The Drum Engineering Company Ltd.
Edward Street Works, Tong Street, Bradford. West Yorkshire. BD4. 9SH.
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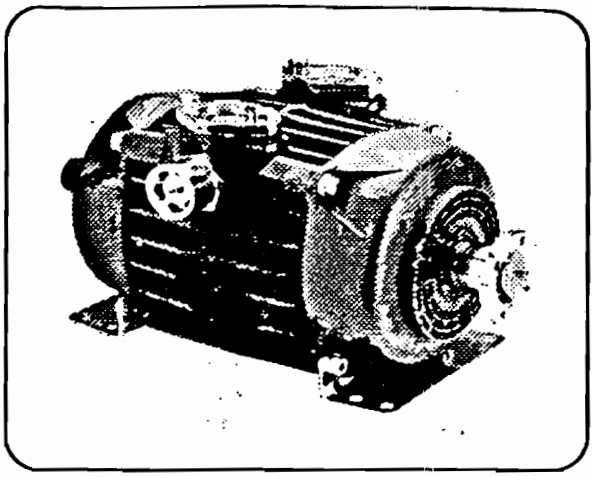
A SYLTONE COMPANY



JUPITER 100

SERVICE INSTRUCTIONS

Please read these instructions thoroughly before starting any work on this machine.

One screw on each bearing housing cap and sideplate is fitted with a seal. Do not remove these seals whilst the machine is still covered by the warranty as this will invalidate the warranty.

SAFETY - ENSURE THAT NO TOXIC OR HAZARDOUS CONTAMINATION HAS TAKEN PLACE AND THAT THE DRIVE TO THE MACHINE CAN NOT BE ENGAGED WHILST SERVICING IS IN PROGRESS.

These instructions are divided into 3 parts:-

1 DISMANTLING

2 RE-ASSEMBLY

3 REPLACEMENT PARTS

1 DISMANTLING

1.1 Cover the suction and delivery ports to prevent oil, grease, dirt etc. entering the machine.
1.2 Clean the outside of the machine thoroughly before dismantiing.
1.3 A clean working area and equipment are essential.

MARK ALL MATING PARTS DURING DISMANTLING TO ENSURE CORRECT RE-ASSEMBLY.

TO REPLACE BLADES ONLY, SEE SECTION 1.3

1.2 Considerable sideways movement of the drive shaft would suggest bearing wear and the rotor may have damaged the bore of the body. If this isthe case, the machine should be returned to **DRUM ENGINEERING** or the distributor for examination and possible re-boring.

NOTE THE ARROW BETWEEN THE PORTS ON TOP OF THE MACHINE SHOWS THE DIRECTION OF ROTATION. IT ALSO POINTS TOWARDS THE SUCTION PORT. THE LETTER "S" (SUCTION) AND "D" (DELIVERY) ARE MARKED HALFWAY DOWN THE MACHINE BODY BELOW THE RESPECTIVE PORT.

1.3 REPLACING THE BLADES REMOVING THE NON-DRIVE-END COWL, FAN AND SIDEPLATE.

1.3.1 Remove the relief valve fitted on the **DELIVERY** side of the machine, then stand the machine on the suction and delivery ports with the **NON-DRIVE-END** towards the front of the bench

1.3.2 Unscrew the 4-capscrews holding the NDE cowl and lift off the cowl along with the attached mounting bracket.

1.3.3 Tap off the fan using a soft "drift" on the central boss. **TAKE CARE NOT TO DAMAGE THE FINS**

1.3.4 Remove and discard the star tolerance ring from the shaft.

1.3.5 Raise the **SUCTION** side until the machine is tilted to 45° and support it **SECURELY** to prevent it falling over. A large vee block is most suitable. In this position the body will support the rotor, avoiding strain on the bearing when the sideplates are being removed. Identify the appropriate assembly from the illustration - **Fig 1.**

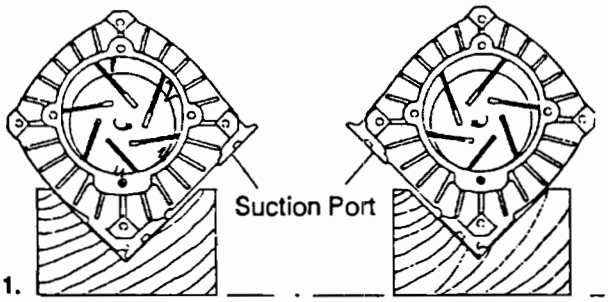


Fig 1.

