

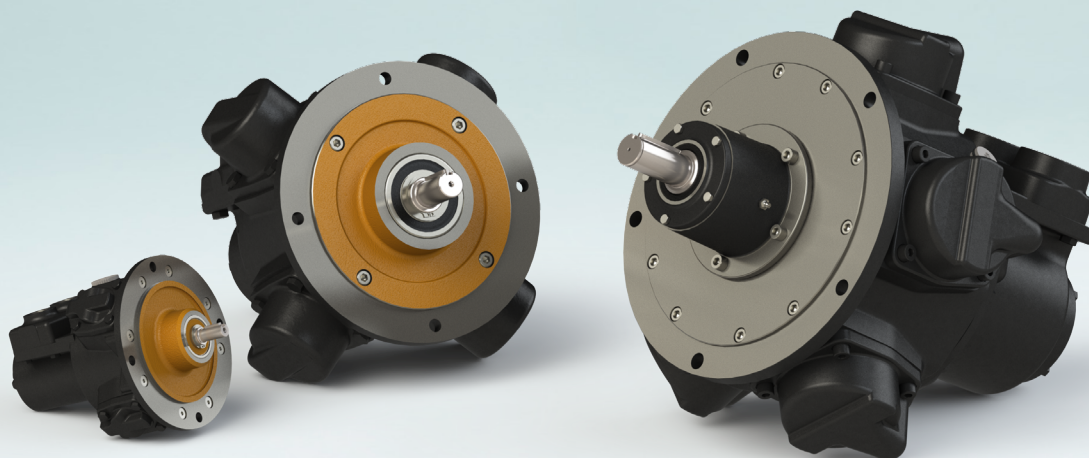


GLOBE AIRMOTORS B.V.

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Specifications: RM110

Piston Air Motor



Order your
PISTON MOTOR:
orders@globe-benelux.nl

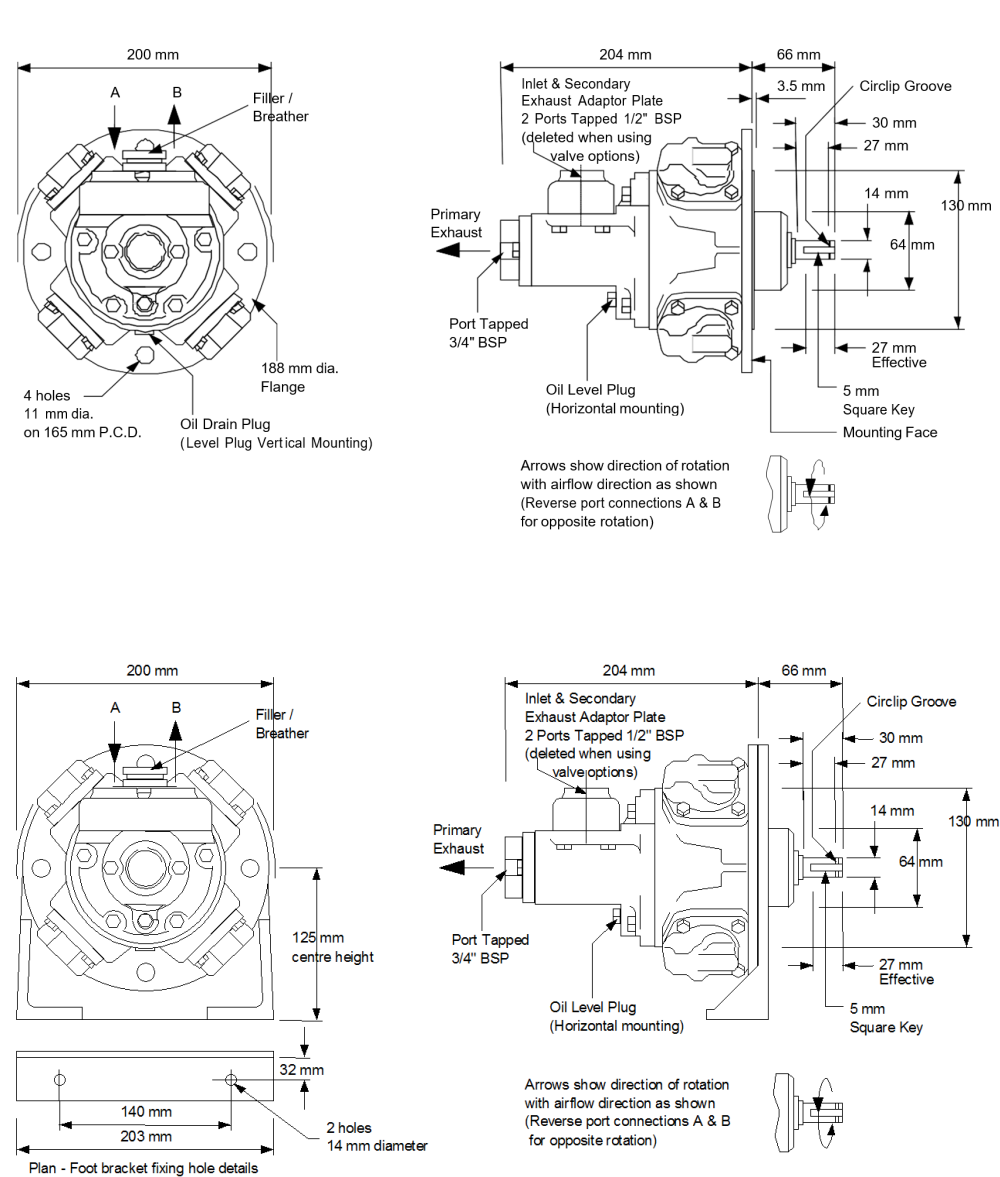
Contents

Dimensions & Spare Parts RM110	2
Dimensions & Performance RM110 + Brake	3
Dimensions RM110 + HCV/RCV	4
Dimensions & Performance RM110 + Brake + HCV/RCV	5
Spare Parts Brake, HCV, RCV	6-7

