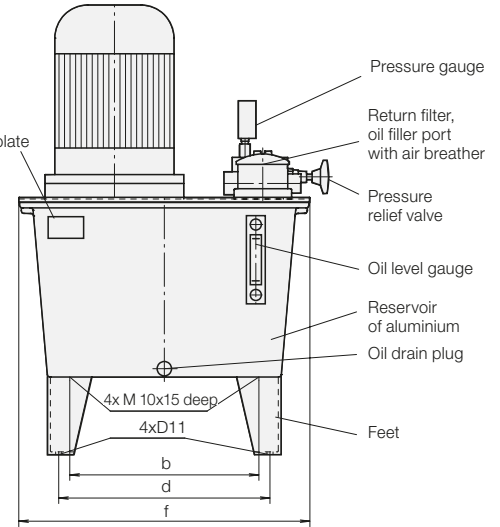
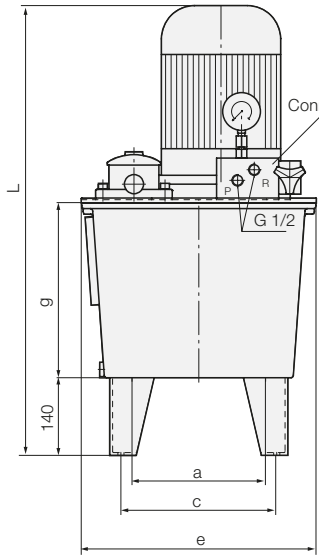




Power Units

Oil reservoir V = 27 l, 40 l, and 63 l



Technical data

Design	
- Gear pump	max. 200 bar
- Piston pump	max. 500 bar
- Pump combination	max. 80/500 bar
Mounting	Foot mounting
Porting	G 1/4 and G 1/2
Direction of rotation	(viewed from above onto drive shaft)
- Gear pump	clockwise
- Piston pump	any
- Pump combination	counterclockwise
Mounting position	upright
Usable oil volume	half of the reservoir volume
Vol. efficiency	$\eta_{vol} = 85-95\%$

Electrical data

Nominal voltage	230/400V up to 2.2 kW 400 V from 3 kW
Power system	3-phase AC, 50 Hz
Code class	IP 54
Relative duty cycle ED	Depends on operating pressure. Details for 100% and 40% ED (see page 2)

The calculation of the relative duty cycle is based on a cycle of 10 min. At 40% ED e.g. the maximum load within the cycle should not exceed 4 min. During the remaining time the motor can be loaded up to 50% of the nominal output rating and should run continuously.

Dimensions

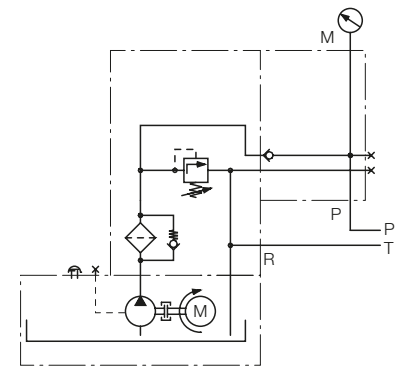
	V = 27 l	V = 40 l	V = 63 l
a	176	241	282,5
b	326	341	422,5
c	216	281	322,5
d	366	381	462,5
e	341	424	474
f	491	525	615
g	285	315	365
L	see page 2		

Other data
see table and data sheet A 0.100.

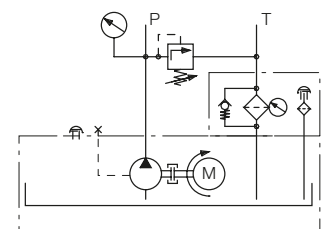
Optional oil level and temperature control.

