

## Stacking Pressure Reducing Valve, size 3 with integral Bypass Check Valve Seated Pilot Stage, Spool-type Main Stage, Series SDRB ...



- 80 l/min, 350 / 315 bar
- With two-stage 10 mm pressure reducing cartridge DRPA-5-10...
- 350 bar, 80 l/min on all ports for ..P-6 315 bar, 80 l/min on all ports for ..AR-6 / ..BR-6
- Pilot stage is drained to port T
- Optionally available with hand knob, or lockable hand knob, adjuster
- Also available with solenoid controlled two-pressure cartridge WDRVPB-5...-10
- with ISO 4401/CETOP R35H size 3, NFPA D03, DIN 24 340 A6 interface

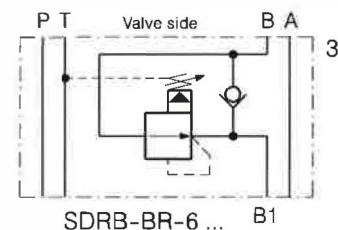
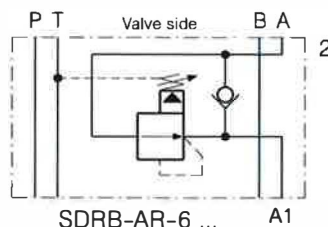
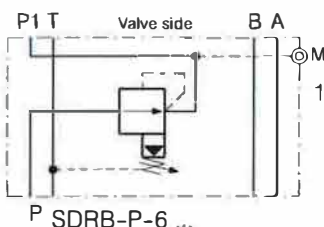
### 1. Description

Series SDRB...-6 stack valves are used as pressure reducing valves in the P-, A- or B lines. They are equipped with the two-stage pressure reducing cartridge type DRPA-5-10... as shown on data sheet D-4.36 - the pilot stage is drained to port T. While the pressure in P1 (A1, B1) remains below the valve setting, the connection P-P1 (A-A1,

B-B1) remains fully open. As soon as the pressure in P1 (A1, B1) rises above the setting, the pressure reducing function becomes active. The control spool holds the pressure in P1 (A1, B1) at the valve setting, independently of the primary pressure at P (A, B). Pilot flow occurs only while the reducing function is active and is approximately 300 cc/min

(see Performance Data). The bypass check valve in models SDRB-AR-6... and SDRB-BR-6... allows reverse flow from A1 to A, or B1 to B. The screw-in design of the cartridge valve provides for straight-forward, trouble-free maintenance. Interface sealing is by means of O-rings which are retained in counterbores in the valve body.

### 2. Symbols



### 3. Characteristics

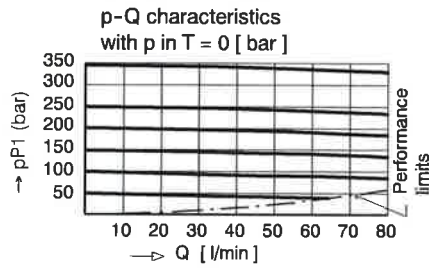
Type		stacking pressure reducing valve
Design		two-stage, sliding spool
Mounting method		stack mounting
Size		ISO 4401 size 3 interface
Mass	kg	SDRB-P-6 = 1,50; SDRB-AR / BR-6 = 1,65
Mounting attitude		unrestricted
Flow direction		see symbols
Operating pressure in P, A, B and T.	bar	..P-6... 350 ..AR-6 / ..BR-6: ... 315
Adjustment ranges	bar	pressure range N = 010 ... 350/315 pressure range M = 010 ... 210 pressure range L = 010 ... 065
Flow rate Qmax	l/min	80, see performance limits
Fluids		Hydraulic oils HL and HLP to DIN 51 524, other fluids contact BUCHER
Fluid temperature range	°C	-25 ... + 80

Ambient temperature	°C	-25 ... + 80
Viscosity range	cSt	10 ... 650, recommended 15 ... 250
Minimum fluid cleanliness		18/14 to ISO 4406 /CETOP RP70H 8 ... 9 to NAS 1638