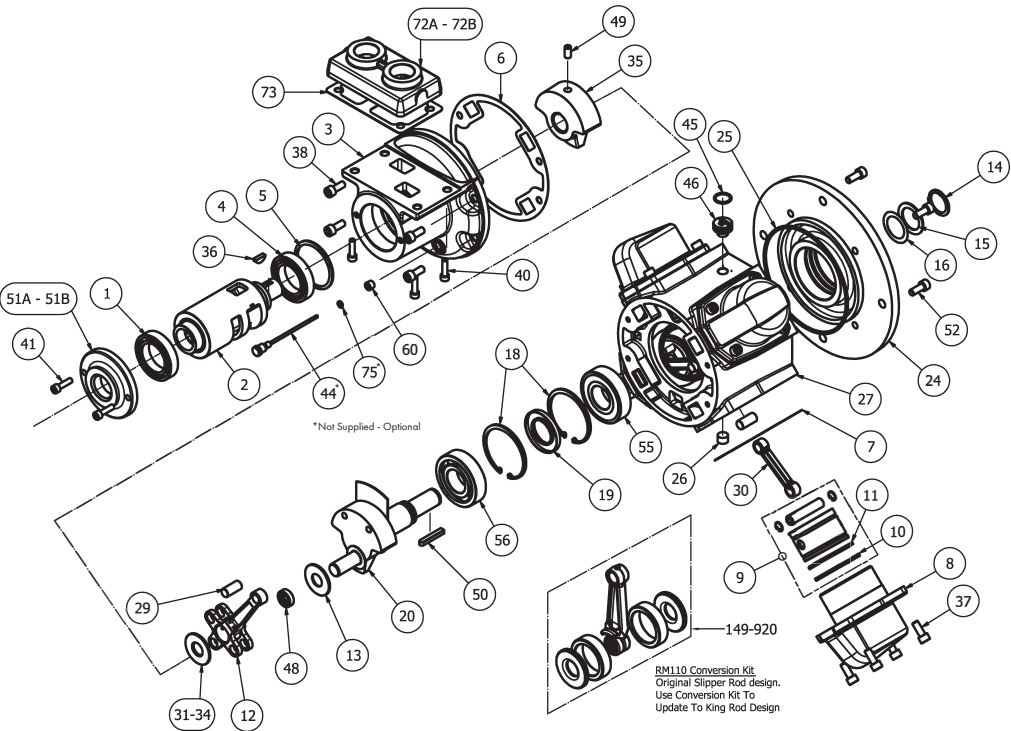


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Dimensions RM110 & RM110 + Foot Bracket



Spare Parts List RM110



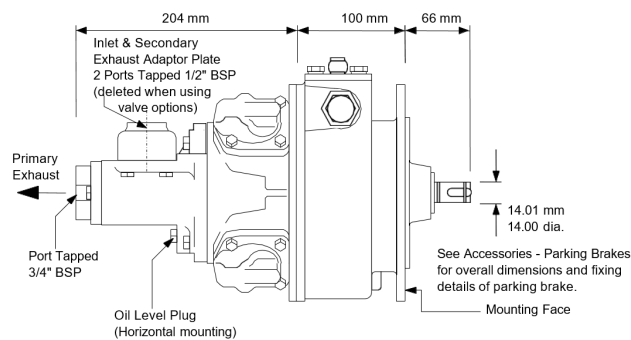
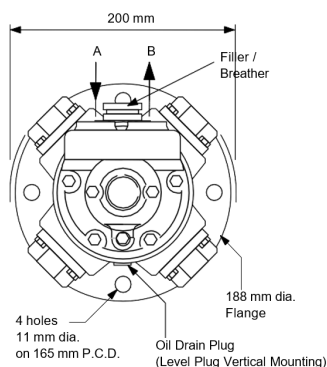
Item	Part No.	Description	Qty	Kit No.	Item	Part No.	Description	Qty	Kit No.
01	807-020	Rotary Valve Bearing (Outer)	1		36	811-016	Woodruff Key	1	
02	130-006	Rotary Valve	1		37	802-020	Cylinder Bolts	16	
03	130-011	Rotary Valve Housing	1		38	802-020	Valve Housing Bolts	4	
04	807-021	Rotary Valve Bearing (Inner)	1		40	802-020	Adaptor Plate Bolt	4	
05	804-051	Rotary Valve Bearing Circlip	1		41	802-016	Exhaust Cover Bolts	2	
06	100-001	Rotary Valve Housing Gasket	1*	139-911	44	100-040	Dipstick (vertical mounting)	1	
07	110-030	Cylinder Gasket	4*	139-911	45	808-004	Seal (transit only)	1	
08	110-082	Cylinder	4		46	130-066	Breather Plug	1	
09	130-902	Piston Assembly	4		48	807-042	Needle Bearing	1	
10	100-024	Compression Ring	4*	139-911	49	815-012	Grub Screw	1	
11	100-022	Oil Control Ring	4*	139-911	50	811-002	Key	1	
12	140-077	King Rod	1		51A	130-005	Rotary Valve Exhaust Cover BSP	1	
13	140-013	Crankshaft Spacer	1		51B	130-105	Rotary Valve Exhaust Cover NPT	1	
14	804-006	Crankshaft Circlip	1		52	810-003	Flange Bolt	8	
15	100-035	Crankshaft Spacer	1		55	807-007	Output Shaft Bearing (Outer)	1	
16	100-049	Crankshaft Spacer Shim	5		56	807-007	Output Shaft Bearing (Inner)	1	
18	804-051	Crankshaft Bearing Circlip	2		60	816-063	Oil Level Plug	1	
19	808-043	Crankshaft Oil Seal	1	139-911	72A	130-003	Inlet Adaptor Plate BSP	1	
20	110-901	Std. Crankshaft Assembly	1		72B	130-103	Inlet Adaptor Plate NPT	1	
24	130-076	Std. Flange Plate	1		73	130-004	Inlet Adaptor Plate Gasket	1*	139-911
25	808-033	Flange Plate Seal	1*	139-911	75	808-008	Dipstick Seal	1*	139-911
26	816-074	Plug	1			139-911	RM110 Seal Kit	1	
27	130-012	Engine Case	1			149-920	Conversion Kit	1	
29	140-081	Queen Rod Pivot	3						
30	140-078	Queen Rod	3						
31	140-052	Crank Spacer SELECT	1	149-920					
32	140-053	Crank Spacer ON	1	149-920					
33	140-054/055	Crank Spacer *ASSEMBLY	1	149-920					
34	140-056	Crank Spacer	1	149-920					
35	130-010	Balance Weight	1						