1.3.6 The sideplate is located in position by a shouldered screw alongside the **"NIP"** (ie where the rotor and the body bore are closest). Unscrew the shouldered pin and the 3 capscrews holding the sideplate and remove the sideplate assembly.

1.3.7 Slide out the worn blades and discard them. **IF ANY OF THE BLADES ARE CHIPPED, MAKE SURE THAT NO PIECES OF BROKEN BLADE ARE LEFT BEHIND IN THE ROTOR SLOTS OR MACHINE BODY.**

NO FURTHER DISMANTLING IS NEEDED FOR THE BLADE REPLACEMENT. SEE 2.5 -6,7,8 AND 1,2,3,4,5, FOR RE-ASSEMBLY FROM THIS POINT.

1.4 REMOVE THE ROTOR

Remove the coupling from the **DRIVE-END** of the shaft and with the machine positioned as in **Fig 1.** remove the **DRIVE-END** cowl, fan and sideplate assembly; then slide out the rotor from the body.

1.5 REMOVING THE BEARING, INNER RACE SLEEVE

After removing the rotor from the body; if necessary pull off the bearing inner race and sleeve using a suitable extractor in the groove of the sleeve.

1.6 DISMANTLING THE SIDEPLATE

THIS IS ONLY NECESSARY IF DAMAGE TO BEARING OR SEAL IS SUSPECTED.

1.6.1 Unscrew the 3-capscrews holding the bearing housing cap to the sideplate and remove it along with any shims fitted beneath it.

1.6.2 Pull out the bearing outer race from the sideplate.

1.6.3 Examine the seals in the bearing housing cap and sideplate and discard them if damaged.

1.6.4 Repeat with the other sideplate.

2.6 CHECKING THE END FLOAT

2.6.1 Stand the assembly on the suction and delivery ports.

2.6.2 Fit a steel plate (approximately 100mm a 50mm x 6mm) to the machine using one of the M10 holes and capscrews by which the cowl is secured.

2.6.3 Using a dial test indicator with a magnetic stand, place the magnetic base onto the steel plate and with the button of the "clock" on the end of the shaft, check that there is an end float 0.150mm - 0.292mm (0.006" - 0.0115") see **Fig 4.**

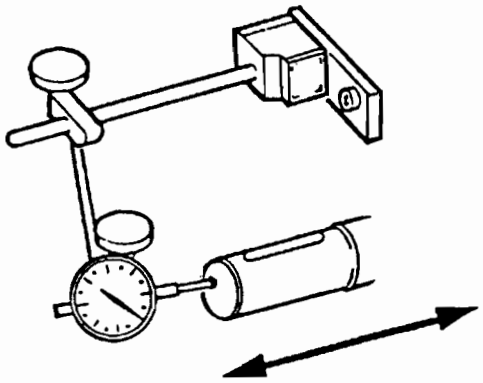


Fig 4.

2.7 REPLACING THE FANS AND COWLS

2.7.1 Stand the assembly on the suction and delivery ports with the **NON-DRIVE-END** towards the front of the bench.

2.7.2 Slide a new star tolerance ring along the shaft and into the groove in front of the sideplate assembly.

2.7.3 Tap the fan (using a hollow "dolly" on the central boss), fins first, onto the star tolerance ring and against the shoulder on the shaft.

2.7.4 Replace the **NON-DRIVE-END** cowl and mounting bracket. Fit the mount bracket on top of the mounting bush and secure it with the 2 longer capscrews and spring washer. See Fig-5.

