



# STACK VALVES CETOP - 05



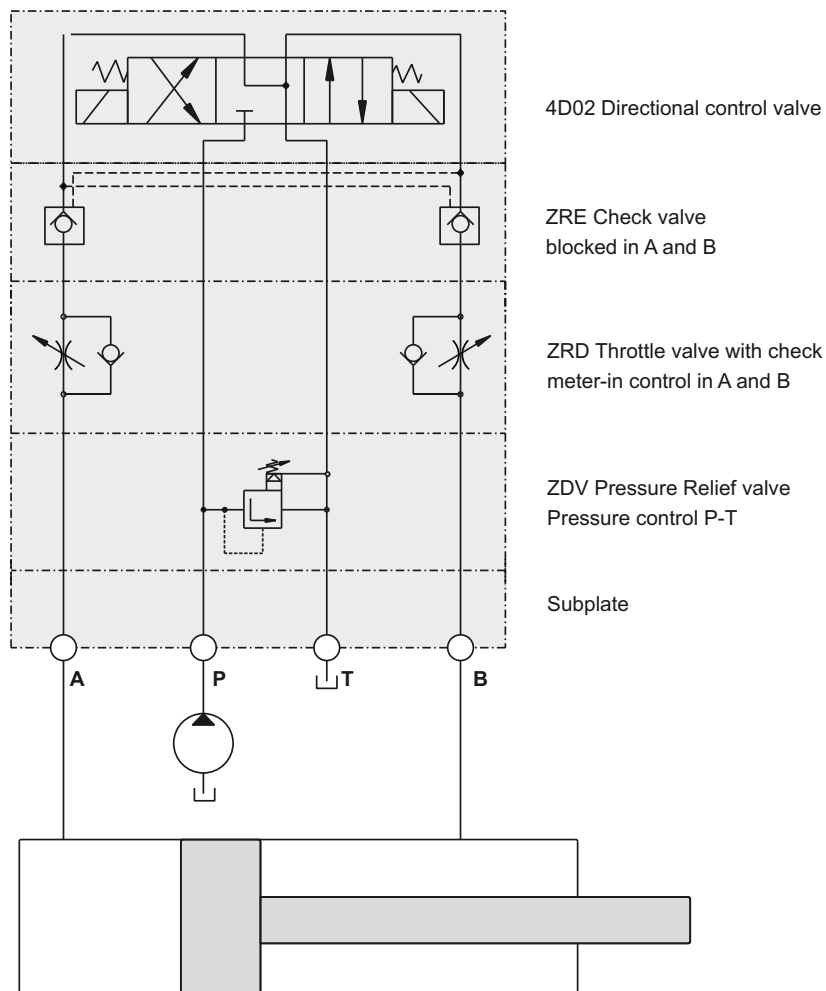
## DESCRIPTION

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, as check and counterbalance valves they are standardized according to CETOP, ISO and DIN in mounting configuration and meet industrial requirements for compact control systems.

Stack valves size 05 have the same mounting configuration as the directional control valve 4D02 and can be arranged as shown on the following pages.

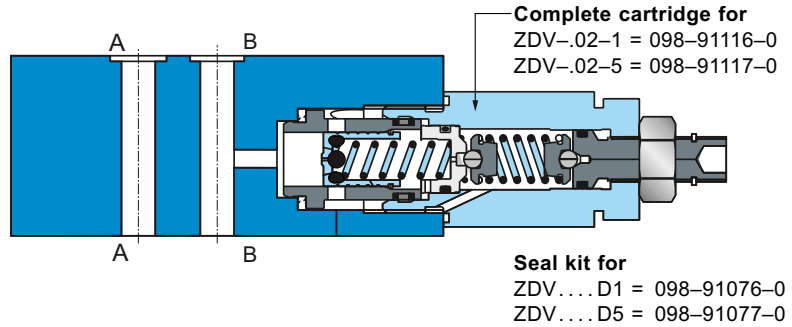
## CIRCUIT EXAMPLE



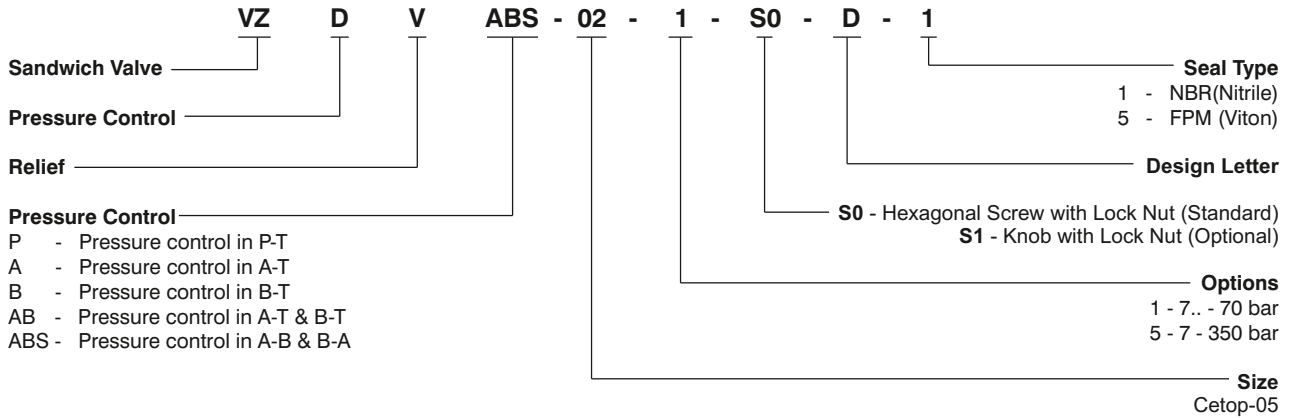
# PRESSURE RELIEF VALVE - ZDV



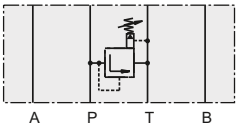
- Operating pressure range
  - ZDV-P / A / B / AB 7... 70/350 bar
  - ZDV-ABS 7... 70/315 bar
- Max. flow 140 l/min
- Viscosity range 10... 500 cSt
- Fluid temperature range -18... +60°C



