

"Always ready for operation but without consuming any energy"
– energy efficiency thanks to accumulator charging function

- **Area of application:**
Accumulator charging function with integrated safety valve and accumulator pressure release
- 3/2 directional seat valve with check valves in the inlet and outlet
- Integrated Stat-Free® pressure filter element for optimal oil quality
→ Stat-Free® filter element as standard to prevent damaging electrical charging
- Possible to install accumulators up to 3.5l directly on the flange
- **Optional:**
Control can be extended using ML function modules directly on the flange

Technical specifications

P_{max} = up to 250 bar
 Q_{max} = up to 20 l/min

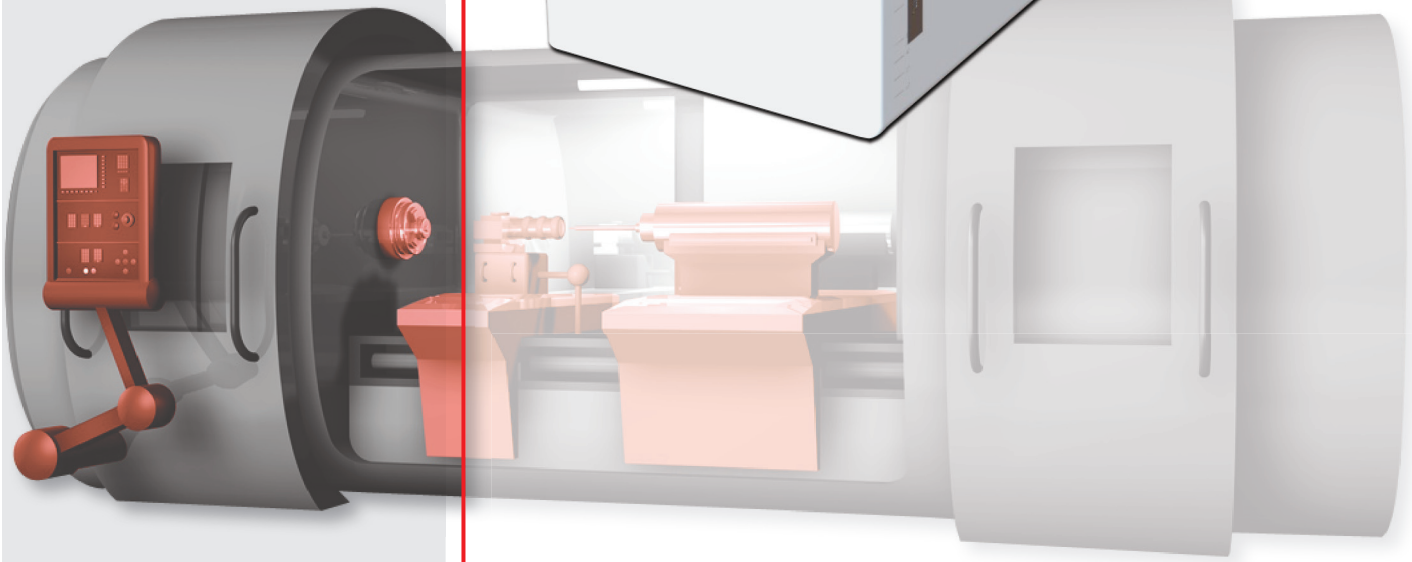
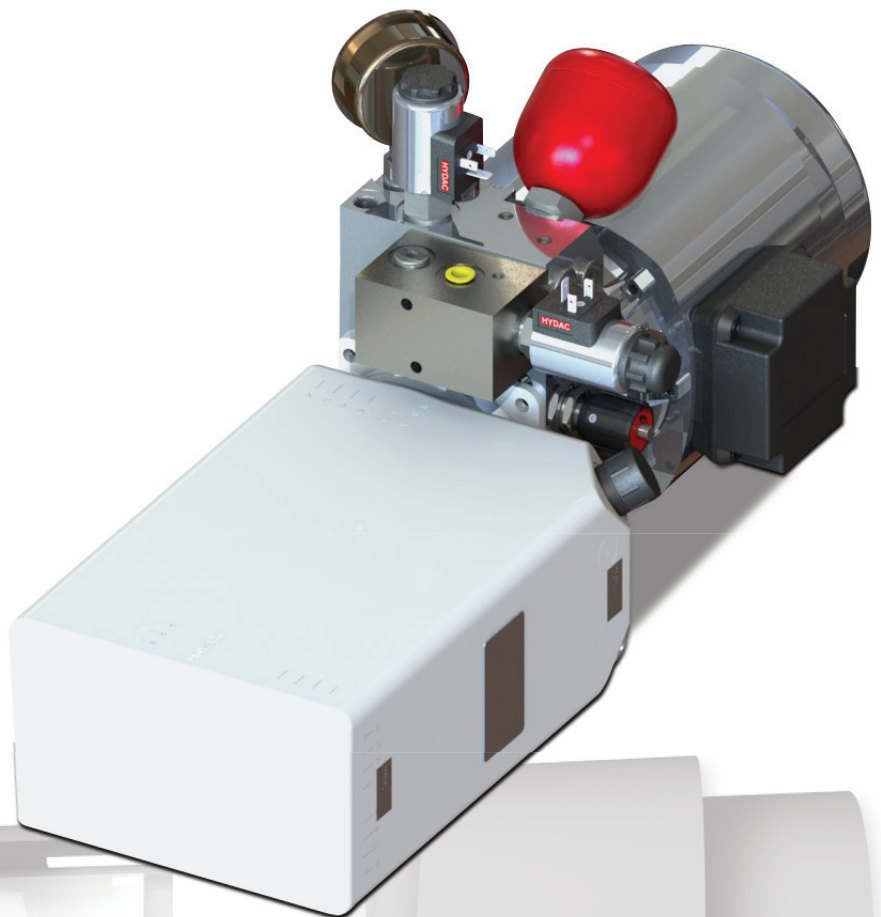
According to EN 60034-1 suitable for:

Short-term operation:
S2 = 5 min* (average value)

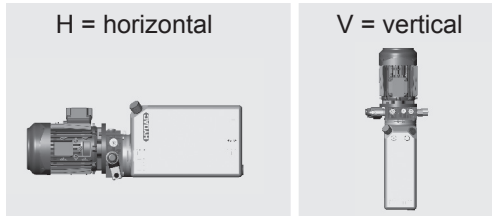
Intermittent operation:
S3 = 20 %* (average value)

HYDAC Compact Power Unit CO1 MF21

For auxiliary functions in machine tools



Mounting position of power unit



Motor / reservoir orientations



NOTE: Reservoir orientation T not possible when ML stacking valves are added

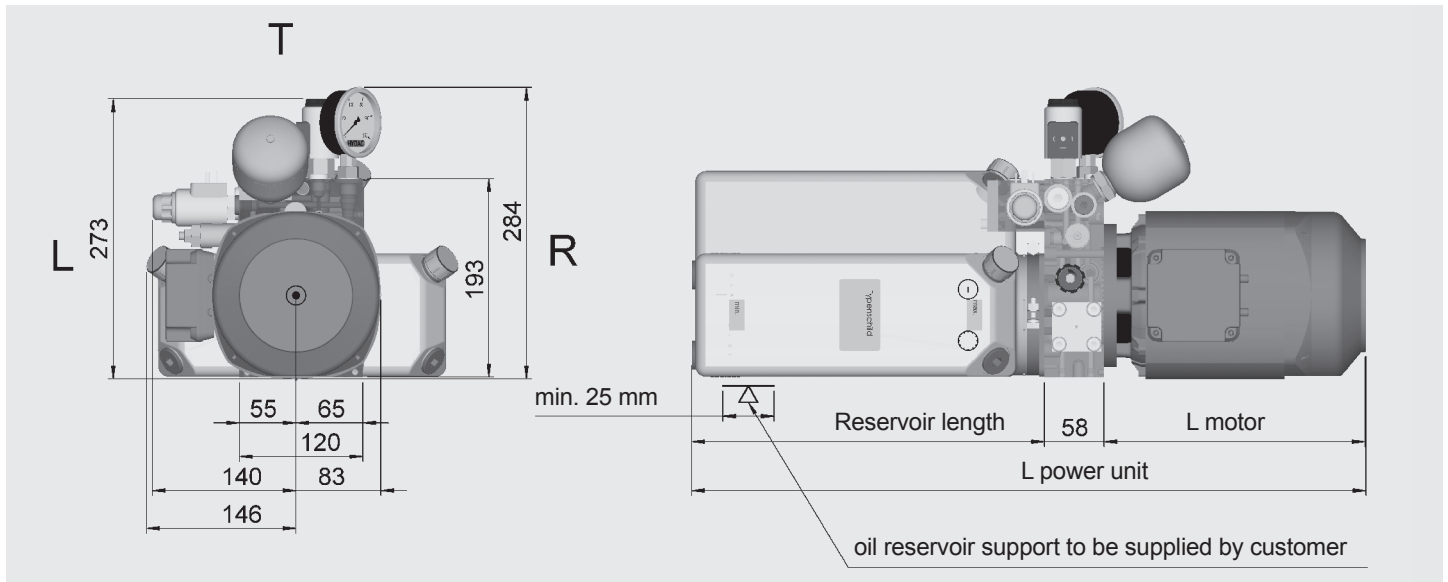
Model Code

	Power unit	Flange control	Add-on equipment	Valve voltage
Example	CO1 H B05 - R - 2.4 - 170 - 03 - TSM	- M F21 - DVC RTR	- CE150 - M1/EDS3 - M2/MA2 - MA/M - PS/SBO5 + 24DG + ML	
Power unit series	CO1			
Installation position	H = horizontal V = vertical			
Oil reservoir (see table, page 3)	B04 = length 165 mm B05 = length 220 mm B08 = length 340 mm B12 = length 500 mm			
Motor / reservoir orientation	L = left I = top R = right			
Flow rate + pressure (see table on page 3)				
Motor voltage (see table page 3)	03 { 3 phase 230/400 V - 50 Hz 3 phase 257/480 V - 60 Hz			
Thermal overload	- no details, without thermal overload = standard TSM thermal overload motor, set temperature 80 °C TSO thermal overload oil, set temperature 80 °C	on request		
Valves	MF21 = pressure filter rating 20µm M021 = without pressure filter	06		
	DV = mechanical accumulator release (DV5E) V = WSM 06020 V - 01 W = WSM 06020 W - 01 WN = WSM 06020 W - 01M	10		
	C = WSM08130C w/o coil D = WSM08130D w/o coil DN = WSM08130D..01M w/o coil ... with manual override O = without WSM08	12		