149-920 Conversion Kit:

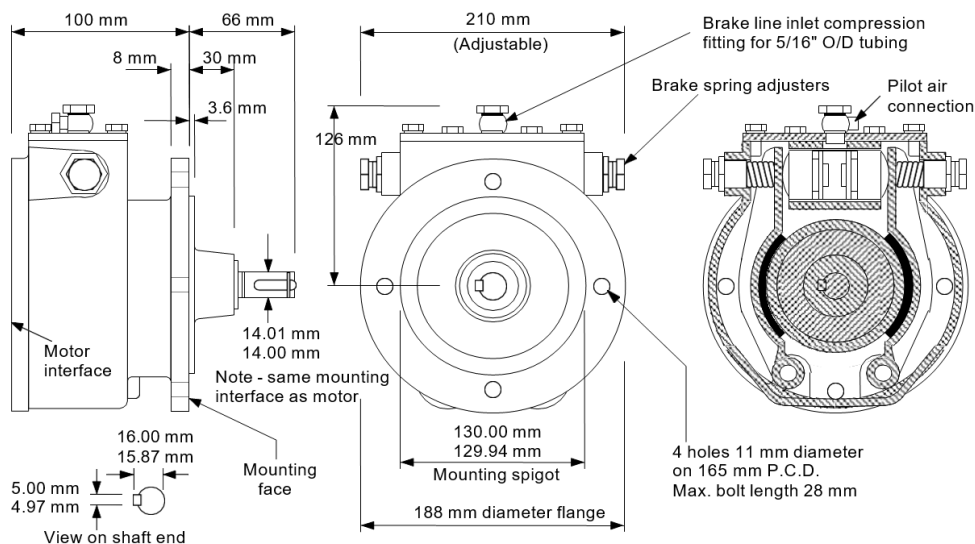
Comprises of items 12, 13, 29, 30, 31-34 and 48. These items may be used to convert a motor from the original design to the king rod design. If unit is pro

149-920 Conversion Kit:
Comprises of items 12, 13, 29, 30, 31-34 and 48. These items may be used to convert a motor from the original design to the king rod design. If unit is pre 1990 supplied, consult manufacturer to confirm design.

Dimensions & Performance RM110 + Brake



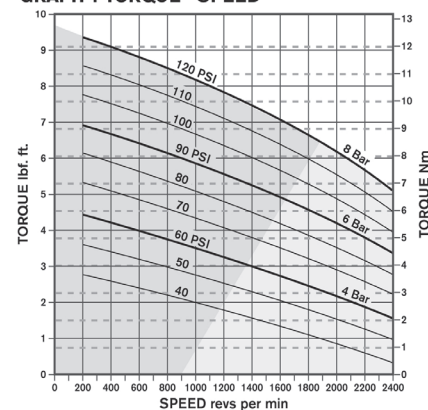
Arrows show direction of rotation with airflow direction as shown (Reverse port connections A & B for opposite rotation)



