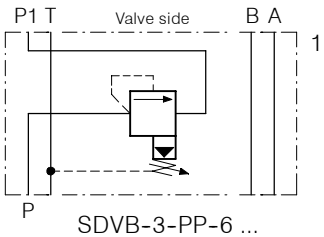
# Stacking Sequence and Preload Valve, 6 mm
## With integral Bypass Check Valve
## Seated Pilot Stage, Spool-type Main Stage, Series SDVB-3 ...


- 80 l/min, 350/315 bar
- With two-stage 10 mm pressure relief cartridge DVPA-3-10...
- ..PP-6: 350 bar, 80 l/min on all ports
  ..AR-6: 315 bar, 80 l/min on all ports
- Pilot stage is drained to port T
- Optionally available with hand knob or lockable hand knob, adjuster
- Also available with solenoid controlled two-pressure cartr. WUVPB-3...-10
- ISO 4401 CETOP RP35H size 3, NFPA D03, DIN 24 340 A6 interface

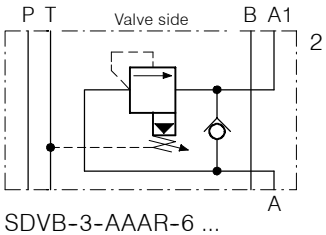
## 1. Description

Series SDVB-3...-6 stack valves are used for sequence- and preload functions. They are equipped with the two-stage pressure relief cartridge type DVPA-3-10... When closed, the valves shut off the relief path with spool-type leakage (see performance data). The pilot stage of the cartridge is drained to port T - the pressure setting is therefore unaffected by fluctuations of the secondary pressure in P1, A1 or B1. The bypass check valve in models SDVB-3-AAAR-6... and SDVB-3-BBAR-6... allows reverse flow from A1 to A or B1 to B. NOTE: After the connection P - P1 (or A - A1, B - B1) has opened, pilot oil drain flow to T will increase with rising system pressure (see performance data). 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.

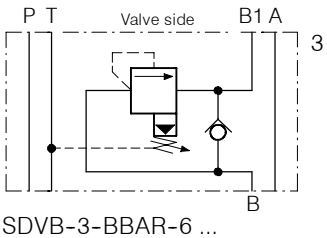
## 2. Symbols



SDVB-3-PP-6 ...



SDVB-3-AAAR-6 ...



SDVB-3-BBAR-6 ...

## 3. Characteristics

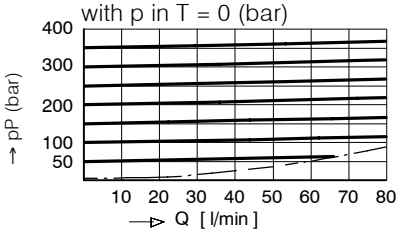
| | | |
|---|---|---|
| Type | | stacking pressure sequence valve |
| Design | | two-stage, sliding spool |
| Mounting method | | stack mounting |
| Size | | ISO 4401 size 3 interface |
| Mass | kg | SDVB-3-PP-6 = 1,50; SDVB-3-AAAR / BBAR-6 = 1,65 |
| Mounting attitude | | unrestricted |
| Flow direction | | see symbols |
| Operating pressure in P, A, B and T | bar | ..PP-6..: ... 350<br>..AR-6..: ... 315 |
| Adjustment ranges | bar | pressure range N = 010 ... 350/315<br>pressure range M = 010 ... 210<br>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 cleanless | | 18/14 to ISO 4406 /CETOP RP70H 8 ... 9 to NAS 1638 |

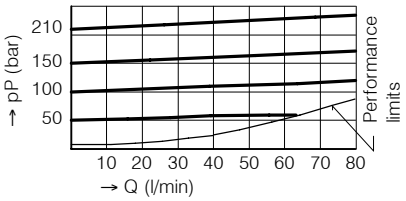
## 4. Performance graphs

Oil viscosity 33 cSt

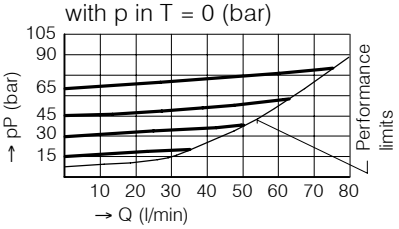
SDVB-3-PP-6-..N
p-Q characteristics P ⇒ P1
with p in T = 0 (bar)



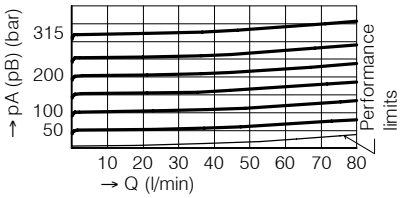

SDVB-3-PP-6-..M
p-Q characteristics P ⇒ P1
with p in T = 0 (bar)



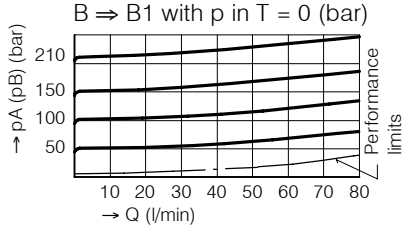

SDVB-3-PP-6-..L
p-Q characteristics P ⇒ P1
with p in T = 0 (bar)



