

Screw-in Cartridges, Sandwich Bodies, Line-Mounting Bodies

The Size 16 Product Range



**Multi-functional
Compact**

Economical

Pressure: 420 bar

Flow Rate: 350 l/min

An Introduction to the Size 16 Product Range according to ISO 7789

No matter which industrial branch is concerned there is a growing need for higher system pressures and flow rates, lower power losses and a more favourable cost/performance ratio. As a leading manufacturer of high-quality valves and pumps, system solutions and power-packs we have taken this challenge with our new size 16 valve program and fulfilled these requirements to a large degree.

The new size 16 program, based on a modular design, covers a multitude of different valve functions and can be fitted into **one single cavity** according to ISO 7789 with M42 x 2 thread. The high level of functional reliability for which we are well known and the great stability of our individual components have all contributed to the success of our products throughout the world. They have to be successfully implemented in many different applications, like in construction, agricultural and municipal machinery, the multi-faceted field of industrial hydraulics with its particularly stringent safety requirements and equipment for wind power generation.

- One standard cavity according to **ISO 7789-42-06-0-07**
- High power density – maximum flow rate and pressure combined with lowest possible pressure loss
- Compact – resulting in reduced installation space and weight
- Long life-time at maximum performance levels
- High functional stability throughout the entire pressure and flow rate range
- Extensive range – all the important functions available by **one-stop shopping**
- Modular design – flexibility – availability – interesting cost/performance ratio
- Solenoids can be replaced without opening the hydraulic envelope
- Each component 100 % tested with oil
- Galvanised exterior cartridge parts (contains no chrome VI)
- A single set of tools for the entire size 16 range
- An extensive sandwich valve program with mounting patterns according to ISO 4401-07-07/ CETOP 07

One System – One Cavity

Reduce your cost and cycle times

**420 bar
350 l/min**

Proportional
Pressure relief
Pressure reducing

Pilot valves
manual, electrical,
proportional

Standardised
main stage

One single cavity EB according
to ISO 7789-42-06-0-07
Refer to data sheet 400-P-080111-E

2/2 directional solenoid valves

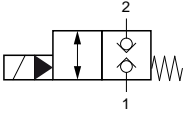
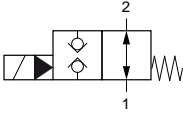
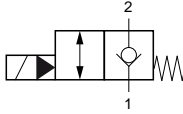
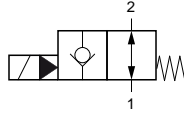
Pressure relief
Pressure reducing
manual & electrical

Logic valves


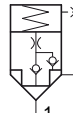

Pressure compensators

Large range of
sandwich valves

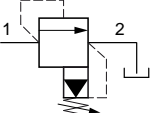
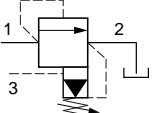
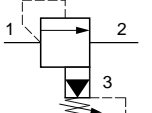
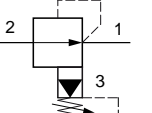
2/2 Directional Solenoid Cartridges

Design	Bidirectional seat-valve shut-off, pilot operated		seat-valve shut-off, pilot operated	
Symbols				
Series	WS22G...	WS22O...	WR22G...	WR22O...
Flow Rate / Pressure	350 l/min / 420 bar	350 l/min / 420 bar	350 l/min / 420 bar	350 l/min / 420 bar
Flow Direction	1 ⇌ 2 / 2 ⇌ 1		1 ⇌ 2 / 2 ⇌ 1	
Pilot Oil	No permanent pilot oil flow		No permanent pilot oil flow	
Data Sheet Reference	400-P-150101-E		400-P-150121-E	

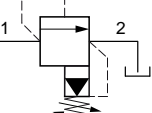
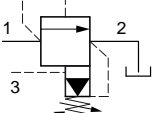
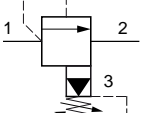
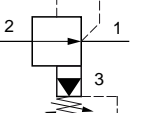
2/2 Directional Logic Cartridges

Design	Active control seat-valve shut-off, direct acting	Passive control seat-valve shut-off, direct acting	Passive control, soft switching seat-valve shut-off, direct acting
Symbols			
Series	WL22SD...	WL22SDL...	WL22SDUR...
Flow Rate / Pressure	350 l/min / 420 bar	350 l/min / 420 bar	350 l/min / 420 bar
Area Ratio	2 : 1	2 : 1	2 : 1
Opening Pressure	0.4 / 2 / 6 / 10 / 13 bar	0.4 / 2 / 6 / 10 / 13 bar	0.4 / 2 / 6 / 10 / 13 bar
Flow Direction	1 ⇌ 2 / 2 ⇌ 1		
Pilot Line 3	Integrated orifice, no pilot oil flow	Integrated orifice, pilot oil flow	Integrated orifice, pilot oil flow
Data Sheet Reference	400-P-160101-E	400-P-160121-E	400-P-160151-E

