PONAR silesia	Power pack type UHMZ 40		WK 560 504
	p_{max}= 20 MPa	Q_{max}= 10 cm^3/rev	04.2008

APPLICATION

Power pack is intended to supply hydraulic system with hydraulic fluid (oil) according to the required parameters (pressure and displacement).

DESCRIPTION

Power pack in standard consists of the oil tank and the key accessories such as:

- drain breather filter used also as the oil filler
- oil level indicator (optical)
- oil drain plug
- magnetic plug

and of pumping unit (electric motor - gear pump), oil filter (low pressure filter), and also measuring block with pressure gauge switch, pressure gauge and output connections.

Standard version of the power pack can be extended (upon customer request) with:

- hydraulic control system – according to individual scheme;
- other equipment and hydraulic machines, which are not included in the data card, after prior consultation with the manufacturer
- electric control system

The extension of hydraulic system can be made:

- on the blocks for column mounting (**WK560 520**) – standard version
- on multi-station manifold blocks type **ULRA 6**... (**WK 450 499**)

Power pack is usually used for short - time operation. When the power pack is applied to continuous running under load, outside cooling system must be used.

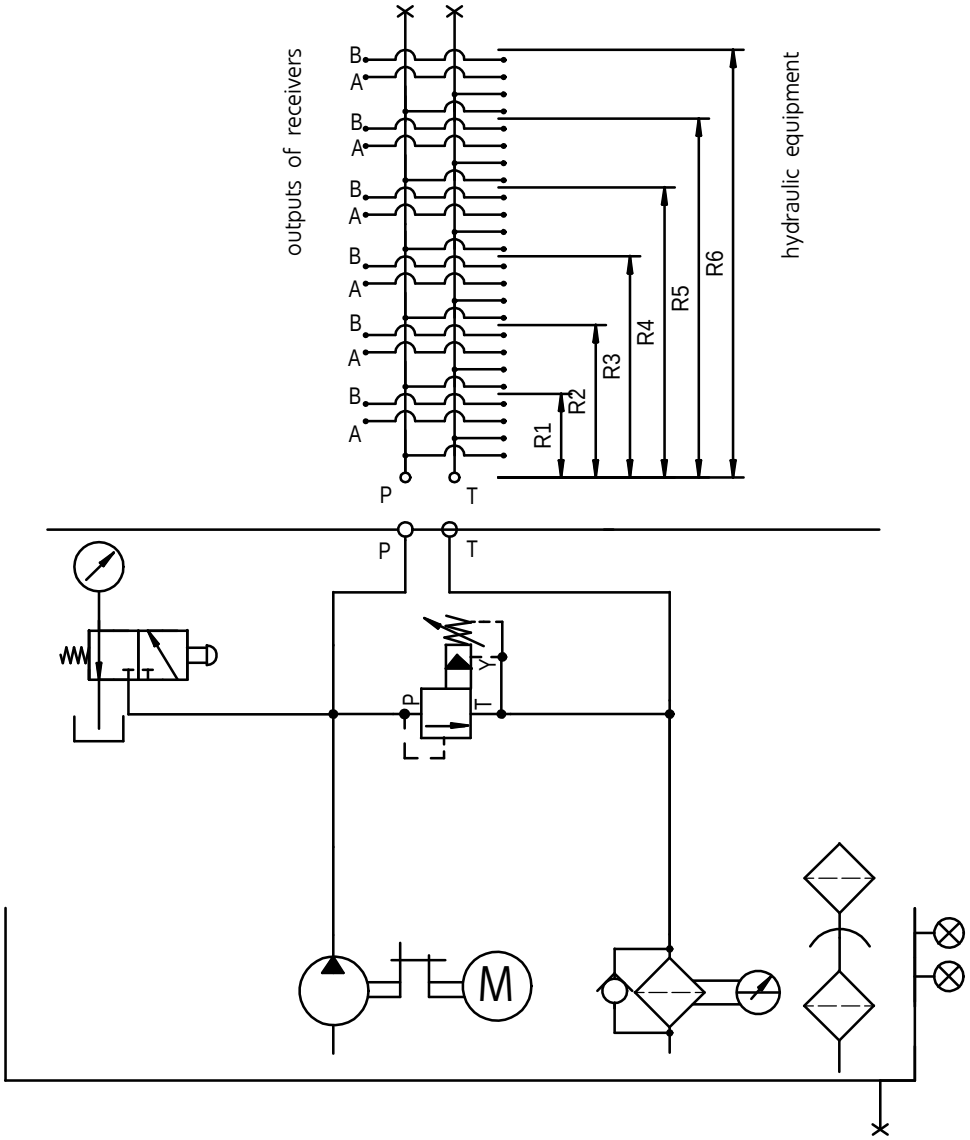
TECHNICAL DATA (table1)

