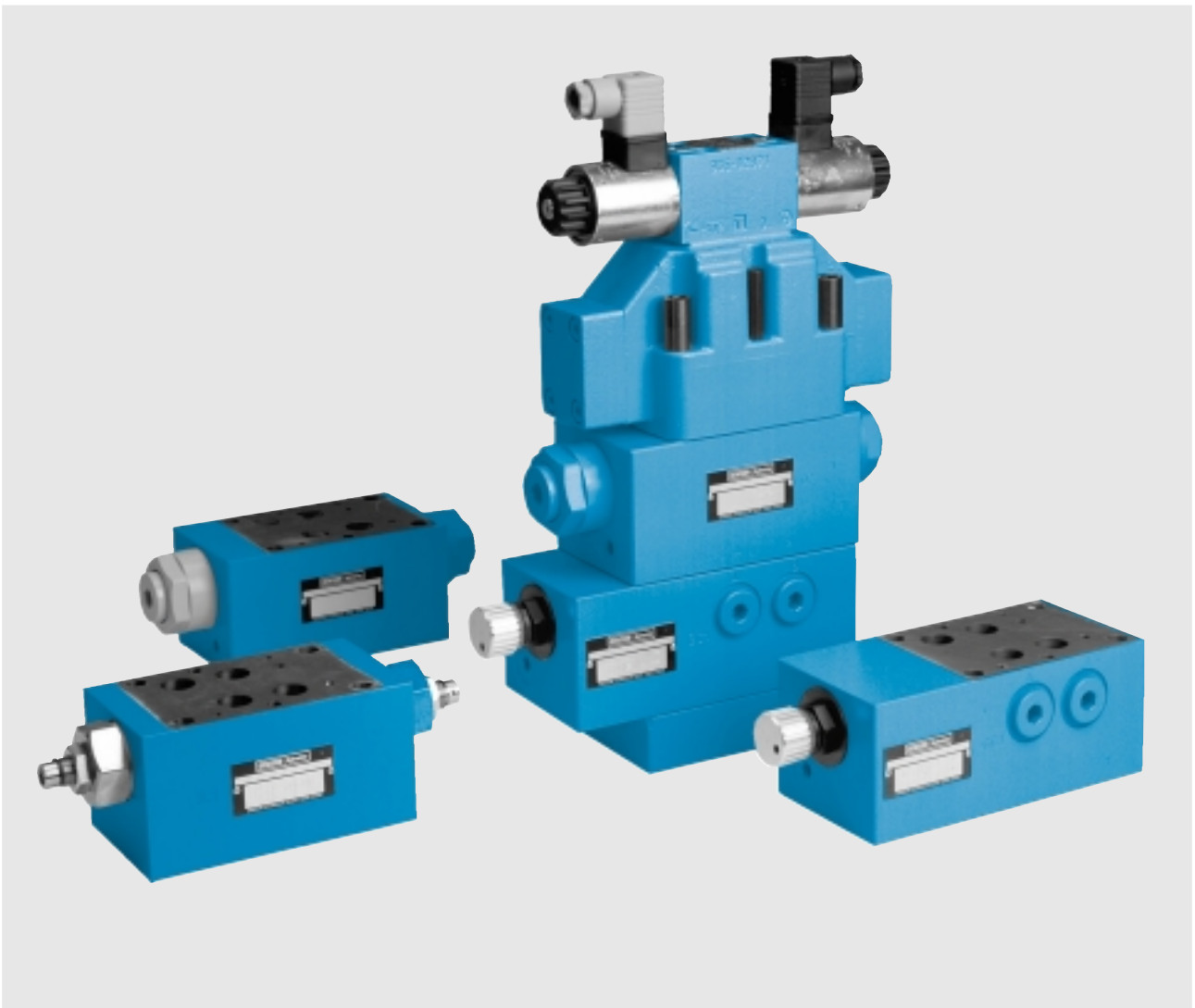


# DENISON HYDRAULICS

## Stack Valves

Cetop 07



Publ. 8-EN 5850-A

**DENISON** Hydraulics

## DESCRIPTION, CIRCUIT

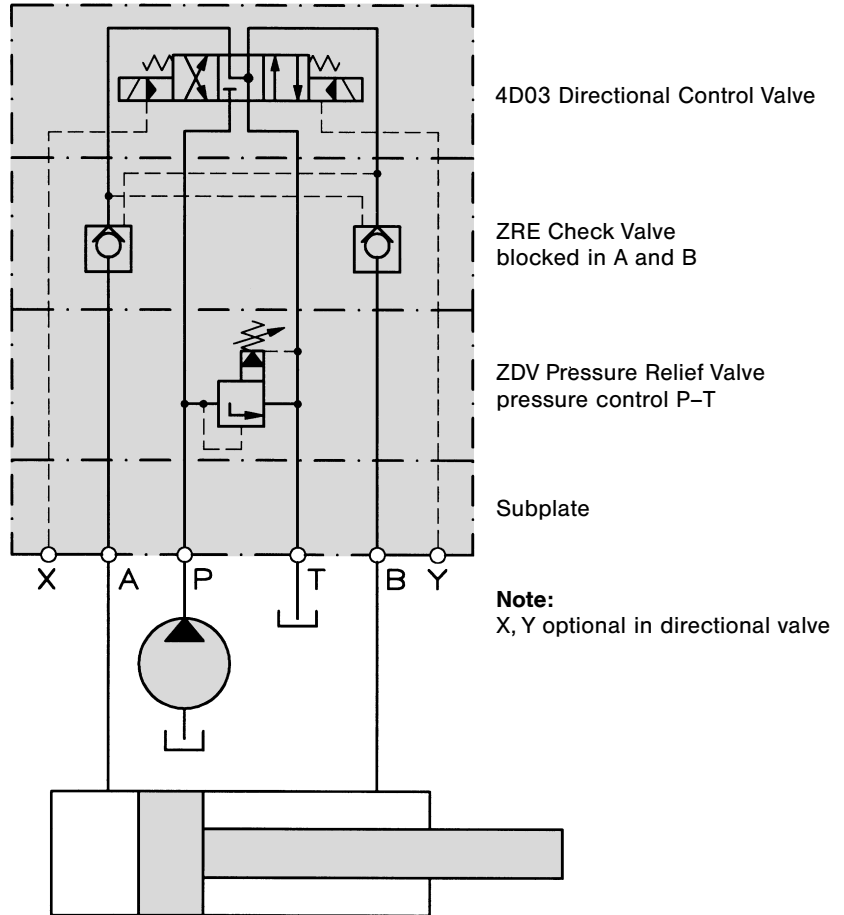
### DESCRIPTION

The Stack Valves described in this bulletin can be used as vertical and horizontal stack systems.

As pressure relief, pressure reducing valves, throttle valves with check and as check valves they are standardized according to ISO mounting configuration and meet industrial requirements for compact control systems.