Manually Operated Pressure Cartridges

Design	Pressure Relief seated pilot	Pressure Relief seated pilot	Pressure Relief seated pilot	Pressure Reducing seated pilot
Pilot Oil / External remote control port	Internal to port 2	Internal to port 2/ Remote control port 3	External pilot drain to port 3	External pilot drain to port 3
Symbols				
Series	DVPB-1...	DVPB-2...	DVPB-3...	DRPB-5...
Flow Rate / Pressure	350 l/min / 420 bar	350 l/min / 420 bar	350 l/min / 420 bar	250 l/min / 420 bar
Data Sheet Reference	400-P-285301-E	400-P-285311-E	400-P-285321-E	400-P-285401-E

Electrically Operated Pressure Cartridges (for 2 electrically adjustable pressures)

Design	Pressure Relief seated pilot	Pressure Relief seated pilot	Pressure Relief seated pilot	Pressure Reducing seated pilot
Pilot Oil / External remote control port	Internal to port 2	Internal to port 2/ Remote control port 3	External pilot drain to port 3	External pilot drain to port 3
Symbols				
Series	WUVPA-1...	WUVPA-2...	WUVPA-3...	WDRVPA-5...
Flow Rate / Pressure	350 l/min / 420 bar	350 l/min / 420 bar	350 l/min / 420 bar	250 l/min / 420 bar
Data Sheet Reference	400-P-295301-E	400-P-295311-E	400-P-295321-E	400-P-295401-E

Pressure Compensator Cartridges

Design	Bypass Pressure Compensator Direct acting, adjustable pressure compensator spring	Bypass Pressure Compensator Pilot operated, fixed pressure compensa- tor spring, with pressure relief function	Inline Pressure Compensator Direct acting, adjustable pressure compensator spring
Symbols			
Series	DWDPA-2B ...	DWVPA / Y / Z-2B ...	DWDPA-5B ...
Flow Rate / Pressure	350 l/min / 420 bar	350 l/min / 420 bar	250 l/min / 420 bar
Compensator Spring	Adjustable 5 ... 13 bar	Fixed 5, 8 or 12 bar optional	Adjustable 8 ... 16 bar
Ext. remote control port 3	With damping orifice	With damping orifice	With damping orifice
Data Sheet Reference	400-P-330701-E	400-P-330711-E	400-P-330801-E

Proportional Pressure Cartridges

Design	Proportional Pressure Relief Seated pilot	Proportional Pressure Reducing Seated pilot
Pilot Oil	External pilot drain to port 3	External pilot drain to port 3
Symbols		
Series	DVPSB-3B ...	DRPSB-5B ...
Flow Rate / Pressure	350 l/min / 350 bar	250 l/min / 350 bar
Data Sheet Reference	400-P-581601-E	400-P-581701-E

Pilot Operated Cartridges

Design	2/2 Directional Cartridges Electrically actuated	Pressure Relief Manually operated	Pressure Relief Electrically actuated	Pressure Relief proportional
Nominal Size	Size 1 or size 3	Size 4	Size 1	Size 1
Symbols				
Series	WSP22G / OLA1 ... WSP22G / ONA3 ...	DDPC-1L ...	WUVA-1LO ...	DVSA-1L ...
Flow Rate / Pressure	5 or 15 l/min / 420 bar	30 l/min / 420 bar	1.5 l/min / 420 bar	1.5 l/min / 350 bar
Data Sheet Reference	400-P-120601-E 400-P-120801-E	400-P-260111-E	400-P-287101-E	400-P-580101-E

Alternative connection types



DIN / EN mating plug



Junior Timer Radial



Kostal



Deutsch DT04-2P



Junior-Timer Axial



Flying leads

Mechanical Operation



Key operation



Hand wheel operation



Sealed with tamper-proof cap

Sandwich Valves 2/2 Directional Solenoid Operated

Design	Bidirectional seat-valve shut-off, electrically operated (ON/OFF), pilot operated	
Series	SWS22G ... / SWS22O ...	
Flow Rate / Pressure	300 l/min / 350 bar	
Version	Normally open or closed	
Functions	Inline function in P	Bypass function in PT / AT / BT
Symbols		
Mounting Pattern	In accordance with ISO 4401-07-07 / Form A16 DIN 24340 / CETOP 07	
Data Sheet Reference	400-P-240101-E	

