

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:

- filler breather filter;
- oil level indicator (optical) with possibility of electric indication on minimum level;
- thermometer;
- revision seals;
- oil drain plug;
- magnetic filter (or 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;
- temperature regulation system (air cooler or water cooler, heater, heat sensor, temperature regulator);
- 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**),
- in board.system (using individual subplates type **G...**).

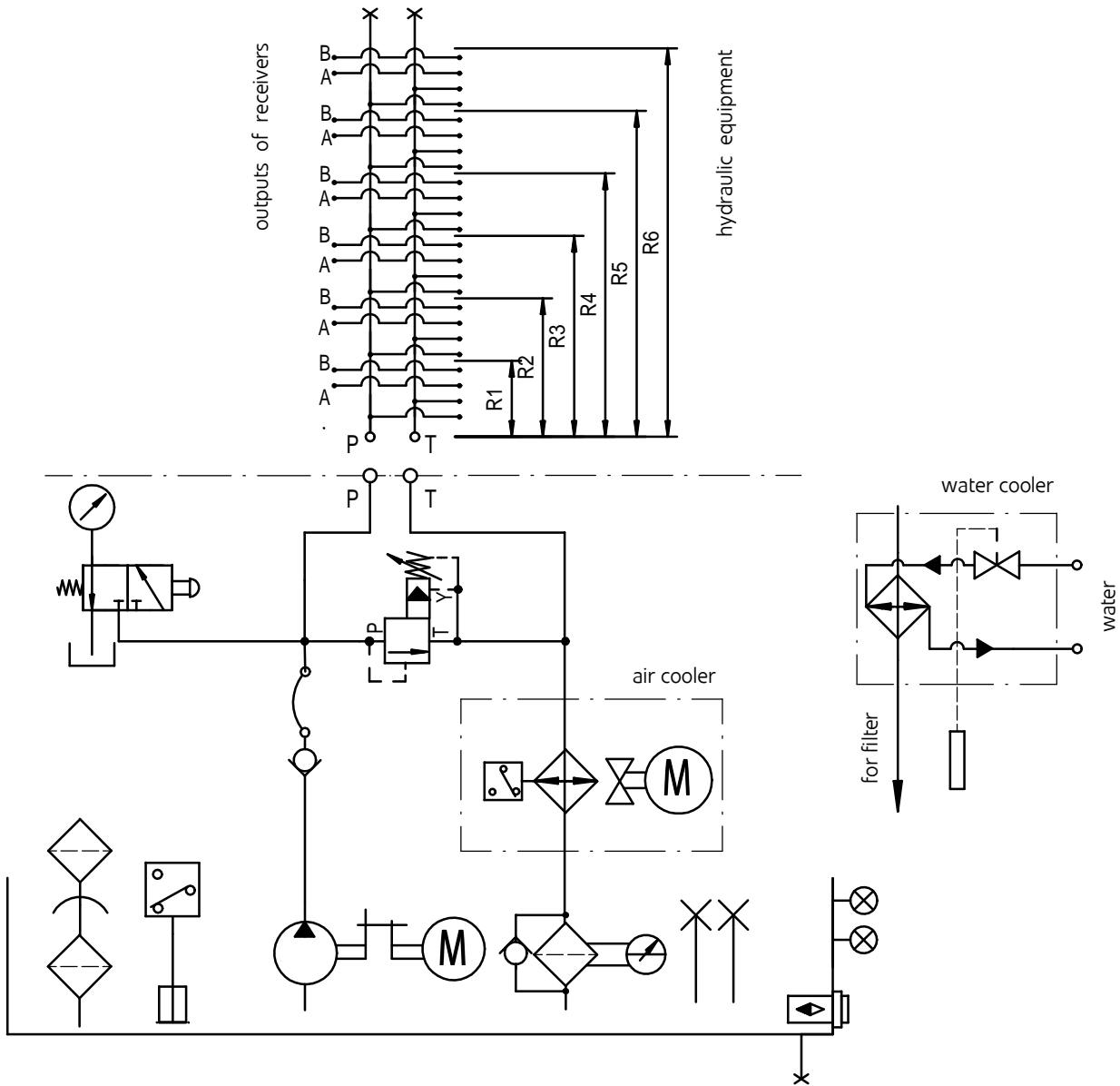
TECHNICAL DATA (table1)

Nominal oil tank capacity	63 dm ³		
Oil capacity difference corresponding to oil level difference max - min	up to 13,9 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	10C4,2X053G	10C6,1X053G	20C10X016G
Operating pressure	up to 20 MPa	up to 20 MPa	up to 20 MPa
Displacement	4,2 cm ³ /revolution	6,1 cm ³ /revolution	10 cm ³ /revolution

HYDRAULIC SCHEME

Connections (table 2)

