

APPLICATION

Power packs type UHKG... are designed to drive and control hydraulic receivers (cylinders and hydraulic motors). They are used in moveable machines as a drive for small presses, lifts and shop machines.

The power pack is intended to operate for short periods of time.



DESCRIPTION OF OPERATION

Standard version of power pack is composed of the oil tank with essential accessories like:

- oil suction filter
- oil filler
- oil level indicator (optical)
- oil drain plug
- pump assembly (electric motor – gear pump), pressure gauge and the block with output connections installed on the power pack.

Standard version of power pack can be extended upon customer's request with the following systems:

- hydraulic control system according to the individual scheme
- other apparatus and hydraulic machines which are not included in data sheet, prior agreed with the manufacturer
- electric control system

TECHNICAL DATA

Basic information

| | | | | | | |
|--|-------------------------------------|-----------------|------------------|------------------|-----------------|-----------------|
| Hydraulic fluid | mineral oil | | | | | |
| Operating temperature range | -10 up to +70 °C | | | | | |
| Fluid viscosity range | 90 μm | | | | | |
| Fluid viscosity range | 10 up to 380 mm^2/s | | | | | |
| Supply voltage for motor | 24V DC, 12V DC | | | | | |
| Supply voltage for directional control valve | 24V DC, 12V DC | | | | | |
| Tank type | 2,5A | 5B | 10B | 12B | 3L | 5L |
| Material for a tank | steel | | | plastic | | |
| Nominal capacity of a tank | 2,5 dm^3 | 5 dm^3 | 10 dm^3 | 12 dm^3 | 3 dm^3 | 5 dm^3 |

TECHNICAL DATA

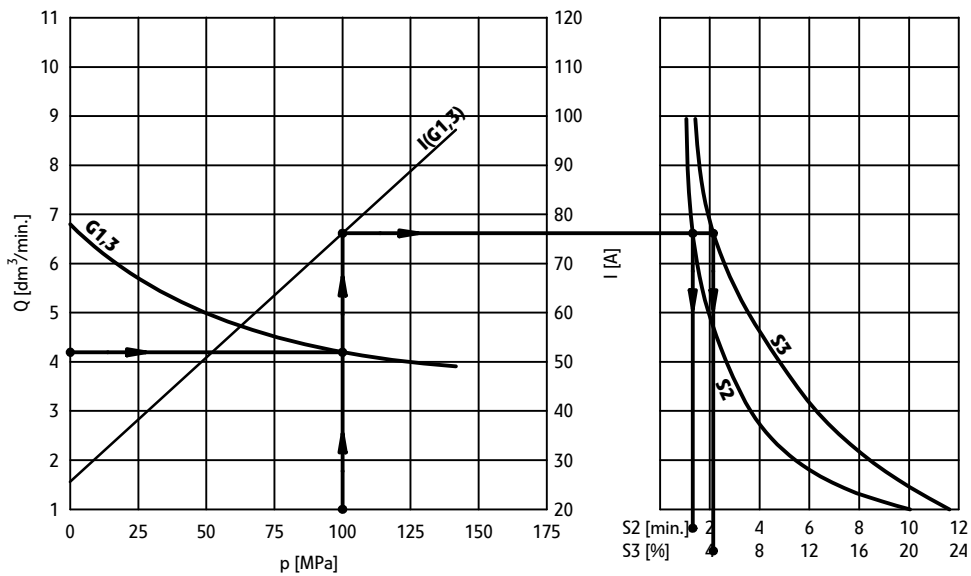
Matching electric motor

If the pressure p , displacement Q and supply voltage U (12V or 24V DC) is known, you can match an electric motor and a pump. To this purpose, check in diagram if displacement curve of the pump is at the point of intersection between pressure and displacement.

