

**INSTALLATION AND MAINTENANCE INSTRUCTIONS**

**MEN**  
**Life-time**  
**lubricated**  
**bearings**

NOT 04 96 356 V06 AN



IDP

Pacific

Worthington

Jeumont-Schneider Pumps

Byron Jackson

Durco

Pleuger

## Pump noise

When the pump noise level exceeds 85 dBA attention must be given to prevailing Health and Safety Legislation, to limit the exposure of plant operating personnel to excessive noise. The usual approach is to control exposure time to the noise or to enclose the machine to reduce emitted sound to the surroundings.

Pump noise level is dependent on a number of factors :

the type of motor fitted, the operating capacity, pipework design, and acoustic characteristics of the building.

The noise levels specified in the table below give a general guide to the levels to expect.

	2900 min <sup>-1</sup>	2900 min <sup>-1</sup>	1450 min <sup>-1</sup>	1450 min <sup>-1</sup>
MOTOR SIZE kW	PUMP & MOTOR dBA	PUMP ONLY dBA	PUMP & MOTOR dBA	PUMP ONLY dBA
<0.55	64	62	63	62
0.75	67	62	63	62
1.1	67	64	65	64
1.5	70	66	66	66
2.2	71	68	68	68
3	74	70	70	70
4	75	71	71	71
5.5	83	73	72	71
7.5	83	74	73	72
11	84	76	74	73
15	85	77	75	74
18.5	85	79	76	75
<b>22</b>	<b>85</b>	<b>79</b>	77	75
30	93	81	80	76
37	93	82	80	76
45	93	83	80	76
55	95	84	82	77
75	95	86	83	78
90	95	86	85	78
110	95	87	86	79
132	95	87	86	79
160	96	88	86	79

The dBA values are based on the noisiest ungeared electric motors which are likely to be encountered, they are Sound Pressure levels at 1 meter from the directly driven pump, for "free field over a reflecting plane".


Characteristics shown on the nameplate fixed on the pump are as shown below :

Each pump is supplied with the following nameplate :

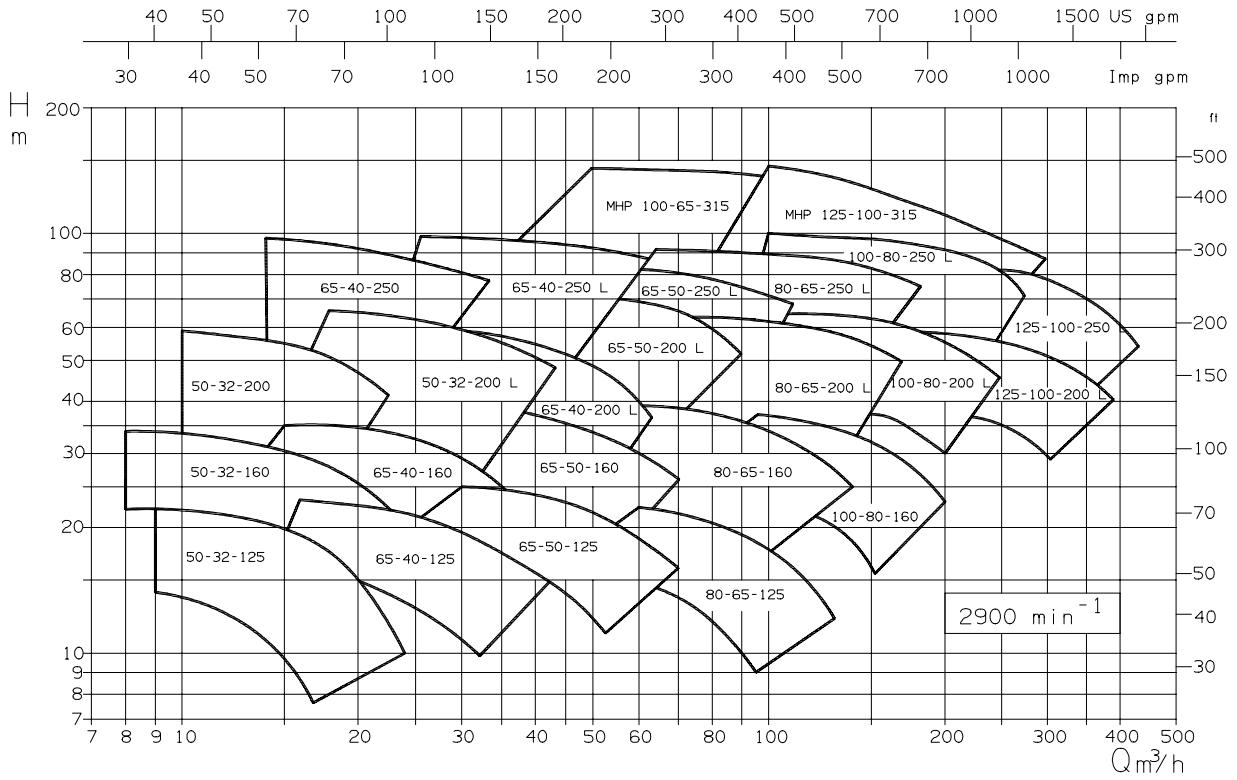
	<b>FLOWSERVE</b> Pump Division		
Speed of rotation	Type		kg
Pump type	Q	m <sup>3</sup> /h	bar
Flow rate	min. <sup>-1</sup>	Temp. °C	
Head	H	m.	Max Py at 20 °C
Radial/thrust bearing	Bearing	rad./thr.	Maximum / minimum temperature
Year of construction + Manufacture number	Year of cons. + Manuf. N		
	FLOWSERVE POMPES - 72234 ARNAGE CEDEX - FRANCE		

