

**Pumps & Controls** 







# **APPLICATION**

Mackwell pump develop Macflow series for axial flow application. Macflow pump is unmatched in the industry for high volume/low head pumping requirements, especially when corrosive & abrasive solutions are involved. Its mainly use in evaporator &crystallizer / phosphate, soda ash, potash & sodium chloride processing Polypropylene reactors, xylene application Black liquor evaporator, chlorine dioxide generators Sewage digesters, raw water pumping, & many more.

# **DESIGN**

The MacFlow pump generates flow by the thrust or lift action of rotating axial vanes of the impeller. The pump has an elbow that directs the flow through the suction and out the discharge end of the pump. Long life, minimum maintenance and seamless performance; all these features are best justified in MacFlow pump. The MacFlow Pump indeed rules the industry by the matchless corrosive and abrasive solution offered by. It The vivid ranges of propellers MAF Models are unrivalled. It is best designed to meet any and every possible high flow, low head pumping requirements.

### **MACFLOW SERIES**





## **OPERATING DATA**

Pump size	6 inch to 36 inch
Flow up to	100m3/hr to 6000 m3/hr.
Head up to	2 mtr to 8 mtr.
Max. working pressure	10bar
Temperature up	300°C
Speed up	1400 rpm2900 rpm 3500 rpm
Standard material	Cast iron, Stainless Steel 304/316, cd4mcu,

Provide any special material on request.

### **BEARING**

Oil Lubrication-Standard/Max. Pump temperature 150° C . The bearing arrangement consists of single row angular contact ball bearing and spherical roller bearing. Oil lever indicator is provided for oil level checking & maintaining.

### **CASING**

Casted thick metal section & elbow with precise machined with minimum air gap between propeller and casing.

#### **SEALING OPTION**

Stuffed packing box, single / double mechanical seal with cartridge type arrangement ,other available as per request.

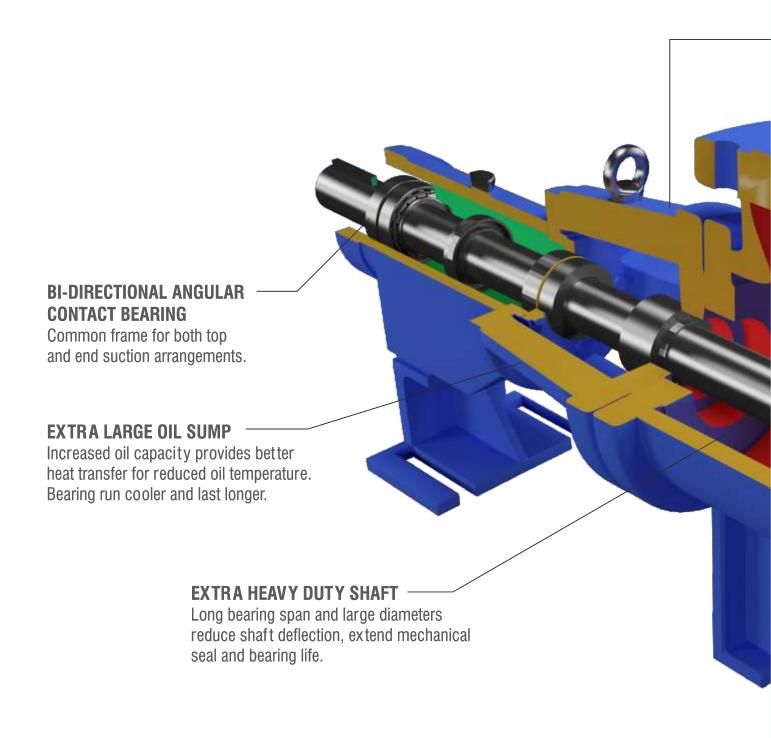
### **FLANGE STANDARD**

ANSI B16.5, 150# SORF. - Standard DIN - Optional

#### **SHAFT**

The shaft is of the dry type, with protection sleeve to prevent contact with the piped liquid ( for packed gland only ). For standard mechanical seal models the shaft is in contact with the pumped liquid.