## ORDERING CODE :

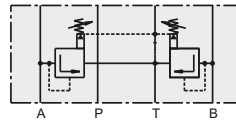


### Pressure control P-T



Model Code:	Order No.
ZDV-P02-1-S0-D1	098-91034-0
ZDV-P02-5-S0-D1	098-91035-0

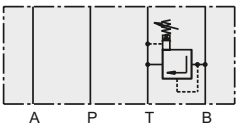
### Pressure control A-T & B-T



Model Code:	Order No.
ZDV-AB02-1-S0-D1	098-91207-0
ZDV-AB02-5-S0-D1	098-91208-0

1 = 7... 70 bar  
5 = 7... 350 bar

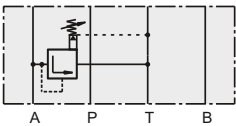
### Pressure control B-T



Model Code:	Order No.
ZDV-B02-1-S0-D1	098-91038-0
ZDV-B02-5-S0-D1	098-91039-0

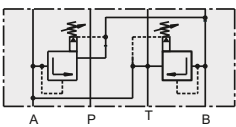
1 = 7... 70 bar  
5 = 7... 350 bar

### Pressure control A-T



Model Code:	Order No.
ZDV-A02-1-S0-D1	098-91203-0
ZDV-A02-5-S0-D1	098-91204-0

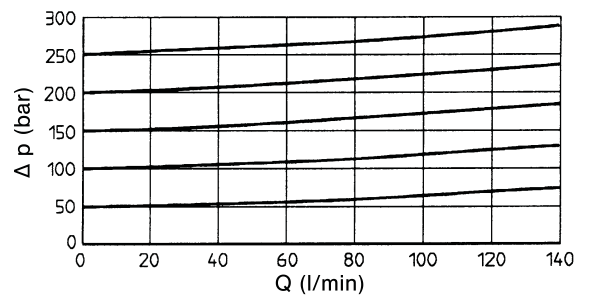
### Pressure control A-B & B-A



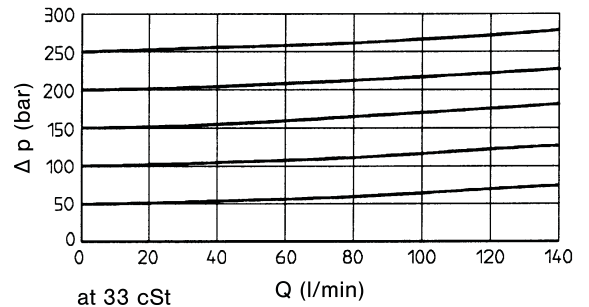
Model Code:	Order No.
ZDV-ABS02-1-S0-D1	098-91042-0
ZDV-ABS02-5-S0-D1	098-91043-0