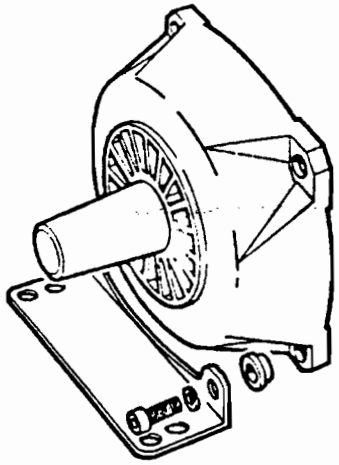


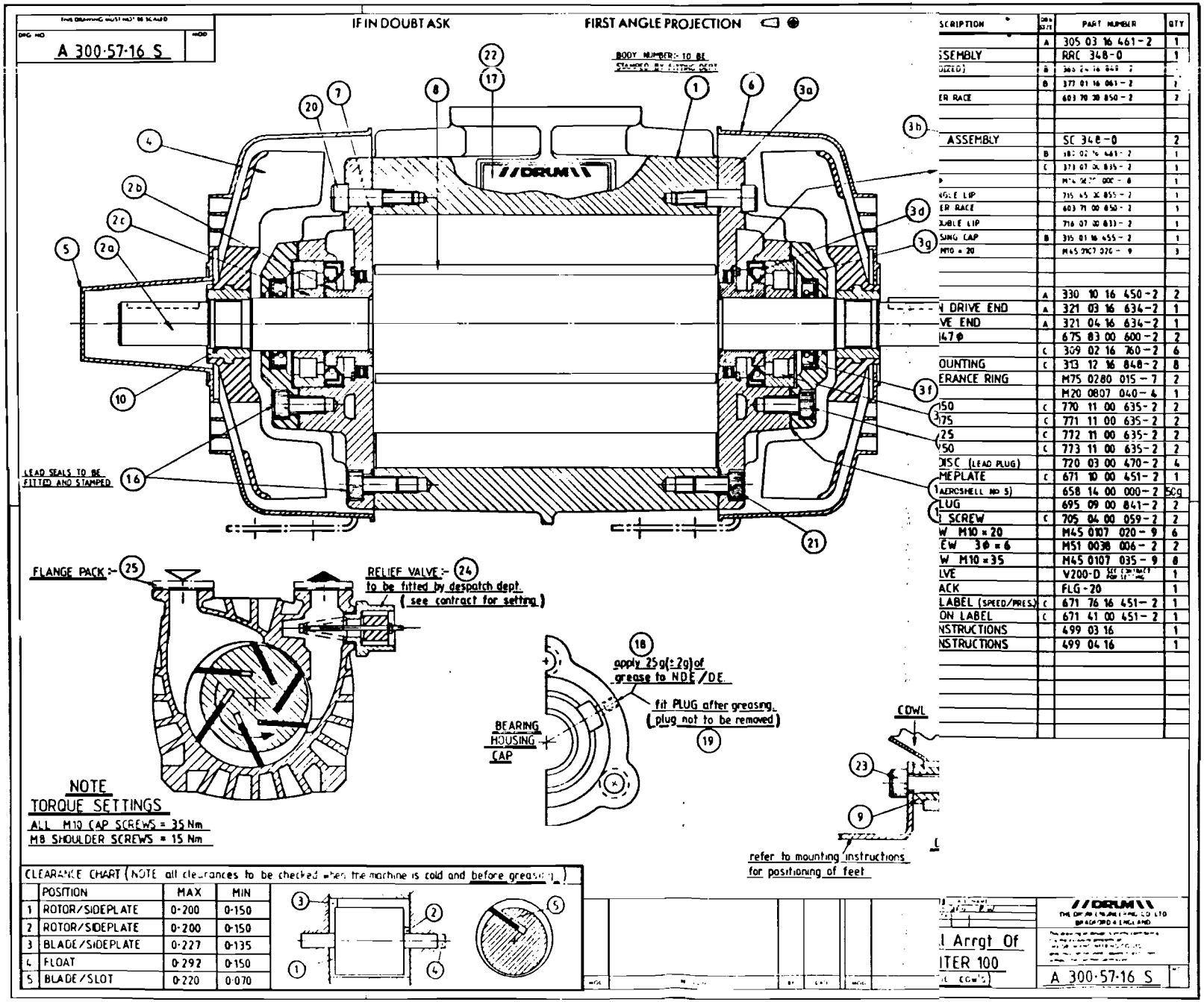
Fig 5.