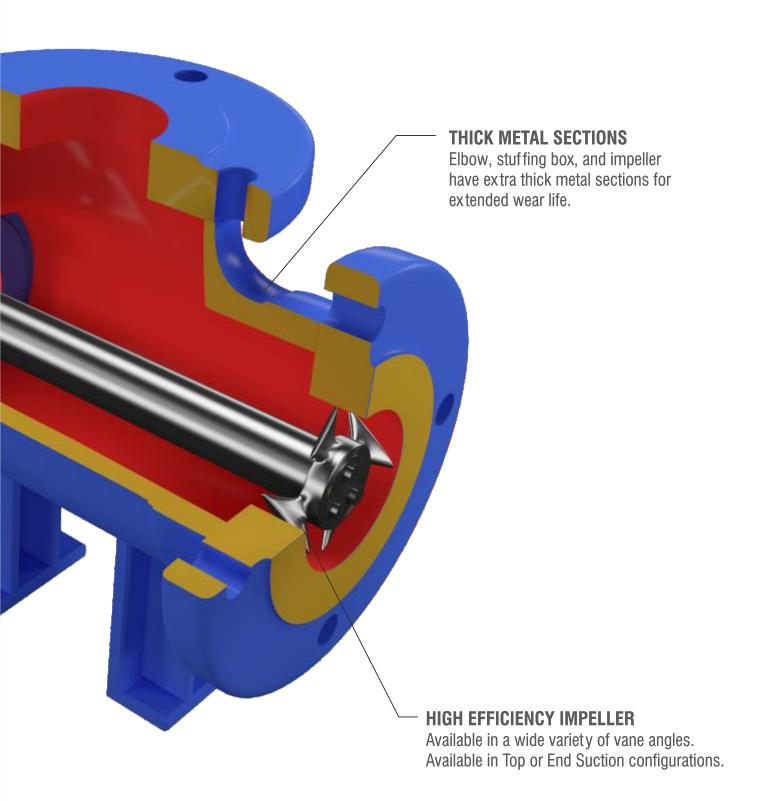
Horizontal non self priming pump with back pull out design (up to 14" size & bigger size available on request). The "back pull out "design allows for the maintenance of the pump without disturbing the pipe work connected to the casing, or the pump alignment



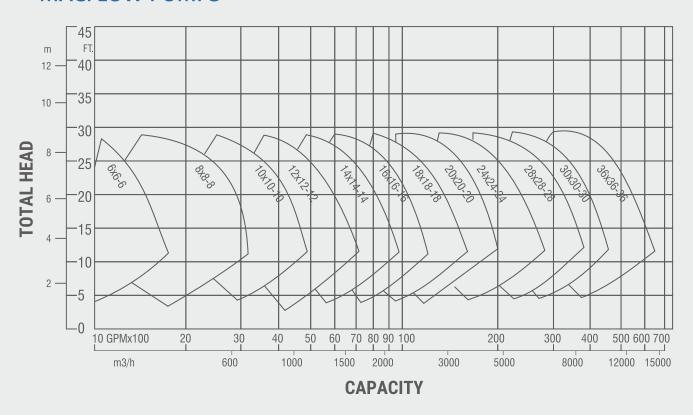


# TWO PIECE BEARING FRAME

Insures accurate alignment for optimum life.



#### **MACFLOW PUMPS**



#### **PUMP SELECTION**

- For pump selection the hydraulic curves should be used .
- These curves are based on water 20 c and specific gravity equal to 1.0.
- NSPH valves are indicated on the performance curves. At least 1.5 meter must be added as a safety margin.