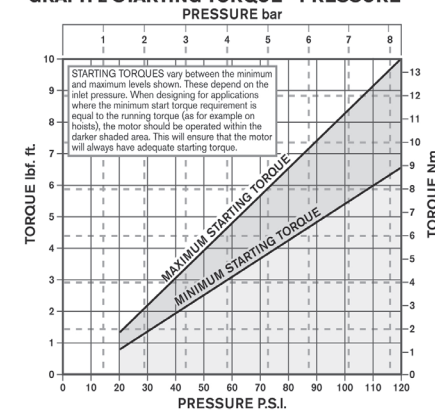
Gearbox ratio: None

Maximum speed: 2400 RPM
No Control Valve fitted

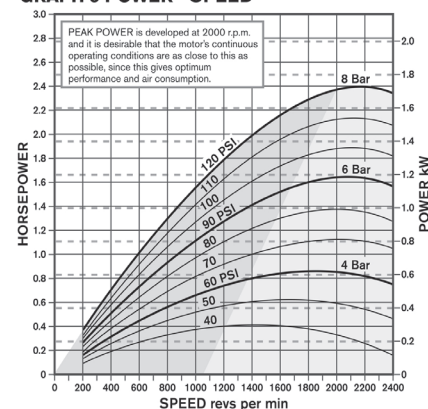
GRAPH 1 TORQUE - SPEED



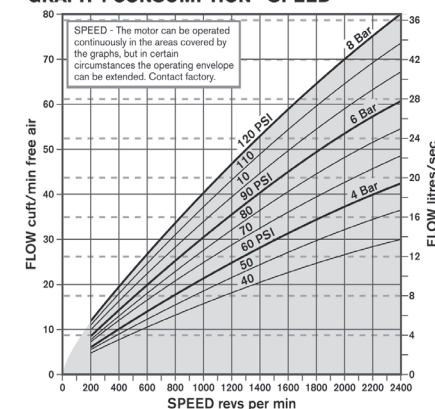
GRAPH 2 STARTING TORQUE - PRESSURE



GRAPH 3 POWER - SPEED



GRAPH 4 CONSUMPTION - SPEED



LUBRICATING OIL CAPACITIES

Horizontal 75ml Vertical 150ml

Use a good quality hydraulic oil with a viscosity of around 100cSt (460SSU) at 40°C (104°F)

AIRLINE FILTRATION AND LUBRICATION

Use 64 micron filtration or better. Choose a lubricator suitable for the flow required. Prior to initial start-up, inject oil into the inlet port.

GENERAL DATA

MASS (motor only) 13 kgs (28.7 lbs)

MOMENT OF INERTIA of rotating parts 0.01 gm² (motor only)

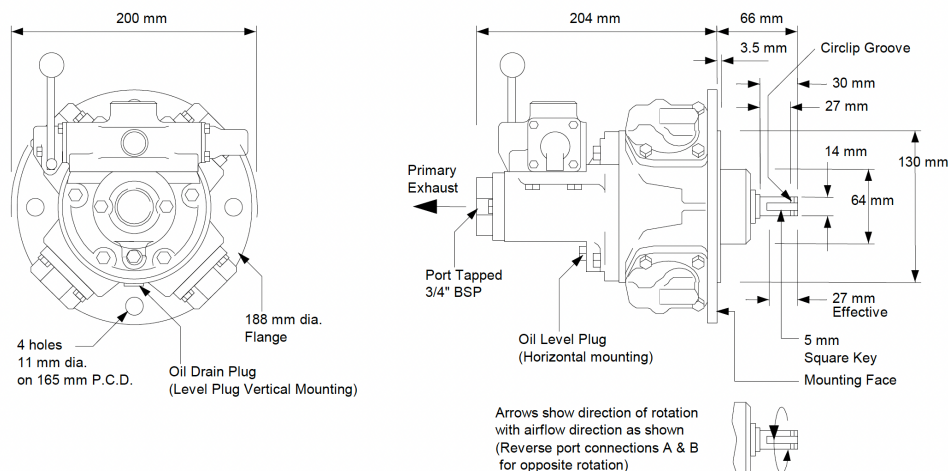
MAX OVERHUNG FORCE on motor shaft 445 N (100 lbf)

TEMPERATURE RANGE -20°C to +60°C (-4°F to +140°F) / -10°C to +60°C (-14°F to +140°F) with brake

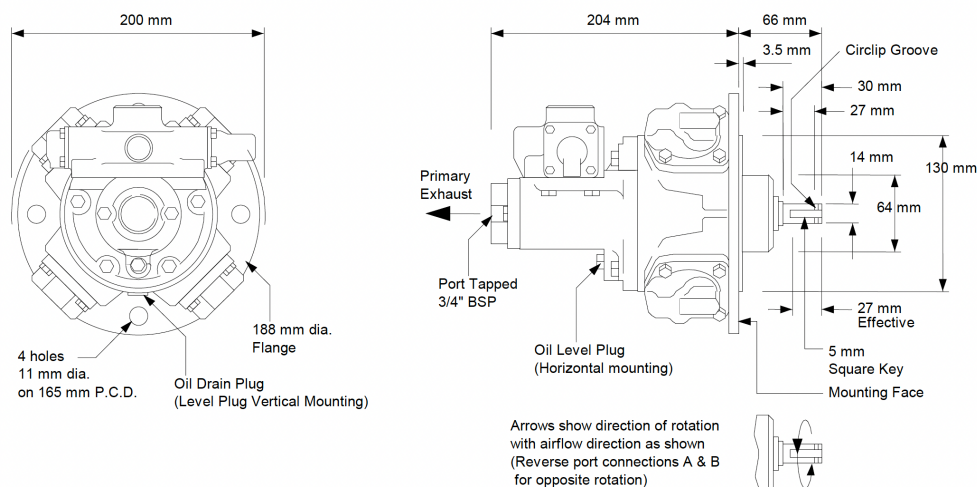
Lubricator drop rate 3-4 drops/minute continuous operation

Lubricator drop rate 6-8 drops/minute intermittent operation

Dimensions & Performance RM110 + HCV



Dimensions & Performance RM110 + RCV



Operational principle RM110 Control Valve Options

This range of bolt on valves offers very sensitive speed and directional control. One frictional matched spool and sleeve assembly is offered with two alternative means of actuation.

