

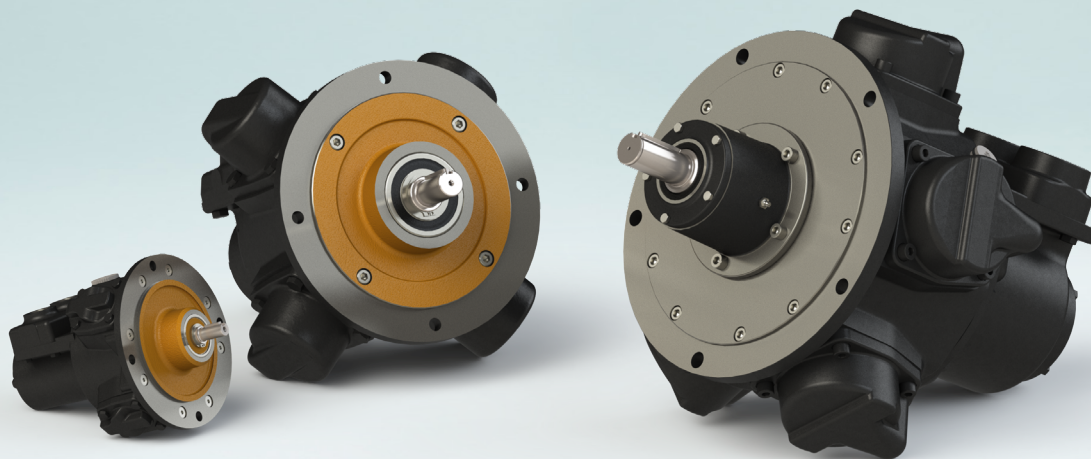


GLOBE AIRMOTORS B.V.

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Specifications: RM210

Piston Air Motor



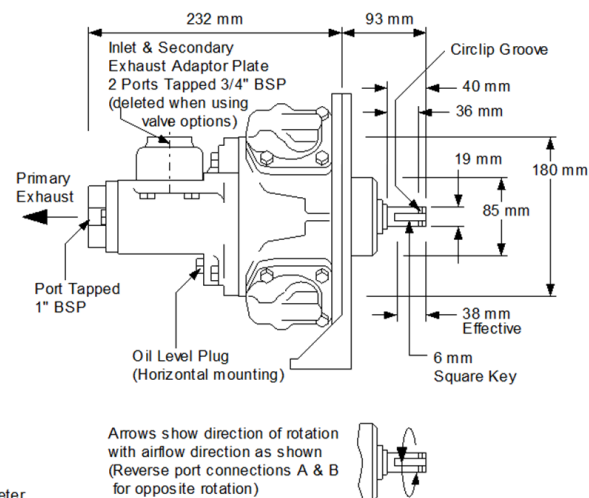
