

Throttle check valves series ZRD are designed for maximum flow rates.

The throttle check function can be located in port A or B as well as in A + B. Meter-in or meter-out functionality can be selected by model code.

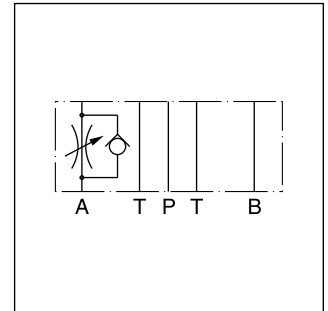
A low flow / high resolution version in NG06 for sensitive shifting time adjustment of pilot operated directional control valves is available on request.

**Features**

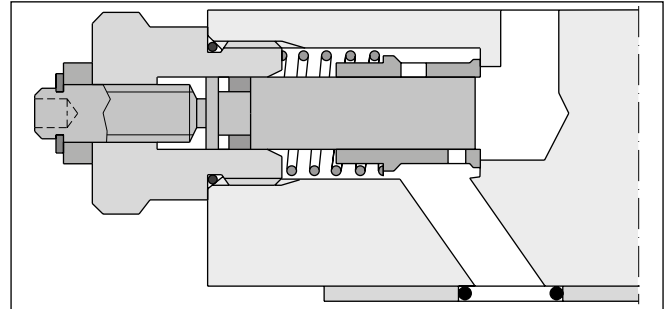
- High flow capacity
- Various functional arrangements
- ZRD01 - NG06 (CETOP 03)  
ZRD02 - NG10 (CETOP 05)



ZRD-ABZ01



ZRD-AA02



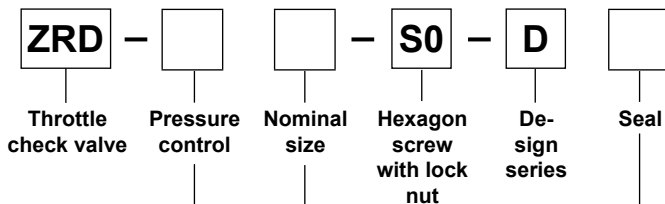
ZRD-AA02

**Technical data**

General			NG06	NG10
Size				
Mounting interface			DIN 24340 A6 ISO 4401 NFPA D03	DIN 24340 A10 ISO 4401 NFPA D05
			CETOP RP 121	
Mounting position			unrestricted	
Ambient temperature	[°C]		-20...+60	
MTTF <sub>D</sub> value	[years]		150	
Weight	1 cartridge	[kg]	1.2	2.8
	2 cartridges	[kg]	1.3	2.9
Hydraulic				
Max. operating pressure		[bar]	350	315
Nominal flow		[cSt] / [l/min]	80	160
Leakage		[cSt] / [l/min]	0.1...0.2 (at closed throttle)	0.1...0.2 (at closed throttle)
Opening pressure		[bar]	0.7	0.7
Fluid			Hydraulic oil according to DIN 51524	
Fluid temperature		[°C]	-20...+70 (NBR: -25...+70)	
Viscosity, permitted		[cSt] / [mm <sup>2</sup> /s]	20 ... 400	
Viscosity, recommended		[cSt] / [mm <sup>2</sup> /s]	30 ... 80	
Filtration			ISO 4406 (1999); 18/16/13	

# Throttle Check Valve Series ZRD

## Ordering Code



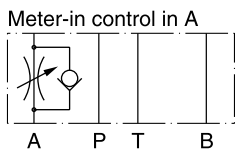
Code	Pressure control
AA	Meter-out control in A
AZ	Meter-in control in A
BA	Meter-out control in B
BZ	Meter-in control in B
ABA	Meter-out control in A and B
ABZ	Meter-in control in A and B