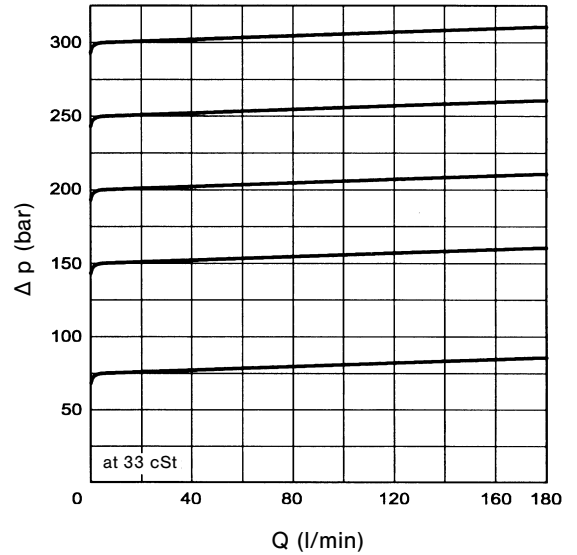
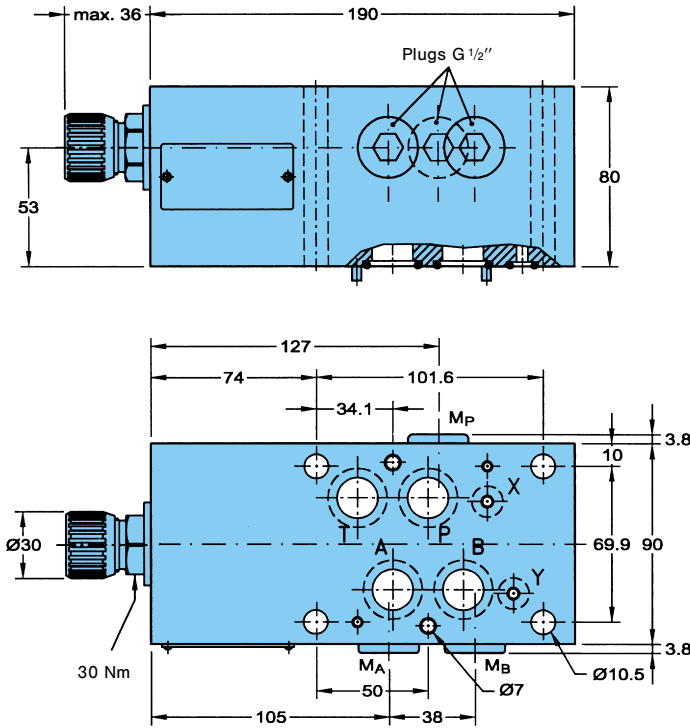
Stack valves size 07 have the same mounting configuration as the directional control valve 4D03 and can be arranged as shown on the following pages.

### CIRCUIT EXAMPLE



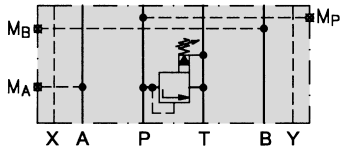
# PRESSURE RELIEF VALVE – SERIES ZDV

Weight: 8.3 kg



- Operating pressure range 7...65/315 bar (...350 bar on request)
- Max. flow 180 l/min
- Viscosity range 10...500 cSt
- Fluid temperature range -18...+60 °C

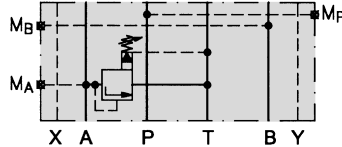
Pressure control P-T



Series	Order No.
ZDV-P03-1-H0-B1	098-90951-0
ZDV-P03-5-H0-B1	098-90122-0

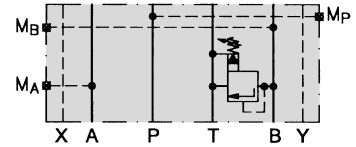
1 = 7... 65 bar  
5 = 7... 315 bar

Pressure control A-T



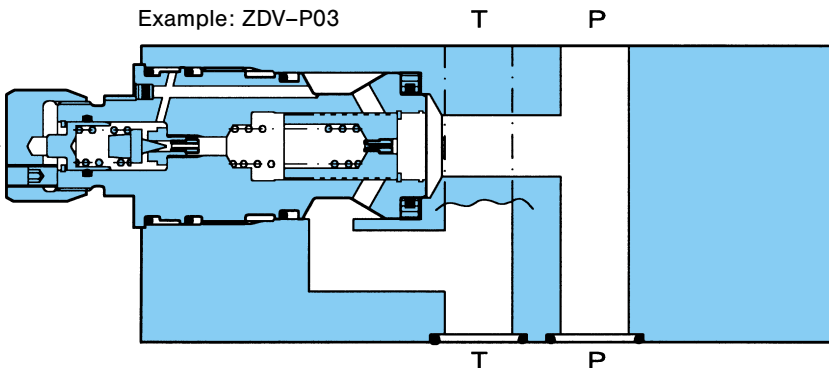
Series	Order No.
ZDV-A03-1-H0-B1	098-90218-0
ZDV-A03-5-H0-B1	098-91222-0