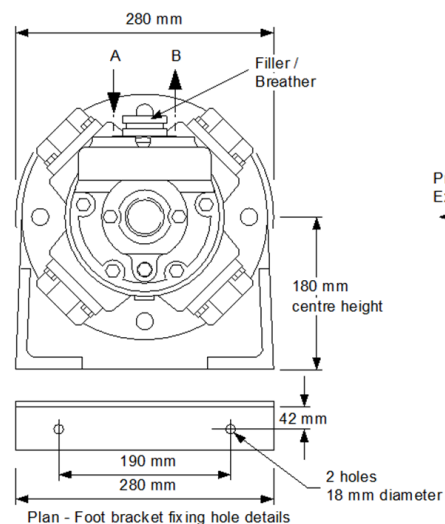
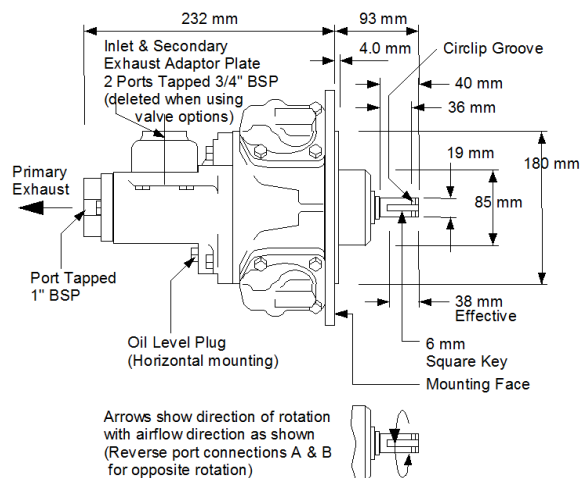
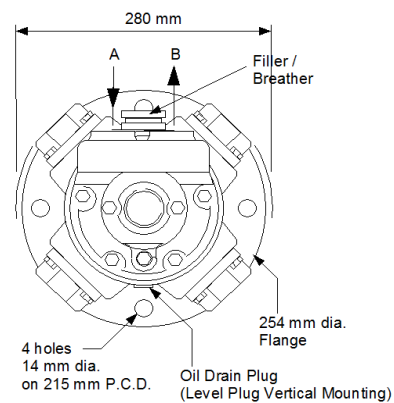
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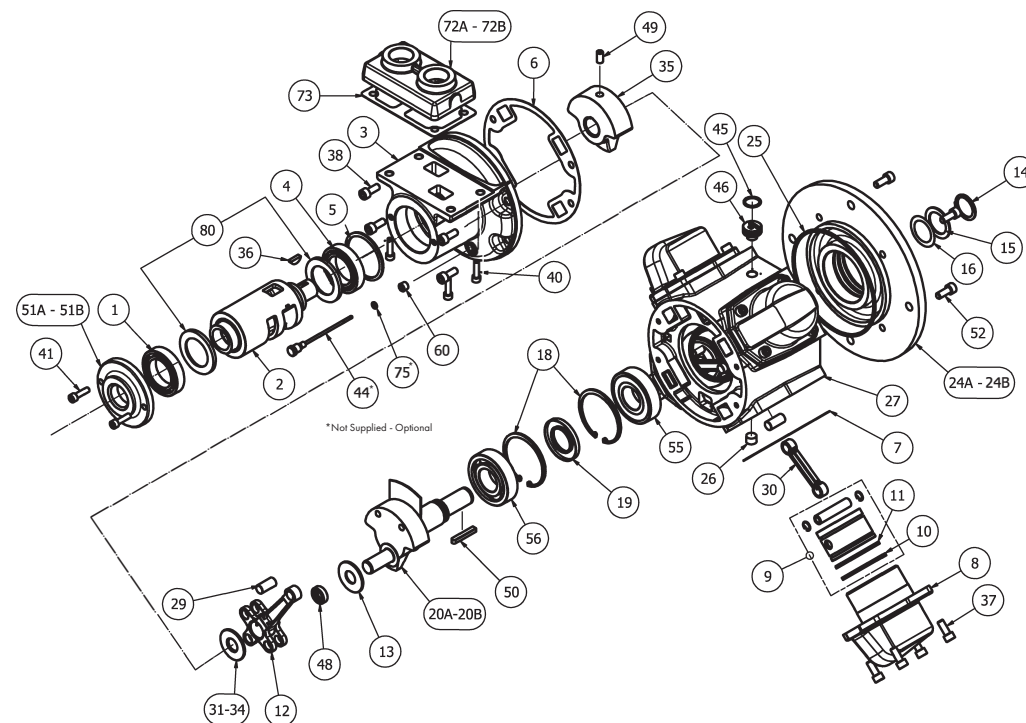