Configuration

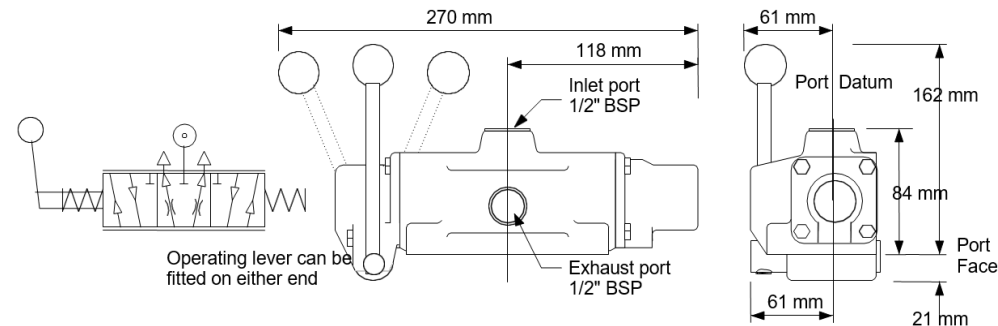
As standard these valves can be supplied with either **EQUAL POWER OR BIASED POWER** spools, the latter is suitable for hoisting applications (normal power for lifting - reduced power for lowering). The direction of reduced power must be stated when ordering **CW** or **CCW**, when viewed on the output shaft of the motor.

Hand Controlled (HCV) - The control valve spool is operated directly by a lever mechanism. Speed increase is obtained as the lever is moved in either direction from the centre (neutral) position.

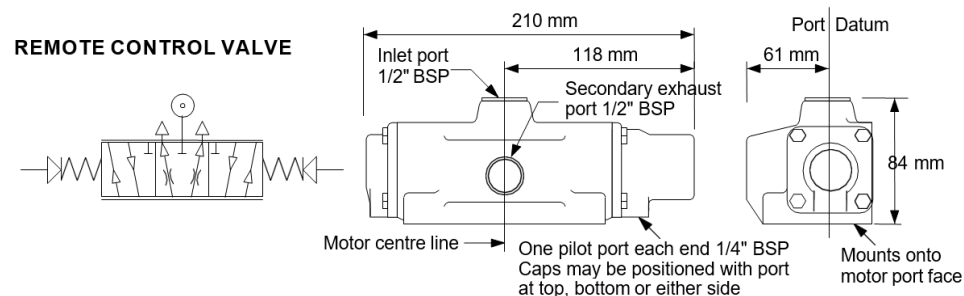
Remotely Controlled (RCV) - This option is usually controlled from a remote position by one of the PC series or LC2 remote controllers. A variable air pilot signal is applied to either end of the valve spool, depending on the required direction of motor rotation. The pilot pressure range is between 1.4 bar (20 psi) and 4.8 bar (70 psi), increased pilot pressure gives increased speed. The valve is spring centred to neutral.

Pressure Drop - Minimal pressure drop will be experienced through the valves, having the effect of maintaining the output torque whilst reducing the motor output speed by approximately 10-15% at 6 bar (90 psi) at maximum power. The starting torque remains unaffected.

