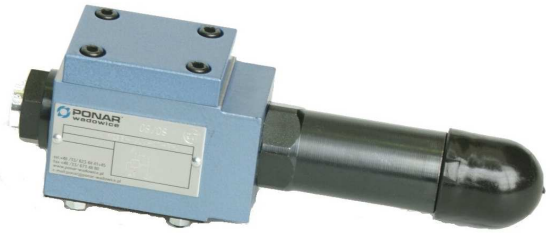
PONAR wadowice	Pressure reducing valve type UZRB6			WK 424 770
	NS 6	up to 21 MPa	up to 30 dm^3/min	03.2015

DATA SHEET - OPERATION MANUAL

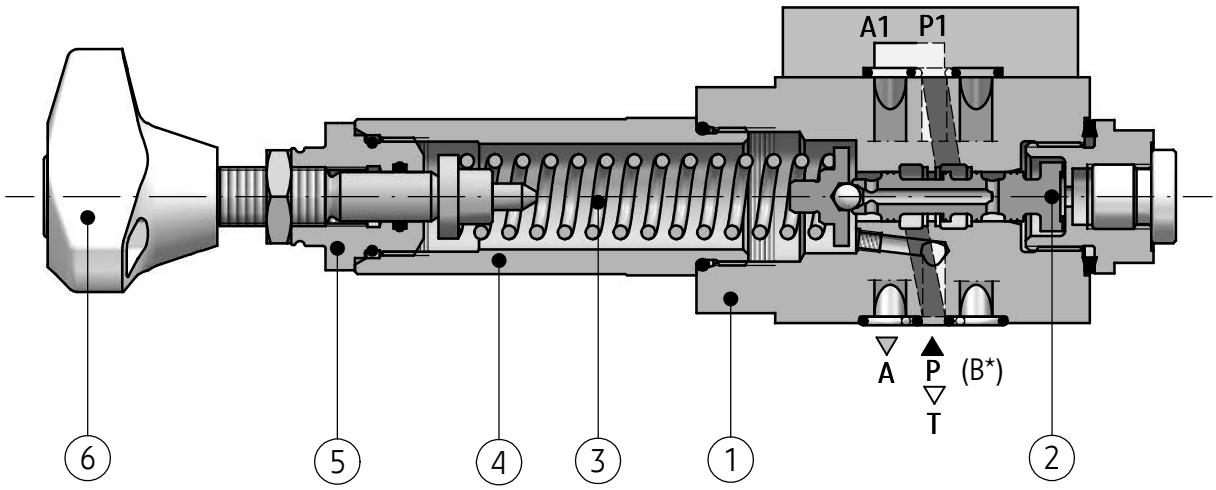
APPLICATION

Pressure reducing valve for subplate mounting type **UZRB6...** is used to maintain pressure behind the valve constant, on condition that pressure in front of the valve is higher. The valve may also be applied where undesirable pressure increase behind the valve could appear. An additional connection to a tank is then open in order to reduce excessive pressure increase.



DESCRIPTION OF OPERATION

UZRB6/23 - 210 Y 1



The spool (2) is held in neutral position in the housing (1) by the spring (3). At the same time pressure in line **A** affects the spool surface opposite the spring. The valve is open in initial position. The spring force is set by turning the hand knob (6) of the setting element (5), which is screwed in the sleeve (4). If pressure exceeds the value set at the spring, the spool moves along and reduces the flow from **P** to **A**. Thus larger restriction of the flow will follow and as a result pressure behind the valve will be limited. If pressure in line **A** continues to rise, connection from **P** to **A** is cut off. The spool (2) is pushed further against the spring and line **A** is connected to **T**. Oil drains until pressure stops to increase. Optionally, the valve in version UZRB6...**Z**... can be equipped with check valve, which allows free flow in direction from port **A** to **P**.