Pressure control B-T



Series	Order No.
ZDV-B03-1-H0-B1	098-90955-0
ZDV-B03-5-H0-B1	098-90956-0

Example: ZDV-P03

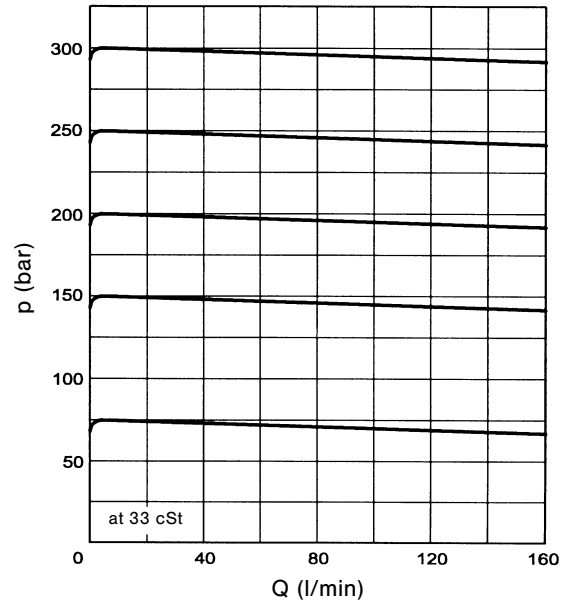
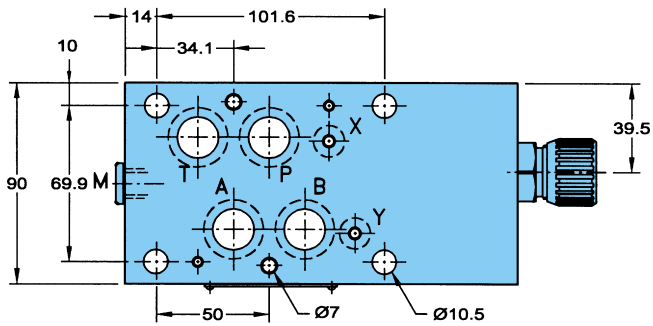
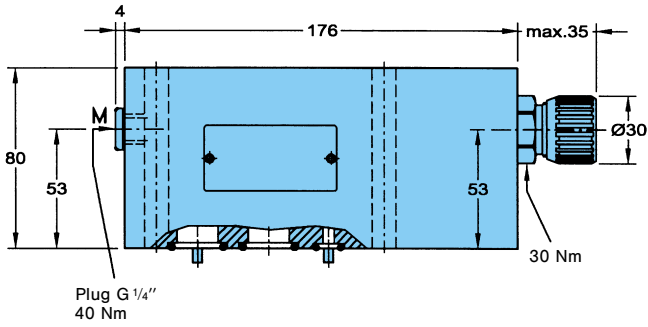


Complete cartridge for  
ZDV-.03-1 = 098-91049-0  
ZDV-.03-5 = 098-90017-0

Seal kit for:  
ZDV... B1 = 098-91286-0  
ZDV... B5 = 098-91316-0

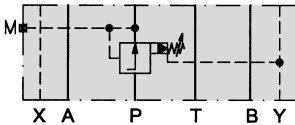
# PRESSURE REDUCING VALVE – SERIES ZDR

Weight: 7.6 kg



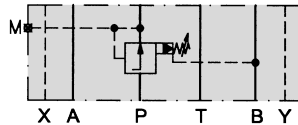
- Operating pressure range 7...65/315 bar (...350 bar on request)
- Max. flow 160 l/min
- Viscosity range 10...500 cSt
- Fluid temperature range -18...+60°C
- Pilot oil (P, A, B-T) max. 0.9 l/min at 33 cSt

Pressure reducing in P



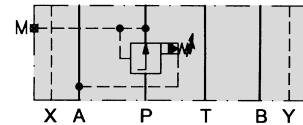
Series	Order No.
ZDR-P03-1-H0-B1	098-90957-0
ZDR-P03-5-H0-B1	098-90958-0