Nominal oil tank capacity	40 dm^3			
Oil capacity difference corresponding to oil level difference max - min	up to 7,4 dm^3			
Hydraulic fluid	mineral oil			
Operating temperature range	- 10 up to + 70 °C			
Standard filtration	16µm			
Viscosity	10 ÷ 380 mm^2/s			
Motor supply voltage	230/400V 50Hz (other, if agreed)			
Type of pump	10C2,5X053G	10C4,2X053G	10C6,1X053G	20C10X016G
Operating pressure	up to 20 MPa	up to 20 MPa	up to 20 MPa	up to 20 MPa
Displacement	2,5 cm^3/revolution	4,2 cm^3/revolution	6,1 cm^3/revolution	10 cm^3/revolution

HYDRAULIC SCHEME

Connections (table 2)

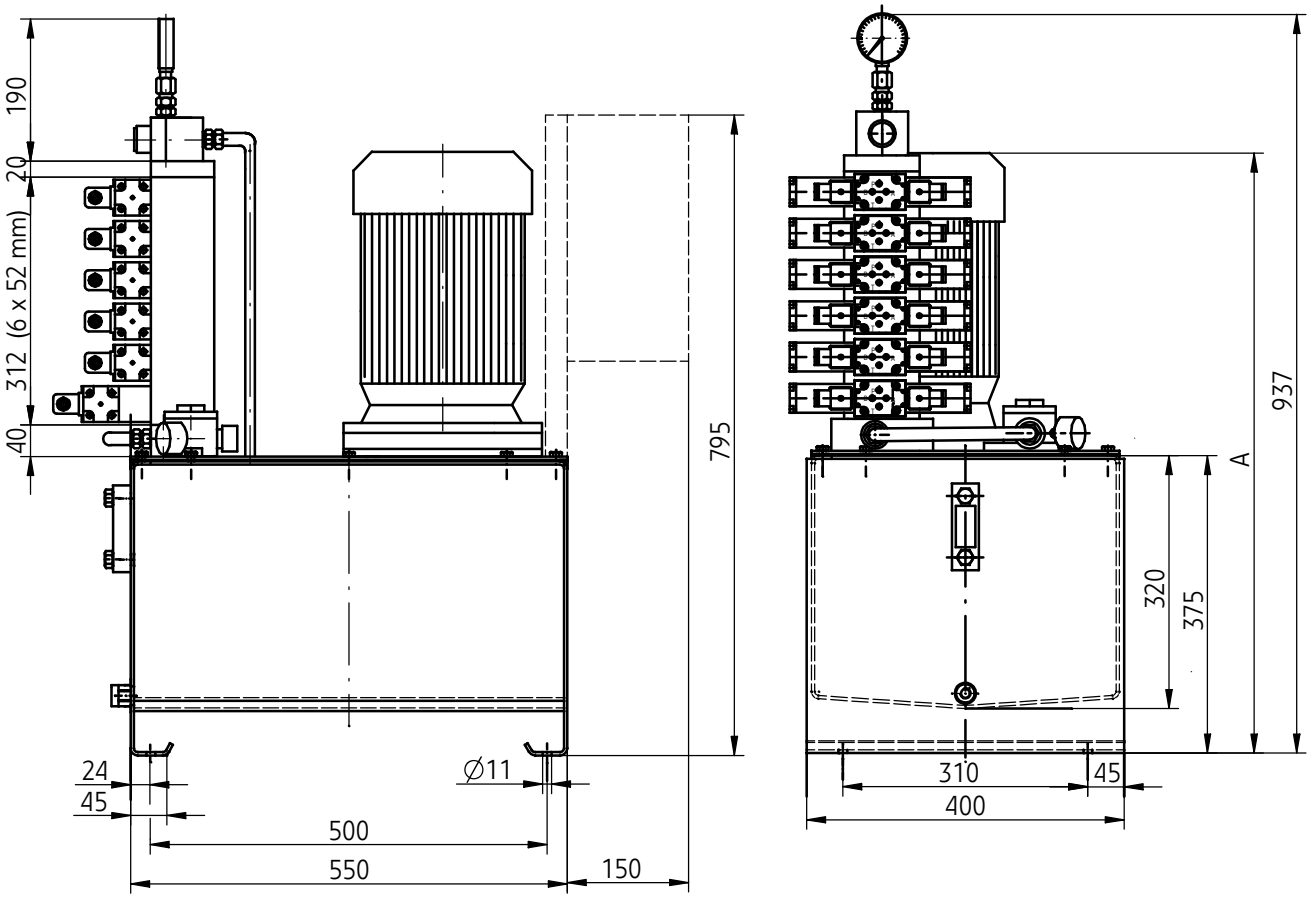
Port	P	T	A	B
Connections for NS6	G1/2"	G1/2"	G1/2"	G1/2"