TECHNICAL DATA

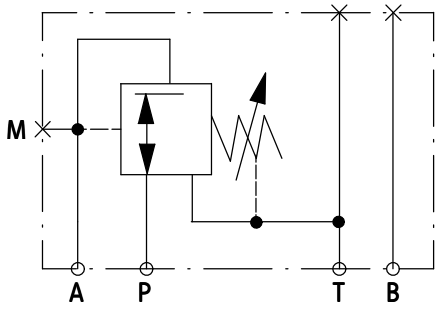
Hydraulic fluid	mineral oil	
Required fluid cleanliness class	**ISO 4406 class 20/18/15**	
Nominal fluid viscosity	37 mm ^{2}/s at temperature 55 ^{o}C	
Viscosity range	2,8 up to 380 mm ^{2}/s	
Fluid temperature range (in a tank)	recommended	40^{o}C up to 55^{o}C
	max	-20^{o}C up to +70^{o}C
Ambient temperature range	- 20^{o}C up to +70^{o}C	
Max operating pressure (on inlet)	**lines P, A, B**	**31,5 MPa**
	line T	**1,5 MPa**
Max set pressure (in line **P**)	**21 MPa** (at pressure in line **T** = 0 MPa)	
Max flow rate	**30 dm^3/min**	
Weight	1,4 kg	

INSTALLATION AND OPERATION REQUIREMENTS

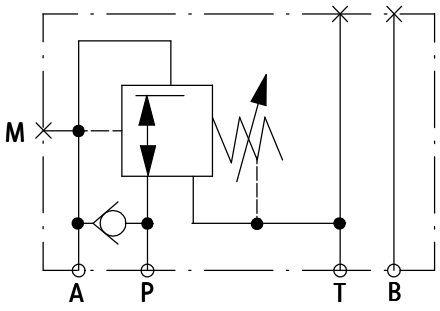
1. Only fully functional and operational valve must be used.
2. During the period of operation must be kept fluid viscosity acc. to requirements defined in this Data Sheet - Operation Manual
3. In order to ensure failure free and safe operation the following must be checked:
   - proper working of the valve
   - cleanliness of the hydraulic fluid
4. Due to heating of valve body to high temp., the valve shall be placed in such way to eliminate the risk of accidental contact with the valve body during operation or to apply suitable covers acc. to PN-EN ISO 13732 - 1 and PN - EN 982
5. In order to provide proper tightness of the valve connection to a hydraulic system, one should ensure dimension of sealing rings, tightening torques and valve operation parameters as specified in this Data Sheet - Operation Manual.
6. A person that operates the valve must be thoroughly familiar with this Data Sheet - Operation Manual.