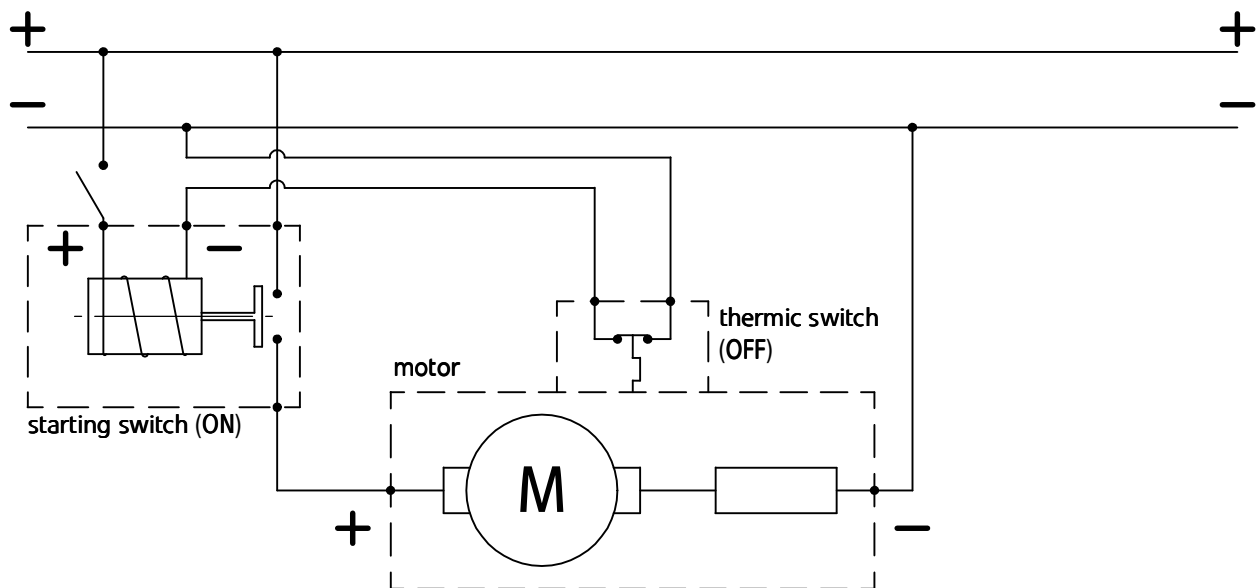
Current input can be read on the basis of specific curve "I".

In diagram on the right, it is possible to read maximum values $S2$ [min] and $S3$ [%]. $S2$ means permissible time to work permanently for motor [in min], whereas $S3$ sets how many percent of total working cycle $S2$ comprises.

If the levels for $S2$ and $S3$ are insufficient, it is necessary to match a motor with higher power.



ELECTRIC SCHEME FOR MOTOR

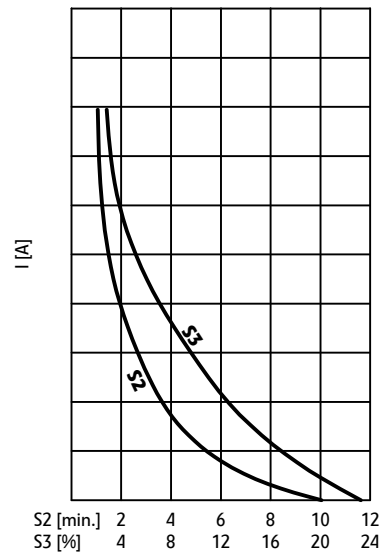
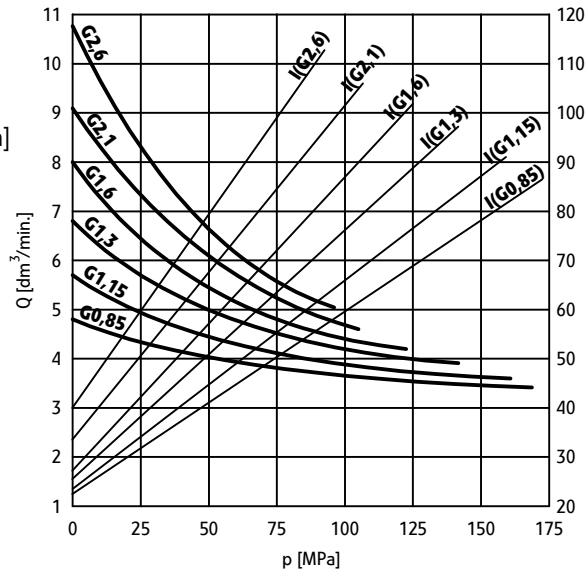


TECHNICAL DATA

Motor M46C2ST08/S

nominal parameters:

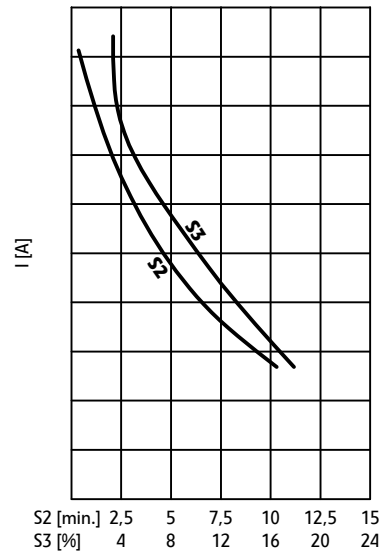
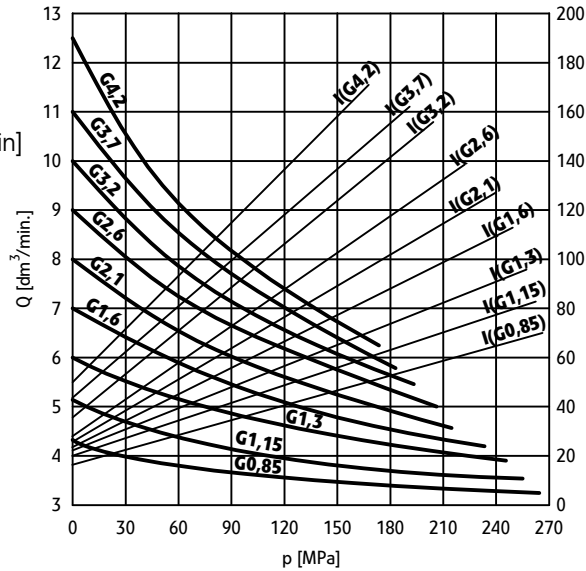
- N = 0,8 [kW]
- n = 4200 [revolution/min]
- I = 60 [A]
- U = 24 [V]
- S2 = 4 [min.]
- S3 = 10 [%]



Motor M46C2ST22/S

nominal parameters:

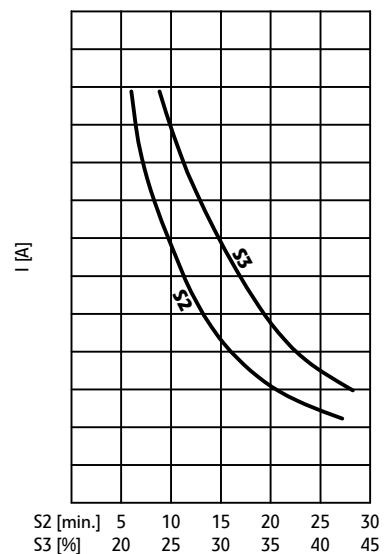
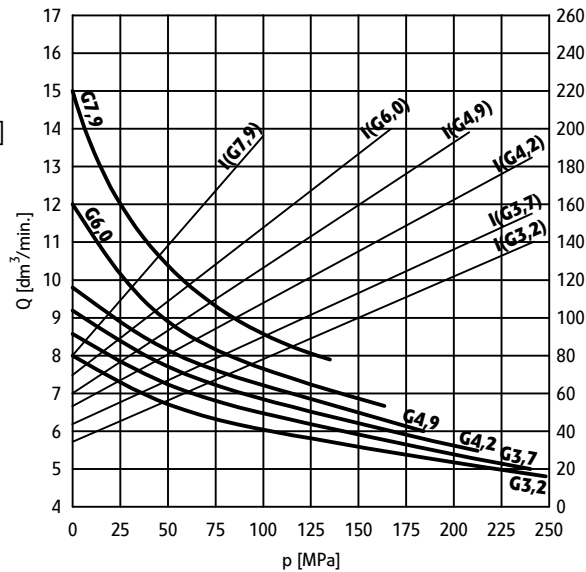
- N = 2,2 [kW]
- n = 2600 [revolution/min]
- I = 140 [A]
- U = 24 [V]
- S2 = 1,2 [min.]
- S3 = 4,5 [%]



Motor MB14C2ST30/S

nominal parameters:

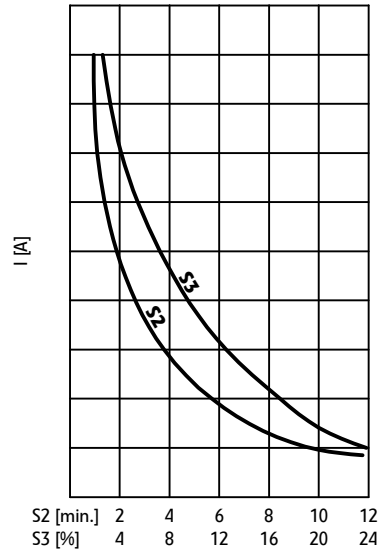
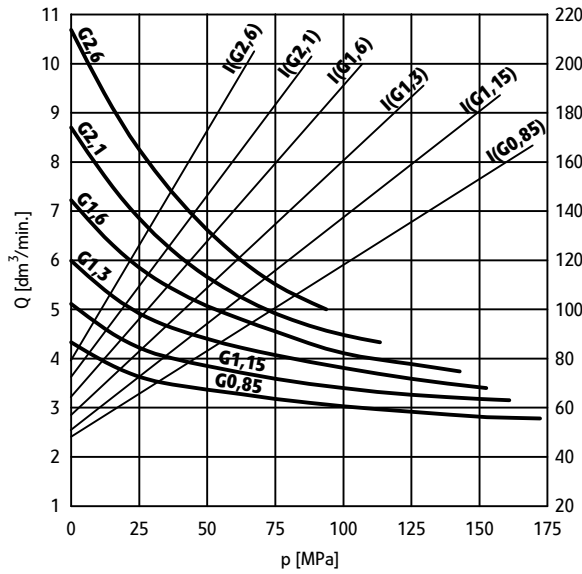
- N = 3,0 [kW]
- n = 1700 [revolution/min]
- I = 290 [A]
- U = 24 [V]
- S2 = 16 [min.]



TECHNICAL DATA

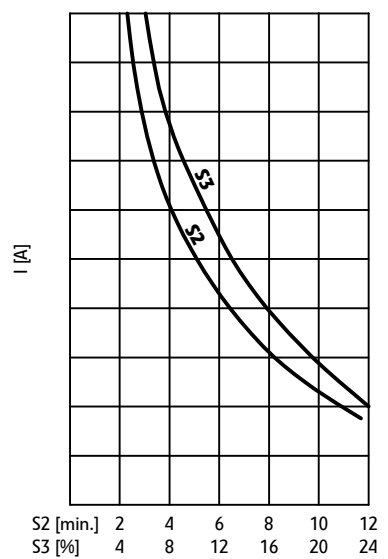
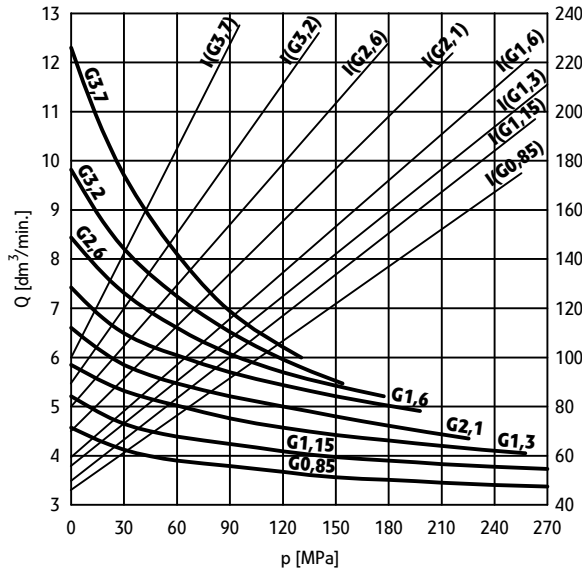
Motor M46C1ST08/S

nominal parameters:
 N = 0,8 [kW]
 n = 4200 [revolution/min]
 I = 120 [A]
 U = 12 [V]
 S2 = 4 [min.]
 S3 = 10 [%]



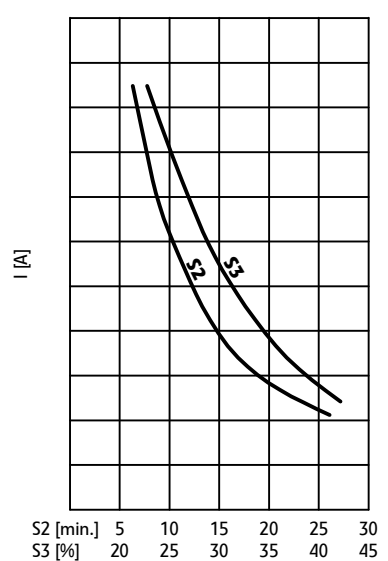
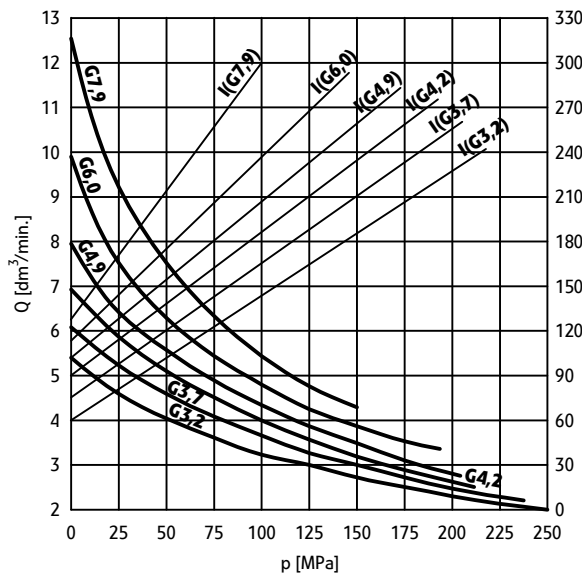
Motor M46C1ST16/S