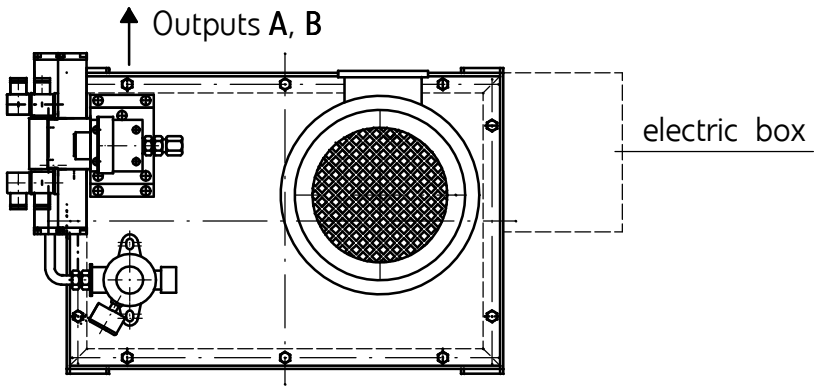


Operating pressure range depending on the motor power and type of pump (table 3)

Motor type	Power [kW]	10C2,5X053G	10C4,2X053G	10C6,1X053G	20C10X016G
		pressure [MPa]	pressure [MPa]	pressure [MPa]	pressure [MPa]
SKg 80- 4A	0,55	7	-	-	-
SKg 80- 4B	0,75	9	6,3	-	-
SKg 90- S4	1,1	13,5	10	6,3	-
SKg 90 L4	1,5	19	13	8,4	5
SKg 90 L4PC	2,2	-	20	12,3	7,6
SKg 100 L4B	3	-	-	16,7	10
SKg 112 M4	4	-	-	20	13,8

OVERALL AND CONNECTION DIMENSIONS





Overall dimensions depending on the motor power and type of pump (table 4)

Motor type	Dimension	10C2,5X053G	10C4,2X053G	10C6,1X053G	20C10X016G
SKg 80- 4A 0,55 [kW]	A	620	-	-	-
SKg 80- 4B 0,75 [kW]	A	637	637	-	-
SKg 90-S4 1,1 [kW]	A	661	661	661	-
SKg 90L4 1,5 [kW]	A	686	686	686	686
SKg 90 L4PC 2,2 [kW]	A	-	705	705	705
SKg 100 L4B 3,0 [kW]	A	-	-	719	719
SKg 112 M4 4,0 [kW]	A	-	-	728	728