DIAGRAMS

Hydraulic diagrams of the valve type **UZRB6...**

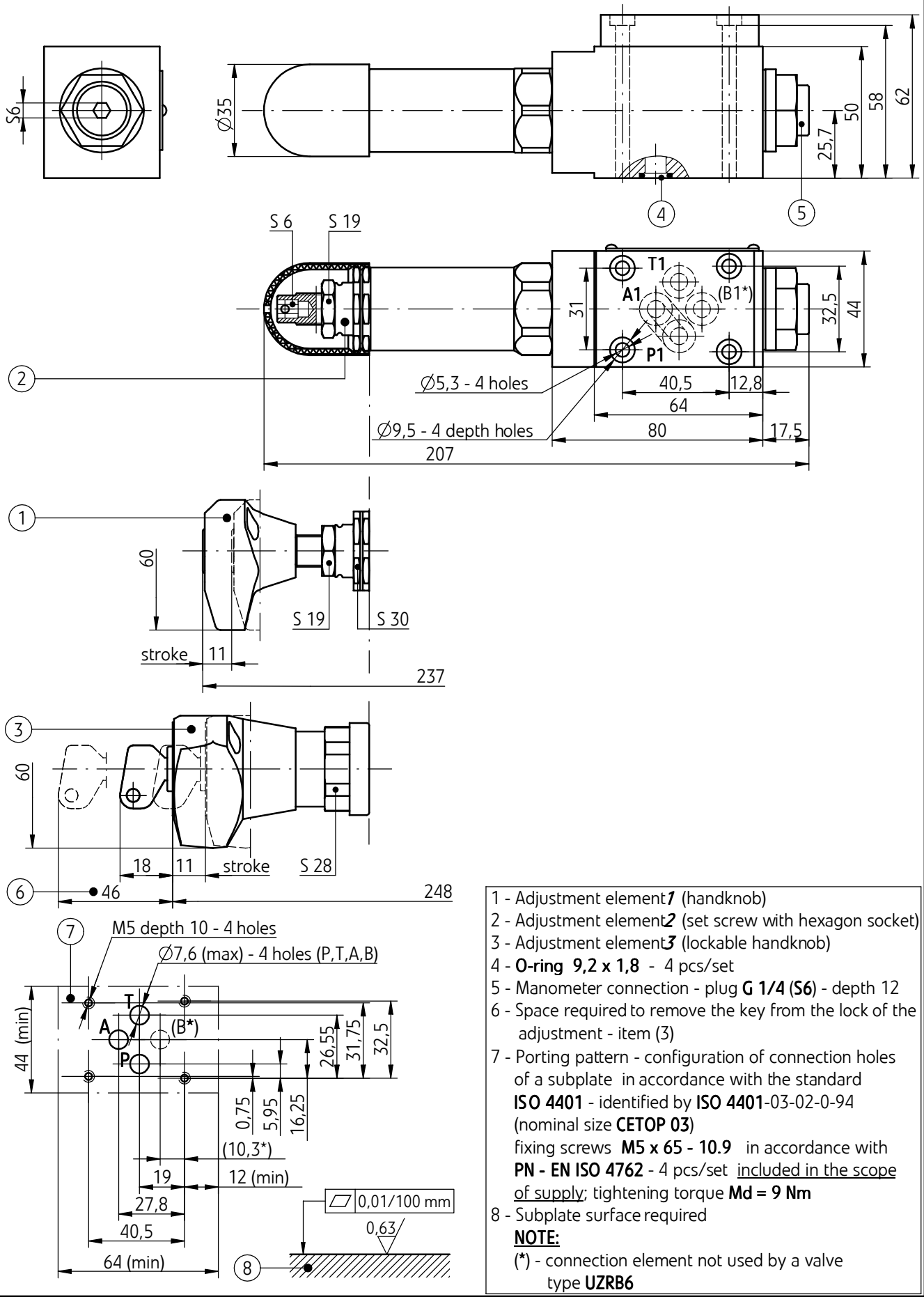


version UZRB6...**Y**...



version UZRB6...**Y**...**Z**...

OVERALL AND CONNECTION DIMENSIONS



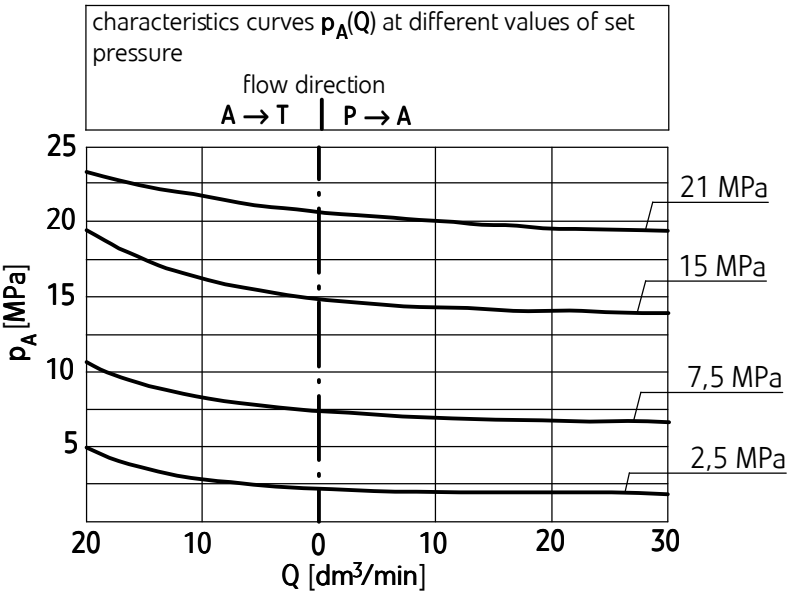
1 - Adjustment element ***1*** (handknob)
2 - Adjustment element ***2*** (set screw with hexagon socket)
3 - Adjustment element ***3*** (lockable handknob)
4 - **O-ring 9,2 x 1,8** - 4 pcs/set
5 - Manometer connection - plug **G 1/4** (**S6**) - depth 12
6 - Space required to remove the key from the lock of the adjustment - item (3)
7 - Porting pattern - configuration of connection holes of a subplate in accordance with the standard **ISO 4401** - identified by **ISO 4401**-03-02-0-94 (nominal size **CETOP 03**)
fixing screws **M5 x 65 - 10.9** in accordance with **PN - EN ISO 4762** - 4 pcs/set included in the scope of supply; tightening torque **Md = 9 Nm**
8 - Subplate surface required