Part no.	for V = 27 l	3822-006
	for V = 40 l	3822-048
	for V = 63 l	3822-005

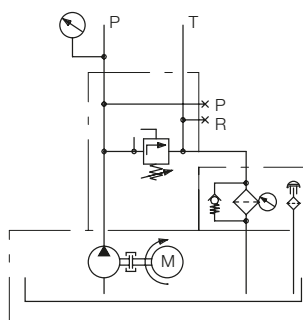
Piston pump with pressure filter



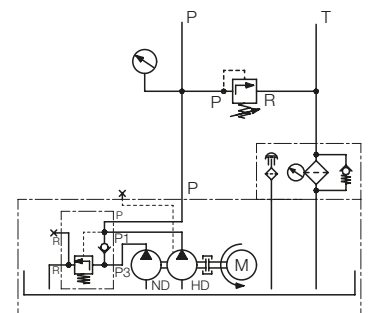
Piston pump with return filter



Gear pump



Pump combination



Flow rate [ccm/s]	Operating pressure at [l/min]	Nominal rating [kW]		RF ²⁾	L ³⁾	L ³⁾	L ³⁾	Weight [kg]			Part no. Reservoir volume			
		100% ED ¹⁾	40% ED	DF ²⁾ LV ²⁾	V=27 l [mm]	V=40 l [mm]	V=63 l [mm]	V=27 l	V=40 l	V=63 l	V=27 l	V=40 l	V=63 l	
Power unit with gear pump – direction of rotation: clockwise														
75	4.5	60	85	0.75	RF	683	–	–	34	–	–	8142-120	–	–
		135	180	1.5	RF	725	758	–	37	48	–	8144-120	8144-140	–
		200	200	2.2	RF	759	792	842	44	55	59	8145-120	8145-140	8145-160
102	6.2	45	60	0.75	RF	683	–	–	34	–	–	8152-120	–	–
		100	125	1.5	RF	725	758	–	37	48	–	8154-120	8154-140	–
		160	200	2.2	RF	759	792	842	44	55	59	8155-120	8155-140	8155-160
146	8.8	45	60	0.75	RF	683	716	–	35	46	–	8156-120	8156-140	–
		90	110	1.5	RF	725	758	808	38	49	55	8157-120	8157-140	8157-160
		130	160	2.2	RF	760	793	843	45	56	60	8158-120	8158-140	8158-160
		175	200	3.0	RF	–	793	843	–	60	64	–	8159-140	8159-160
200	12	50	70	1.5	RF	725	758	808	38	49	55	8164-120	8164-140	8164-160
		80	105	2.2	RF	760	793	843	45	56	60	8165-120	8165-140	8165-160
		115	140	3.0	RF	–	793	843	–	60	64	–	8166-140	8166-160
		160	190	4.0	RF	–	809	859	–	68	72	–	8167-140	8167-160
		200	200	5.5	RF	–	858	908	–	77	82	–	8168-140	8168-160
267	16	40	50	1.5	RF	725	758	808	39	50	56	8174-120	8174-140	8174-160
		60	75	2.2	RF	760	793	843	46	57	61	8175-120	8175-140	8175-160
		85	105	3.0	RF	–	793	843	–	61	65	–	8176-140	8176-160
		115	140	4.0	RF	–	809	859	–	69	73	–	8177-140	8177-160
400	24	165	195	5.5	RF	–	858	908	–	78	83	–	8178-140	8178-160
		40	50	2.2	RF	760	793	843	46	57	61	8185-120	8185-140	8185-160
		55	70	3.0	RF	–	793	843	–	61	65	–	8186-140	8186-160
		80	95	4.0	RF	–	809	859	–	69	73	–	8187-140	8187-160
		100	120	5.5	RF	–	858	908	–	78	83	–	8188-140	8188-160
		150	180	7.5	RF	–	–	946	–	–	105	–	–	8189-160
Power unit with piston pump – direction of rotation: any														
100	6.0	315	–	4.0	RF	–	805	855	–	71	75	–	8267-140	8267-160
140	8.4	315	–	5.5	RF	–	861	911	–	79	83	–	8268-140	8268-160
200	12.0	315	–	7.5	RF	–	899	949	–	104	108	–	8269-140	8269-160
60	3.6	–	350	2.2	DF	756	789	–	46	57	–	8275-120	8275-140	–
70	4.2	–	350	3.0	DF	756	789	–	53	64	–	8276-120	8276-140	–
100	6.0	–	350	4.0	RF	–	805	855	–	71	75	–	8277-140	8277-160
140	8.4	–	350	5.5	RF	–	861	911	–	79	83	–	8278-140	8278-160
200	12.0	–	350	7.5	RF	–	899	949	–	104	108	–	8279-140	8279-160
25	1.5	–	500	1.1	DF	698	731	–	36	47	–	8223-120	8223-140	–
43	2.6	–	350	1.5	DF	731	764	–	39	50	–	8254-120	8254-140	–
43	2.6	–	500	2.2	DF	756	789	–	48	59	–	8255-120	8255-140	–
61	3.7	–	500	3.0	DF	756	789	839	53	64	68	8256-120	8256-140	8256-160
88	5.3	–	350	3.0	RF	756	789	839	62	67	71	8252-120	8252-140	8252-160
88	5.3	–	500	4.0	RF	–	805	855	–	75	79	–	8257-140	8257-160
123	7.4	–	330	4.0	RF	–	805	855	–	77	81	–	8253-140	8253-160
123	7.4	–	500	5.5	RF	–	861	911	–	84	88	–	8258-140	8258-160
Power unit with combination of gear pump and piston pump – direction of rotation: counterclockwise														
150/25	9.0/1,5	90/500	–	1.5	LV/RF	731	764	–	42	53	–	8280-125	8280-145	–
205/25	12.3/1.5	90/500	–	1.5	LV/RF	731	764	–	42	53	–	8281-125	8281-145	–
150/43	9.0/2.6	80/500	–	2.2	LV/RF	756	789	–	52	63	–	–	8283-145	–
205/43	12.3/2.6	80/500	–	2.2	LV/RF	756	789	–	52	63	–	–	8284-145	–
266/43	16.0/2.6	80/500	–	2.2	LV/RF	756	789	–	53	64	–	–	8285-145	–
150/61	9.0/3.7	80/500	–	3.0	LV/RF	756	789	839	60	70	74	–	8286-145	8286-165
205/61	12.3/3.7	80/500	–	3.0	LV/RF	756	789	839	60	70	74	–	8287-145	8287-165
150/88	9.0/5.3	80/500	–	4.0	LV/RF	–	805	855	–	78	84	–	–	8288-165
205/88	12.3/5.3	80/500	–	4.0	LV/RF	–	805	855	–	78	84	–	–	8289-165
150/123	9.0/7.4	80/500	–	5.5	LV/RF	–	861	911	–	85	89	–	–	8290-165