1 = 7... 70 bar  
5 = 7... 315 bar

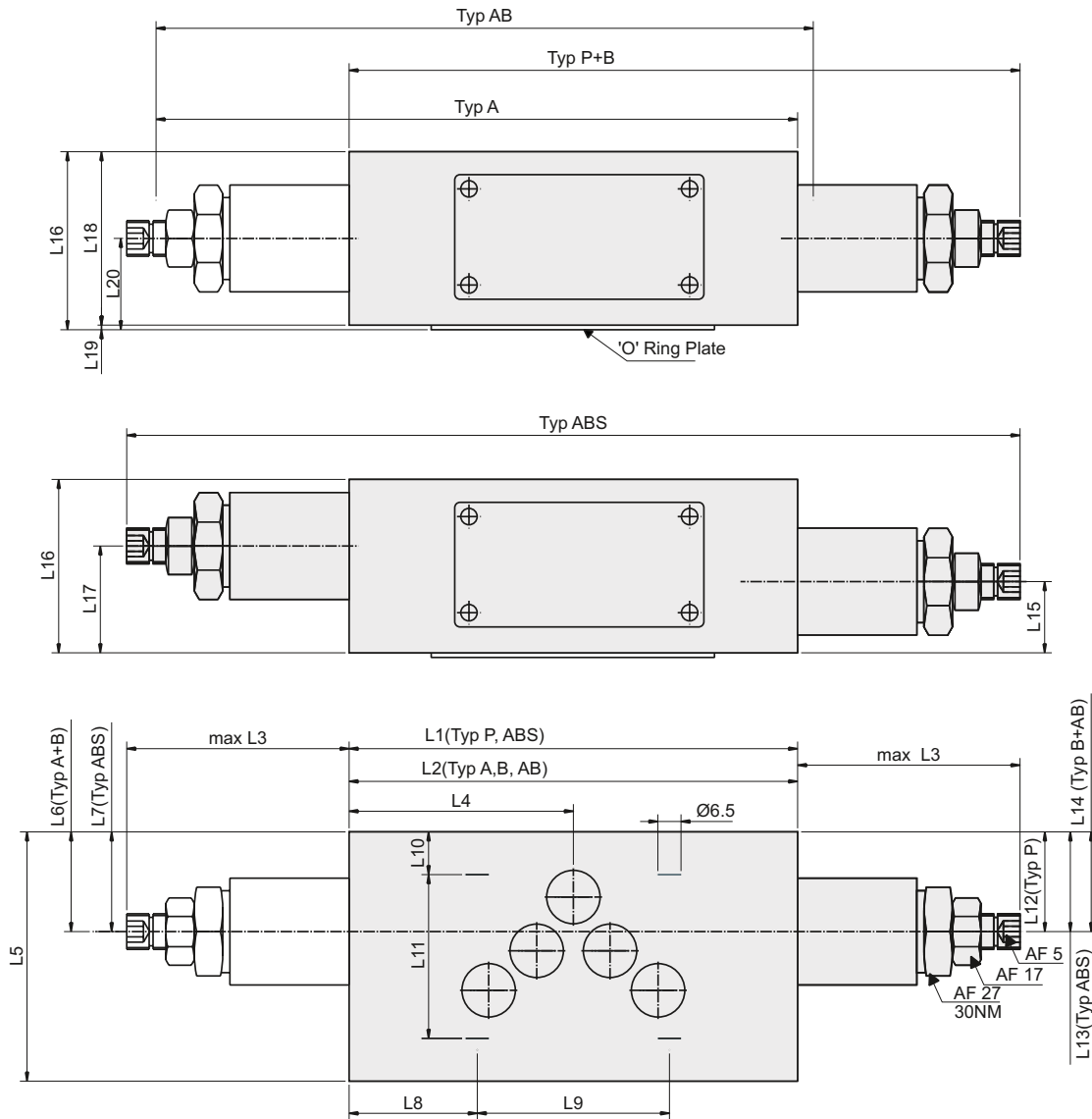
### ZDV-P/A/B/ABS02



### ZDV-AB02



**INSTALLATION - 3.0 / 3.7 kg**



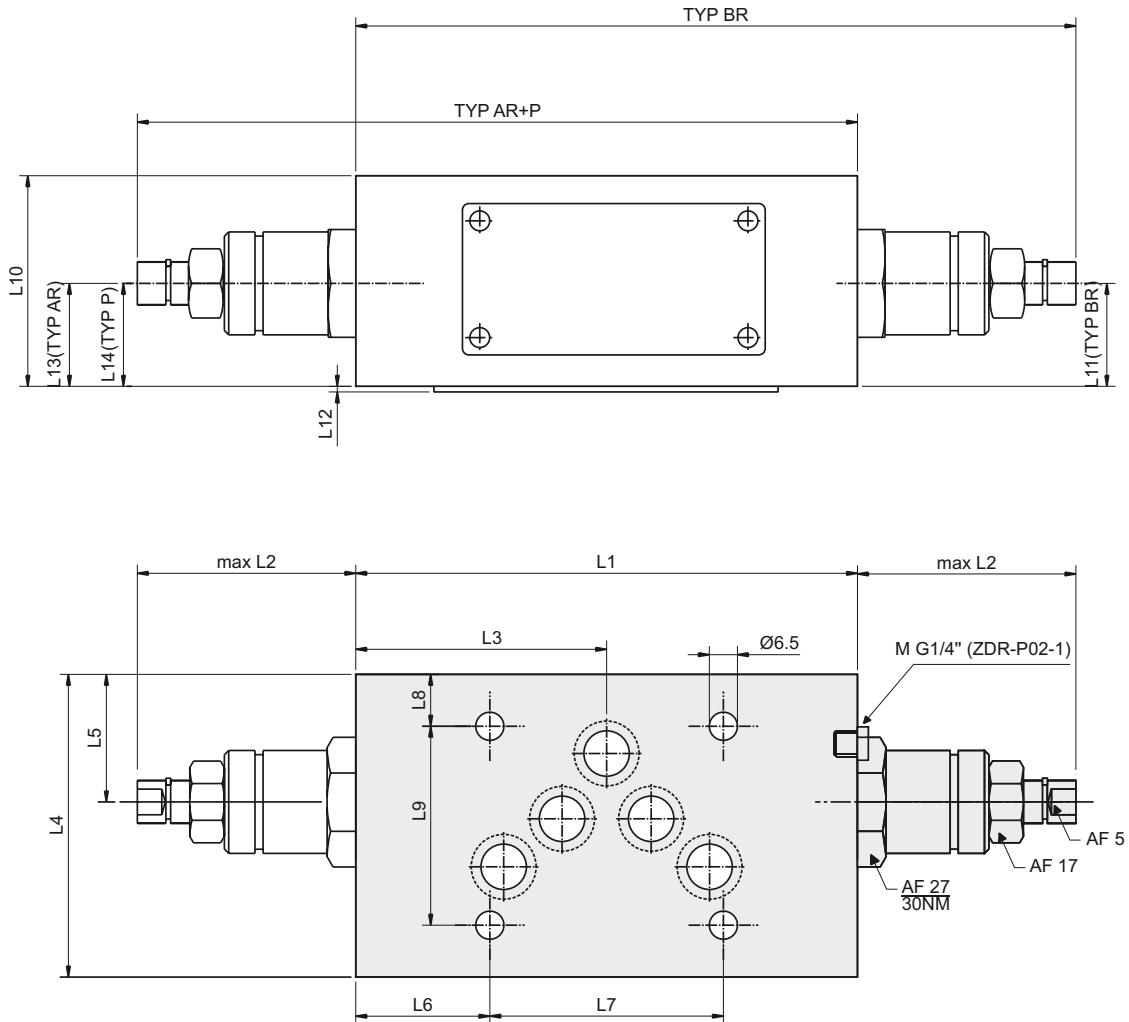
UNITS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18	L19	L20
mm	126.0	116.0	62.5	58.0	70.0	30.0	28.0	31(36)	54.0	12.0	46.0	26.5	28.0	30.0	20.0	50.0	33.0	48.7	1.3	25.7
in	4.96	4.56	2.46	2.28	2.75	1.811	1.1	1.22 1.42	2.12	0.47	1.81	1.04	1.1	1.18	0.78	1.96	1.23	1.92	0.05	1.01