NOTE:
(*) - connection element not used by a valve type **UZRB6**

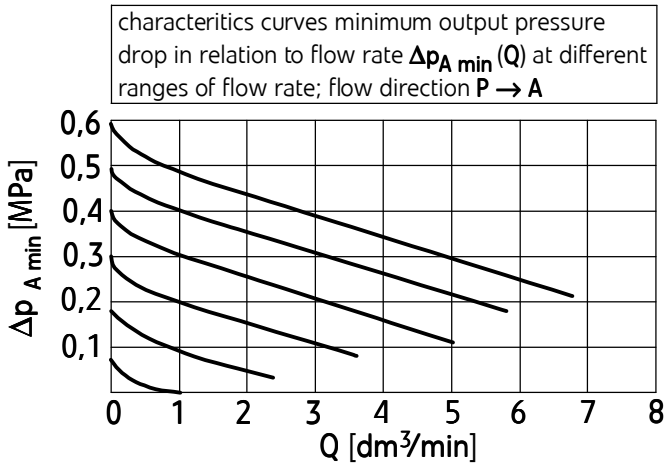
PERFORMANCE CURVES

measured at viscosity ν = 41 mm^2/s and temperature t = 50°C

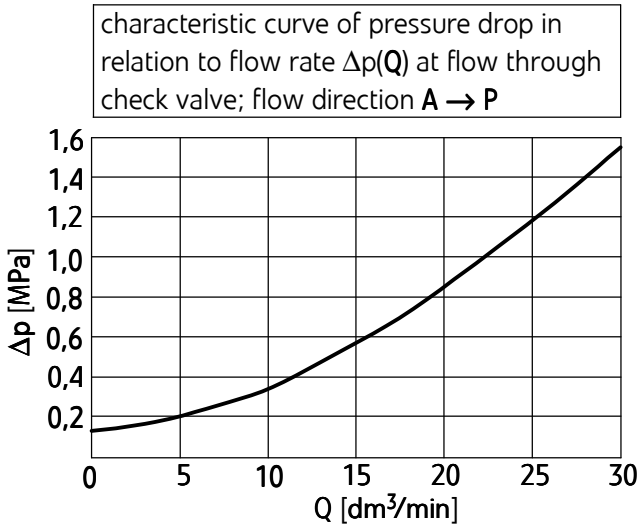
Output pressure in relation to flow rate $p_A(Q)$



Effect of flow changes on output pressure $\Delta p_{A\,min}(Q)$



Flow resistance curve at flow through check valve



HOW TO ORDER

UZRB	6	/	+		Y				★

Nominal size (NS)
NS6 = **6**

Series number
(20-29) - connection and installation dimensions unchanged = 2X
series 23 = **23**

Settable pressure range
up to 2,5 MPa = 25
up to **7,5 MPa** = **75**
up to 15 MPa = 150
up to **21 MPa** = **210**

Controlling circulation
internal pilot flow supply, **external leakage drain via line T**
(for all valve versions) = **Y**

Adjustment element
rotary knob =1
set screw with internal hexagon = **2**
lockable rotary knob = 3

Check valve
without check valve = **no designation**
with check valve (free flow direction from port **A** to **P**) = Z

Sealing
NBR (for fluids on mineral oil base) = **no designation**
FKM (for fluids on phosphate ester base) = V

Further requirements in dear text
(to be agreed with the manufacturer)

NOTES:

The pressure reducing valve should be ordered according to the above coding.
The symbols in bold are the preferred versions available in short delivery time.
Coding example: UZRB6/23 - 210 Y 2

SUBPLATES AND FIXING SCREWS

Subplates must be ordered according to catalogue sheet **WK 496 480**. Subplate symbols:
G 341/01 - threaded connections G 1/4
G 342/01 - threaded connections **G 3/8**
G 502/01 - threaded connections G 1/2
G 341/02 - threaded connections M14 x 1,5
G 342/02 - threaded connections M16 x 1,5

Subplates must be ordered separately.
Valve fixing screws **M5 x 65 - 10,9** in accordance with **PN - EN ISO 4762** - 4 pcs/set included in the scope of supply.
Tightening torque **Md = 9 Nm**
The subplate symbol in bold is the preferred version available in short delivery time.

PONAR Wadowice S.A.
ul. Wojska Polskiego 29
34-100 Wadowice
tel. +48 33 488 29 00
fax.+48 33 488 21 03
www.ponar-wadowice.pl