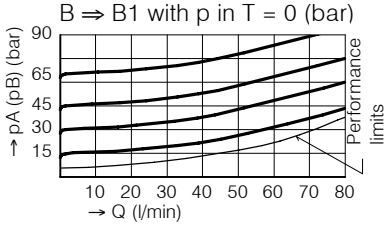

SDVB-3-..AR-6-..N
p-Q characteristics A ⇒ A1,
B ⇒ B1 with p in T = 0 (bar)



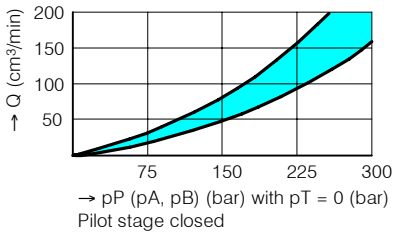

SDVB-3-..AR-6-..M
p-Q characteristics A ⇒ A1,
B ⇒ B1 with p in T = 0 (bar)



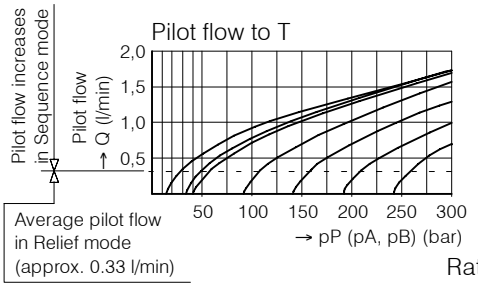

SDVB-3-..AR-6-..L
p-Q characteristics A ⇒ A1,
B ⇒ B1 with p in T = 0 (bar)



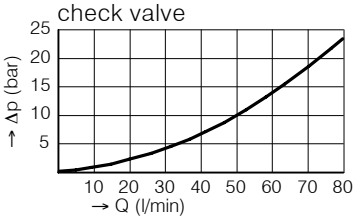

Leakage P ⇒ P1, A ⇒ A1,
B ⇒ B1




Pilot flow to T



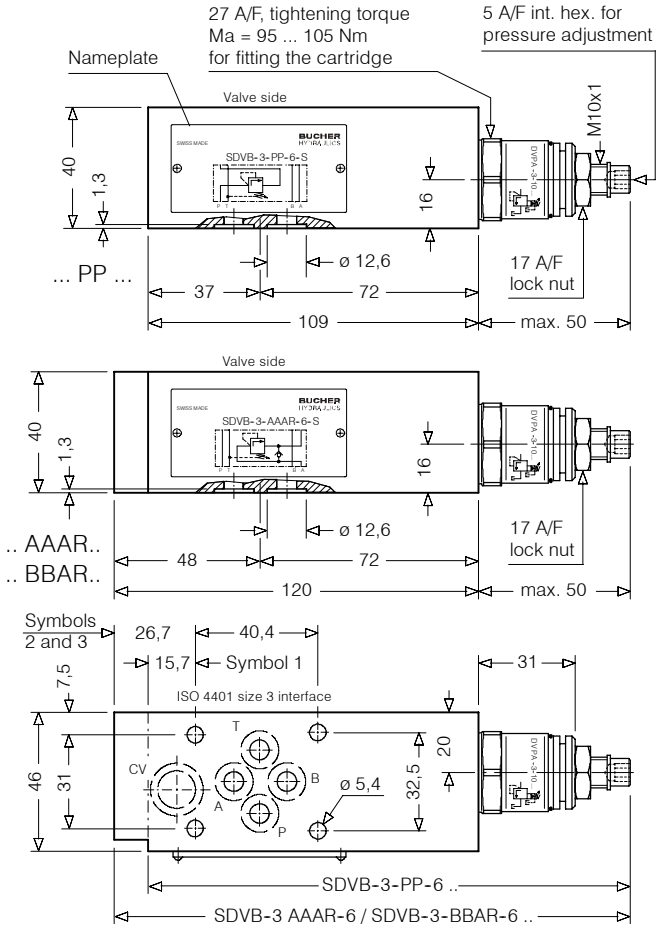

Δp-Q characteristics A1 ⇒ A,
B1 ⇒ B through bypass
check valve




Rate of pressure change
when turning the adjusting screw

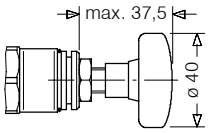
| |
|---|
| SDVB-3-..-6-..N:1 turn ≙ approx. 60 (bar) |
| SDVB-3-..-6-..M:1 turn ≙ approx. 38 (bar) |
| SDVB-3-..-6-..L: 1 turn ≙ approx. 13 (bar) |

## 5. Dimensions

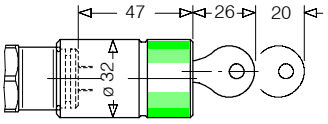



Adjuster style S
(standard)

OPTIONS



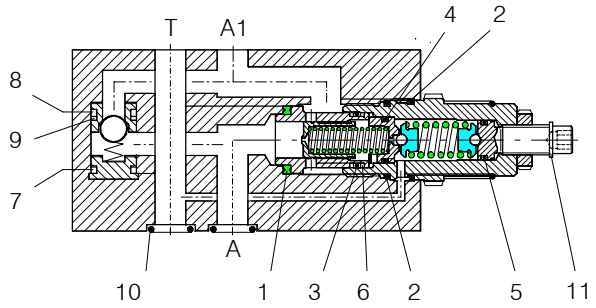

Adjuster style H
Hand knob (can be fittet later by user)




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

## 6. Schematic section

showing the relevant ports
Ex. SDVB-3-AAAR-6- ...