Each pump unit is supplied with the following nameplate :

Mass of the set


  
 kg

2.1.2 2900 min<sup>-1</sup> (50Hz) : coverage charts (Q,H)



### 3.2 Pump masses

All masses are in kg

PUMP TYPE	PUMP MASS	MASS OF PUMP CASING	MASS OF CASING COVER
MEN 50-32-125	30		
MEN 50-32-160	35		
MEN 50-32-200	38		
MEN 50-32-200L	43		
MEN 65-40-125	33		
MEN 65-40-160	36		
MEN 65-40-200L	44		
MEN 65-40-250	51	Mass < 30 kg	
MEN 65-40-250L	58		
MEN 65-50-125	35		
MEN 65-50-160	44		Mass < 30 kg
MEN 65-50-200L	48		
MEN 65-50-250L	57		
MEN 80-65-125	39		
MEN 80-65-160	46		
MEN 80-65-200L	55		
MEN 80-65-250L	85	32	
MEN 80-65-315	105	43	
MEN 100-80-160	49	31	
MEN 100-80-200L	78	33	
MEN 100-80-250L	91	40	
MEN 100-80-315	113	47	
MEN 125-100-200L	94	43	
MEN 125-100-250L	100	50	
MEN 125-100-315	123	52	
MEN 125-100-315L	125	56	
MEN 125-100-400	185	72	39
MEN 125-100-400L	189	75	40
MEN 150-125-250L	120	72	Mass < 30 kg
MEN 150-125-315L	200	73	30
MEN 150-125-400L	230	88	38
MEN 200-150-315L	203	103	30
MEN 200-150-400L	240	104	38

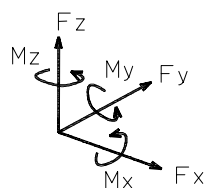
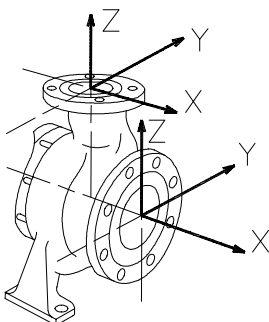
All motors (for masses see the motor description plate) must be handled with a winch.