2.7.5 Repeat with the **DRIVE-END** fan, cowl and mounting bracket at the other end of the machine.

2.7.6 Refit the relief valve into the threaded hole on the DELIVERY side of the machine.

2.7.8 Replace the coupling onto the drive shaft and turn the shaft several times **IN THE DIRECTION SHOWN BY THE ARROW ON THE MACHINE BODY** to ensure that the rotor revolves freely.

If ordering spare parts, please meplate attached to the machine along with the complete identification the



	SCRIPTION	DRN DATE	PART NUMBER	QTY
		A	305 03 16 461-2	1
	SSEMBLY		RRC 348-0	1
	DIZED)	B	305 03 16 848-2	1
		B	377 01 16 061-2	1
	ER RACE		603 70 38 850-2	2
3h	ASSEMBLY		SC 348-0	2
		B	377 02 16 461-2	1
		C	377 07 16 835-2	1
			M14 X 2 DOC - 8	1
	NGLE LIP		715 65 16 855-2	1
3d	ER RACE		603 71 00 850-2	1
	UBLE LIP		716 07 16 833-2	1
3g	SING CAP	B	315 01 16 455-2	1
	M10 x 20		M45 0107 020-9	3
		A	330 10 16 450-2	2
	N DRIVE END	A	321 03 16 634-2	1
	VE END	A	321 04 16 634-2	1
	147Φ		675 83 00 600-2	2
		C	309 02 16 760-2	6
	OUNTING	C	313 12 16 848-2	8
3f	ERANCE RING		M75 0280 015-7	2
			M20 0807 040-4	1
	150	C	770 11 00 635-2	2
3	175	C	771 11 00 635-2	2
	25	C	772 11 00 635-2	2
	150	C	773 11 00 635-2	2
	ISC (LEAD PLUG)		720 03 00 470-2	4
1	MEPLATE	C	671 10 00 451-2	1
	AERCSHELL NO 5)		658 14 00 000-2	50g
1	LUG		695 09 00 841-2	2
	SCREW	C	705 04 00 059-2	2
	W M10 x 20		M45 0107 020-9	6
	EW 3Φ x 6		M51 0038 006-2	2
	W M10 x 35		M45 0107 035-9	8
	LVE		W200-D SEE CONTRACT FOR SETTING	1
	ACK		FLG-20	1
	LABEL (SPEED/PRES.)	C	671 76 16 451-2	1
	ON LABEL	C	671 41 00 451-2	1
	NSTRUCTIONS		499 03 16	1
	NSTRUCTIONS		499 04 16	1

2.4 CHECKING THE SIDEPLATE/ROTOR CLEARANCE

2.4.1 Stand the rotor with it shaft in a vertical position, **DRIVE-END** uppermost and support it firmly to prevei it falling over.

2.4.2 Slide the DRIVE-END sideplate assembly down the shaft onto the bearing inner race and sleeve.

2.4.3 Place a weight onto the sideplate to make sure it is held down firmly and evenly, then, using 2 feeler gauges of equal thickness at opposite sides, simultaneously, check that a clearance of 0.150 mm - 0.200 mm (0.006" - 0.008") exists between the sideplate and rotor faces.
This must be done in several places to make sure that the clearance is constant. If the clearance is outside therecommended limits add or remove shims from underneath the bearing housing cap to reduce or increase the clearance.
USE THE THICKEST SHIMS POSSIBLE, MINIMUM OF 1 AND A MAXIMUM OF 3 PER BEARING CAP.

2.4.4 Remove the sideplate from the rotor.

2.4. 5 Take off the bearing housing cap and withdraw the bearing outer race.

2.4.6 Smear a layer of grease into the recess on each side of the bearing outer race and fill the hollow on the inside of the bearing housing cap with grease - **AEROSHELL NO.5**

IT IS RECOMMENDED THAT GREASES ARE NOT INTERMIXED: IF IN DOUBT CONTACT DRUM ENGINEERING.

2.4.7 Refit and grease the bearing outer race. Refit the correct shims and bearing housing cap.

2.4.8 Repeat with the other sideplate at the other shaft end.

2.5 REPLACING THE ROTOR, SIDEPLATE AND BLADES.

2.5.1 Stand the machine body with the DRIVE-END towards the front of the bench and tilted as in **Fig 1.**

2.5.2 Carefully slide the rotor. NON-DRIVE-END first, into the body, **MAKE SURE THAT THE SLOTS IN THE ROTOR ARE FACING IN THE CORRECT DIRECTION - Fig 1.**

2.5.3 Slide the DRIVE-END sideplate onto the rotor shaft taking care not to damage the seal and secure it to the body with the shouldered pin and the 3-capscrews.

