)



Automatic reversing			
Type	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
SD4/IAM	Mechanical control	9,2 (35)	3050 (210)
SD11/IAM	Mechanical control	17 (65)	3050 (210)
VIA/AP/6-38	Hydraulic face-mounting D03	8 (30)	3050 (210)
VIA/AP/10-12	Hydraulic face-mounting D05	16 (60)	3050 (210)
VIA/AP CMEB	Mechanical and hydraulic control in-line	16 (60)	3050 (210)



# VALVES

## SAE CARTRIDGE VALVES

- Available in cavity 08, 09, 10, 12 and 16
- 2-, 3- or 4-way
- Relief, reducing and sequence
- Check and pilot-operated
- Counterbalance
- Directional solenoid control

Pressure relief				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
MC..A	8-10-12	Direct-acting	26 (100)	5100 (350)
MC..M	10	Direct-acting, guided poppet	18 (70)	3770 (260)
MC..R	8-9-10	Direct-acting, guided poppet	13 (50)	5100 (350)
MC..Y	8	Proportional (NO)	0,3 (1)	5100 (350)
MC..T	10	Proportional (NC)	0,9 (3)	5100 (350)
MC..X	10	Proportional (NC)	0,9 (3)	5100 (350)
MG..A	10-12	Differential	26 (100)	5100 (350)
MP..A	10-12-16	Pilot-operated	48 (180)	5100 (350)
MP..Y	16	Pilot-operated (NO)	40 (150)	5100 (350)
MP..T	10-12	Pilot-operated (NC)	32 (120)	5100 (350)
MP..X	10-12	Pilot-operated (NO)	32 (120)	5100 (350)
MD..M	10-12	Direct valves, damped	26 (100)	5100 (350)



# VALVES

## SAE CARTRIDGE VALVES

Pressure reducing				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
RB..A	8-10	Direct-acting without relieving	8 (30)	5100 (350)
RD..A	8-10	Direct-acting with relieving	8 (30)	5100 (350)
RD..W	8	Direct-acting with relieving (NO)	1 (4)	5100 (350)
RD..T	8	Direct-acting with relieving (NO)	1 (4)	650 (45)
RD..S	8	Direct-acting with relieving (NO)	3 (12)	510 (35)
RM..A	10-12-16	Pilot-operated without relieving	40 (150)	5100 (350)
RP..A	10-12-16	Pilot-operated with relieving	40 (150)	5100 (350)
RM..W	10-12-16	Pilot-operated without relieving (NO)	40 (150)	5100 (350)
RP..W	10-12-16	Pilot-operated with relieving (NC)	40 (150)	5100 (350)
RP..X	8	Pilot-operated with relieving (NO)	4 (15)	5100 (350)



Sequence				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
SE..A	8-10	External pilot	5 (20)	3050 (210)
SG..A	12	External pilot and drain	13 (50)	4350 (300)
SW..A	10-12-16	Kick-down	48 (180)	5100 (350)
SP..A	10	Not affected by back pressure	13 (50)	5100 (350)



# VALVES

## SAE CARTRIDGE VALVES

Check				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
UC..A	8-10-12-16	Poppet type	26 (100)	5100 (350)
UT..A	8-10	Shuttle	5 (20)	5100 (350)



Pilot-operated check				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
BC..A	8-10-12-16	1:3 - 1:4	26 (100)	5100 (350)
BC..C	10	1:3 - 1:4	16 (60)	5100 (350)
BC..B	10-12-16	1:3 - 1:4	26 (100)	5100 (350)



Needle				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
NB..A	8-10-12-16	-	26 (100)	5100 (350)
NU..A	8-10-12-16	With free flow	26 (100)	5100 (350)
NT..A	8-10-12-16	With free flow	26 (100)	5100 (350)