**For masses above 30 kg, manual handling is forbidden.**

Forces and moments applied to the pump flanges must never exceed the values shown in the table below :

MEN Pump	Suction DNA (mm)	Discharge DNR (mm)	Forces (daN)		Moments (mdaN.)
			Fv max	Fh max	$\Sigma$ Mt max
50-32-125	50	32	125	95	20
50-32-160	50	32	125	95	17
50-32-200	50	32	125	95	17
50-32-200L	50	32	125	95	17
65-40-125	65	40	135	100	22
65-40-160	65	40	135	100	22
65-40-200L	65	40	135	100	20
65-40-250	65	40	135	100	25
65-40-250L	65	40	135	100	25
65-50-125	65	50	135	100	22
65-50-160	65	50	135	100	22
65-50-200L	65	50	135	100	20
65-50-250L	65	50	135	100	25
80-65-125	80	65	145	105	27
80-65-160	80	65	145	105	27
80-65-200L	80	65	145	105	27
80-65-250L	80	65	145	105	27
80-65-315	80	65	145	105	27
100-80-160	100	80	180	125	47
100-80-200L	100	80	180	125	47
100-80-250L	100	80	180	125	47
100-80-315	100	80	180	125	47
125-100-200L	125	100	320	190	95
125-100-250L	125	100	330	200	102
125-100-315	125	100	310	185	92
125-100-315L	125	100	310	185	92
125-100-400	125	100	285	170	82
125-100-400L	125	100	285	170	82
150-125-250L	150	125	450	290	155
150-125-315L	150	125	415	260	140
150-125-400L	150	125	410	255	137
200-150-315L	200	150	500	325	175
200-150-400L	200	150	500	325	175



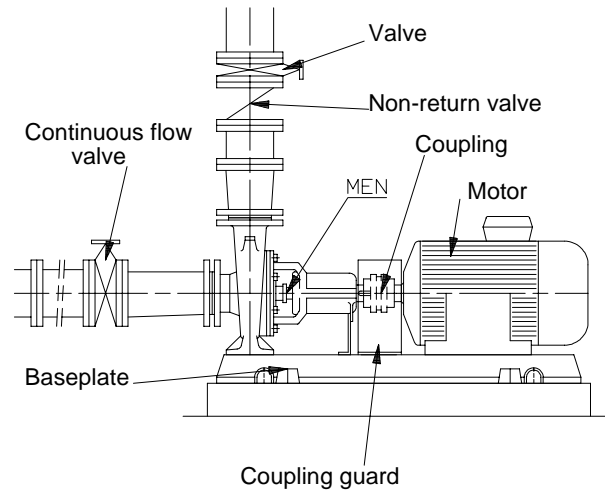
Forces and moments values are applied to the whole flanges and not flange by flange. For their sharing out on the pump flanges, refer to standard NFE 44 - 145.

## INSTALLATION AND MAINTENANCE INSTRUCTIONS

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#### 5.4.1 Design of a flooded suction line

The suction line must be as short and direct as possible, never mount an elbow directly on the inlet flange of the pump.