**SERVICE INFORMATION:**

MODEL CODE	SPARE PART NO.	DETAILS
VZDV-02-1	V098-91116-0	CARTRIDGE
VZDV-02-5	V098-91117-0	CARTRIDGE
VZDV.....D1	V098-91076-0	SEALKIT
VZDV.....D5	V098-91077-0	SEALKIT
VZDV-5	VS16-85742	'O' RING PLATE



**INSTALLATION - 2.9 / 3.0 kg**



UNITS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14
mm	116.0	50.5	58.0	70.0	29.5	31.0	54.0	12.0	46.0	50.0	23.8	1.3	23.8	26.3
in	4.56	1.99	2.28	2.75	1.16	1.22	2.12	0.47	1.18	1.96	0.94	0.05	0.94	1.03

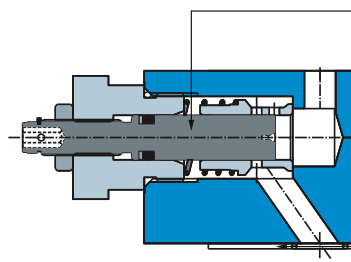
**SERVICE INFORMATION:**

MODEL CODE	SPARE PART NO.	DETAILS
VZDR-02-1	V098-91102-0	CARTRIDGE
VZDR-02-5	V098-91103-0	CARTRIDGE
VZDR.....D1	V098-91082-0	SEALKIT
VZDR.....D5	V098-91083-0	SEALKIT
VZDR-S	VS16-85742-0	'O' RING PLATE

# THROTTLE WITH CHECK - ZRD



- Max. operating pressure 350 bar
- Max. flow 160 l/min
- Viscosity range 10 ... 500 cSt
- Fluid temperature range -18 ... + 60hC

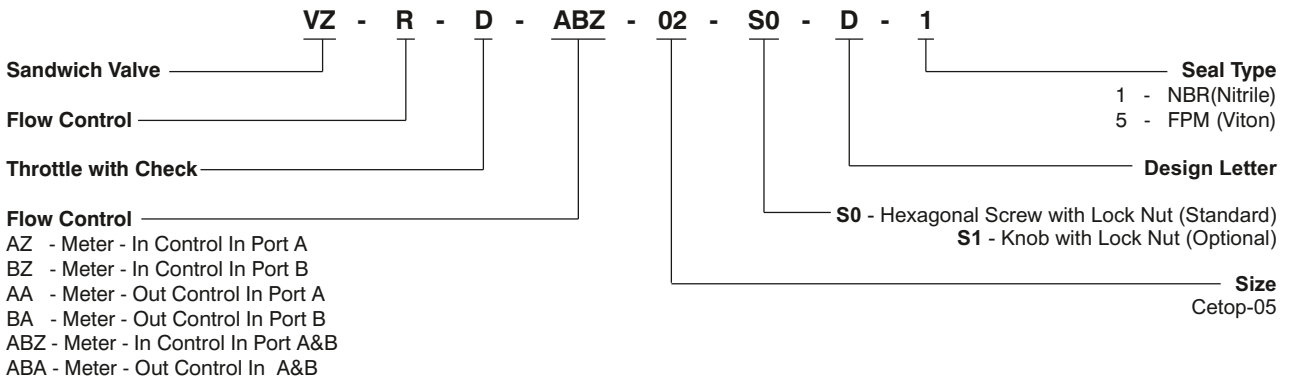


**Complete cartridge for**  
ZRD-.02-1 = 098-91120-0

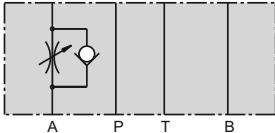
**Seal kit for:**  
ZRD01 ... D1 = 098-91098-0  
ZRD01 ... D5 = 098-91099-0

**O-Ring Plate**  
S 16-85742-0

## ORDERING CODE :

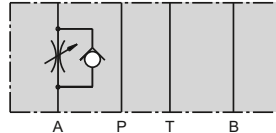


### METER - IN CONTROL IN PORT A



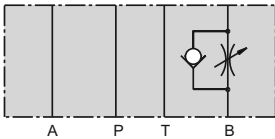
Series: ZRD-AZ02-S0-D1  
Order No. 098-91059-0

### METER - OUT CONTROL IN PORT A



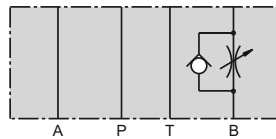
Series: ZRD-AA02-S0-D1  
Order No. 098-91015-0

### METER - IN CONTROL IN PORT B



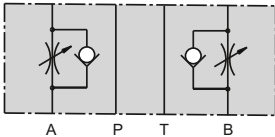
Series: ZRD-BZ02-S0-D1  
Order No. 098-91060-0

### METER - OUT CONTROL IN PORT B



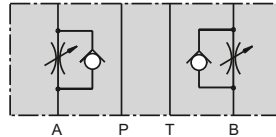
Series: ZRD-BA02-S0-D1  
Order No. 098-91016-0

### METER - IN CONTROL IN PORT A&B

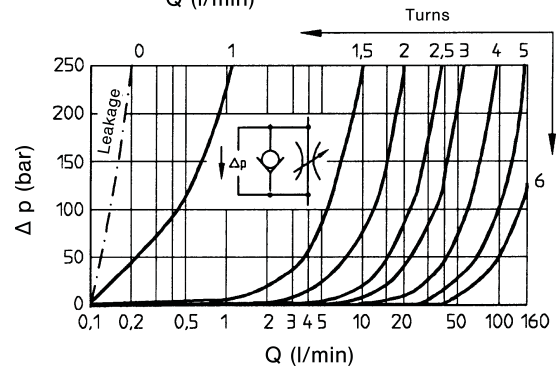
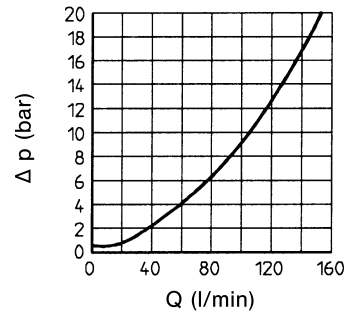