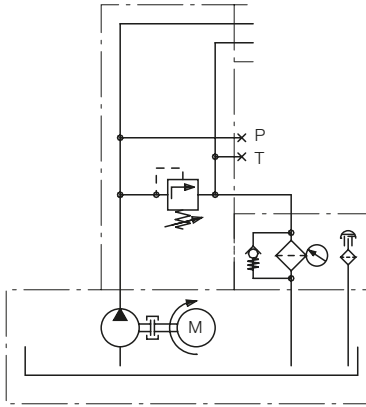
1) Refers to electric motor only. Running time of pump at max. pressure depends on unit power losses. It should be noted that oil temperature must not exceed 70°C.

2) RF = for return filter
DF = for pressure filter
LV = for idle pressure valve

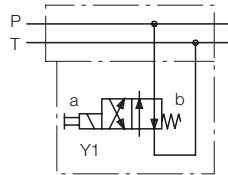
3) Dimension L = minimum height, depending on the motor type and the use of damper rings to reduce the noise level.

When using damper rings dimension L is changed as follows:

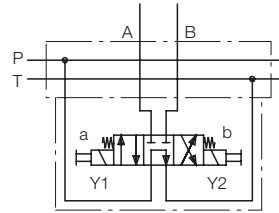
Motor 0.75 up to 1,5 kW: plus 40 mm
Motor 2.2 up to 4,0 kW: plus 45 mm
Motor 5.5 up to 7,5 kW: plus 50 mm