	R = check valve (without RV, no details) TR = back-pressure in the return line (0.5 bar; without RV, no details)	08 11		
Pressure relief valve	e.g. 250 V DB4E up to 250 bar (not pre-set) 250V200 DB4E pre-set to 200 bar CE150 DB4E ... CE (CE approved) set to 150 bar			
Add-on equipment	DS1 = mech. pressure switch 10-100 bar (connector not supplied) DS2 = mech. pressure switch 50-200 bar (connector not supplied) EDS3 = EDS 3446-2-250-000 EDS8 = EDS 8446-2-250-000	M1		
	MA1 = Ø 63mm pressure gauge c/w adapter 160 bar MA2 = Ø 63mm pressure gauge c/w adapter 250 bar MA4 = Ø 63mm pressure gauge c/w adapter 400 bar	M2		
	M = Minimes	MA		
Accumulator	SBO1 accumulator SBO210-0.16 SBO3 accumulator SBO210-0.32 SBO5 accumulator SBO20-0.5 SBO7 accumulator SBO210-0.75	SBO10 accumulator SBO210-1 SBO14 accumulator SBO20-1.4 SBO20 accumulator SBO210-2.0 SBO35 accumulator SBO210-3.5		
Valve voltage	24DG 24 V DC coil without connector 230AG 230 V AC coil without connector Z4 = with connector Z4 (no details: no connector)			
Build-on controls	ML = function module from the ML range (see brochure no. 5.308 ML)			

For further data: see brochure no. 5.306 CO1

* see circuit diagram on page 3

Dimensions



P [kW]	No. of poles	L motor [mm]	∅ motor [mm]
0.37	4	220 ± 5	141 ± 5
0.55	4	220 ± 5	141 ± 5
0.75	4	220 ± 5	141 ± 5
1.1	4	255 ± 5	159 ± 5
1.5	4	255 ± 5	159 ± 5
2.2	2	255 ± 5	159 ± 5
2.2*	4	280 ± 5	176 ± 5
3*	2	280 ± 5	176 ± 5

*On 2.2 and 3 kW motors the flange must have at least 15 mm of support.