Pressure reducing in A



Series	Order No.
ZDR-A03-1-H0-B1	098-91315-0
ZDR-A03-5-H0-B1	098-90337-0

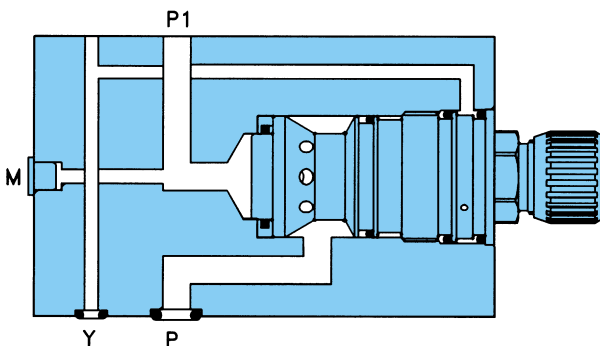
Pressure reducing in B



Series	Order No.
ZDR-B03-1-H0-B1	098-91317-0
ZDR-B03-5-H0-B1	098-90358-0

↑  
1 = 7... 65 bar  
5 = 7... 315 bar

Example: ZDR-P03

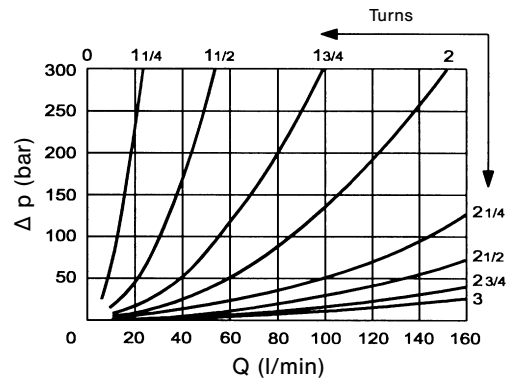
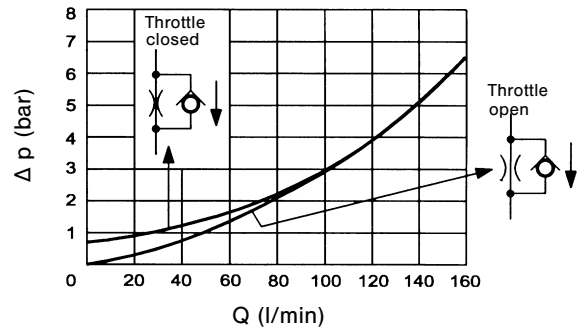
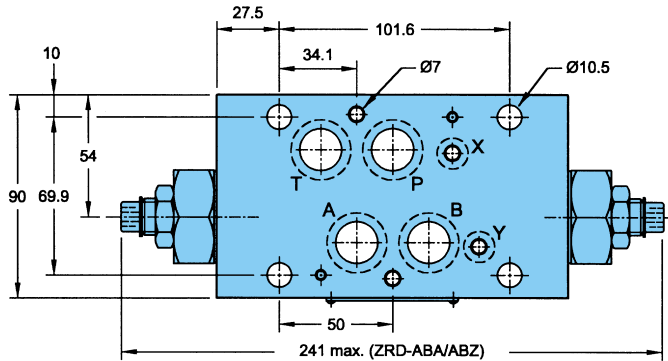
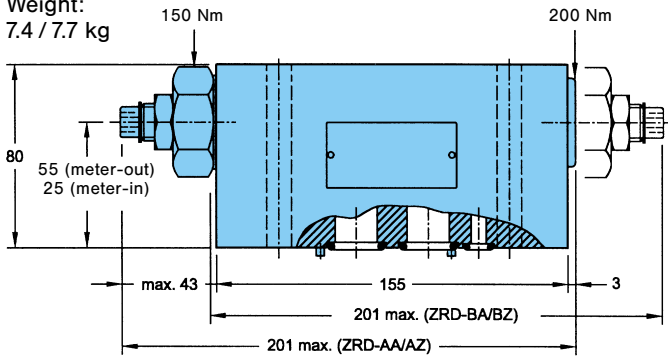