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Dimensions RM210 & RM210 + Foot Bracket



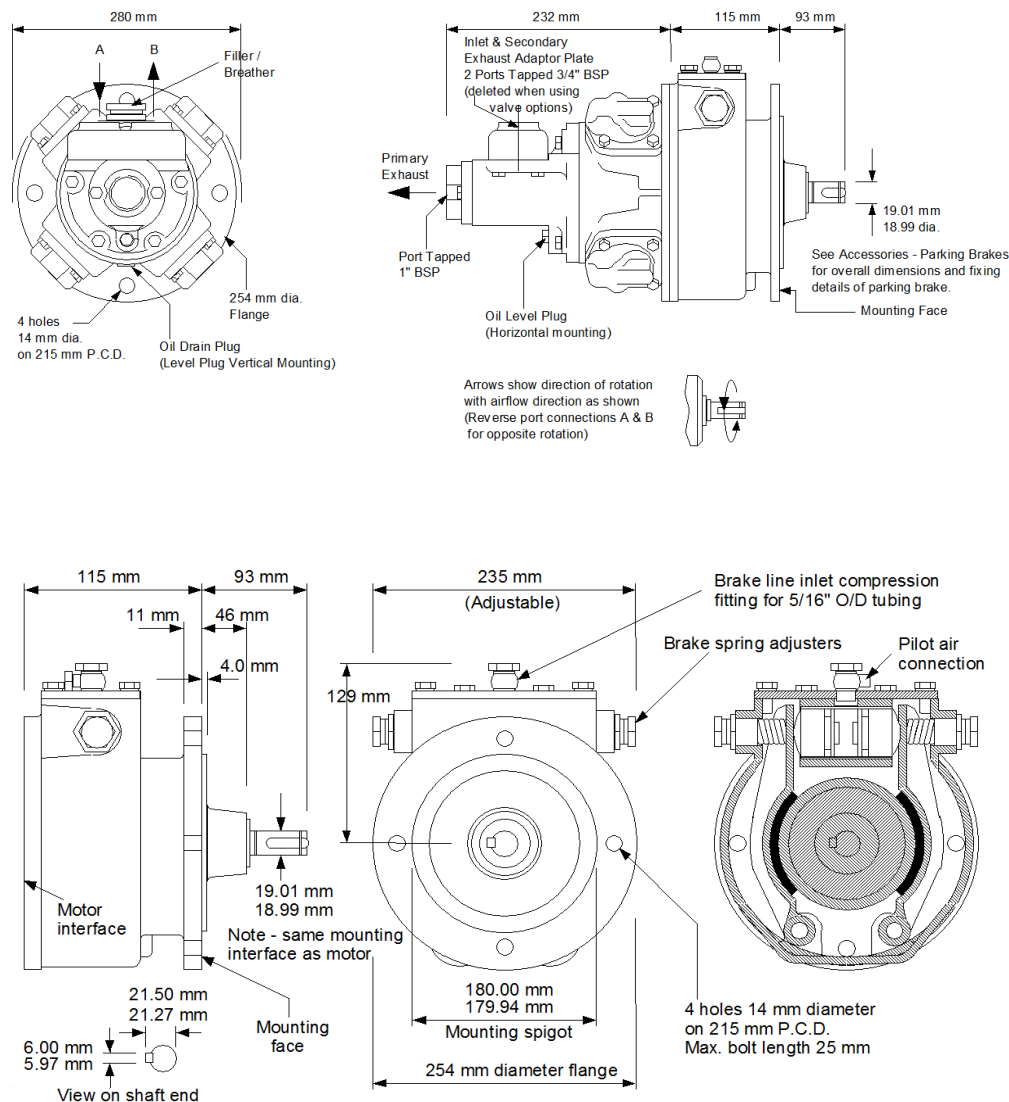
Spare Parts List RM210



Item	Part No.	Description	Qty	Kit No.	Item	Part No.	Description	Qty	Kit No.
01	807-020	Rotary Valve Bearing (Outer)	1		36	811-010	Woodruff Key	1	
02	230-059	Rotary Valve	1		37	802-032	Cylinder Bolts	16	
03	230-011	Rotary Valve Housing	1		38	802-033	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	200-001	Rotary Valve Housing Gasket	1*	239-911	44	200-040	Dipstick (Vertical Mounting)	1	
07	210-030	Cylinder Gasket	4*	239-911	45	808-004	Seal (Transit Only)	1	
08	210-082	Cylinder	4		46	130-066	Breather Plug	1	
09	230-902A	Piston Assembly	4		48	807-048	Needle Bearing	2	
10	200-024	Compression Ring	4*	239-911	49	815-001	Grub Screw	1	
11	200-022	Oil Control Ring	4*	239-911	50	811-001	Key	1	
12	230-077	King Rod	1		51A	230-005	Rotary Valve Exhaust Cover BSP	1	
13	230-013	Crankshaft Spacer	1		51B	230-105	Rotary Valve Exhaust Cover NPT	1	
14	804-009	Crankshaft Circlip	1		52	810-001	Flange Bolts	8	
15	300-035	Crankshaft Spacer	1		55	807-007	Output Shaft Brg. (Outer)	0	
16	300-049	Crankshaft Spacer Shim	5		56	807-008	Output Shaft Brg. (Inner)	2	
18	804-058	Crankshaft Bearing Circlip	2		60	816-063	Oil Level Plug	1	
19	808-044	Crankshaft Oilseal	1*	239-911	72A	230-003	Inlet Adaptor Plate BSP	1	
20	230-915	Std. Crankshaft Assembly	1		72B	230-103	Inlet Adaptor Plate NPT	1	
24	230-076	Std. Flange Plate	1		73	130-004	Inlet Adaptor Plate Gasket	1*	239-911
25	808-028	Flange Plate Seal	1*	239-911	75	808-008	Dipstick Seal	1*	239-911
26	816-071	Plug	1		239-911	239-911	RM210 Seal Kit	1	
27	230-012	Engine Case	1		80	230-060	Rotary Valve Spacer	2	
29	230-081	Queen Rod Pivot	3						
30	230-078	Queen Rod	3						
31	230-052	Crank Spacer SELECT	1						
33	230-054/055	Crank Spacer ASSEMBLY	1						
34	230-056	Crank Spacer	1						
35	230-010	Balance Weight	1						

If unit is pre 1990 supplied, consult manufacturer to confirm design.