Specifications

Flow rate:	up to 20.0 l/min
Continuous pressure:	max. 250 bar
Coil duty rating:	S2 (short-term operation) : 5 min S3 (intermittent duty) : 20 %
Motor:	PN = 0.37 kW ... 3.0 kW (4; 5.5 kW on request)
Motor voltages:	3 phase 230/400 V - 50 Hz (other motor voltages on request, min. order 10 pcs.)
Protection class:	DIN EN 60034-5 min IP54
Pump displacement:	1.0 cm ³ /rev. ... 10.0 cm ³ /rev
Reservoir volume:	1.8 - 8.4 l
Usable volume:	1.2 - 7.8 l
Operating fluid:	Hydraulic oil to DIN 51524 Part 2
Temperature range of operating fluid:	-20 °C to max. +80 °C
Ambient temperature range:	-20 °C to max. +40 °C
Viscosity range:	10 - 380 mm ² /s is recommended
Filtration:	Operating fluid to ISO 4406 Class 21/19/16 or cleaner
Cooling:	Convection or air cooling
Weight:	from 12 to 20 kg
Installation:	Vertical, horizontal

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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Oil reservoir

Reservoir code	Filling volume / Usable volume [l]**			Reservoir length [mm]
	Horizontal, reservoir position R and L	Horizontal, reservoir position T**	Vertical	
B04	1.9 / 1.5	2.2 / 2.0	1.8 / 1.2	165* ± 5
B05	2.7 / 2.2	3.0 / 2.7	3.0 / 2.4	220* ± 5
B08	4.4 / 3.5	5.1 / 4.6	5.1 / 4.5	340* ± 5
B12	6.5 / 5.2	8.4 / 7.6	8.4 / 7.8	500* ± 5

* where mounted horizontally, support for oil reservoir must be provided by the customer – see dimensions

** cannot be selected if stacking valves are to be added

*** The usable volume given is the maximum value (achieved with a clean suction filter, low to medium flow rate and viscous fluid!)
Subject to modifications.

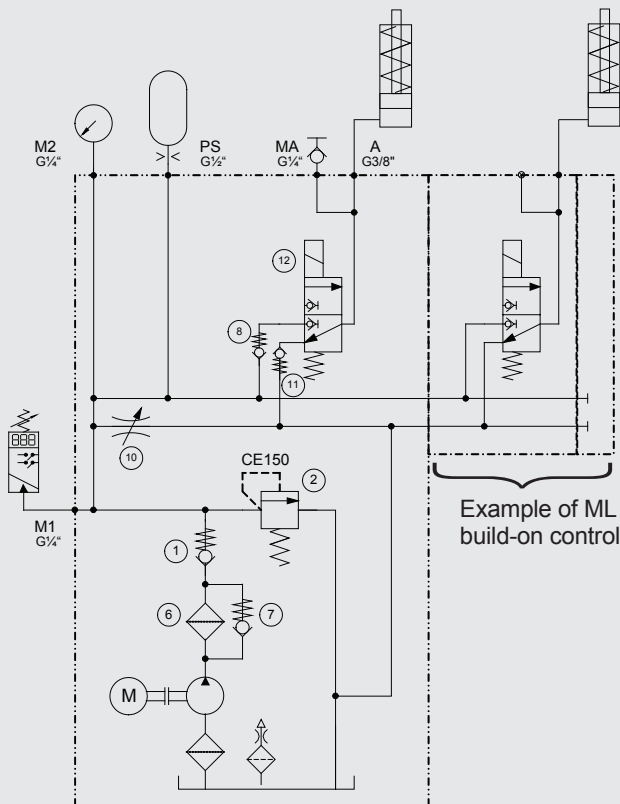
Flow rate and pressure

Flow rate				Motor output at 3 ~ 50 Hz 230 / 400 V Motor also suitable for 3 ~ 60 Hz 257 / 480 V } Motor code 03						
50 Hz [l/min]	60 Hz [l/min]	No. poles on motor	Displ. pump [ccm/rev]	0.37 kW [bar]	0.55 kW [bar]	0.75 kW [bar]	1.1 kW [bar]	1.5 kW [bar]	2.2 kW [bar]	3.0 kW [bar]
1.3	1.6	4	1.0	215	250					
2.4	2.9	4	2.0	110	170	235	250			
3.7	4.4	4	2.65	75	115	155	230	250		
5.0	6.0	4	3.75	50	85	115	170	230	250	
6.3*	7.6*	4	4.75*	40	70	90	140	185	250	
7.4	8.9	2	2.65						230	250
8.6*	10.3*	4	6.3*	30	50	65	100	130	200	
10.0	12.0	2	3.75						165	230
12.6*	15.1*	2	4.75*						135	185
13.3*	16.0*	4	10.0*		30	40	60	85	120	
17.3*	20.7*	2	6.3*						95	130
20.0*		2	8.0*						80	110

4-pole motor types are low-noise

* not possible with oil reservoir B04

Circuit diagram



3D model of flange unit