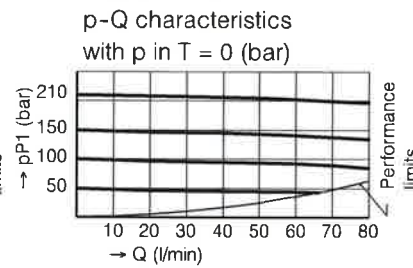
## 4. Performance graphs

Oil viscosity 33 cSt

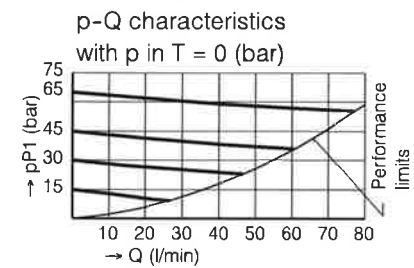
SDRB-P-6-..N



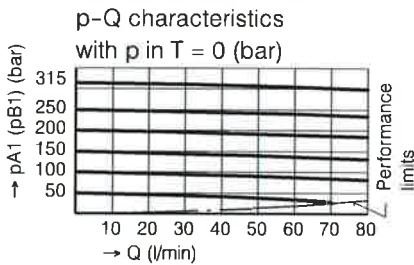
SDRB-P-6-..M



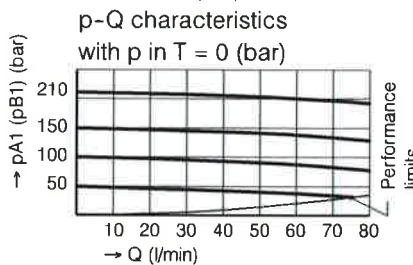
SDRB-P-6-..L



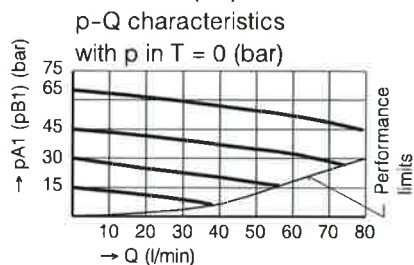
SDRB-AR (BR) -6-..N



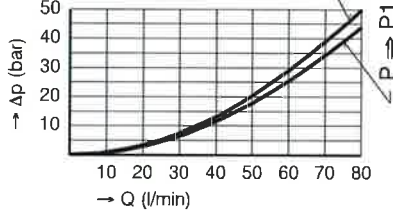
SDRB-AR (BR) -6-..M



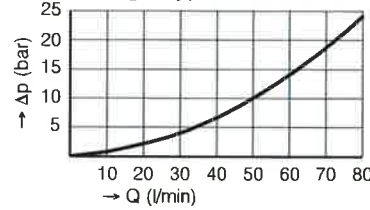
SDRB-AR (BR) -6-..L



$\Delta p$ -Q characteristics  
A  $\Rightarrow$  A1 bzw. B  $\Rightarrow$  B1



$\Delta p$ -Q characteristics A1  $\Rightarrow$  A, B1  $\Rightarrow$  B  
through bypass check valve