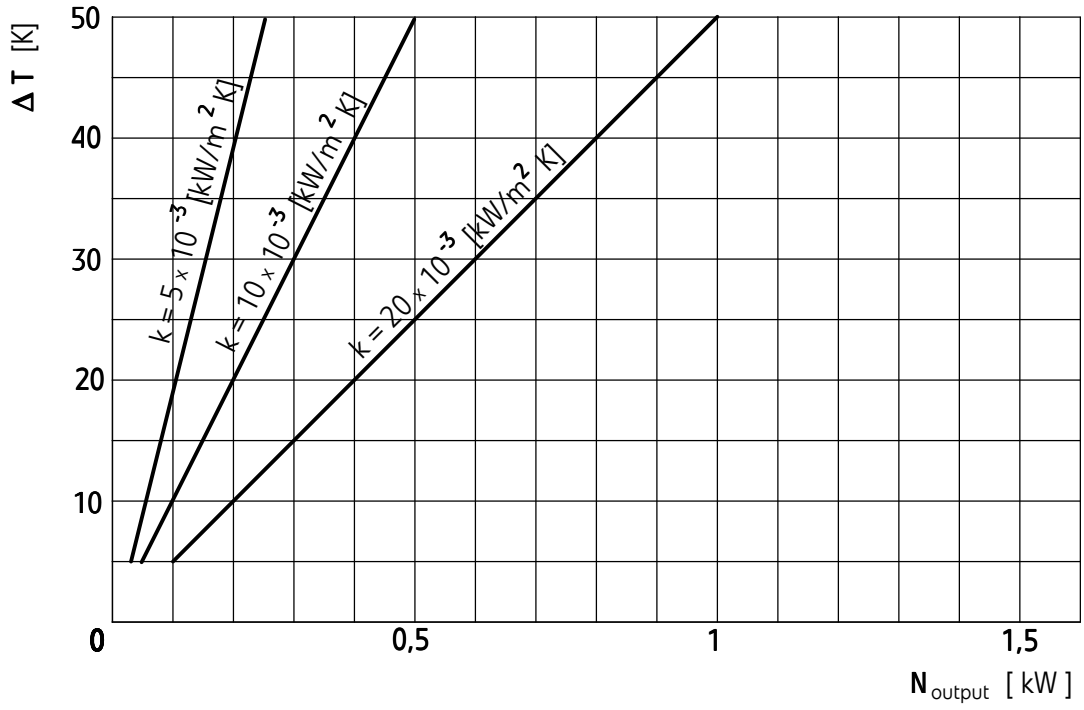
ADDITIONAL

When selecting power pack to the machine it is necessary to consider its total heat balance by specifying oil temperature in the tank – it should not exceed 55°C (328 K).
If necessary, oil cooler must be used for the hydraulic system. Thermal power output of the power pack tank to the environment can be estimated using below formula or diagram.

$$N_{output} = k \times A \times \Delta T$$

N_{output} [W] - thermal power output of the tank
A [m^2] - active surface area of the tank for the power pack tank UHMZ 40 **A** = 1,0 m^2
k [$W/m^2 \times K$] - heat exchange factor
- k = 5 $W/m^2 \times K$ - when poor air circulation, unfavourable location,
- k = 10 $W/m^2 \times K$ - normal air circulation from all directions,
- k = 20 $W/m^2 \times K$ - when intensive air circulation (unnaturally forced),

ΔT [K] - temperature difference between the tank (oil) and the environment



Thermal power output of the power pack tank UHMZ 40

HOW TO ORDER

Any order should be addressed to the manufacturer according to the below coding.

UHMZ	40	+	+	+	+	+	+	★

Tank capacity

40 dm ^{3}	= 40

Type of pump

10C2,5X053G	= 2,5
10C4,2X053G	= 4,2
10C6,1X053G	= 6,1
20C10X016G	= 10

Motor power (according to the table 3)

0,55 kW	= 0,55
0,75 kW	= 0,75
1,1 kW	= 1,1
1,5 kW	= 1,5
2,2 kW	= 2,2
3,0 kW	= 3
4,0 kW	= 4

Nominal size of hydraulic elements mounted
(referred to connections of directional valves)
NS6 = 6

Designed version

- standard version (without connection for directional valve) = no designation
- with the connection for one directional valve = R1
- with the connection for two directional valves (parallel connection of apparatus) = R2
- with the connection for three directional valves (parallel connection of apparatus) = R3
- with the connection for four directional valves (parallel connection of apparatus) = R4
- with the connection for five directional valves (parallel connection of apparatus) = R5
- with the connection for six directional valves (parallel connection of apparatus) = R6

Successive number of power pack version
(given by the manufacturer of the power pack when order confirmed) = XXXX

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

Coding example: UHMZ 40-6,1-1,5- 6 -R3-XXXX

NOTE:
Type, quantity and placing hydraulic equipment (directional valves, valves and other), must be specified in the hydraulic scheme or in another clear way.

Below hydraulic equipment manufactured by "PONAR-WADOWICE" S.A.
that can be used for control systems (table 5)

Directional spool valve, electrically operated	**WE 6**	according to WK 499 502
Directional spool valve, hydraulically operated	**WH 6**	according to WK 420 170
Directional spool valve, hand lever operated	**WMM 6**	according to WK 420 170
Directional spool valve, rotary knob operated	**WMD 6**	according to WK 420 170
Pressure reducing valves, sandwich plate	**UZRC 6**	according to WK 493 061
Pressure sequence valves, sandwich plate	**UZKC 6**	according to WK 393 060
Check valves, sandwich plate	**WZZC 6**	according to WK 450 355
Double check valves, pilot operated	**Z2S 6**	according to WK 450 360
Double check valves, sandwich plate	**Z2FS 6**	according to WK 450 232
Pressure switches (with subplate UŁBC 6)	**USPH 4**	according to WK 450 398
Pressure relief valves	**UZPR 6**	according to WK 494 060

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