2.5.4 Ensure that the seal in the bearing housing cap is located concentrically around the rotor shaft, adjusting the cap if necessary.

2.5.5 Stand the assembly with the NON-DRIVE END towards the front of the bench and still tilted as in **Fig 1.**

2.5.6 Make sure that each blade is undamaged, free from oil, grease and dirt, and slide one carefully into each slot.

ENSURE THAT THE LEADING EDGE OF EACH BLADE IS FACING IN THE CORRECT DIRECTION Fig 3.

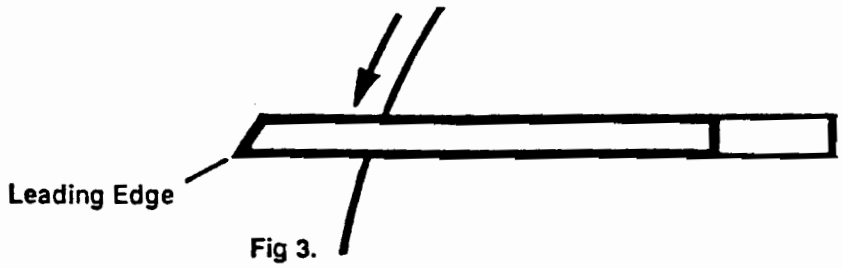


Fig 3.

2.5.7 Taking care not to damage the seals, slide the **NON-DRIVE-END** sideplate along the shaft and secure it to the body with the shouldered pin and the 3 capscrews.

2.5.8 Make sure that the seal in the bearing housing cap is located concentrically around the rotor shaft. Adjust the cap if necessary.

2.6 CHECKING THE END FLOAT

2.6.1 Stand the assembly on the suction and delivery ports.

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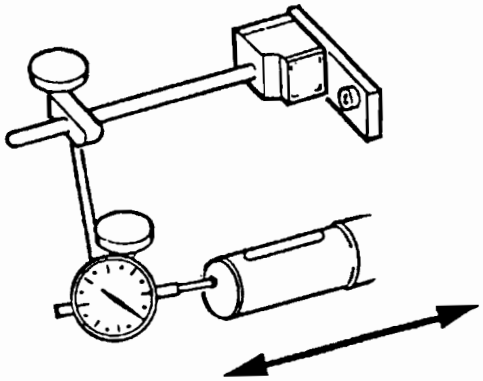

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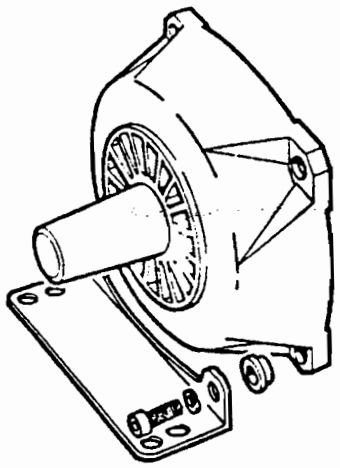