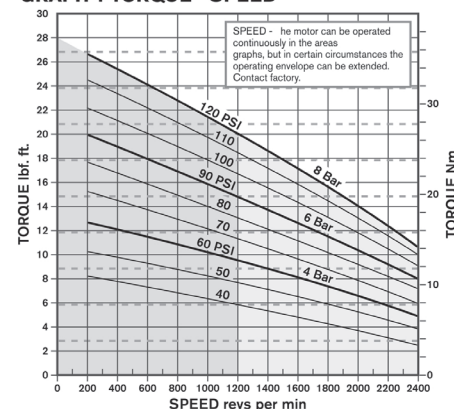
Dimensions & Performance RM210 + Brake



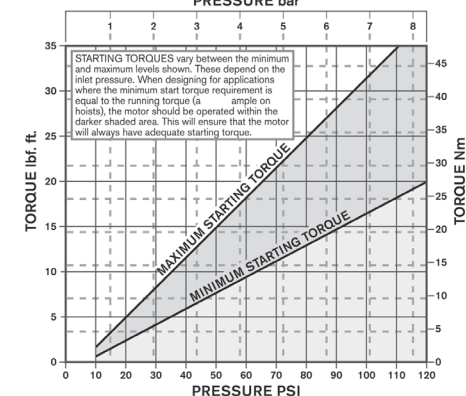
Gearbox ratio: None

Maximum speed: 2400 RPM
No Control Valve fitted

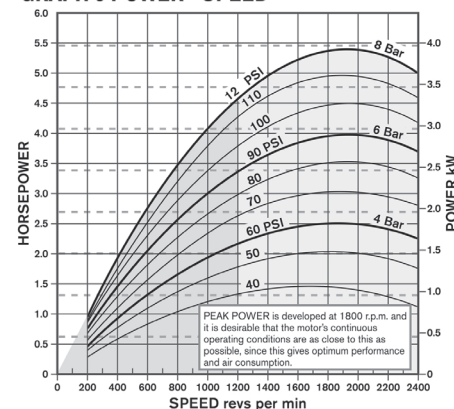
GRAPH 1 TORQUE - SPEED



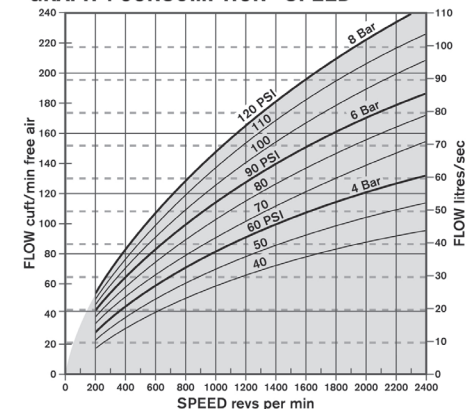
GRAPH 2 STARTING TORQUE - PRESSURE



GRAPH 3 POWER - SPEED



GRAPH 4 CONSUMPTION - SPEED



LUBRICATING OIL CAPACITIES

Horizontal 330ml Vertical 450ml

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) 26 kgs (57.3 lbs)

MOMENT OF INERTIA of rotating parts 0.56 gm² (motor only)

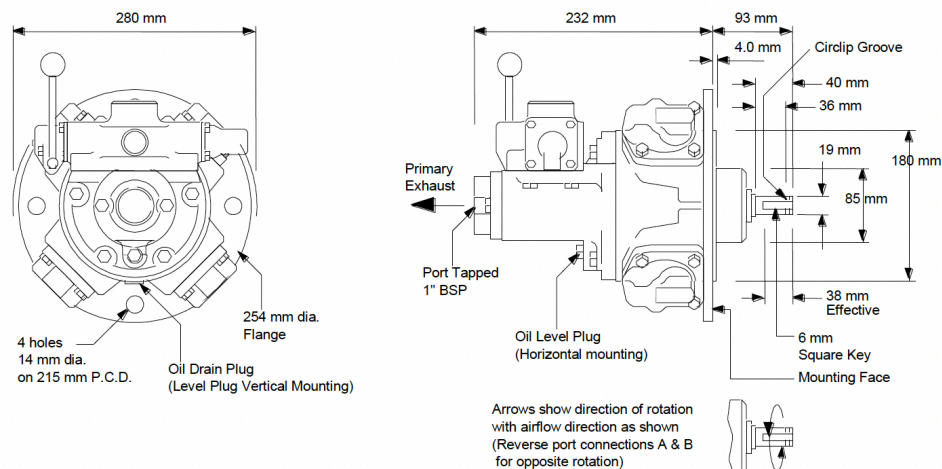
MAX OVERHUNG FORCE on motor shaft 890 N (200 lbf)

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 4-5 drops/minute continuous operation

Lubricator drop rate 8-10 drops/minute intermittent operation

Dimensions & Performance RM210 + HCV



Operational principle RM210 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