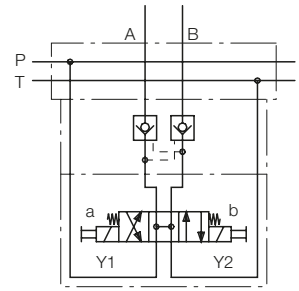
Basic power unit



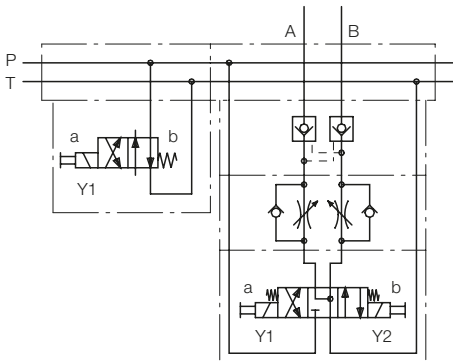
4/2 directional control valve with mounting plate for unpressurised cycles.



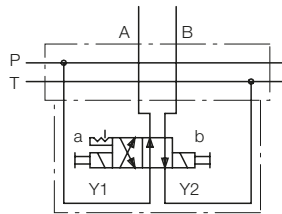
4/3 directional control valve with mounting plate for unpressurised cycles in central position. Ports A and B closed, not leakage-free.



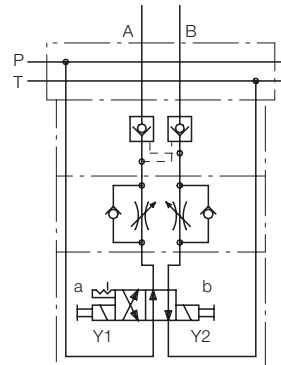
4/3 directional control valve with mounting plate for unpressurised cycles in central position. Ports A and B closed by a twin check valve, and leakage-free.



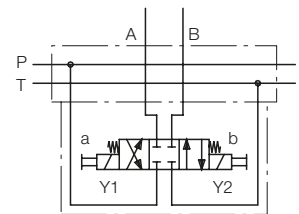
4/2 directional control valve with mounting plate for unpressurised cycles.



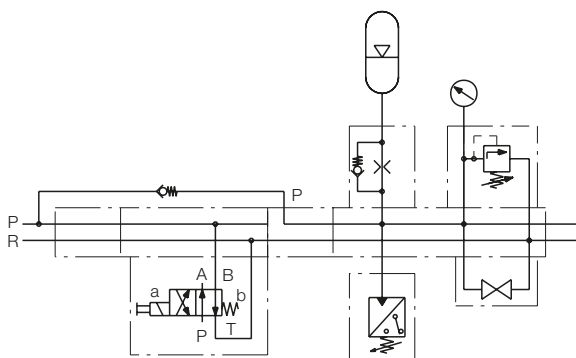
4/3 directional control valve with twin flow control valve and twin check valve. Ports A and B closed and leakage-free.



4/2 directional control valve with catch, twin flow control valve and twin check valve. Ports A and B closed and leakage-free.

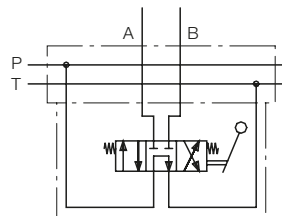


4/3 directional control valve. Ports A and B closed, not leakage-free.

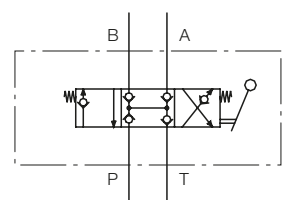


4/2 directional control valve with mounting plate for unpressurised cycles.

Accumulator connecting block with accumulator, check valve with throttling, pressure switch, drain plug, pressure reducing valve and pressure gauge.

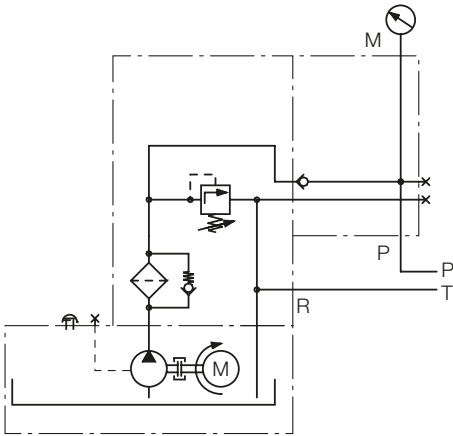


4/3 directional control valve with unpressurised cycle in central position, manually operated by lever, spring return. Ports A and B closed, not leakage-free.