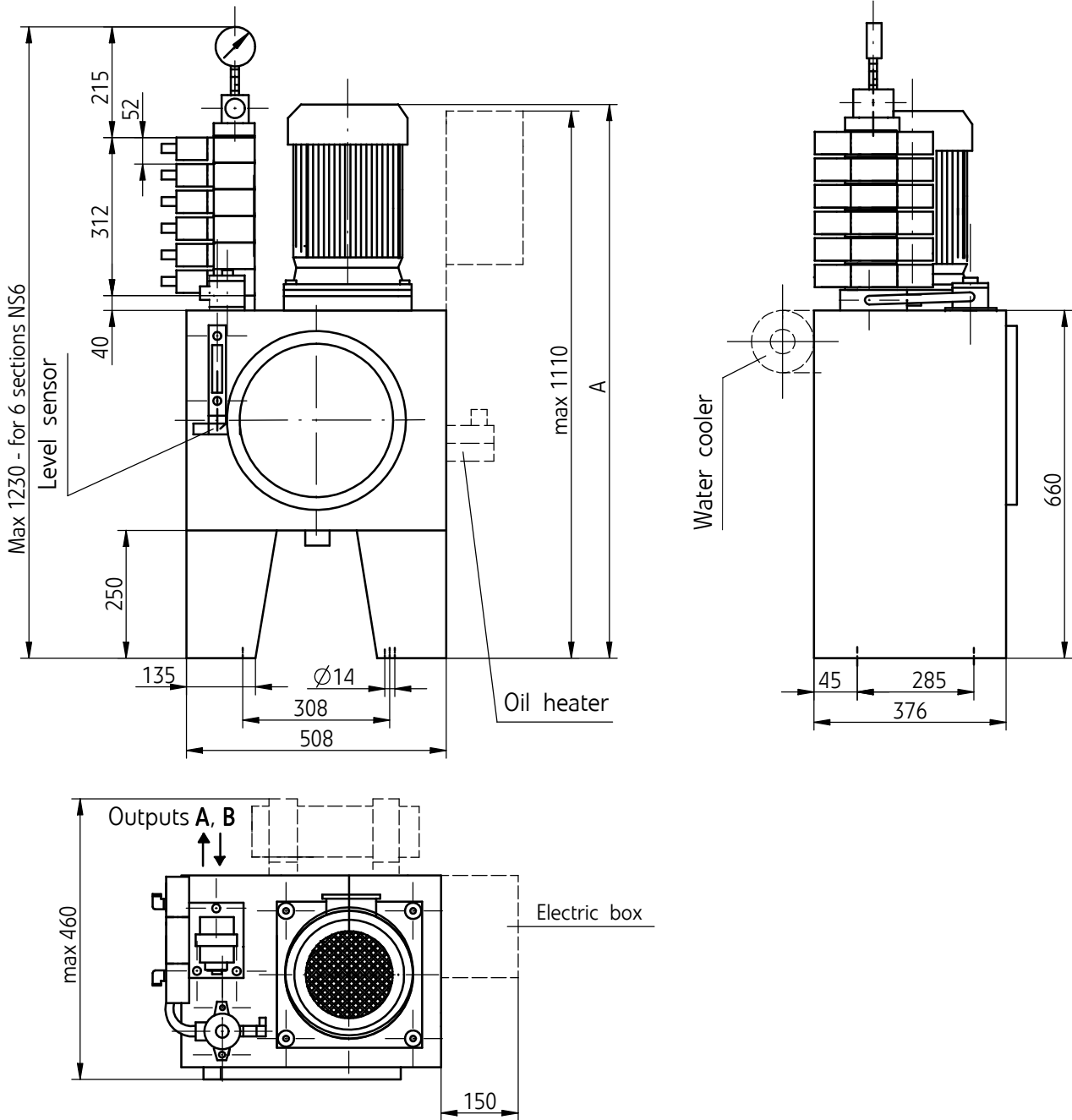
Port	P	T	A	B
Connections for NS6	G1/2"	G1/2"	G1/2"	G1/2"



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

Motor type	Power [kW]	10C4,2X053G	10C6,1X053G	20C10X016G
		pressure [MPa]	pressure [MPa]	pressure [MPa]
SKg 80- 4B	0,75	6,3	-	-
SKg 90 S4	1,1	10	6,3	-
SKg 90 L4	1,5	13	8,4	5
SKg 100 L4A	2,2	20	12,3	7,6
SKg 100 L4B	3	-	16,7	10
SKg 112 M4	4	-	20	13,8
SKg 132 S4	5,5	-	-	19

OVERALL AND CONNECTION DIMENSIONS



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

Motor type	Dimension	10C4,2X053G	10C6,1X053G	20C10X016G
SKg 80- 4B 0,75 [kW]	A	955	-	-
SKg 90S4 1,1 [kW]	A	988	988	-
SKg 90L4 1,5 [kW]	A	1015	1015	1015
SKg 100 L4A 2,2 [kW]	A	1055	1055	1055
SKg 100 L4B 3 [kW]	A	-	1055	1055
SKg 112 M4 4 [kW]	A	-	1065	1065
SKg 112 M4-PC 5,5 [kW]	A	-	-	1150