# VALVES

## SAE CARTRIDGE VALVES

Pressure-compensated flow control				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
PU..A	8-10-12-16	2-way, manual	24 (90)	5100 (350)
PU..X	8-10-12-16	2-way, electro-proportional	24 (90)	4600 (315)
PW..A	8-10-12-16	2-way, manual with free flow	24 (90)	5100 (350)
PP..A	8-10-12-16	3-way, manual	24 (90)	5100 (350)
PP..X	8-10-12-16	3-way, electro-proportional	24 (90)	4600 (315)
PD..B	10-12-16	4-way, flow divider/combiner	40 (150)	3050 (210)



Counterbalance (overcentre)				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
CA..A	10-12-16	Load sensitive	24 (90)	5100 (350)
CC..A	10-12-16-20	Not affected by back pressure	40 (150)	5100 (350)



# VALVES

## SAE CARTRIDGE VALVES

Directional solenoid				
Type	SAE cavity	Features	Nominal flow USgpm (lpm)	Max. pressure psi (bar)
EE..A	8-10-12	2-way, direct-acting, NO or NC	11 (40)	3050 (210)
EA..A	8	2-way, direct-acting, NO or NC	0,3 (1)	5100 (350)
EC..M	8-10-12-16	2-way, pilot-operated, NO or NC	40 (150)	5500 (380)
EF..M	8-10-12-16	2-way, pilot-operated, NO or NC	40 (150)	5500 (380)
EW..	8-10-12	2-way, direct-acting, 2 check, NO or NC	40 (150)	3050 (210)
EJ..F	8	3-way, direct-acting for low pressure	3 (12)	700 (50)
EJ..G	8	3-way, direct-acting for high pressure	0,3 (1)	5100 (350)
EJ..M	8-10	3-way, direct-acting	11 (40)	3050 (210)
EJ..A	12	3-way, direct-acting	11 (40)	3050 (210)
EL..C	8-10	3-way, direct-acting with check	5,3 (20)	3050 (210)
ER..M	8-10	4-way, direct-acting	11 (40)	3050 (210)
ER..A	12	4-way, direct-acting	11 (40)	3050 (210)
ET..M	8-10	4-way, direct-acting	11 (40)	3050 (210)
ET..A	12	4-way, direct-acting	11 (40)	3050 (210)



# VALVES

## DIVERTER VALVES

- Available from 2-way to 12-way
- With mechanical or rotary control
- Electrical On/Off solenoid control
- Hydraulic or pneumatic operation

Type	Nominal flow (static working conditions) USgpm (lpm)	Operating pressure (static working conditions) psi (bar)	Nb. of ways	Threads (SAE)
Mechanical rotary spool control ▲				
DH5	16 (60)	4600 (315)	3/4/6/8	8
DH10	24 (90)	4600 (315)	3/4/6/8	10
DH20	37 (140)	4600 (315)	3/4/6/8	12
DH25	53 (200)	3600 (250)	3/4/6/8	16
DH30	74 (280)	3050 (210)	3/6	24
Mechanical spool control				
DF5	16 (60)	4600 (315)	2/3/6	8
DF10	24 (90)	4600 (315)	2/3/6	10
DF20	37 (140)	4600 (315)	2/3/6	12, 16
DF25	74 (280)	4600 (315)	3	16
Solenoid operated monobloc type				
DFE052	16 (60)	2900/4600* (200/315*)	2/3/6/8	8
DFE102	24 (90)	2900/4600* (200/315*)	3/6	10
DFE20	37 (140)	2900/4600* (200/315*)	3/6	12, 16
Solenoid operated sectional type				
DFE080	6,6 (25)	2900/4600* (200/315*)	6/8/10	4
DFE100	13 (50)	2900/4600* (200/315*)	6/8/10	8
DFE140	21 (80)	2900/4600* (200/315*)	6/8/10	10
Designed for front-end loader applications				
DFE110	24 (90)	2900/4600* (200/315*)	12	10
Designed for steering applications				
DFE085	6,6 (25)	3050 (210)	4	8
Designed for joystick pattern selections				
DHV080	2,6 (10)	1450 (100)	8	4
DFEV080	1,5 (6)	725 (50)	8	4



Notes:(\*): With drain  
 (▲): DH rotary valves can only be operated without pressure (max. 25 bar/360 psi)