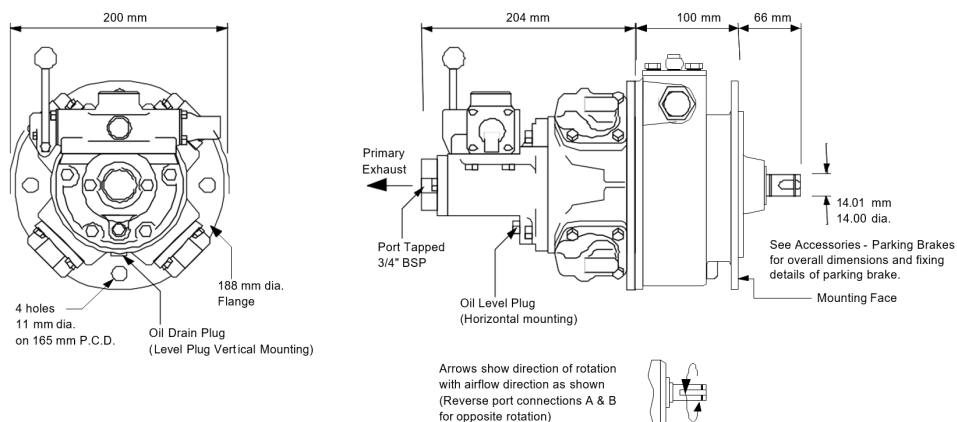
HAND CONTROL VALVE



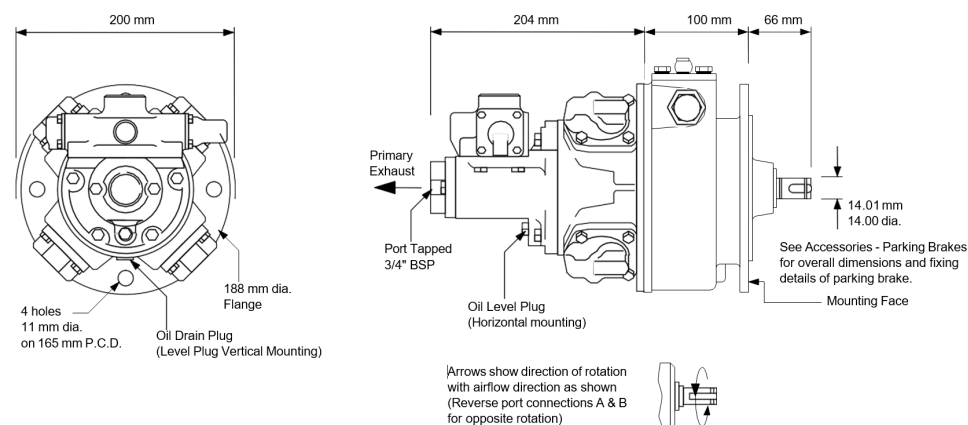
REMOTE CONTROL VALVE



Dimensions & Performance RM110 + Brake + HCV

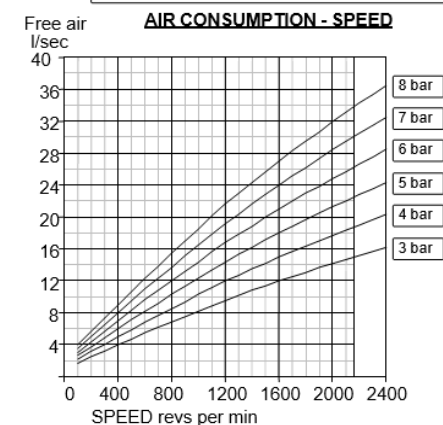
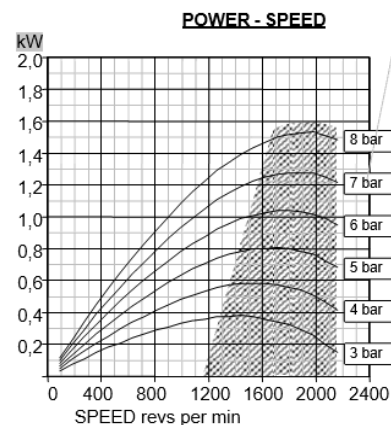
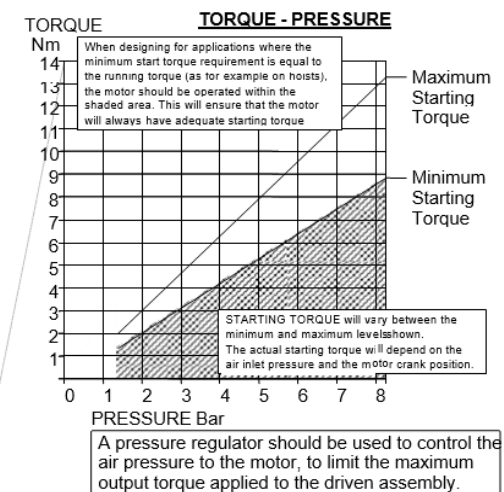
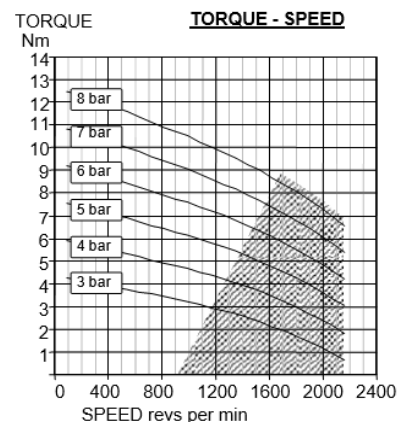


Dimensions & Performance RM110 + Brake + RCV



Gearbox ratio: None

Maximum speed: 2160 RPM
Control Valve Fitted



LUBRICATING OIL CAPACITIES

Horizontal 75ml Vertical 150ml

Use a good quality hydraulic oil with a viscosity of around 100cSt (460SSU) at 40°C (104°F)

AIRLINE FILTRATION AND LUBRICATION

Use 64 micron filtration or better. Choose a lubricator suitable for the flow required. Prior to initial start-up, inject oil into the inlet port.

Lubricator drop rate 3-4 drops/minute continuous operation

Lubricator drop rate 6-8 drops/minute intermittent operation

GENERAL DATA

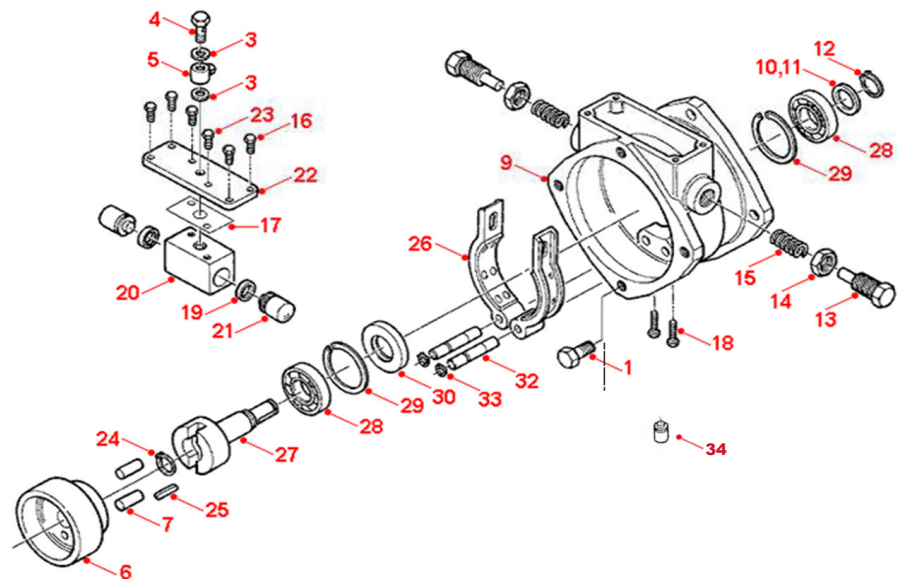
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MOMENT OF INERTIA of rotating parts 0.01 gm² (motor only)