Sandwich Pressure Relief Valves

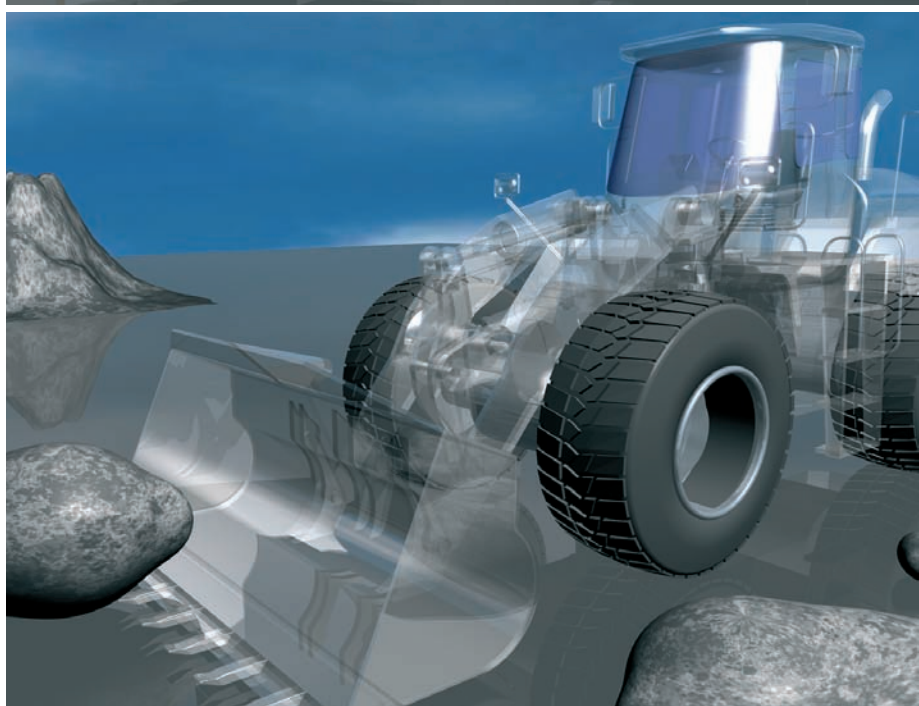
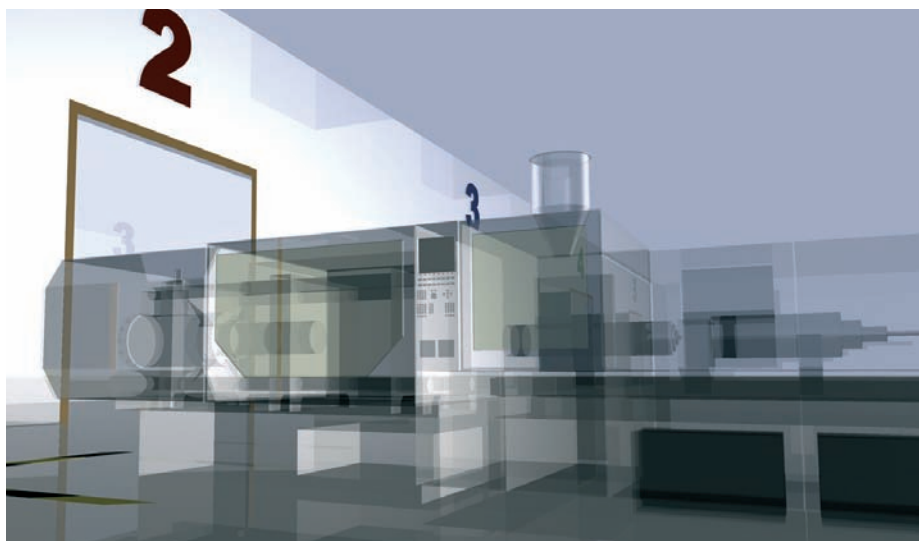
Actuation	Manually operated	Electrically operated
Series	SDVA ...	SWUVPA-1 ...
Flow Rate / Pressure	300 l/min / 350 bar	
Design	Seated pilot, spool type	
Functions	Bypass function in PT / AT / BT	
Symbols		
Pressure Stages	100 / 160 / 250 / 350 bar	
Pilot Oil	Internal to port T	
Mounting Pattern	In accordance with ISO 4401-07-07 / Form A16 DIN 24340 / CETOP 07	
Data Sheet Reference	400-P-308101-E	400-P-309101-E

Sandwich Pressure Reducing Valves

Actuation	Mechanically operated	Electrically operated	Electrical, proportional
Series	SDRA ...	SWDRVPA-5 ...	SDRPSA-5 ...
Flow Rate / Pressure	250 l/min / 350 bar	250 l/min / 350 bar	250 l/min / 350 bar
Design	Seated pilot, spool type, with pressure-gauge port		
Functions	Inline function in P	Inline function in P	Inline function in P
Pilot Drain to Port	Optional to port Y, A or B	To port Y	External to Port Y
Symbols			
Pressure Stages	100 / 160 / 250 / 350 bar		
Mounting Pattern	In accordance with ISO 4401-07-07 / Form A16 DIN 24340 / CETOP 07		
Data Sheet Reference	400-P-308501-E	400-P-309501-E	400-P-593551-E

Line-Mounting Bodies

Series	GEBAA ...
Pressure	420 bar
Design	with annular groove in port 2 for improved Δp values
Ports	Ports 1 and 2 = G 1" / Port 3 = G 1/4"
Data Sheet Reference	400-P-750115-E



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For further information please visit our website:
www.bucherhydraulics.com