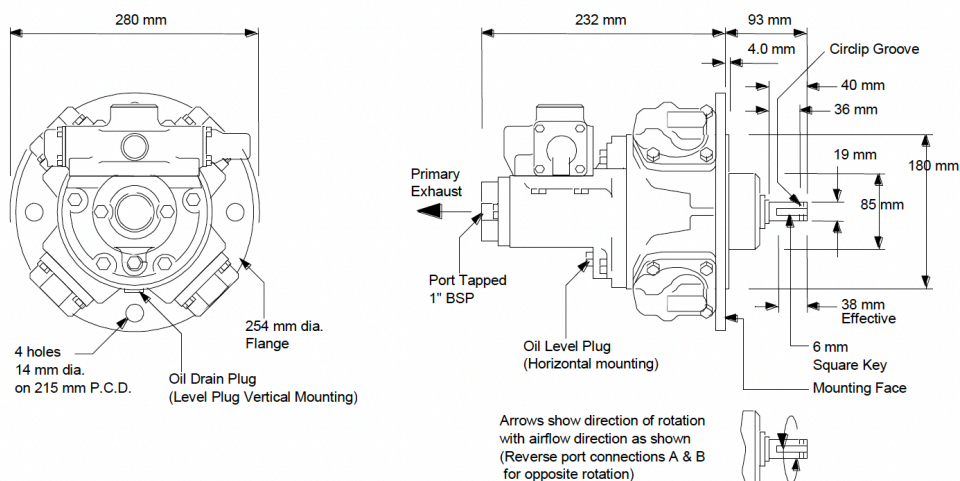
As standard these valves can be supplied with either **EQUAL POWER OR BIASED POWER** spools, the latter is suitable for hoisting applications (normal power for lifting - reduced power for lowering). The direction of reduced power must be stated when ordering **CW** or **CCW**, when viewed on the output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

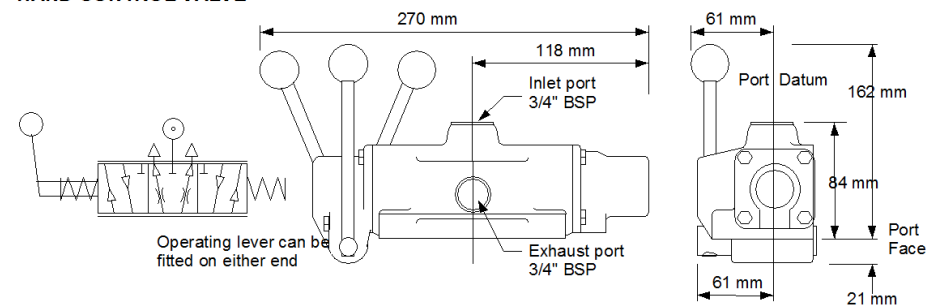
Remotely Controlled (RCV) - This option is usually controlled from a remote position by one of the PC series or LC2 remote controllers. A variable air pilot signal is applied to either end of the valve spool, depending on the required direction of motor rotation. The pilot pressure range is between 1.4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