4/3 directional control valve with closed and leakage-free central position. Manual operation by lever with spring return up to an operating pressure of 300 bar. In the case of higher operating pressures there is no automatic lever return. When using this valve the power unit must function intermittently or with a valve for unpressurised cycles.

Power units with piston pumps, flow rate up to 6.0 l/min
Piston pump with pressure filter



The same valves ND 4, valve blocks and control variants as used for the power units as per data sheet D 8.021 can be mounted to all power units with pressure filter, e.g. Part no. 8275-120.

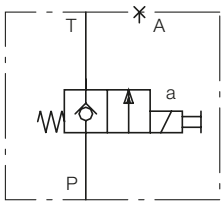
Power units with piston pump, flow rate more than 6.0 l/min

For power units with piston pump e.g. 8.4 l/min, Part no. 8278-140, or with pump combination e.g. 9.0/1.5 l/min, Part no. 8280-140, with return filter valves ND 10 and mounting plates with ports G 1/2 have to be used.

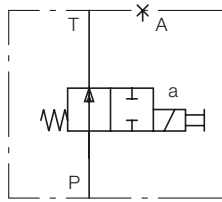
When designing a power unit the surface ratios of the cylinders (e.g. in the case of Römheld cylinders 1.6:1 or in the case of swing clamps 2.75:1 up to 4:1) have to be considered, since the flow rate will increase correspondingly in the return line.

Smaller pumps have to be used accordingly. The max. admissible flow rate of valves ND 10 is 25 l/min. These valves are mounted separately on the top of the reservoir cover.

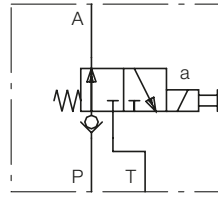
Variants of valves ND 10 in initial position on single mounting plate, Part no. 3534-299



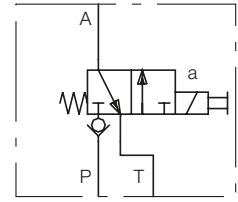
0-position: closed



0-position: passage



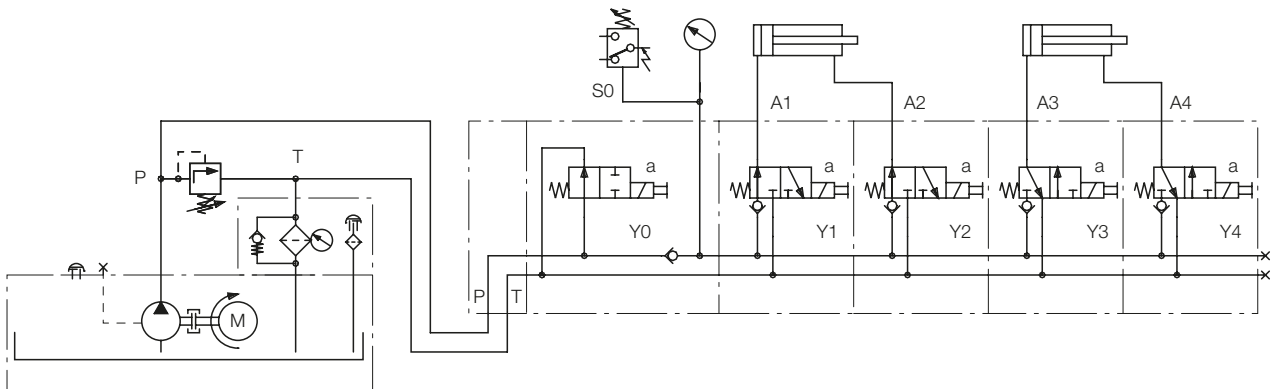
0-position: passage to the cylinder



0-position: return from the cylinder

In addition, there is the possibility to install valves in block design onto series mounting plates if several functions are required.

Example: 2 x double acting with different valves, unpressurised cycle and pressure switch



Further versions on request!

Power units with hydraulic and electric control can be designed and delivered according to your task.

– Please do not hesitate to contact us! –