nominal parameters:
 N = 1,6 [kW]
 n = 2600 [revolution/min]
 I = 230 [A]
 U = 12 [V]
 S2 = 2 [min.]
 S3 = 7,5 [%]



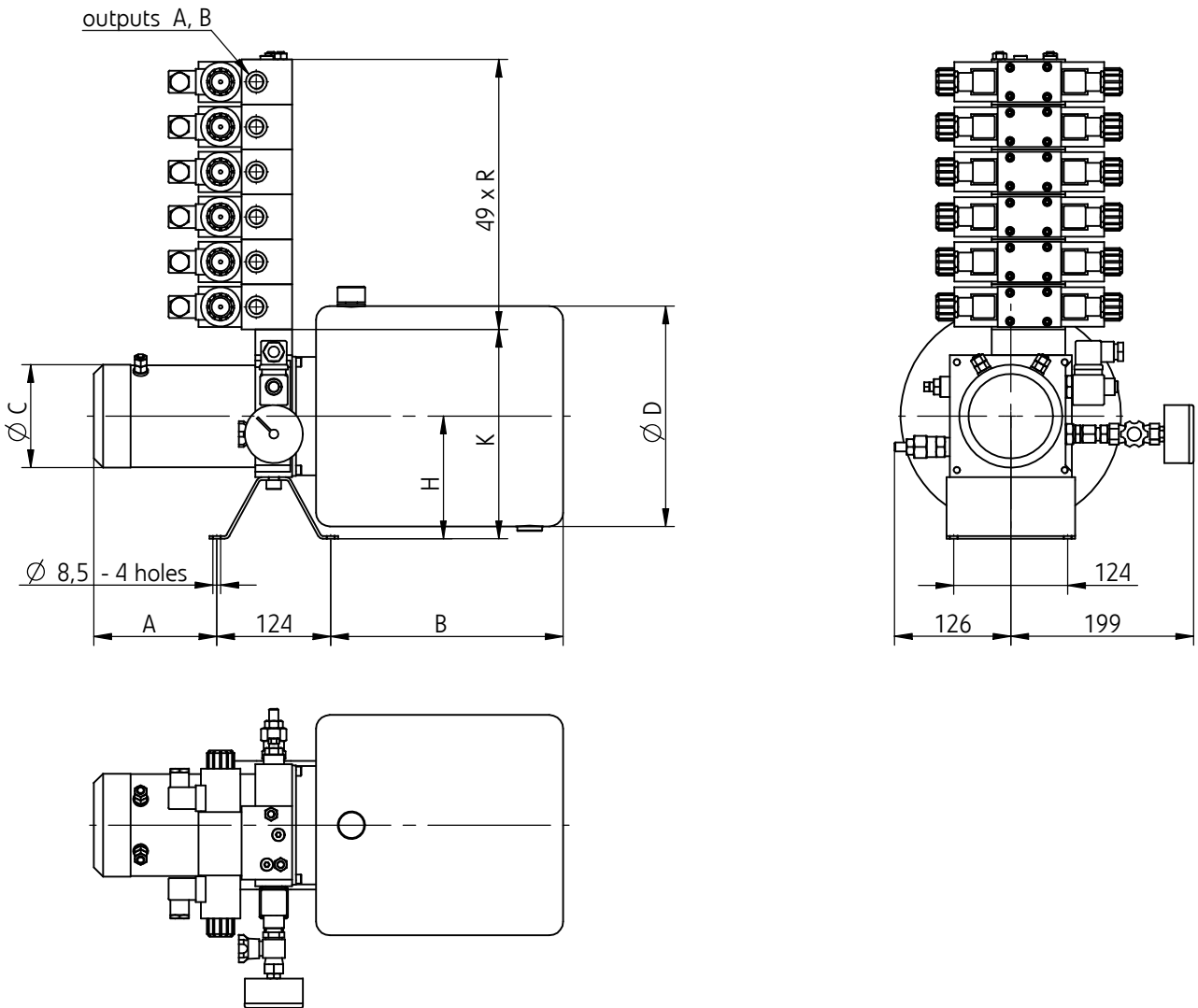
Motor MB14C1ST25/S

nominal parameters:
 N = 2,5 [kW]
 n = 1700 [revolution/min]
 I = 170 [A]
 U = 12 [V]
 S2 = 16 [min.]