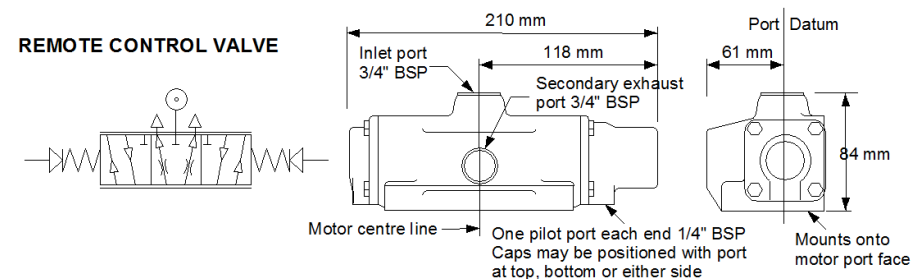
Dimensions & Performance RM210 + RCV



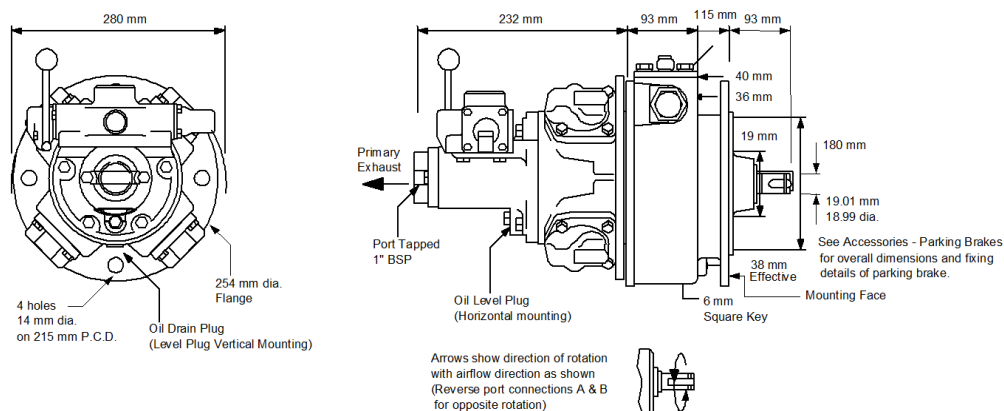
HAND CONTROL VALVE



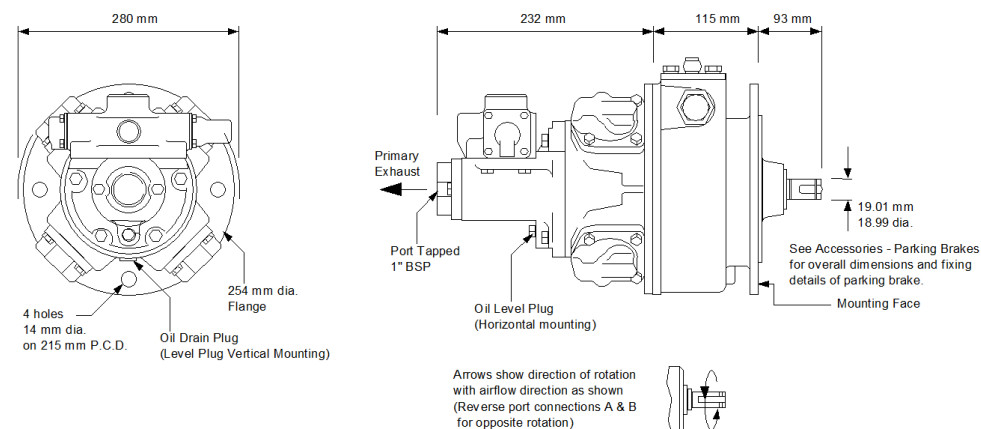
REMOTE CONTROL VALVE



Dimensions & Performance RM210 + Brake + HCV

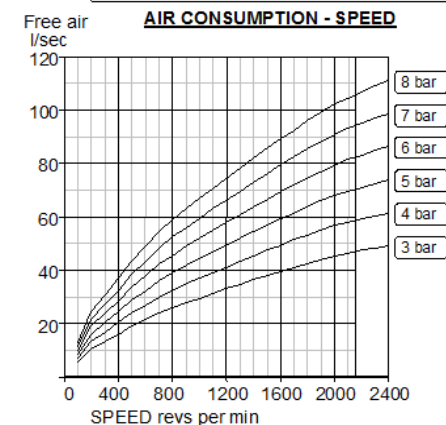
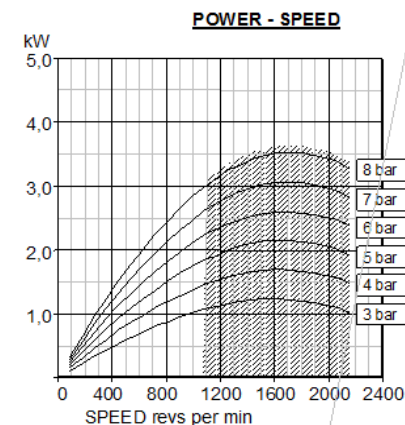
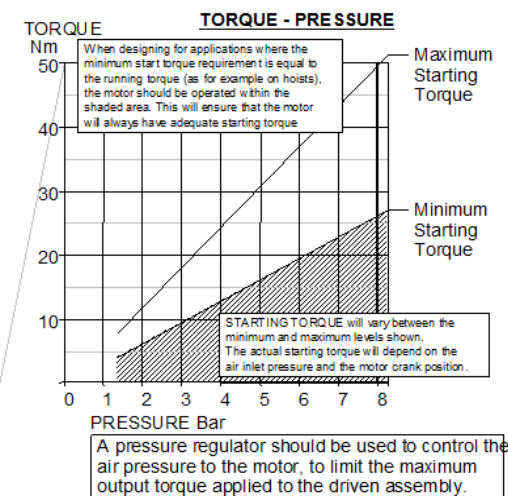
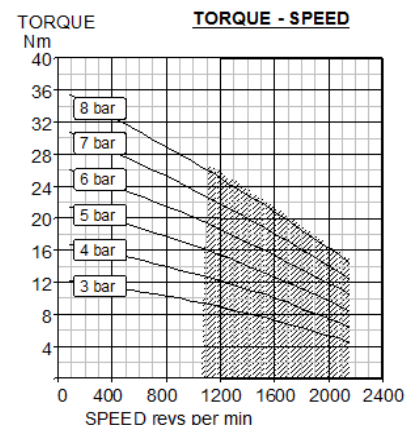


Dimensions & Performance RM210 + Brake + RCV



Gearbox ratio: None

Maximum speed: 2160 RPM
Control Valve Fitted



LUBRICATING OIL CAPACITIES

Horizontal 330ml Vertical 450ml

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 4-5 drops/minute continuous operation

Lubricator drop rate 8-10 drops/minute intermittent operation

GENERAL DATA

MASS (motor only) 26 kgs (57.3 lbs)