MAX OVERHUNG FORCE on motor shaft 445 N (100 lbf)

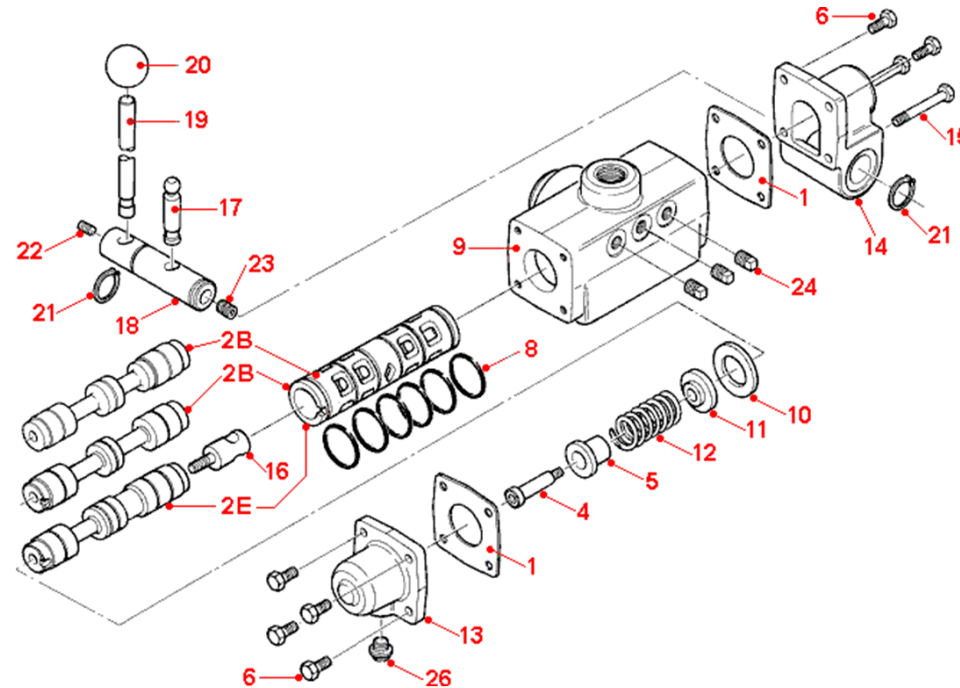
TEMPERATURE RANGE -20°C to +60°C (-4°F to +140°F) / -10°C to +60°C (-14°F to +140°F) with brake

Spare Parts List Parking Brake



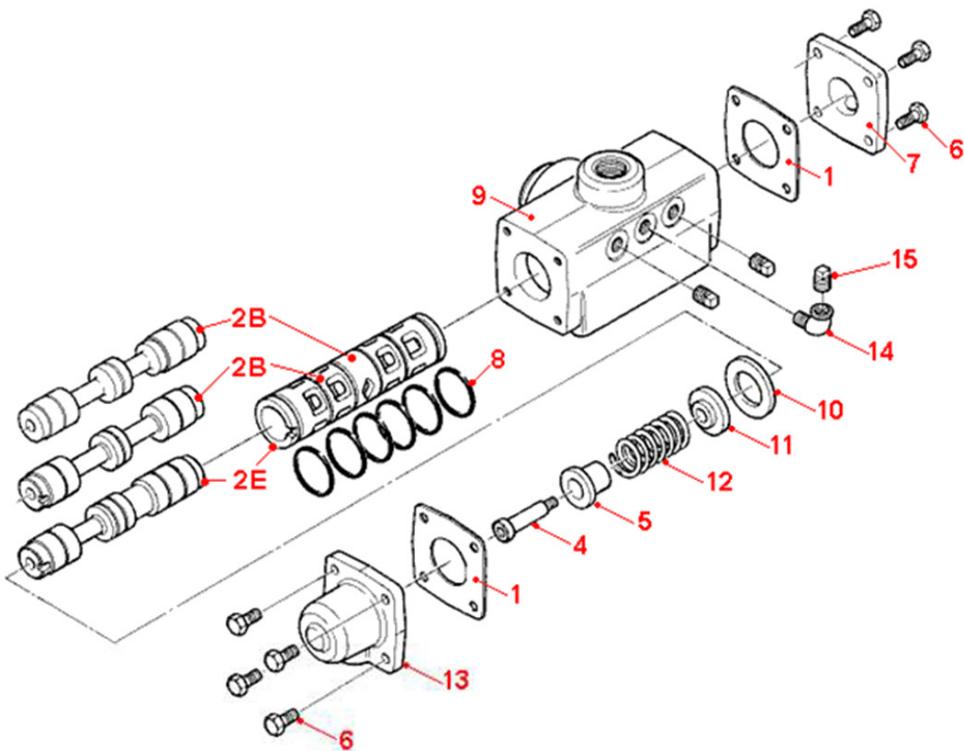
Item	Part No.	Description	Qty
01	802-052	Set Screw M10 x 20	4
03	808-090	Bonded Seal 1/4" BSP Dowty	2
04	816-004	Banjo Bolt Only 1/8" BSP	1
05	816-005	Banjo Bolt C/W/ Nut&Pin 5/16"	1
06	112-001	Brake Wheel	1
07	804-001	Dowel Dia 10 x 30 Lg	2
09	112-008	Brake Housing	1
10	100-049	Shim - Output	5
11	100-035	RM100 Output Shaft Spacer	1
12	804-006	Circlip 19mm External	1
13	102-009	Brake Spring Adjuster	2
14	102-024	1/2" BSP Hex Nut	2
15	814-002	Spring 223612	2
16	802-016	Hex Head Screw M6 x 16	4
17	112-030	Piston Block O-Ring Gasket	1
18	802-020	Hex Head Screw M6 x 20	2
19	808-072	U Packing U110	2
20	112-014	Piston Block	1
21	102-011	Brake Piston	2
22	112-013	Block Support Plate	1
23	802-012	Hex Head Screw M6 x 12	2
24	804-003	Circlip 14mm External	1
25	811-022	Key K123 5Sq	1
26	112-901	Brake Shoe Assembly	2
27	112-005	Output Shaft	1
28	807-007	Ball Bearing	2
29	804-051	Circlip 47mm Internal	2
30	808-043	Oilseal 20x47x10/R4	1
32	112-003	Brake Shoe Pivot	2
33	804-121	Circlip 3/8" External Ander	2
34	7008G18	Breather plug 1/8 BSP (ATEX only)	1