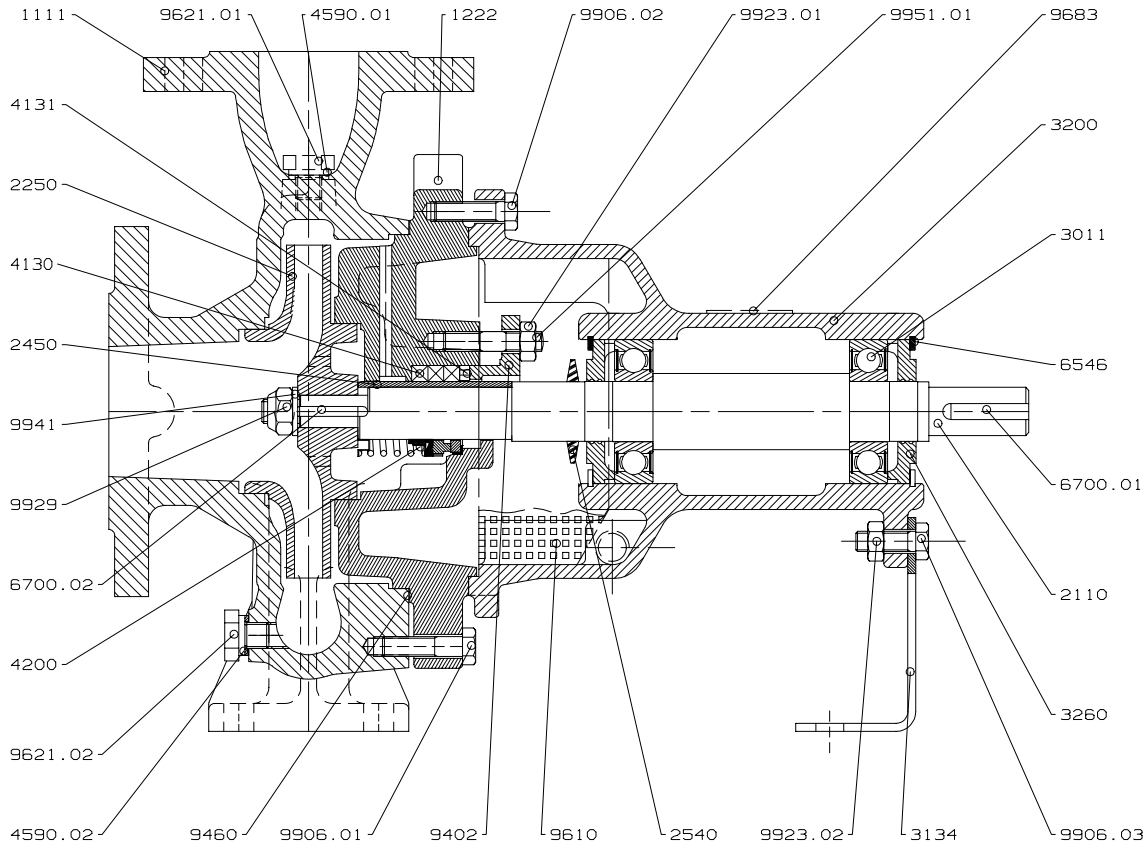
#### **Flooded suction configuration**

- Avoid sharp elbows or sudden narrowings. Use convergents  $\leq 20^\circ$  (total angle).
- Arrange the pipework so that there are no air pockets (no bulges).
- If high points cannot be avoided in suction line, provide them with air relief cocks.
- If a strainer is necessary, its net area should be three or four times the area of the suction pipe.
- If an inlet valve is necessary, choose a model with direct crossing.

**⚠ Do not tighten flanges before the final check (see § 5.4.4).**

10.2 General arrangement drawing

MEN pumps

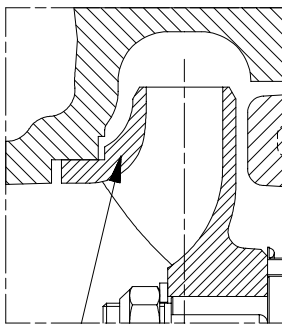


**IMPELLER DIAMETER 125**

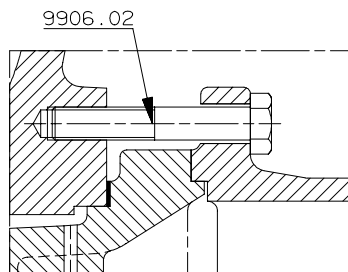
Without back hub ring  
(MEN pumps)

Clamped casing cover

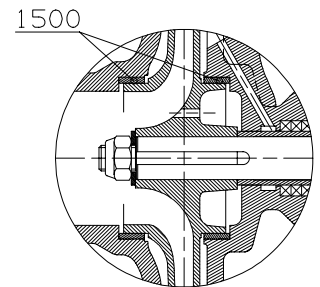
With wear-rings



2250



9906.02



1500

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