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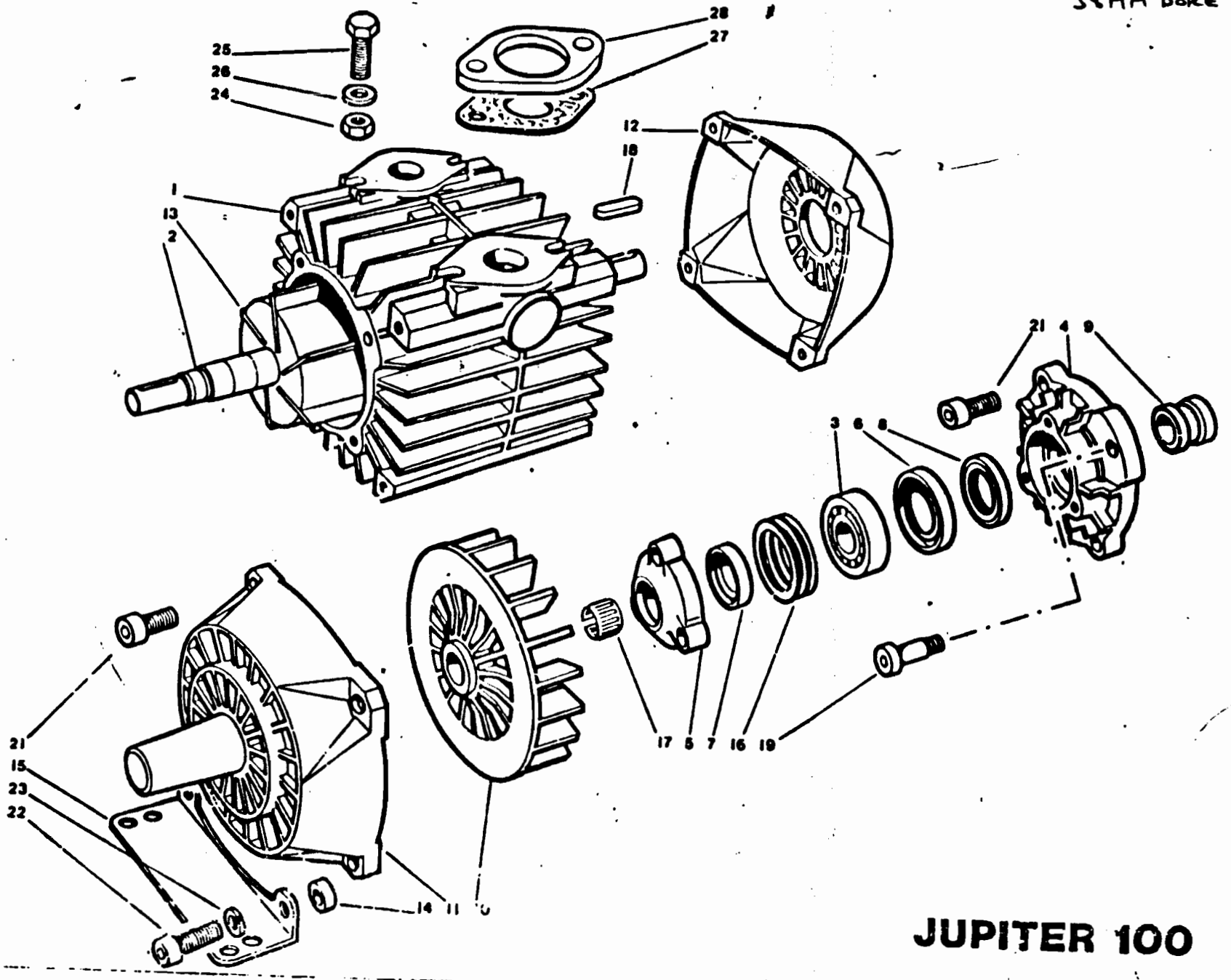
2.7.8 Replace the coupling onto the drive shaft and turn the shaft several times **IN THE DIRECTION SHOWN BY THE ARROW ON THE MACHINE BODY** to ensure that the rotor revolves freely.

DUCTING 6940400000
38MM BORE X 1 METRE



JUPITER 100

JUPITER 100

2.5 BAR CONTINUOUSLY RATED

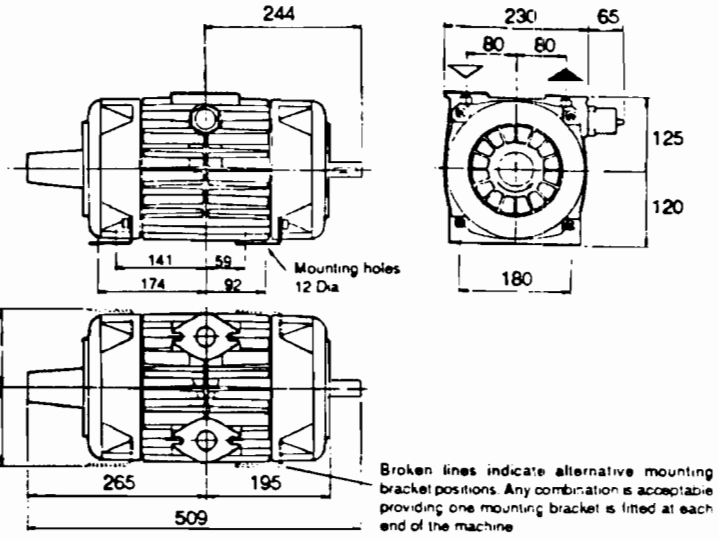
This machine is available with the following ancillary items:

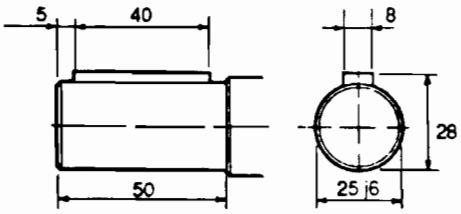
- Suction filter
- Pressure relief valve
- Air line non-return valve
- Pressure line filter
- Adaptor trunk for close coupled hydraulic motor.

The following drive systems are available for use with this machine

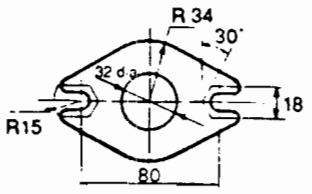
- Power take-off (shaft drive)
- Lightweight Hydraulic system
- Diesel engine and electric motor

Please ask for further details of any of these ancillaries or drive systems

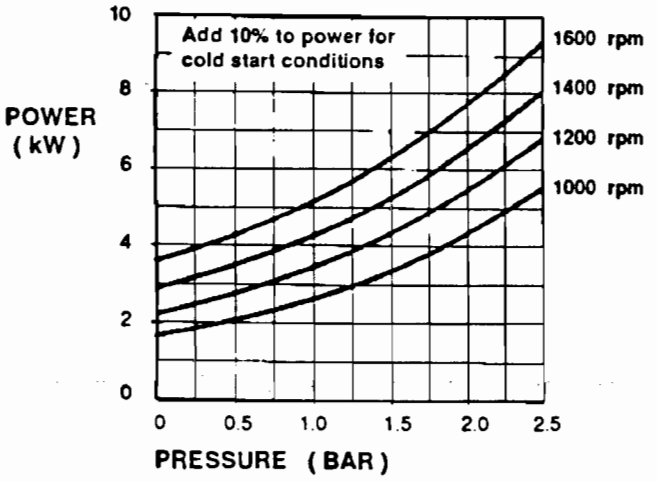


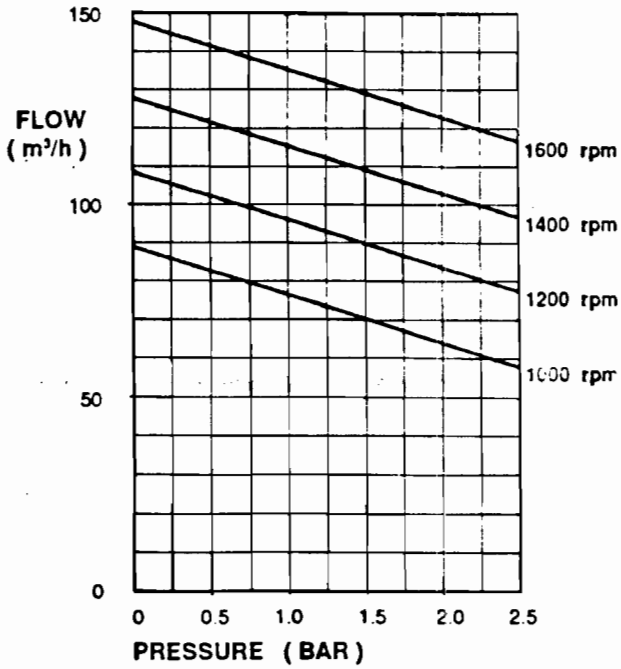


Shaft End Details



Flange Details





SPECIFICATION

MAXIMUM AIR FLOW	**147 m³/h**
MAXIMUM WORKING PRESSURE	**2,5 Bar**
SPEED RANGE	**1000 - 1600 rpm.**
WEIGHT	**25 kg.**

Drum International's policy is one of continued development and we therefore reserve the right to alter specifications without prior notice

DRUM INTERNATIONAL

DRUM INTERNATIONAL LTD

PO Box 178, Edward Street Works, Tong Street, Bradford. West Yorkshire. BD4. 9SH. England.