Series: ZRD-ABZ02-S0-D1  
Order No. 098-91061-0

### METER - OUT CONTROL IN A&B

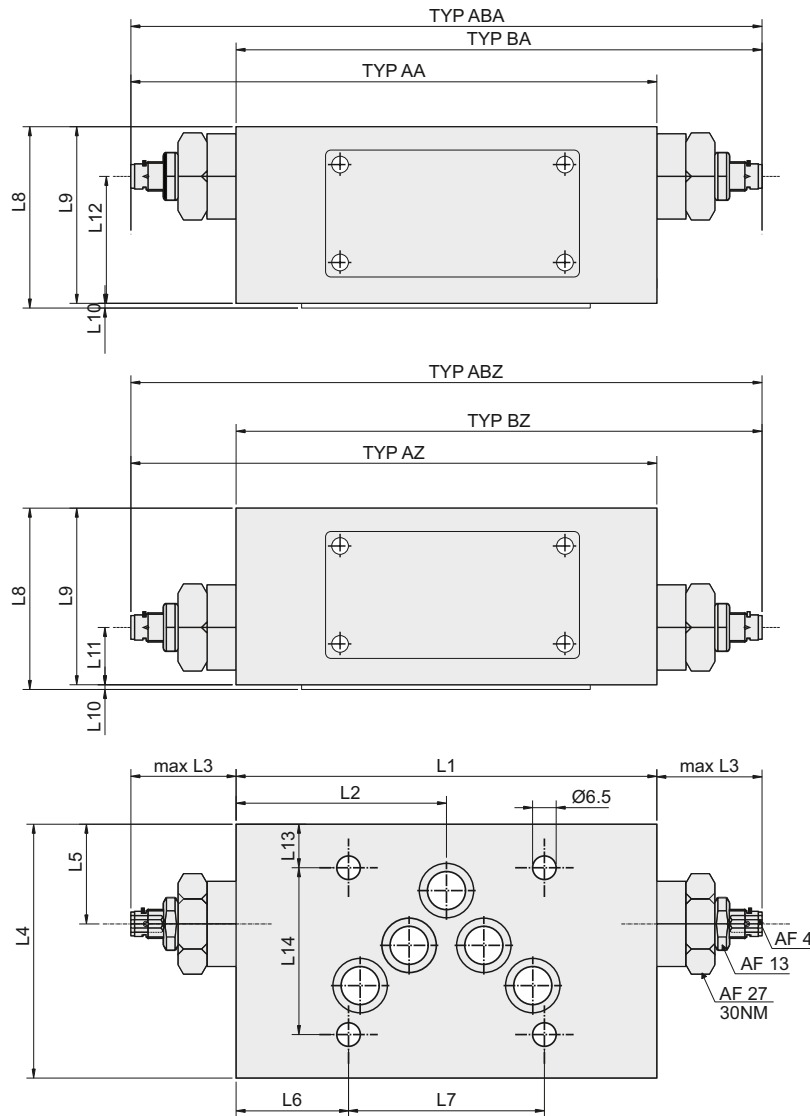


Series: ZRD-ABA02-S0-D1  
Order No. 098-91017-0



at 33 cSt

## INSTALLATION - 2.8 / 2.9 kg



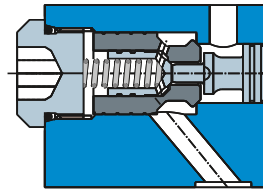
UNITS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14
mm	116.0	58.0	22.0	70.0	27.5	31.0	54.0	50.0	48.7	1.3	16.3	35.0	12.0	46
in	4.56	2.28	0.87	2.75	1.08	1.22	2.12	1.96	1.91	0.05	0.64	1.37	0.47	1.81

### SERVICE INFORMATION:

MODEL CODE	SPARE PART NO.	DETAILS
VZRD-02	V098-91120-0	CARTRIDGE
VZRD02.....D1	V098-91098-0	SEALKIT
VZRD02.....D5	V098-91099-0	SEALKIT
VZRD-S	VS26-85742-0	O-RING PLATE

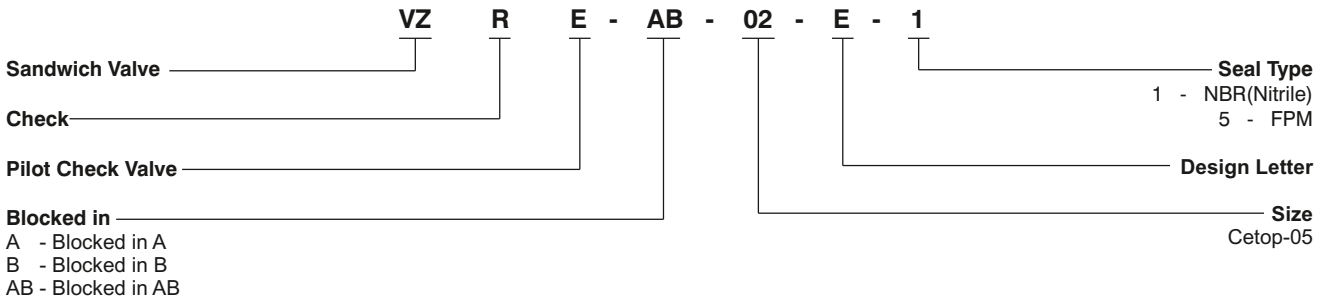


- Max. operating pressure 350 bar
- Max. flow 120 l/min
- Opening ratio 1 : 6 (pilot cone /main cone)
- Cracking pressure 2 bar (check valve)
- Viscosity range 10 ... 500 cSt
- Fluid temperature range -18 ... + 60°C

