

**Technical Catalogue**  
**Catalogo Tecnico**

EN / IT

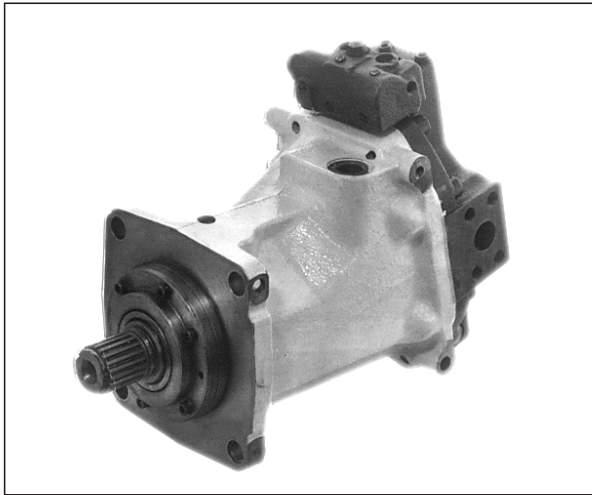
**RB7MV - RB7MR**  
**series**

**Hydraulic Piston Motors**

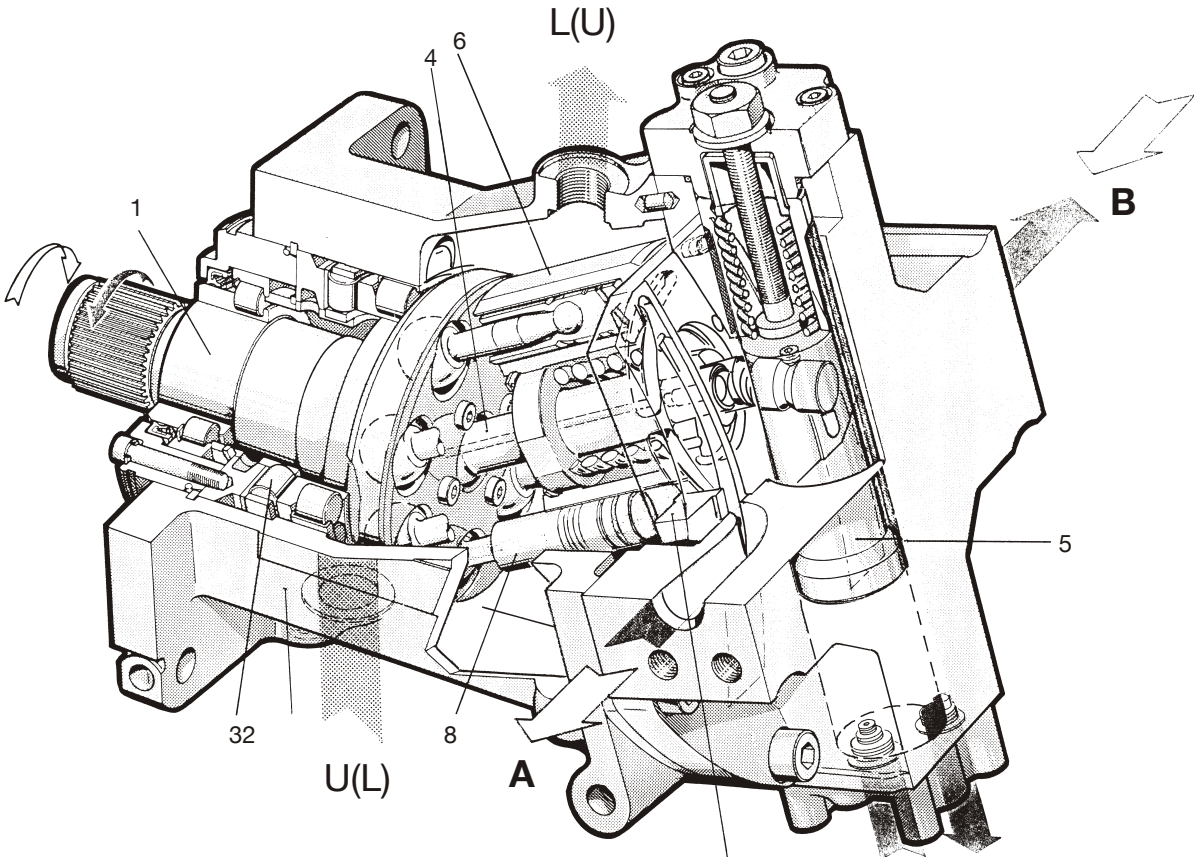
**Revortex**

Innovation + High Performance + Durability

- Hydraulic motors for both open-loop and closed-loop hydraulic systems
- Exceptionally small overall dimensions
- At request, it can be supplied with or without valve for flushing of housing, i.e. system. The overall dimensions are not altered if the valve is installed.
- Improved efficiency
- Very robust and rugged rotary group, with a shaft that may be loaded with radial forces.
- Noiseless operation