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A SYLTONE COMPANY

J100

ITEM NO	PART NO	DESCRIPTION	QUANTITY PER UNIT	PRICE
	08	X1100		
	61218002402	K1300 FLANGE	1	
	61266002402	DIN 90 FLANGE	1	
	6950800001-2 (12)	PLUG (R. VALVE PORT)	1	
	3670116452-2	AIR SEAL RETAINER		
	FLG-20	FLANGE PACK	1	
	3131216848-2	STEPPED BUSH FOR	8	
		USE WITH PLASTIC COWL		
	M1406200008	CIRCLIP (AIR SEAL RETAINING)	2	
	6950900841-2	PLUG AVSEAL 6mm	2	
	MS10038006-2	DRIVE SCREW 3x6		
	3722016455-2	4" - OVAL FLANGE WITH 2½" PIPE.		
	62855 00000 -2	FILTER ASSY. COMP		PLASTIC
	62854 00000-2	FILTER ELEMENT		

ITEM NO	PART NO	DESCRIPTION	QUANTITY PER UNIT	PRICE

J100

ITEM NO	PART NO	DESCRIPTION	QUANTITY PER UNIT	PRICE
1	30503164461-2	BODY	1	
2	3662416849-2	ROTOR + SHAFT	1	
	RRC348-0	ROTOR ASSY	1	
3	6037000850-2	INNER BRG	2	
	6037100850-2	OUTER BRG	2	
4	3802~~16461-2~~ 1816469-2	SIDEPLATE	2	
	SC348-0	SIDEPLATE ASSY	2	
5	3150116455-2	BRG HSG CAP	2	
6	7154500855-2	SEAL (48 x 72 x 8 SIDEPLATE-LARGE)	2	
7	7160700833-2	SEAL (30 x 52 x 10 BRG HSG CAP)	2	
8	3730700835-2	SEAL (48 x 62 x 7 SIDEPLATE SMALL)	2	
11	3770116061-2	SLEEVE	2	
10	3300116450-2	FAN (ALUM COWL)	2	24.43
	3301016450-2	FAN (PLASTIC COWLS	2	13.20
1	3210369450-2	N.D.E COWL (ALUM)	1	
	3210316634-2	N.D.E COWL (PLASTIC)	1	
2	3210469450-2	D.E COWL (ALUM)	1	
	3210416634-2	D.E COWL (PLASTIC)	1	
3	3090216760-2	BLADES 200 x 53 x 6	6	
12	3131116458-2	MOUNTING BRKT BUSH	4	
13	3950116843-2	MOUNTING BRK.T	2	

ITEM NO	PART NO	DESCRIPTION	QUANTITY PER UNIT	PRICE
16	3761116635-2	SHIM PACK :- COMPRISING		
	7701100635-2	SHIM .002" 0.050mm	2	
	7711100635-2	SHIM .003" 0.075mm	2	
	7721100635-2	SHIM .005" 0.125mm	2	
	7731100635-2	SHIM .010" 0.250mm	2	
17	M7502800015-7	STAR TOL RING	2	
18	M2008070040-4	KEY 8x7x40	1	
19	7050400059-2	SHOULDERED PIN	2	
20	6581400000-1	3KG AEROSHELL GREASE	N°5	
21	M4501070020-9	CAP SCREW 10x20	16	
22	M4501070035-9	CAP SCREW 10x35	4	
23	M6101000000-5	SPRING WASHER (MTG BRKT)	4	
24	M2501070000-2	10MM NUT (FLANGE)	4	
25	M4701070035-2	SETSCREW (FLANGE) 10x35	4	
26	M6001000000-2	PLAIN WASHER	4	
27	3350416871-2	GASKET	2	
28	6297316240-2	SECURING FLANGE	2	
29	V200-D36	RELIEF VALVE 36PSI 2.5 BAR	1	
30	7901700871-2	JOINT WASHER	1	
	6758300600-2	O RINGS (SIDEPLATE)	2	
	6120800240-2	K1100 FLANGE 25mm BORE		