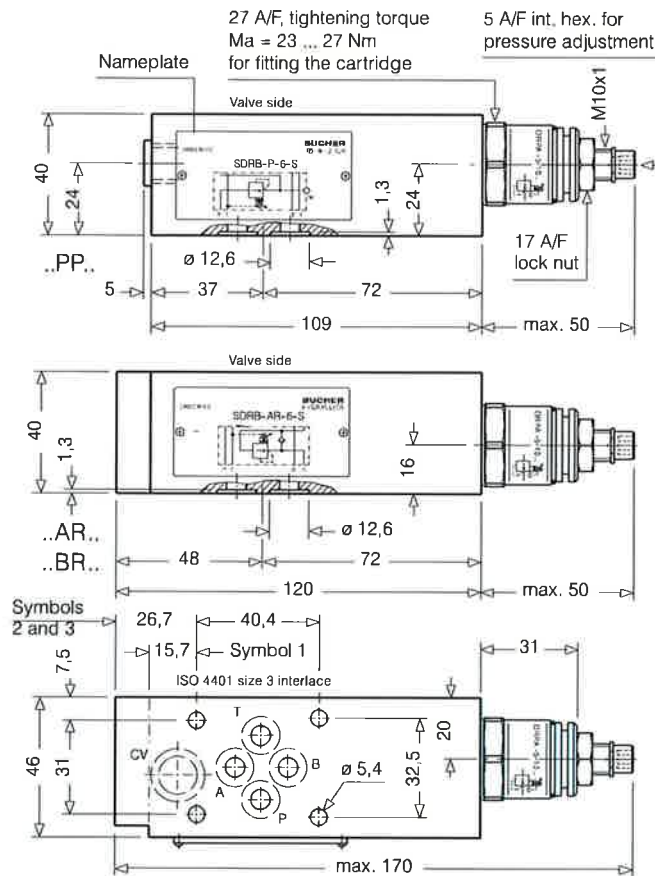


Rate of pressure change when turning the adjusting screw:

SDRB-...-6-..N: 1 turn $\cong$ approx. 60 (bar)
SDRB-...-6-..M: 1 turn $\cong$ approx. 38 (bar)
SDRB-...-6-..L: 1 turn $\cong$ approx. 13 (bar)

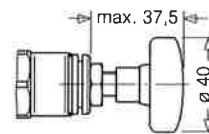
Pilot oil flow P  $\Rightarrow$  T while reducing function is active is approx. 300 cc/min

## 5. Dimensions

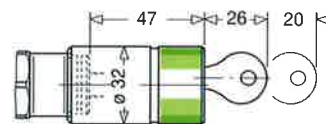


Adjuster style S  
(standard)

### OPTIONS



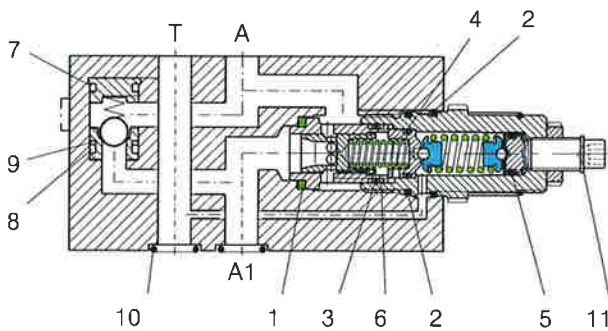
Adjuster style H  
hand knob (can be fitted later by user)



Adjuster style Z4 Lockable hand knob type 2H  
complies with Volkswagen Factory Specification  
BV 1.09(factory option only)

## 6. Schematic section

showing the relevant ports  
Ex. SDRB-AR-6 ...



Seal kit no. DS-260, comprising:

Itm.	Qty.	Qty.	Description	Size
1	1	1	Seal	Ø 22.1/16.5x2.5
2	2	2	O-ring no. 020	Ø 21.95x1.78 N90
3	1	1	O-ring	Ø 14.00x2.00 N90
4	1	1	O-ring no. 013	Ø 10.82x1.78 N90
5	1	1	O-ring no. 012	Ø 9.25x1.78 N90
6	2	2	Backup ring	Ø 13,7x1,4x1,15
7	--	1	O-ring no. 015	Ø 14.00x1.78 N90
8	--	1	O-ring no. 012	Ø 9.25x1.78 N90
9	--	1	Backup ring	Ø 7,6x1,5x1,4
10	4	4	O-ring no. 012	Ø 9.25x1.78 N90
11	1	1	Snap ring	Ø 9 Typ SS

SDRB-BR-/-AR-6  
SDRB-P-6...