OVERALL AND CONNECTION DIMENSIONS

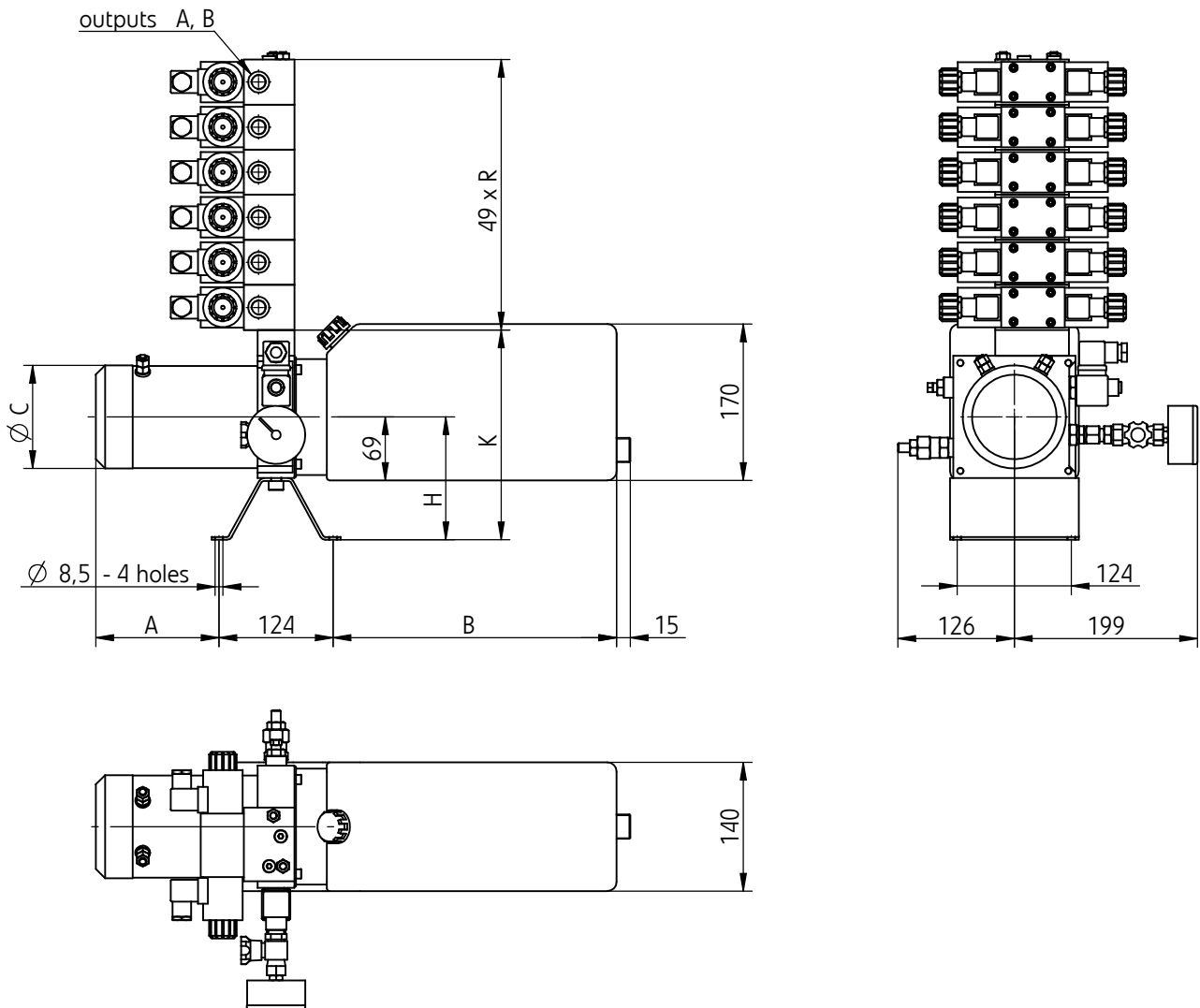
Fitting on the tanks: 2,5A, 5B, 10B, 12B