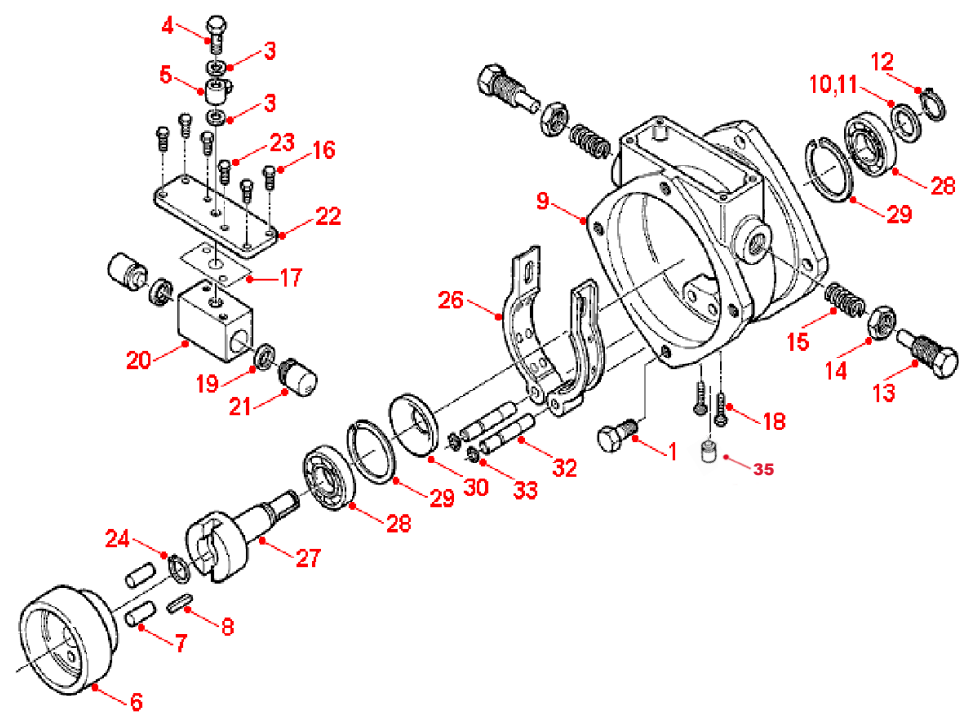
MOMENT OF INERTIA of rotating parts 0.56 gm² (motor only)

MAX OVERHUNG FORCE on motor shaft 890 N (200 lbf)

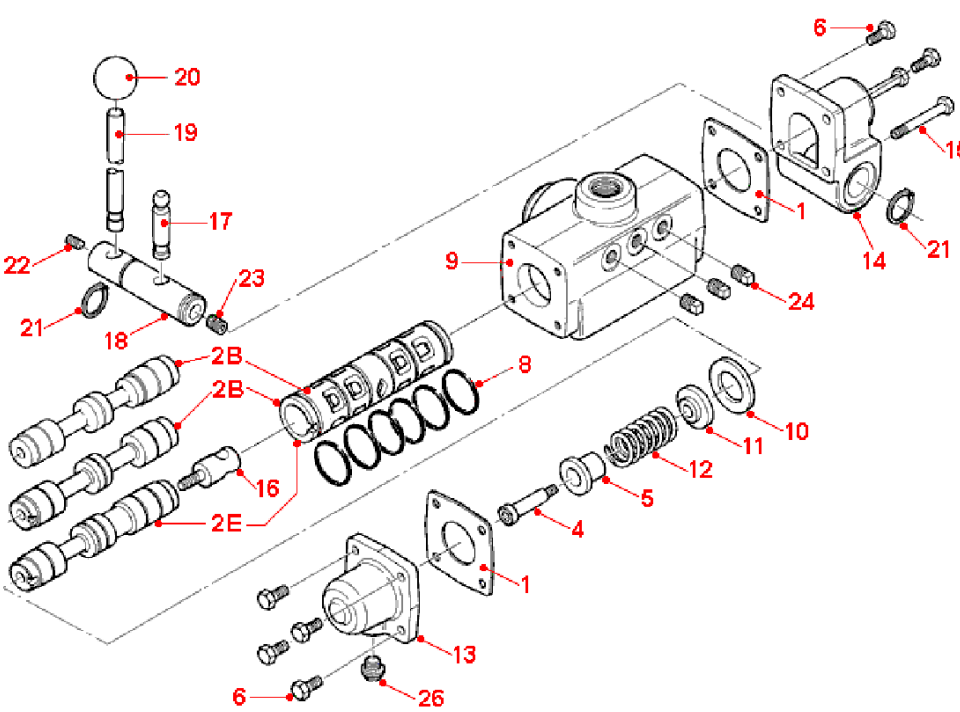
TEMPERATURE RANGE -20°C to +60°C (-4°F to +140°F) / -10°C to +60°C (-14°F to +140°F) with brake