SECTION - MODE OF OPERATION (STANDARD MOTOR, FLIP - FLOP)

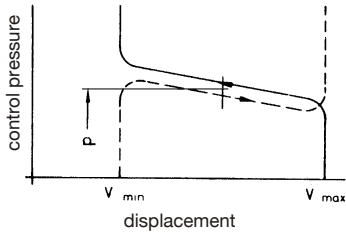


- 1. Drive shaft
- 2. Housing
- 3. Bearing
- 4. Middle shaft
- 5. Control piston
- 6. Cylinder block
- 7. Division plate
- 8. Piston (7 pcs)

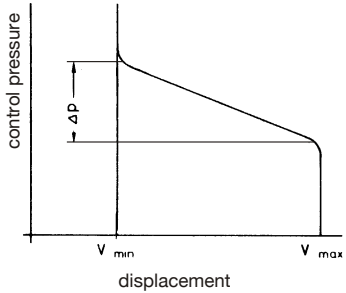
CONTROLS

Displacement of the hydraulic motor can be varied by changing of the cylinder block tilt angle between the maximum and minimum value. equal pressure and input flow: MAXIMUM dsplacement provides

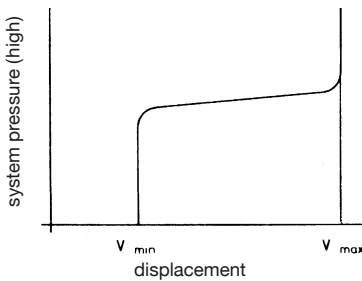
TWO STEP MOTORBMV(FLIP-FLOP)  
Smooth change under load from maximum displacement and versa.



STEPLESS MOTORBMV2(remotelly controlled)  
Head tilt angle progressively changed between maximum and minimum displacement by means of pilot pressure.  
- control pressure range:  $p_U = 8 - 15 \text{ bar}$

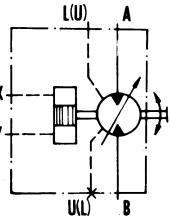


HIGH PRESSURE REGULATED MOTORBMR  
Automatic smooth change, from minimum to maximum displacement and vice versa, at a given pressure in the system (to be indicated in order).

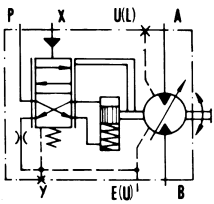


SYMBOLS

MOTOR STANDARD V

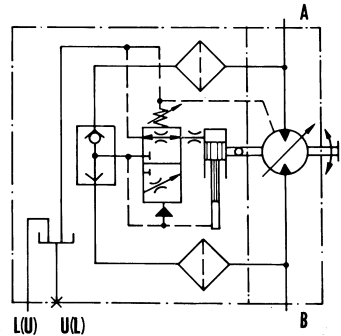


MOTOR STANDARD V2



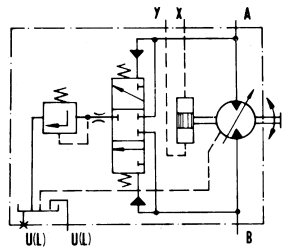
For high

MOTOR STANDARD R

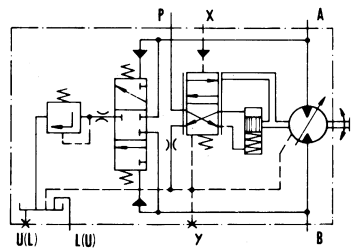


vice

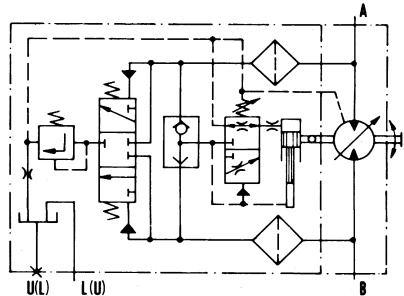
MOTOR WITH FLUSHING VALVE V



MOTOR WITH FLUSHING VALVE V2



MOTOR WITH FLUSHING VALVE R



TEHNICAL DATA

GENERAL

ND	50	75	105
Rotation direction	clockwise and anticlockwise (both - direction)		
Mounting position	optional, drain hole up		
Mass (kg)	24	37	47