Complete cartridge for  
ZDR-.03-1 = 098-90128-0  
ZDR-.03-5 = 098-90127-0

Seal kit for:  
ZDR...B1 = 098-91142-0  
ZDR...B5 = 098-91318-0

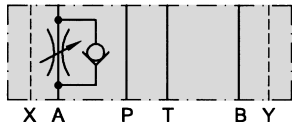
# THROTTLE VALVE WITH CHECK – SERIES ZRD

Weight:  
7.4 / 7.7 kg



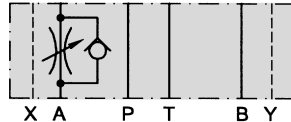
- Max. operating pressure 315 bar (...350 bar on request)
- Check valve cracking pressure approx. 0.7 bar
- Max. flow 160 l/min
- Leakage 0.3...0.5 l/min (at closed throttle)
- Viscosity range 10... 500 cSt
- Fluid temperature range -18... +60 °C

Meter-in control in A



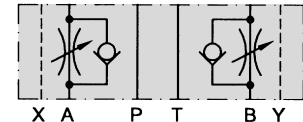
Series Order No.  
ZRD-AZ03-S0-B1 098-90236-0

Meter-out control in A



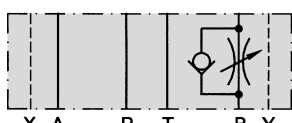
Series Order No.  
ZRD-AA03-S0-B1 098-90961-0

Meter-in control in A and B



Series Order No.  
ZRD-ABZ03-S0-B1 098-91339-0

Meter-in control in B



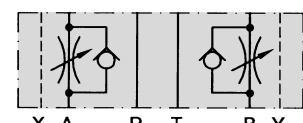
Series Order No.  
ZRD-BZ03-S0-B1 098-91340-0

Meter-out control in B



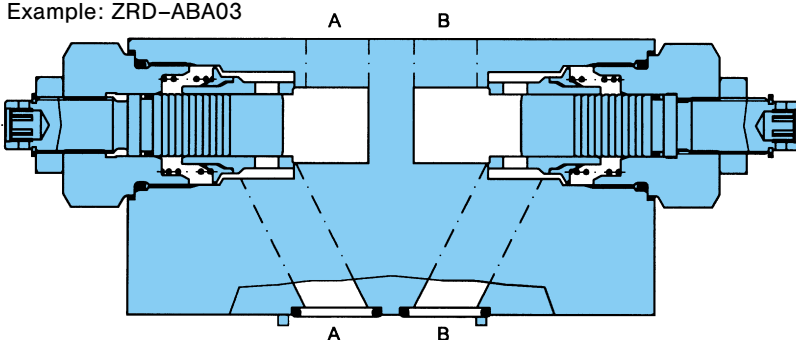
Series Order No.  
ZRD-BA03-S0-B1 098-91311-0