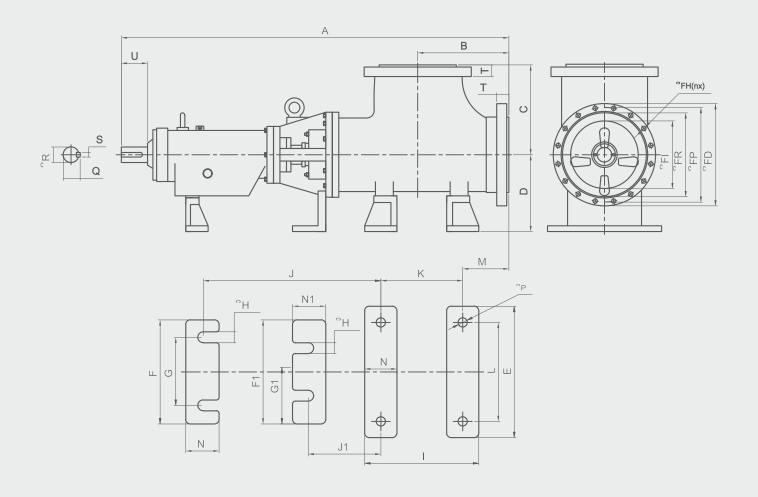
### **DESIGN BENEFITS**

The MacFlow model is designed to meet various pumping requirement in varying temperatures. Its capacity and efficiency over are tremendous.

- The unmatched capacity offered by the MacFlolw models are varies from 100 m3/hr to 6000 m3/hr.
- Taking the performance, efficiency and adaptability of the pump to a level higher. The model design incorporates cylindrical bored stuffing box so as to ensure a long life of the seal. However, as per the requirement of the client, the seal less configurations of the MacFlow models are also available.
- The robust bearing frame and shaft further ensures the long life and durability of the pump even if the propeller is required to perform in the critical conditions.
- Specially design padaster which gives extra balancing to shaft in the worst conditions.
- The various models of distinguished makes are available so as to integrate variety of pumping requirement. For instance, vertical or horizontal configurations of propeller are obtainable in vivid range of alloys. The model can be made sealed or without a seal depending upon the client's preference.



# **MACFLOW GENERAL ARRANGEMENT**



	MacFlow pump Dimenstion are in m.m.																SUC. & DEL.FLANGE														
MODEL	BACKPULL OUT	А	В	С	D	Е	F	F1	G	G1	Н	-1	J	J1	K	L	М	N	N1	Р	Q	R	S	Т	U	F1	FR	FP	FD(NX)	FH	WEIGHT
MacFlow-6	Υ	808	197	156	229	152	276	-	200	-	16	178	385	-	133	125	85	80	-	16	41.1	38.1	10	28	75	150	216	241.5	279	22(8X)	128
MacFlow-8	Υ	858	254	190	229	200	276	-	200	-	16	200	415	-	152	161	113	80	-	16	41.1	38.1	10	28	75	210	270	298.4	343	22(8X)	160
MacFlow-10	Υ	950	307	283	229	254	276	-	200	-	16	254	420	-	180	195	164	80	-	19	41.1	38.1	10	32	75	261	324	362	406	25(12X)	200
MacFlow-12	Υ	1306	381	286	279.4	306	276	-	200	-	16	305	630	-	235	250	190	80	-	19	61.2	57.2	16	34	100	310	381	431.8	482	25(12X)	325
MacFlow-14	Υ	1380	444.5	335	279.4	360	276	-	200	-	16	360	680	-	285	300	165	80	-	22	61.2	57.2	16	34	100	357	413	476.2	534	25(12X)	380
MacFlow-16	Υ	1590	510	421	330	405	276	300	200	300	16	406	705	280	325	340	245	80	95	26	70.5	66.5	18	39	127	430	480	539.5	597	28(16X)	570
MacFlow-18	Υ	1645	535	430	330	460	276	300	200	300	16	460	655	280	350	385	312	80	95	26	70.5	66.5	18	39	127	450	533	578	635	32(16X)	
MacFlow-20	Υ	1960	535	480	400	470	300	325	225	325	19	500	815	350	406	385	248	100	95	32	90.5	85	22	42	160	497	584	635	698	32(16X)	915
MacFlow-24	Υ	2315	760	575	430	550	300	325	225	325	19	550	1060	590	425	470	340	100	95	32	90.5	85	22	48	160	600	692	749	813	35(20X)	1350
MacFlow-30	Υ	2775	845	635	560	760	400	435	325	435	28	760	1800	350	635	670	445	100	95	32	122	115	32	54	235	750	857	914	984	35(28X)	
MacFlow-36	Υ	2910	1015	715	660.5	840	500	550	425	550	40	840	2030	550	720	750	500	150	150	40	137	130	32	60	235	900	1022	1086	1168	41(28X)	





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