Spare Parts List Parking Brake

Spare Parts List Hand Control Valve

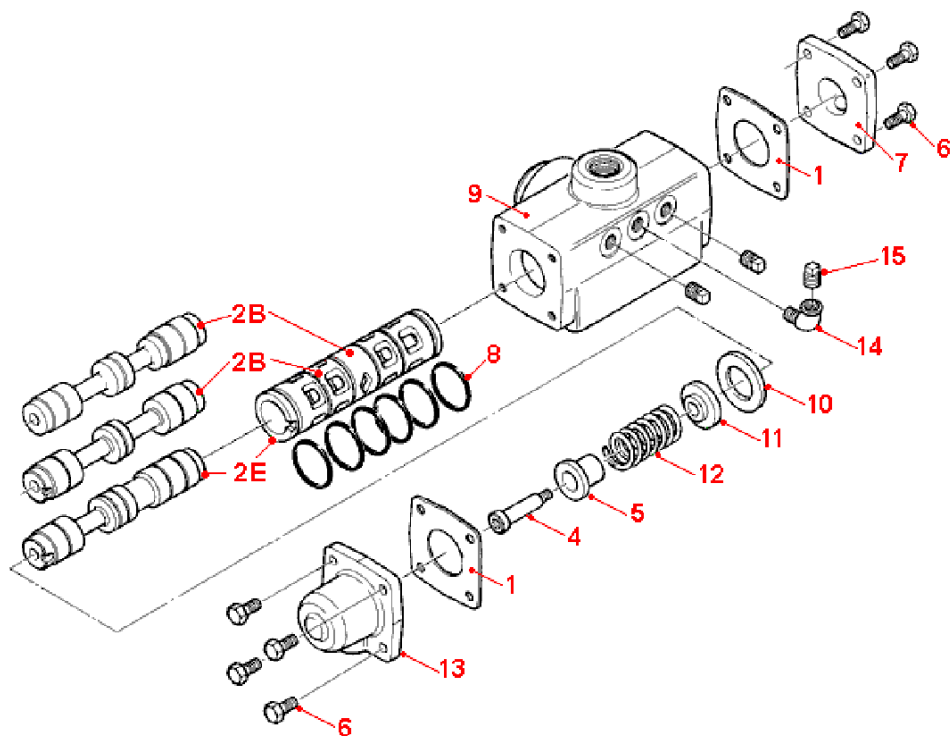


Item	Part No.	Description	Qty
01	802-072	Set Screw M10 x 20	4
03	808-090	Bonded Seal 1/4"BSP Dowty	2
04	816-004	Banjo Bolt Only 1/8 BSP	1
05	816-005	Banjo Bolt C/W/ Nut&Rin 5/16	1
06	212-001	Brake Wheel	1
07	806-001	Dowel Dia 10 x 30 Lg	2
08	811-001	Key 6 Sq.x30mm (K124)	1
09	222-008	Brake Housing	1
10	300-049	Shim - Output	5
11	300-035	Output Shaft Spacer	1
12	804-009	Circlip 27mm External	1
13	102-009	Brake Spring Adjuster	2
14	102-024	1/2" BSP Hex Nut	2
15	814-001	Spring 223712	2
16	802-016	Hex Head Screw M6 x 16	4
17	212-030	Piston Block Gasket	1
18	802-025	Hex Head Screw M6 x 25	2
19	808-075	U Packing U110	2
20	212-014	Piston Block	1
21	202-011	Brake Piston	2
22	212-013	Block Support Plate	1
23	802-012	Hex Head Screw M6 x 12	2
24	804-006	Circlip 19mm External	1
25	212-901	Brake Shoe Assembly	2
26	212-005	Output Shaft	1
27	807-008	Ball Bearing	2
28	804-058	Circlip 62mm Internal	2
29	808-044	Oilseal 30x62x10/R4	1
30	212-003	Brake Shoe Pivot	2
31	804-002	Circlip 11mm External	2
32	7008G18	Breather plug 1/8 BSPP (ATEX only)	1



Item	Part No.	Description	Qty
01	111-066	End Cap Gasket	2
02E	221-913	Matched Spool and Sleeve	1
02B	221-914	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	6
8	808-027	O Ring 27.5 x 30	6
9	221-060	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	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	818-003	Black Plastic Knob 31 mm	1
21	804-013	Circlip 20mm External	2
22	815-010	Grub Screw M8 x 10	1
23	815-002	Grub Screw M8 x 16	1
24	816-063	Plug 1/8" BSPT Sq. Head	3
25	113-050	Vent Plug	1

Spare Parts List Remote Control Valve



Item	Part No.	Description	Qty
01	111-066	End Cap Gasket	2
02E	221-913	Matched Spool and Sleeve	1 (Equipower)
02B	221-914	Matched Spool and Sleeve	1 (Biased)
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	221-060	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

VALVE OPTIONS

OUTPUT OPTIONS

0 = Standard Motor & Ancillaries,
for Standard Mounting

R23

X

XX

H

1

0

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)