Meter-out control in A and B



Series Order No.  
ZRD-ABA03-S0-B1 098-91276-0

Example: ZRD-ABA03

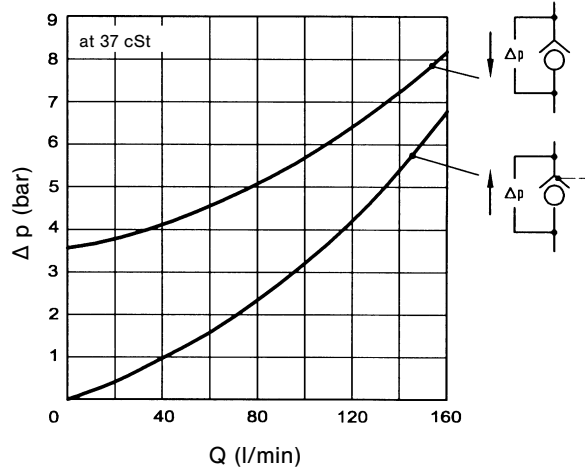
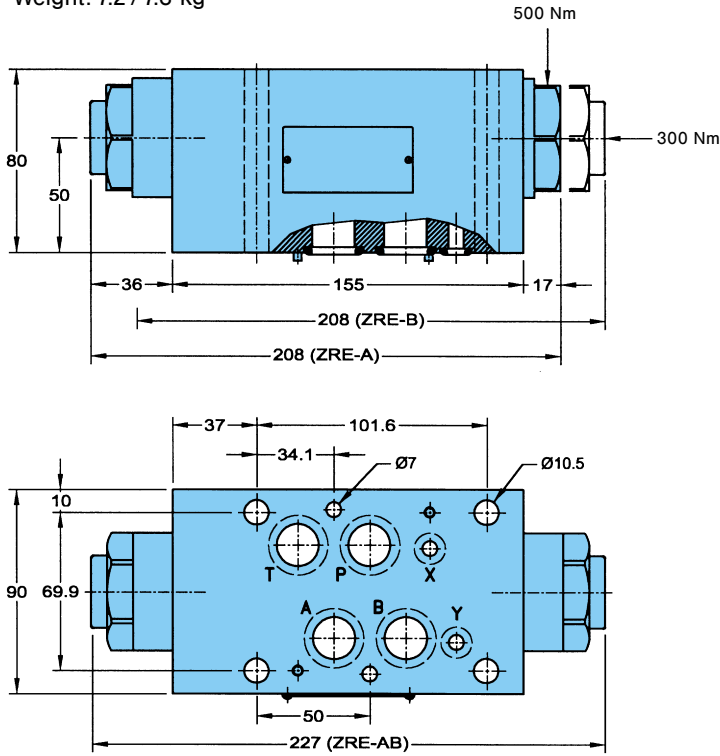


Complete cartridge  
098-91321-0

Seal kit for:  
ZRD... B1 = 098-91239-0  
ZRD... B5 = 098-91319-0

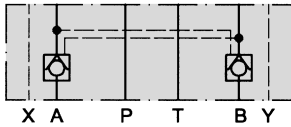
## CHECK VALVE PILOT OPERATED – SERIES ZRE

Weight: 7.2 / 7.3 kg



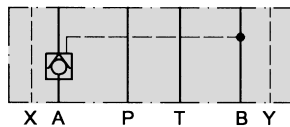
- Max. operating pressure      315 bar (...350 bar on request)
- Cracking pressure            approx. 3.6 bar
- Max. flow                        160 l/min
- Opening ratio                  1 : 13 (Pilot cone / main cone)
- Viscosity range                10... 500 cSt
- Fluid temperature range    - 18... + 60 °C

blocked in A and B



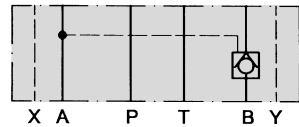
Series            Order No.  
ZRE-AB03-B1   098-91275-0

blocked in A



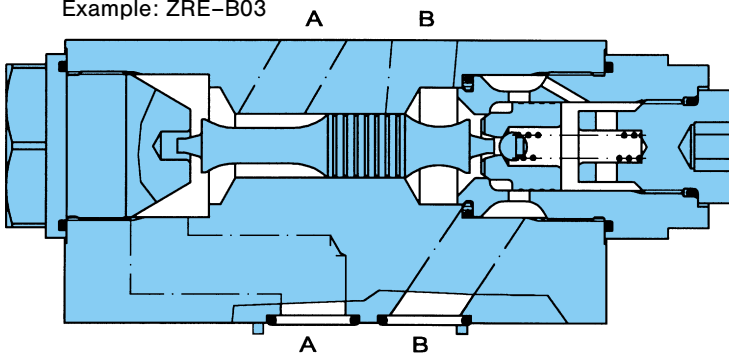
Series            Order No.  
ZRE-A03-B1    098-91314-0