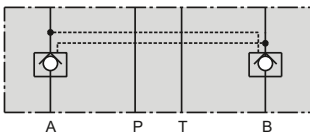


**Seal kit for**  
 ZRE... D1 = 098-91090-0  
 ZRE... D5 = 098-91091-0

## ORDERING CODE :

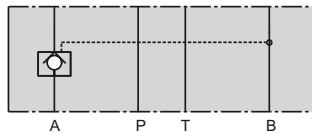


### BLOCKED IN A AND B



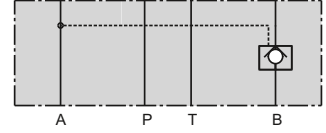
Model code: ZRE-AB02-D1  
 Order No. 098-91300-0

### BLOCKED IN A



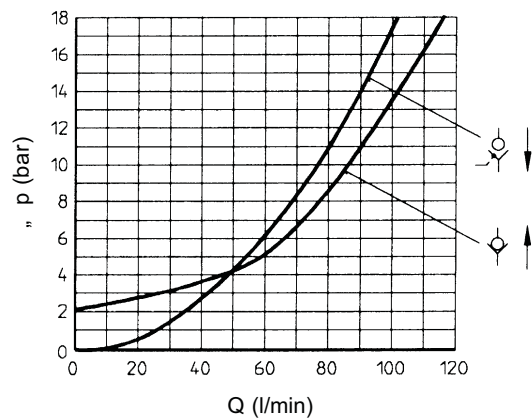
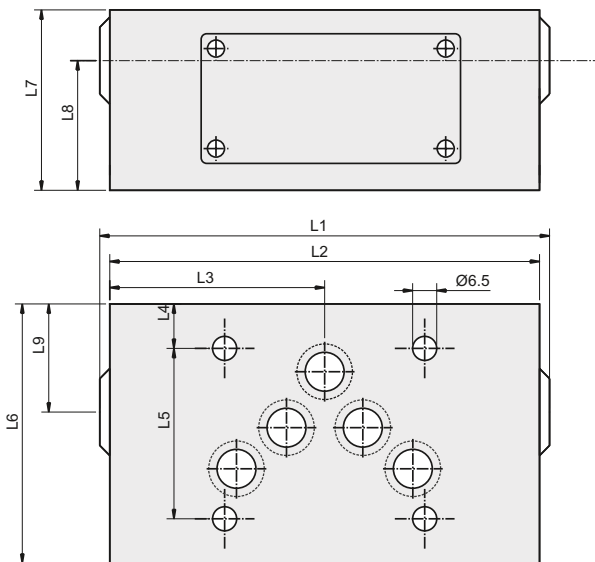
Model code: ZRE-A02-D1  
 Order No. 098-91298-0

### BLOCKED IN B



Model code: ZRE-B02-D1  
 Order No. 098-91304-0

## INSTALLATION - 3.1 kg



### SERVICE INFORMATION:

MODEL CODE	SPARE PART NO.	DETAILS
VZRE.....D1	V098-91090-0	SEALKIT
VZRE.....D5	V098-91091-0	SEALKIT

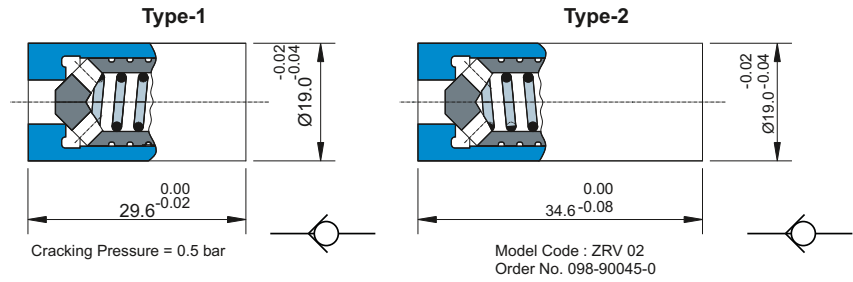
UNITS	L1	L2	L3	L4	L5	L6	L7	L8	L9
mm	117.0	116.0	58.0	12.0	46.0	70.0	50.0	35.0	28.5
in	4.60	4.56	2.28	0.47	1.81	2.75	1.97	1.38	1.12

**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 the seal kit).

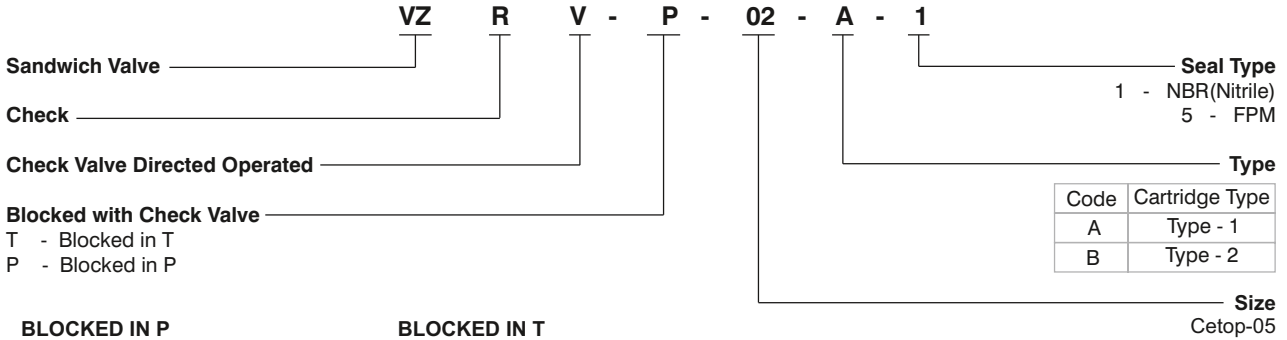
# CHECK VALVE - ZRV



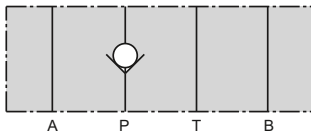
- Max. operating pressure 350 bar
- Max. flow 100 l/min
- Cracking pressure 0.5 bar
- Viscosity range 10 . . . 500 cSt
- Fluid temperature range -18 . . . + 60°C