Spare Parts List Hand Control Valve



Item	Part No.	Description	Qty
01	111-066	End Cap Gasket	2 (Equipower)
02E	111-913	Matched Spool and Sleeve	1 (Biased)
02B	111-914	Matched Spool and Sleeve	1
4	817-003	Shoulder Screw 8 mm	1
5	111-071	Centering Shaft Guide	1
6	802-016	Hex Head Screw M6 x 16	8
8	808-027	O Ring 27.5 x 30	6
9	111-060	Valve Body	1
10	111-068	Valve Sleeve Spacer	1
11	111-072	Washer, Spring Centering	1
12	814-016	Spring 323714	1
13	111-064	End Cap - Spring End	1
14	113-041	Hand Lever Cap	1
15	802-024	Hex Head Bolt M6 x 50	2
16	113-024	Toggle Shaft	1
17	113-026	Toggle Pin	1
18	113-008	Hand Lever Pivot	1
19	113-002	Hand Lever	1
20	818-002	Black Plastic Knob 31 mm	1
21	804-013	Circlip 20mm External	2
22	815-010	Grub Screw M8 x 10	1
23	815-022	Grub Screw M8 x 16	1
24	816-063	Plug 1/8" BSPT Sq. Head	3
26	113-050	Vent Plug	1

Spare Parts List Remote Control Valve



Item	Part No.	Description	Qty
01	111-066	End Cap Gasket	2
02E	111-913	Matched Spool and Sleeve	1
02B	111-914	Matched Spool and Sleeve	1
4	817-003	Shoulder Screw 8 mm	1
5	111-071	Centering Shaft Guide	1
6	802-016	Hex Head Screw M6 x 16	8
7	111-065	End Cap - Plain End	1
8	808-027	O Ring 27,5 x 30	6
9	111-060	Valve Body	1
10	111-068	Valve Sleeve Spacer	1
11	111-072	Washer, Spring Centering	1
12	814-017	Spring D13040	1
13	111-064	End Cap - Spring End	1
14	816-049	Elbow M/F 1/8" BSPT	1
15	816-063	Plug 1/8" BSPT Sq. Head	3

Ordering code

Select easily with the ordering code your version and order it at our sales team. Do you have special wishes? For example ATEX Certified, different mountings, brakes etc. You name it and we make it possible. Contact us for your wishes and we will be happy to engineer a proposal to suit your requirements.

X = Motor Only Maleshaft
D = Motor + Brake
M = Motor Only Female Shaft
N = SAE 'C' Hydraulic Pump Output
V = Grease Lubricated for Shaft Upwards Operation

A = Motor with Inlet Plate
H = Hand Lever Control Valve
R = Remote Controlled Valve
X = No Valving or Adaptor Plate

OUTPUT OPTIONS

R43

X

XX

H

1

0

0 = Standard Motor & Ancillaries, for Standard Mounting

VALVE OPTIONS

NOMINAL GEARBOX RATIO

XX = No Gearbox

DESIGN CODE

RM110 (1.7 KW / 2.4 HP) = R14
RM210 (4 KW / 5.5 HP) = R23
RM310 (7.5 KW / 10 HP) = R33
RM410 (14 KW / 19 HP) = R43
RM510 (14 KW / 31 HP) = R52
RM610 (14 KW / 32 HP) = R62

VALVE

0 = BSP
1 = NPT
2 = Biased: CW Lowering (BSP)
3 = Biased: CCW Lowering (BSP)
4 = Biased: CW Lowering (NPT)
5 = Biased: CCW Lowering (NPT)