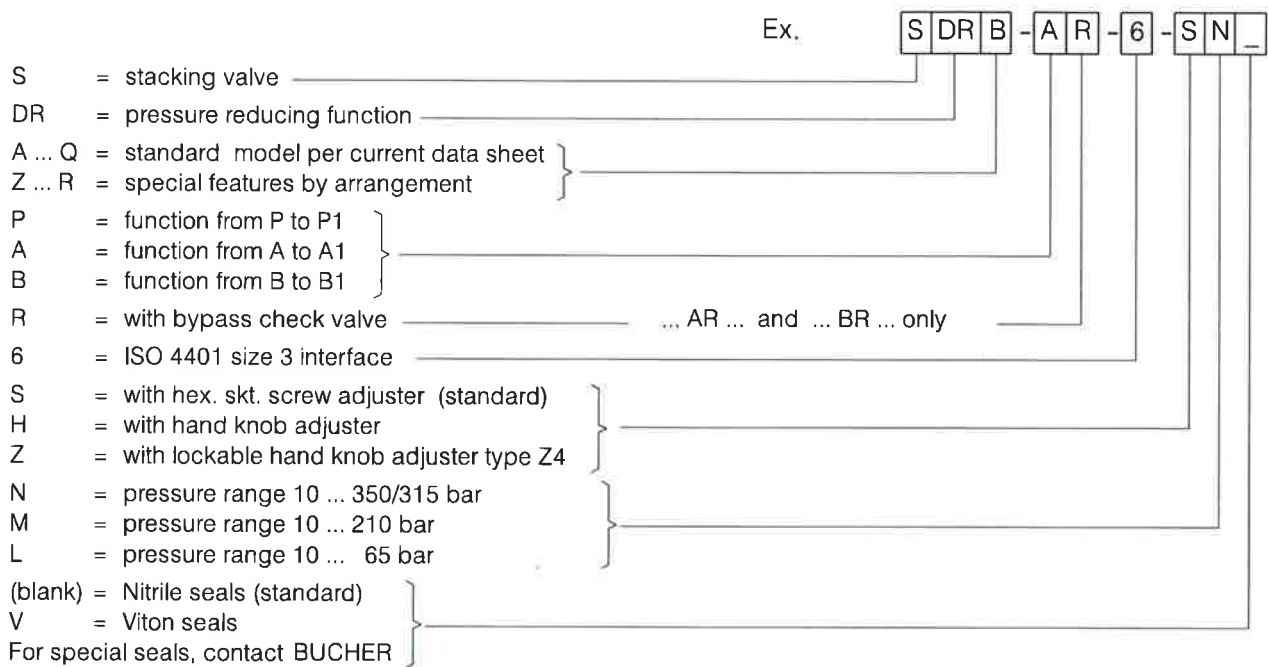
## 7. Installation and servicing

All installation and servicing must be carried out with care, and by qualified personnel only. At installation, be sure to mount the valve with the correct

faces contacting the adjacent units and with all interface connections lining up properly. When changing seals, the new seals should be thoroughly oiled or

greased before fitting them to the valve. Use the correct tightening torque when fitting the cartridge and guide nut.

## 8. Model code key



## 9. Related data sheets

Old no.	New no.	
i-00	400-P-010101-E	Table of interface equivalents
i-31	400-P-030501-E	DIN 24 340 size A6 interface
D-4.36	400-P-280201-E	Two-stage pressure reducing cartridge, 10 mm, series DRPA-5-10 ...

[info.ch@bucherhydraulics.com](mailto:info.ch@bucherhydraulics.com)

[www.bucherhydraulics.com](http://www.bucherhydraulics.com)

© 2015 by Bucher Hydraulics AG Frutigen, CH-3714 Frutigen

All rights reserved.

Data is provided for the purpose of product description only, and must not be construed as warranted characteristics in the legal sense. The information does not relieve users from the duty of conducting their own evaluations and tests. Because the products are subject to continual improvement, we reserve the right to amend the product specifications contained in this catalogue.