Seal kit no. DS-260, comprising:

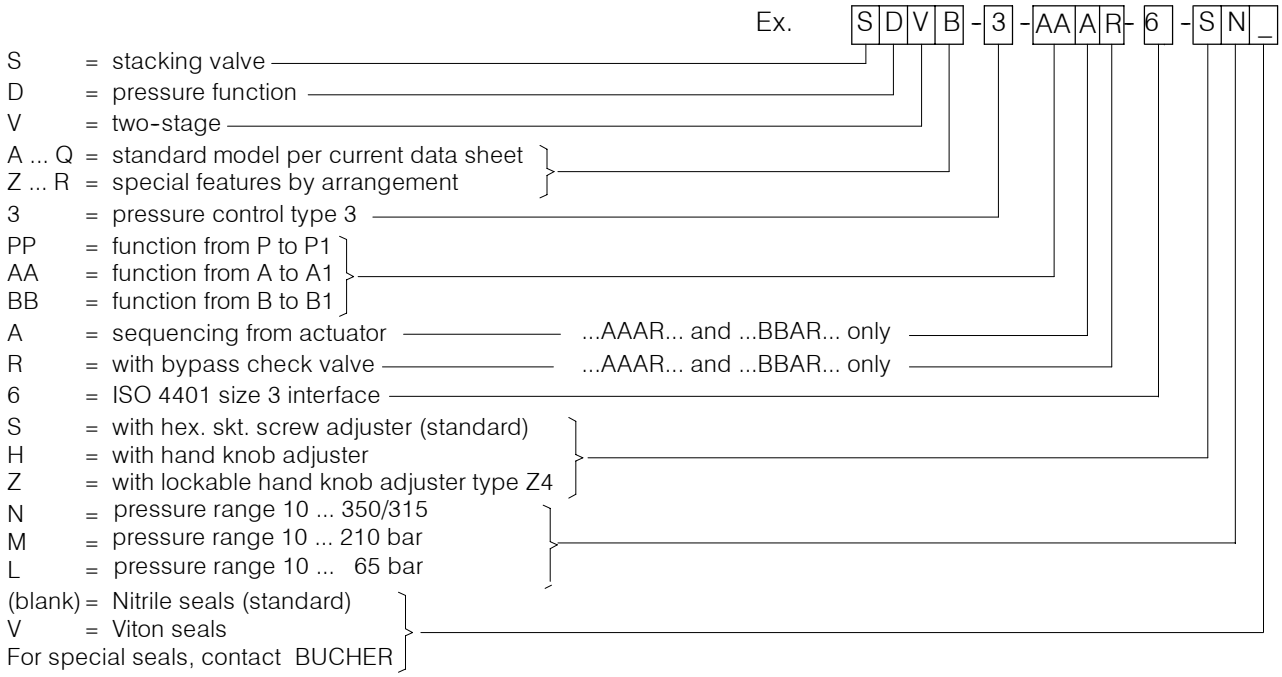
| Itm. | Qty. | Qty. | Description | Size |
|---|---|---|---|---|
| 1 | 1 | 1 | Seal | ∅ 22.1/16.5x2.5 |
| 2 | 2 | 2 | O-ring no. 020 | ∅ 21.95x1.78 N90 |
| 3 | 1 | 1 | O-ring | ∅ 14.00x2.00 N90 |
| 4 | 1 | 1 | O-ring no. 013 | ∅ 10.82x1.78 N90 |
| 5 | 1 | 1 | O-ring no. 012 | ∅ 9.25x1.78 N90 |
| 6 | 2 | 2 | Backup ring | ∅ 13,7X1,4X1,15 |
| 7 | -- | 1 | O-ring no. 015 | ∅ 14.00x1.78 N90 |
| 8 | -- | 1 | O-ring no. 012 | ∅ 9.25x1.78 N90 |
| 9 | -- | 1 | Backup ring | ∅ 7,6X1,5X1,4 |
| 10 | 4 | 4 | O-ring no. 012 | ∅ 9.25x1.78 N90 |
| 11 | 1 | 1 | Snap ring | ∅ 9 Typ SS |

SDVB-3-BBAR.../-AAAR...
SDVB-3-PP-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 changin 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.

## 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-4.33 | 400-P-280121-E | Two-stage pressure relief cartridge, 10 mm, series DVPA-3-10 ... |

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