HYDRAULIC

Pressure (bar)			
- peek (short time)*	500		
- max working	420		
- continuous**	250		
- in housing (back pressure permitted)	1,5		
Displacement (cm³/o)			
- at max tilt angle 28°	50,2	74,9	104,9
- at min tilt angle 8°	15	22	31
Speed (r.p.m.)			
- continuous - at max tilt angle	3600	3300	3000
- continuous - at min tilt angle	4600	4200	3800
- peak speed - at max tilt angle	4000	3700	3400
- peak speed - at min tilt angle	5500	5000	4500

Note: the speed indicated may be exceeded in some cases for short periods of time (e.g. at braking or running through curves), eith increased noise and reduced efficiency.

Response time (s)	1 over full stroke - typical (at continuous pressure and max speed)
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Working fluid - mineral hydraulic oil			
viscosity (mm²/s)	10...80	RECOMMENDATION Oil working temperatureV	iscosity
optimal viscosity range (mm²/s)	15...20		22 mm²/s - 40°C
max viscosity - intermittent for starting (mm²/s)	1000		68 mm²/s - 40°C
			100 mm²/s - 40°C
temperature (C )	-20...+90		

FILTRATION: The fineness of filtering of10 μm is recommended. Filtering of 25 to 40 μm can be also applied. But wearing of the unit parts will be increased.

\*Translent pressure over the max working pressure at which the unit will still function.

\*\*Continuous pressure at which all parts of the unit are able to endure.

DESIGNATION

RB7MV /  
RB7MR

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1 Adjustment mode:

V= pilot pressure operated (flip-flop)

V2=pilot pressure operated (remotelly contolled)

R= high pressure

2 Nominal size ND:

50  
75  
105

3 Min displacement:

at request (see technical data)

4 Supplementing:

- = standard

C = with flushing valve

E12 = with directional control valve 12V DC

E24 = with directional control valve 24V DC

5 Supplementing:

to motor RB7MR starting point of the regulation (140 ... 250 bar)

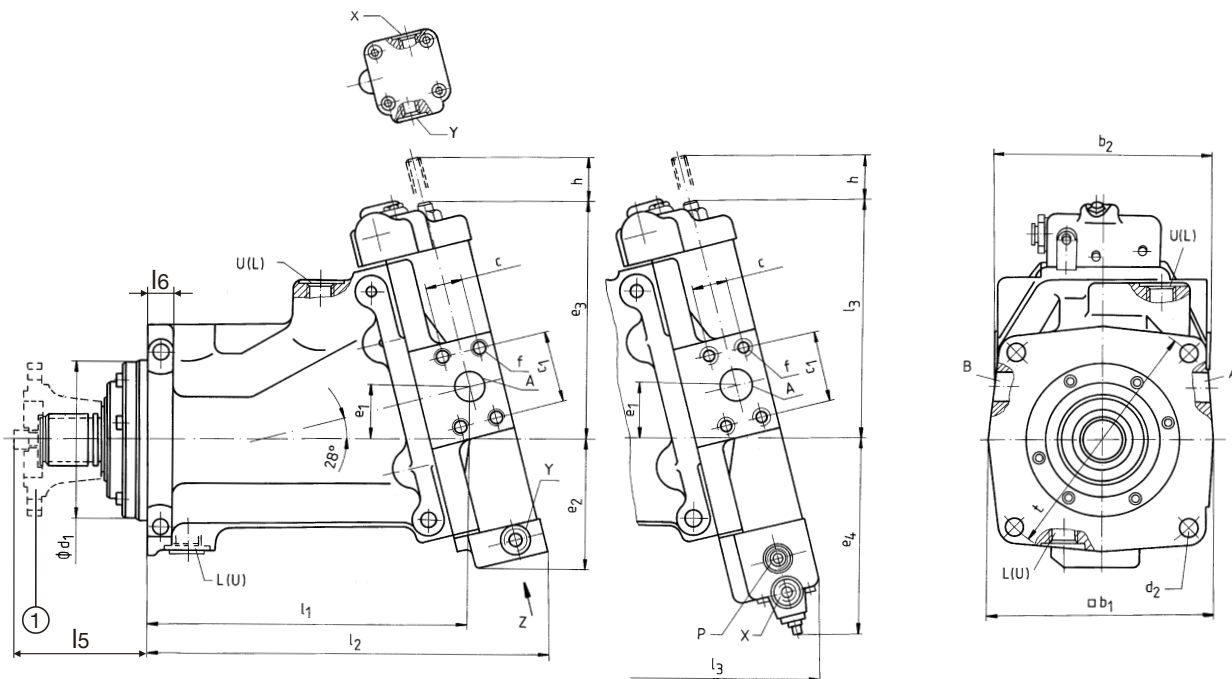
6 Drive shaft:

- = DIN 5482  
1 = DIN 5480  
2 = SAE standard

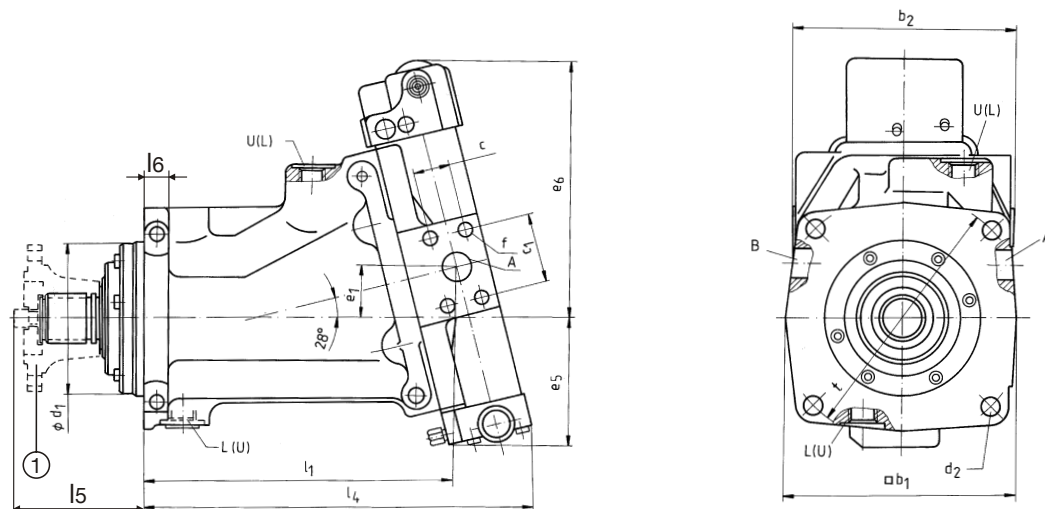
Note: Coupling - on the request only (see page 6)

V, V2 - STANDARD

V, V2 - WITH VALVE



R - STANDARD AND WITH VALVE



A, B = ports - 19 to flange SAE 3/4" (NV 50)

- 25 to flange SAE 1" (NV 75, 105)

L = drain port M22x1,5

U = flushing port M22x1,5

X, Y= control lines M14x1,5

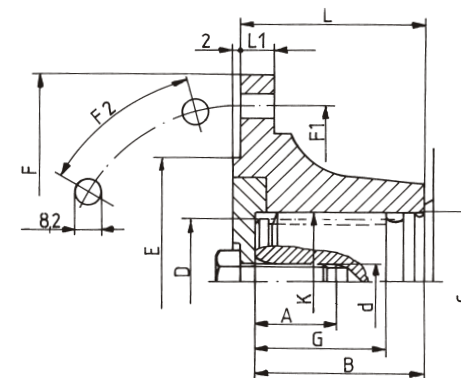
P = control line (high pressure) M14x1,5

① = coupling

NV	b1	b2	l1	l2	l3	l4	l5	l6	d1	d2	c	c1	f	t	e1	e2	max e3	e4	e5	e6	max h
50	150	147	203	255	265	–	85,5	18	100	12	23,8	50,8	M10/16	160	33	93	165	160	–	–	23
75	170	172	243	305	315	315	92,5	18	115	14	27,8	57,2	M12/16	180	38,7	107	220	170	125	201	28
105	184	175	261,5	324	335	331	103,5	20	125	18	27,8	57,2		200	41,6	108	227	172	124	208	31

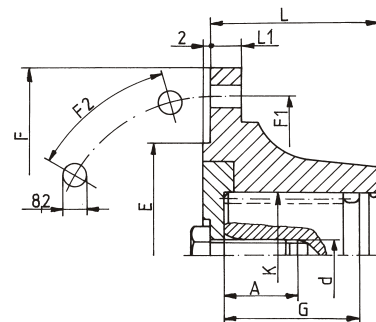
(5)

DRIVE SHAFT WITH COUPLING - DIN standard (dimensions in mm)