## ORDERING CODE :

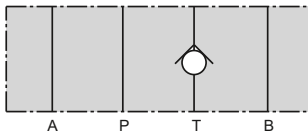


### BLOCKED IN P



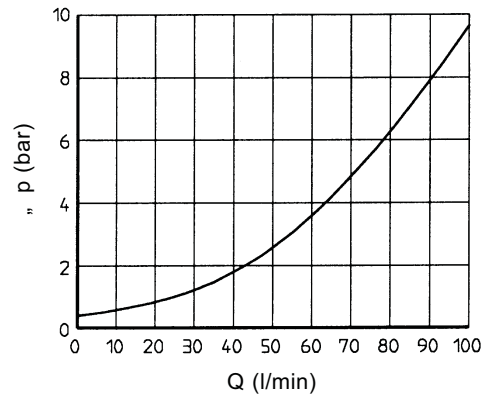
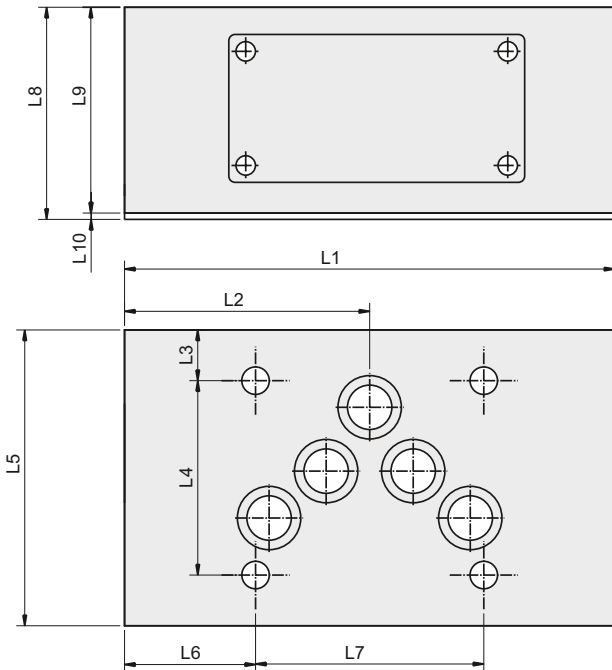
Series :ZRV-P02  
Order No :V98-90043-0