blocked in B



Series            Order No.  
ZRE-B03-B1    098-91067-0

Example: ZRE-B03

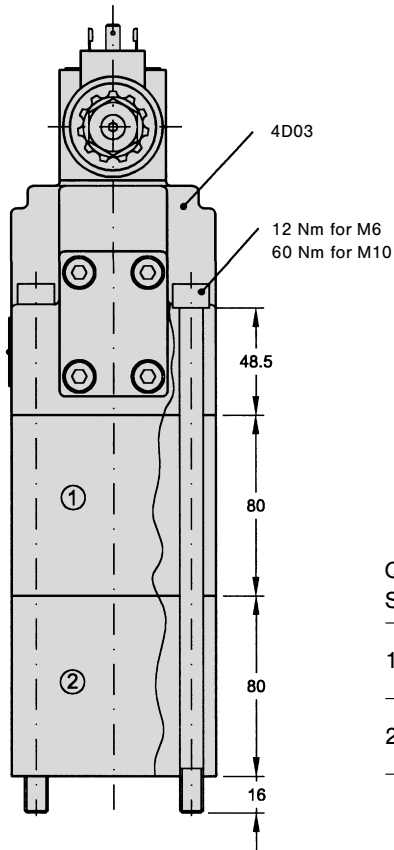


Seal kit for:  
ZRE... B1 = 098-91171-0  
ZRE... B5 = 098-91320-0

**Note:** When service of this valve is necessary, it should be replaced as a complete unit, as the internal components form a matching set (not applicable to seal kit).

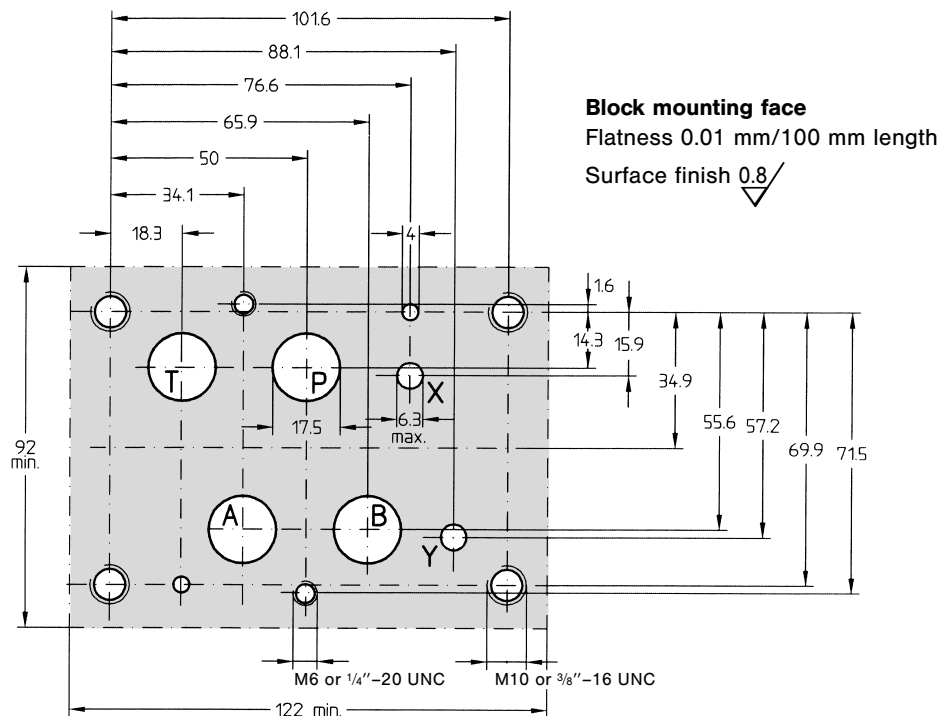
## MOUNTING SCREWS – BLOCK MOUNTING CONFIGURATION

### MOUNTING SCREWS



Qty. of Stack Valves	Screws	Order No.
1	M10 (4 x)	361-11423-8
	M6 (2 x)	361-08424-8
2	M10 (4 x)	361-11494-8
	M6 (2 x)	361-08493-8

### BLOCK MOUNTING CONFIGURATION (confirm to ISO)



#### Note:

Information for directional control valves 4D03 (CETOP 07) and single subplates see publication 4-EN 3510 .

The product described is subject to continual development and the manufacturer reserves the right to change the specifications without notice.