| Motor | Tank | A | B | $\varnothing C$ | $\varnothing D$ | H | K |
|------------------------------|------|-----|-----|-----------------|-----------------|-----|-----|
| M46C1ST08/S M46C2ST08/S | 2,5A | 96 | 193 | 80 | 130 | 112 | 178 |
| | 5B | | 233 | | 180 | | |
| | 10B | | 220 | | 220 | 134 | 200 |
| | 12B | | 253 | | 240 | | |
| M46C1ST16/S M46C2ST22/S | 2,5A | 114 | 193 | 112 | 130 | 112 | 178 |
| | 5B | | 233 | | 180 | | |
| | 10B | | 220 | | 220 | 134 | 200 |
| | 12B | | 253 | | 240 | | |
| MB14C1ST25/S MB14C2ST30/S | 2,5A | 286 | 193 | 220 | 130 | 134 | 256 |
| | 5B | | 233 | | 180 | | |
| | 10B | | 220 | | 220 | | |
| | 12B | | 253 | | 240 | | |

OVERALL AND CONNECTION DIMENSIONS

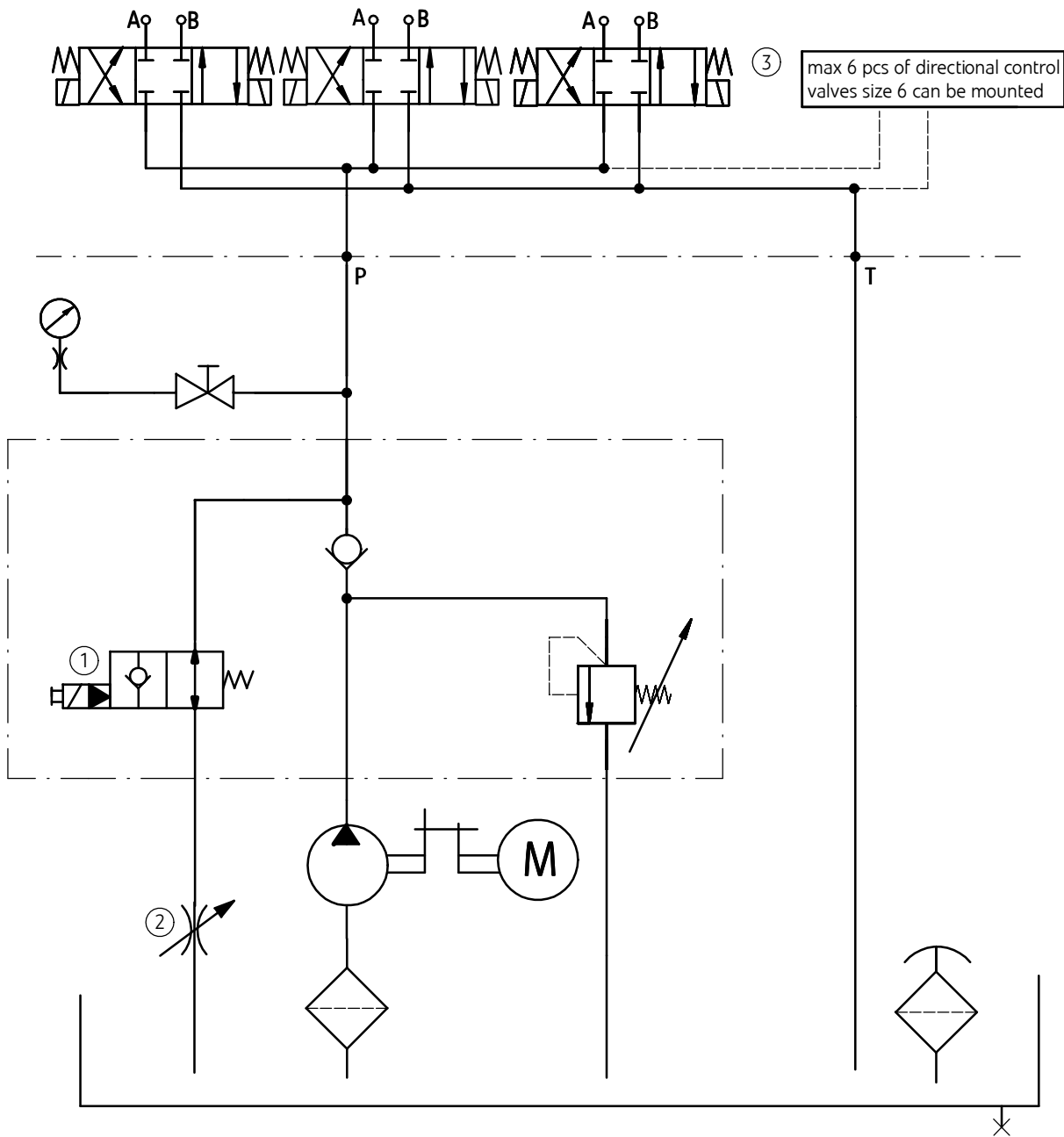
Fitting on the tanks: 3L, 5L



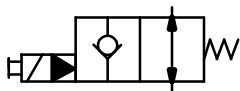
| Motor | Tank | A | B | $\varnothing C$ | H | K |
|---------------------|------|-----|-----|-----------------|-----|-----|
| M46C1ST08/S | 3L | 96 | 208 | 80 | 112 | 178 |
| M46C2ST08/S | 5L | | 308 | | | |
| M46C1ST16/S | 3L | 114 | 208 | 112 | 112 | 178 |
| M46C2ST22/S | 5L | | 308 | | | |
| MB14C1ST25/S | 3L | 286 | 208 | 220 | 134 | 256 |
| MB14C2ST30/S | 5L | | 308 | | | |

SCHEMES

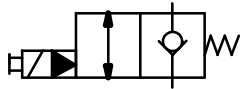
Hydraulic scheme for power pack type UHKG



Hydraulic schemes (options) for directional control valve - pos. 1



option normally-open - designation ...**NO**...



option normally-closed - designation ...**NC**...

- 1 - Directional control valve - options*:
 - **normally-open** - designation UHKG...- **NO** -...
 - **normally-closed** - designation UHKG...- **NC** -...
 - 2 - Throttle valve - options*:
 - **with throttle valve** - designation UHKG...- **D** -...
 - **without throttle valve** - no designation
 - 3 - Directional control valve size 6 to be mounted - connections **A, B**: G 3/8
- Note:**
(*) - Options showed on the scheme are in bold

HOW TO ORDER

| | | | | | | | |
|-------------|---|---|---|---|---|---|---|