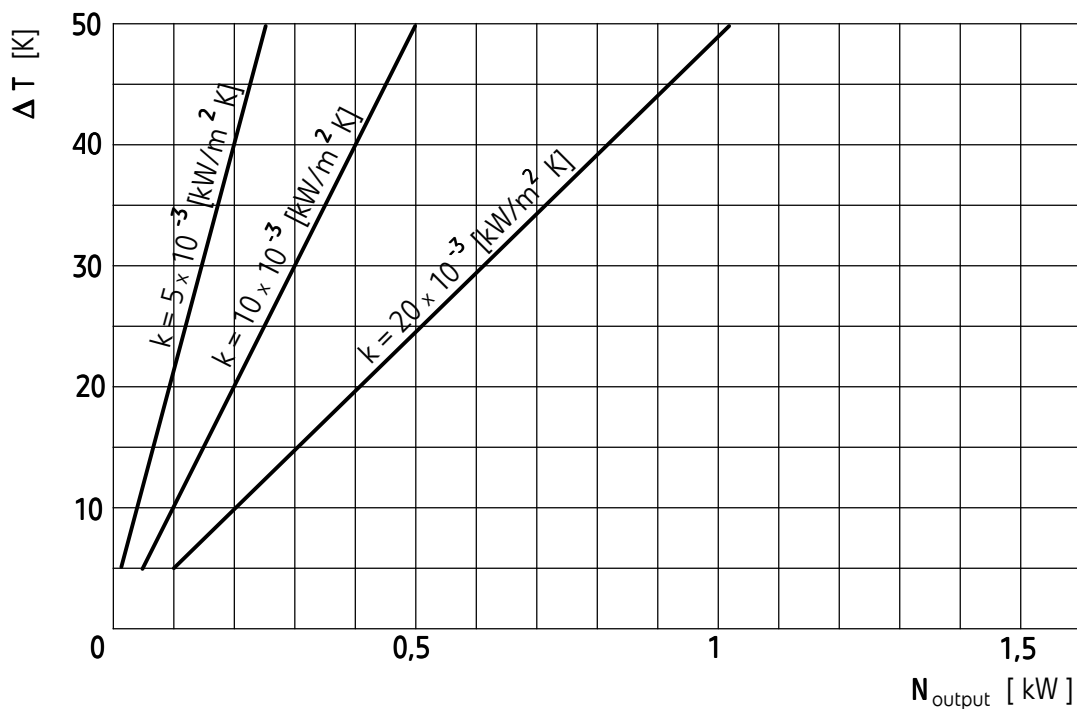
ADDITIONAL

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.

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

- N_{output} [W] - thermal power output of the tank
 A [m²] - active surface area of the tank for the power pack tank UHMZ 63 $A = 1,02 \text{ m}^2$
 k [W/m² x K] - heat exchange factor
- $k = 5 \text{ W/m}^2 \times \text{K}$ - when poor air circulation, unfavourable location,
 - $k = 10 \text{ W/m}^2 \times \text{K}$ - normal air circulation from all directions,
 - $k = 20 \text{ W/m}^2 \times \text{K}$ - 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 63

HOW TO ORDER

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

UHMZ	63	+	+	+	+	+	+	+	+	★
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Tank capacity 63 dm ³ = 63										
Type of pump 10C4,2X053G = 4,2 10C6,1X053G = 6,1 20C10X016G = 10										
Motor power (according to the table 3) 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 5,5 kW = 5,5										
Nominal size of hydraulic elements mounted (referred to connections of directional valves) NS6 = 6										
Designed version <ul style="list-style-type: none"> • 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 										
Oil level indicator without oil level indicator = no designation with oil level indicator of minimum level (electric) = N1										
Cooler without cooler = no designation air cooler (according to the table 5) = P1 water cooler (according to the table 6) = W1										
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 63-10-3- 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.

BASIC TECHNICAL PARAMETERS OF THE ACCESSORIES

Air cooler (table 5)

Type	Designation	Motor power	Voltage	Rate of revolution	Power output for $\Delta t = 20\text{ }^{\circ}\text{C}$
MG AIR 2015K	P1	0,045 kW	230/400V 50Hz	~ 2850 revolutions/min	up to 2,5 kW
MG AIR 2024K	P2	0,12 kW	230/400V 50Hz	~ 2670 revolutions/min	up to 4,5 kW

Water cooler (table 6)

Type	Designation	Connection thread for water	Thermostat type	Power output for $\Delta t = 35\text{ }^{\circ}\text{C}$
MGE 60-140-1	W1	G1/2	AVTA 15	1,5 ÷ 3,5 kW

Oil level indicator with electric indicator (table 7)

Type	Supply voltage	Current	Contact load capacity	Contact state
SNK 127V/O/O/12R	50V AC/DC	0,2A	2,5 W	Open at minimum

Below hydraulic equipment manufactured by "PONAR-WADOWICE" S.A.
that can be used for control systems (table 8)

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	ZZS 6	according to WK 450 360
Double check valves, sandwich plate	ZZFS 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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