Code	Seal
1	NBR
5	FPM

Code	Nominal size
01	NG06
02	NG10

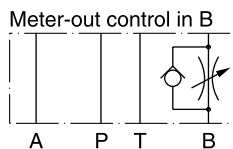
### Ordering code details

#### ZRD\*01



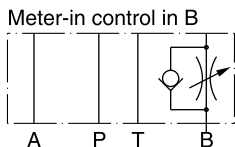
Series  
ZRD-AZ01-S0-D1

Order No.  
098-91056-0



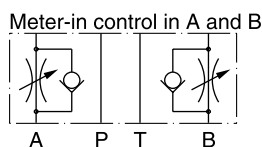
Series  
ZRD-BA01-S0-D1

Order No.  
098-91013-0



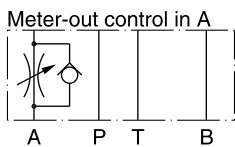
Series  
ZRD-BZ01-S0-D1

Order No.  
098-91057-0



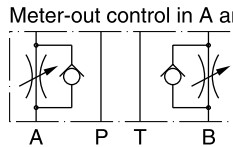
Series  
ZRD-ABZ01-S0-D1

Order No.  
098-91058-0



Series  
ZRD-AA01-S0-D1

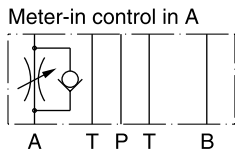
Order No.  
098-91012-0



Series  
ZRD-ABA01-S0-D1

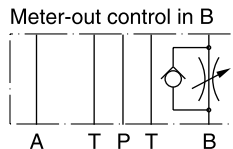
Order No.  
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#### ZRD\*02



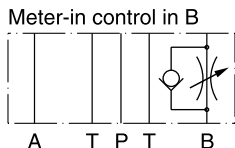
Series  
ZRD-AZ02-S0-D1

Order No.  
098-91059-0



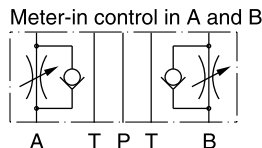
Series  
ZRD-BA02-S0-D1

Order no.  
098-91016-0



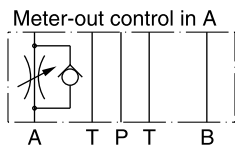
Series  
ZRD-BZ02-S0-D1

Order No.  
098-91060-0



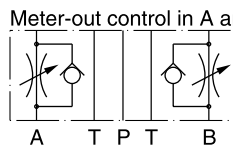
Series  
ZRD-ABZ02-S0-D1

Order no.  
098-91061-0



Series  
ZRD-AA02-S0-D1

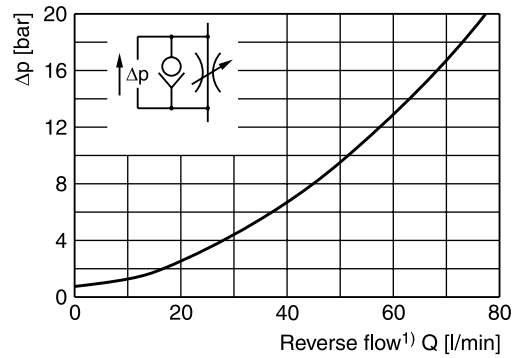
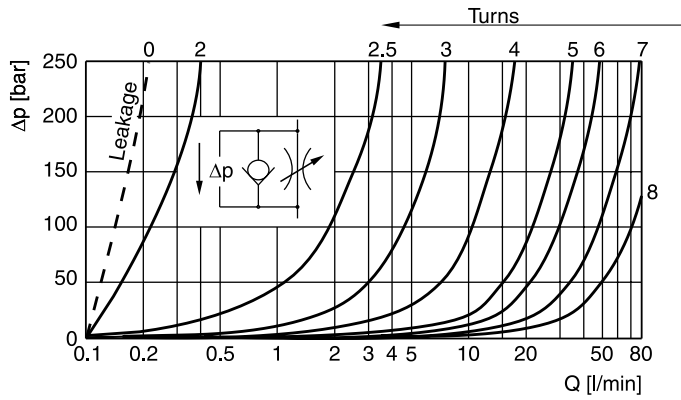
Order no.  
098-91015-0