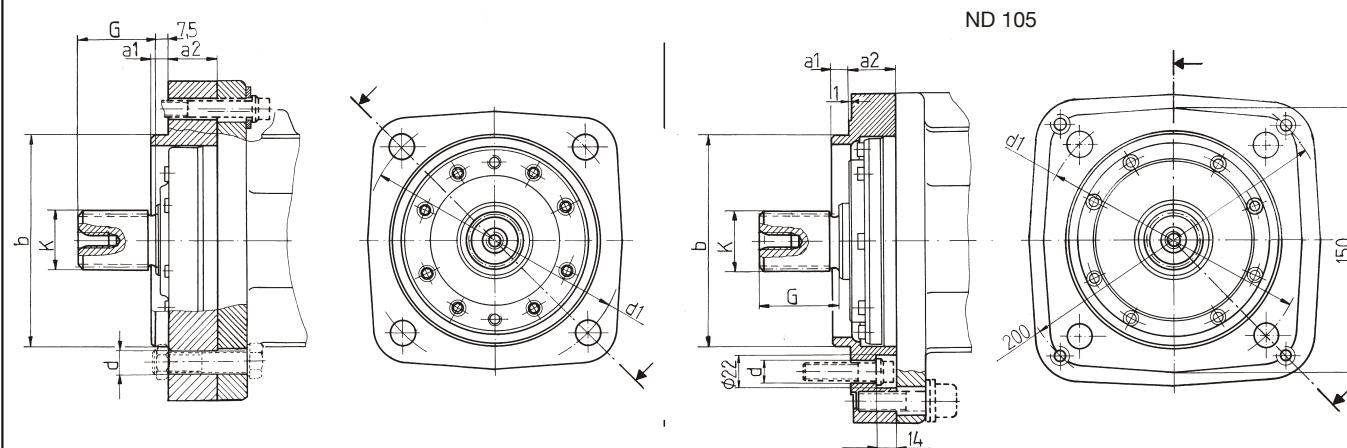
ND	K		A	B	C	D	d	E	F	F1	F2	G	L	L'
	DIN 5480g9	DIN 5482e9												
50	W30x2	B30x27	21	42,5	Ø 30,5g6	Ø 25g6	M8	Ø 57h8	Ø 99,5	Ø 84	6x60°	33	50	10
75	W35x2	B35x31	23	45,5	Ø 35,5g6	Ø 30g6	M10	Ø 75h8	Ø 114,5	Ø 101,5	8x45°	36	55,5	12
105	W40x2	B40x36	26,5	50	Ø 40,5a6	Ø 35a6	M12	Ø 75h8	Ø 114,5	Ø 101,5	8x45°	40	59	12

DRIVE SHAFT WITH COUPLING - SAE standard (dimensions in mm)



ND	K	A	G	d	E	F	F1	F2	L	L1
	SAE J498									
50	12/24; z=14	23	48	M10	☒ 57h8	☒ 99,5	☒ 84	6x60°	50	10
75		23	48	M10	☒ 75h8	☒ 114,5	☒ 101,5	8x45°	55,5	12
105	16/32; z=23	26,5	48	M12	☒ 75h8	☒ 120	☒ 101,5	8x45°	59	12

MEDFLANGE - SAE standard (dimensions in mm)



ND	K	G	a1	a2	d	d1	b
	SAE J498						
50	12/24; z=14	48	12,5	24	14	162	127h8
75		48	12,5	24,5	14	162	127h8
105	16/32; z=23	48	10	29	15	162	127h8

⑥

## WARNING

Errors in the selection or use of the products and / or systems described, can cause serious personal injury and property damage. It is critical that all aspects of the application and the operating conditions and products chosen are analyzed and re-examined. Making own tests and evaluations, the user is the only one able to ensure compliance with performance, safety and cautionary use requirements.

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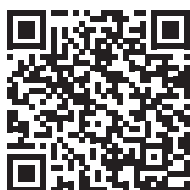
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[Orders@revortex.eu](mailto:Orders@revortex.eu)



[Technicalsupport@revortex.eu](mailto:Technicalsupport@revortex.eu)



[Purchasing@revortex.eu](mailto:Purchasing@revortex.eu)

### Revortex srl

Sede legale: Via Bruno Tosarelli, 23 - 40055 - Villanova di Castenaso - BO - Italy

Sede produttiva: Via Saragat, 26 - 40062 - Molinella - BO - Italy

[info@revortex.eu](mailto:info@revortex.eu) - [revortex.eu](http://revortex.eu)

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