| UHKG | + | + | + | + | + | + | + |
|-------------|---|---|---|---|---|---|---|

Tank size

| | | |
|---------|------|-------|
| steel | 2,5A | = 2,5 |
| steel | 5B | = 5 |
| steel | 10B | = 10 |
| steel | 12B | = 12 |
| plastic | 3L | = 3L |
| plastic | 5L | = 5L |

Type of pump

(according to page 3 and 4)

| | | | |
|--------|--------|-------|-------|
| G 0,85 | = 0,85 | G 3,2 | = 3,2 |
| G 1,15 | = 1,15 | G 3,7 | = 3,7 |
| G 1,3 | = 1,3 | G 4,2 | = 4,2 |
| G 1,6 | = 1,6 | G 4,9 | = 4,9 |
| G 2,1 | = 2,1 | G 6,0 | = 6,0 |
| G 2,6 | = 2,6 | G 7,9 | = 7,9 |

Motor power

(according to page 3 and 4)

| | |
|--------|-------|
| 0,8 kW | = 0,8 |
| 1,6 kW | = 1,6 |
| 2,2 kW | = 2,2 |
| 2,5 kW | = 2,5 |
| 3,0 kW | = 3 |

Nominal supply for electric motor

(according to page 3 and 4)

| | |
|--------|------|
| 12V DC | = 12 |
| 24V DC | = 24 |

Nominal size for hydraulic elements installed

(applied to elements connections nominal size 6 to be mounted pos. 3 according to the scheme on page 7)

| | |
|-----|-----|
| NS6 | = 6 |
|-----|-----|

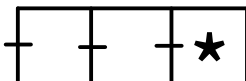
Designed version of power pack

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

Version of directional control valve

(applied to directional control valve pos. 1 according to the scheme on page 7)

| | |
|-----------------|------|
| normally-open | = NO |
| normally-closed | = NC |



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

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

Throttle valve
 (applied to throttle valve pos. 2 according to the scheme on page 7)
 without throttle valve = no designation
 with throttle valve = D

NOTES:

Power pack should be ordered according to the above coding.
 The type, quantity and placing hydraulic elements (directional control valves, valves and other) must be specified on hydraulic scheme or in other clear way.
 Coding example: UHKG12-4,2-3-24-6-R2-NO-D-XXXX

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