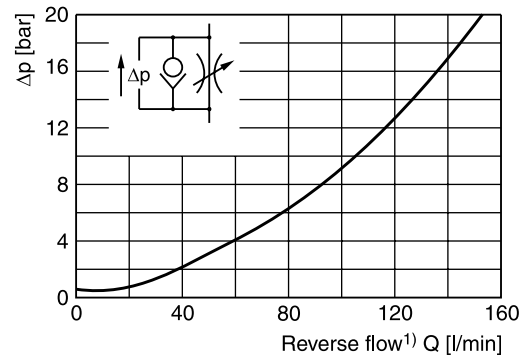
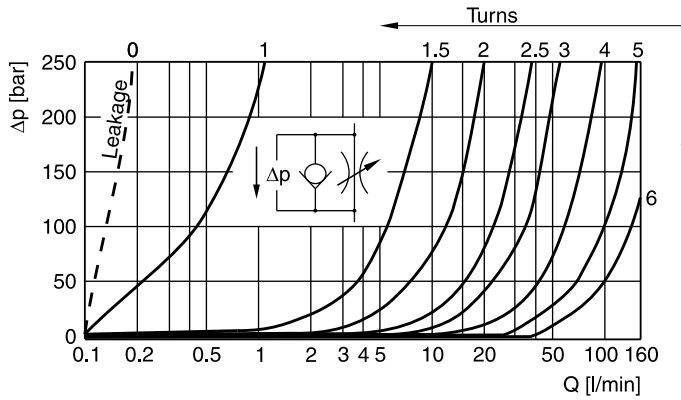
Series  
ZRD-ABA02-S0-D1

Order no.  
098-91017-0

**p/Q performance curves**  
**ZRD\*01**



**ZRD\*02**

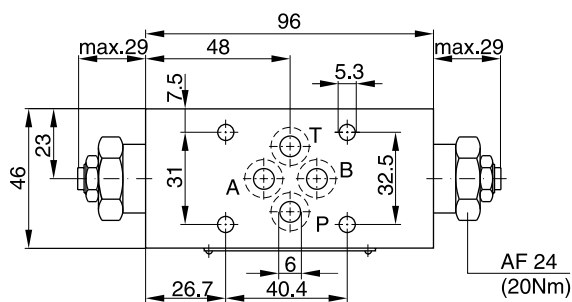


<sup>1)</sup> Throttle closed.

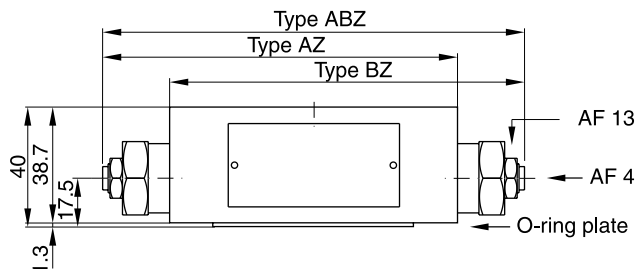
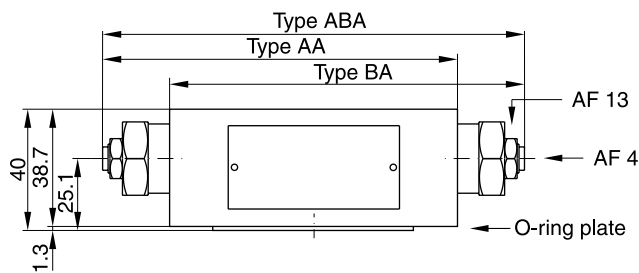
All characteristic curves measured with HLP46 at 50 °C.

Dimensions

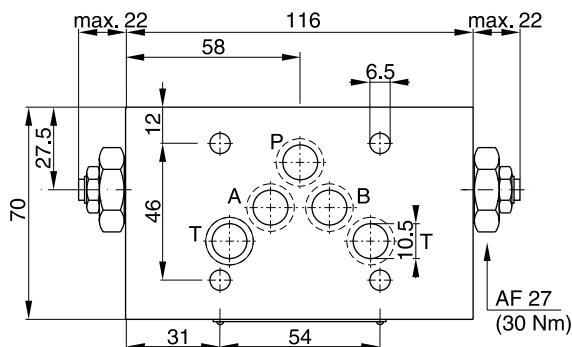
ZRD\*01



Seal kit	
Seal	Order code
1	098-91096-0
5	098-91097-0
Complete cartridge	
Order code 098-91119-0	
O-ring plate	Order code
1	SK-CM2-10
5	SK-CM2-V-10



7 ZRD\*02



Seal kit	
Seal	Order code
1	098-91098-0
5	098-91099-0
Complete cartridge	
Order code 098-91120-0	
O-ring plate	Order code
1	SK-CM3-10
5	SK-CM3-V-10