### BLOCKED IN T



Series :ZRV-T02  
Order No :V98-90044-0

## INSTALLATION - 2.0kg



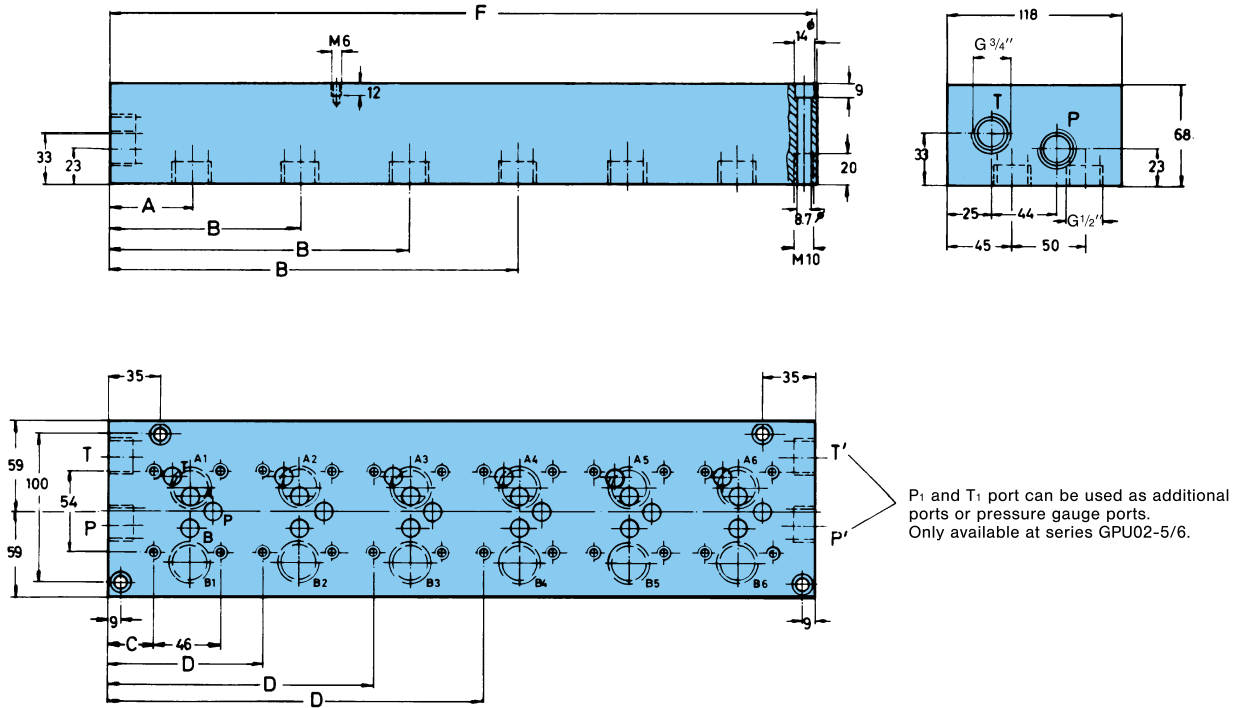
at 33 cSt

## SERVICE INFORMATION:

MODEL CODE	SPARE PART NO.	DETAILS
VZRV.....S	VS16-85742-0	O-Ring plate
VERV-02	V098-90045-0	VERV CARTRIDGE

UNITS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
mm	116.0	58.0	12.0	46.0	70.0	31.0	54.0	35.9	34.6	1.3
in	4.57	2.28	0.47	1.81	2.75	1.22	2.12	1.41	1.36	0.05

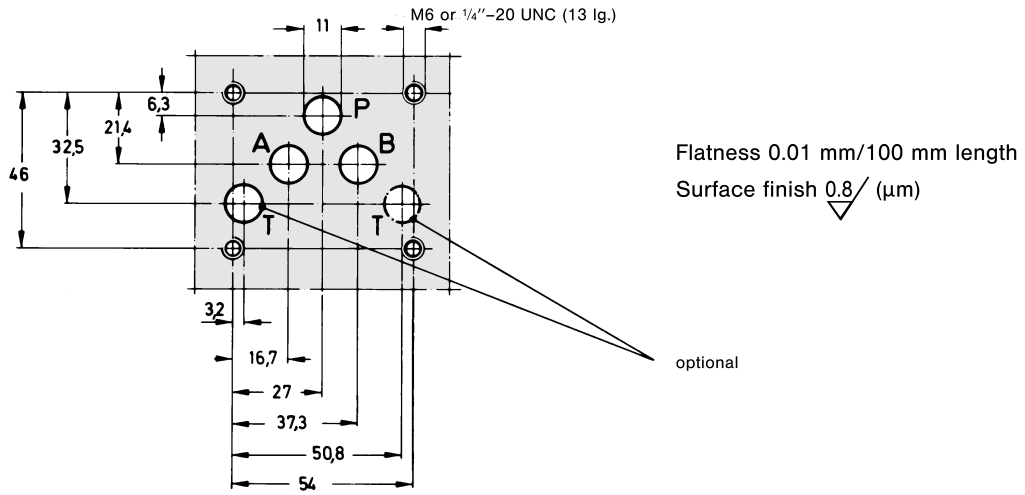
**Multiple Subplate - Series GPU**



Qty. of Valves	Series	Order No.	Dimensions					Weight
			A	B	C	D	F	(kg)
2	GPU 02-2	099-90827-0	54.5	128.5	30	104	180	8.9
3	GPU 02-3	099-90812-0	54.5	202.5	30	178	254	12.5
4	GPU 02-4	099-90813-0	54.5	276.5	30	252	328	16.1
5	GPU 02-5	099-90831-0	54.5	350.5	30	326	402	19.7
6	GPU 02-6	099-90833-0	54.5	424.5	30	400	476	23.3

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

**Mounting Configuration according to CETOP, ISO and DIN**



**Note:**  
Information for directional control valves 4D02 (CETOP 05) and single subplates see publication 4-EN 3300 .

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





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**HYDRAULICS :**

**Pumps**

- Vane : • Fixed Displacement (Single / Double / Triple & Drive Train) 6 to 540 cc / rev and up to 320 bar pressure
- Variable Displacement Vane (11 & 22 cc/rev)
- Piston : • Variable Displacement Piston ( Swash plate design for Open loop) 9 to 140 cc/rev and up to 280 bar pressure

**Motors**

- Vane : • 5 to 811 Nm Torque and Max. Pressure 4000 rpm
- Roller Cam : • 71 to 3040 Nm Torque & 400 to 750 rpm

**Pressure Controls**

- Relief / Reducing / Unloader / Sequence Valves (up to 350 Bar pressure with threaded or flanged ports) 3/8" to 1 1/2"

**Check Valves**

- Direct and Pilot operated (3/8" to 2")

**Throttle Valves**

- With & without free return flow check valve (3/8" to 1 1/2")

**Flow Control Valves**

- pressure and temperature compensated (3/8" to 3/4")

**Directional Control Valves**

- Manual / Pilot and Solenoid operated (1/4" to 3/4")

**Mobile Valves**

- 1 to 8 sections, 80 LPM flow and up to 242 bar pressure.

**Cartridge & Seat valves**

- Manifolds and Complete Power packs
- 40 to 1000 mm bore, up to 8500 mm stroke and 500 bar pressure Tie Rod, Mill Duty, Mobile Duty and Custom designs

**PNEUMATICS :**

**FRLs**

- 1/4" to 2"

**Cylinders**

- Compact, ISO, Heavy Duty Tie Rod and Custom designs (10 - 500 mm Bore) and up to 17 bar pressure

**Rotary actuators**

- 90° actuation

**2/3/4-way DC Valves**

- Spool (with & without seals), Poppet, Diaphragm & D-slide Designs. M5 and 1/8 to 1" size. Manual / Mechanical / Pilot & Solenoid Operators.

**Auxilliary Valves**

- Flow Control, Non-Return, Shuttle, Quick Exhaust Etc.

**Presses**

- C-frame and Column type

**SYSTEMS :**

- Ship Stabilizers & Steering Gear and complete Turnkey Hydraulic/Pneumatic / Hydro Mechanical systems

With its own in-house product development & enhancement, expansion of product range is an ongoing process at Veljan to meet the market demands.

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Note: Product details are liable to change without any notice

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