



Design Considerations

BATTLEMAX heavy duty slurry pumps are designed for long life, efficient operation and ease of maintenance resulting in a lower total cost of operation. Pumps are available in rubber, High-Chrome, Ultra-Chrome or ceramic-lined materials for heavy-duty abrasive applications.

Bearing assembly and shaft

- The shaft is designed with a short overhang to:
 - Reduce shaft deflection
 - Minimise vibration
- Provided with hardened shaft sleeve to protect the shaft
- Optional dimensionally interchangeable heavy duty bearing assemblies
- Bearing assembly is retained on a one piece frame
- Grease-purged piston rings to help seal contaminants out of bearing housing

Impeller

- Enclosed impellers to maximise efficiency
- Pump-out vanes on both shrouds
 - Minimises recirculation
 - Reduces stuffing box pressure
- High chrome, ceramic or elastomer liquid ends
- Interchangeable hard metal, ceramic and elastomer impellers
- Impeller clearance set by moving bearing assembly
- High efficiency impeller optional

Double casing with radial split outer casing

- Ease of assembly and disassembly of liquid end
- Optional construction for higher working pressures
- Removable liners are positively attached with fasteners
- Interchangeable material options

Centrifugal seal option

- Reduces or eliminates need for gland service water
- Reduces sleeve wear and possible bearing contamination

Removable liner

- Removable high-chrome, elastomer, ceramic and tungsten-coated liners can be independently replaced, minimising maintenance costs

Construction and Materials options

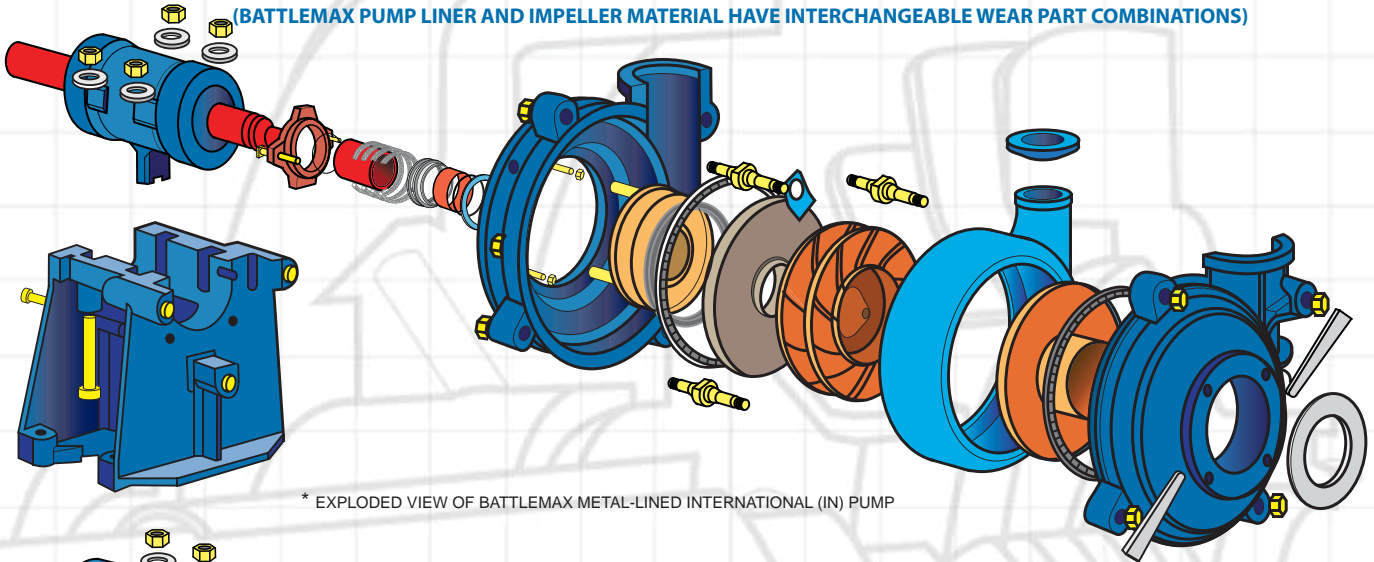
	STANDARD	OPTIONAL
LINERS	High chrome Natural rubber	Ultra chrome, special pH alloy urethane, ceramic
IMPELLERS	High chrome Natural rubber	Ultra chrome, special pH alloy urethane, ceramic
	Cast iron	Ductile iron
SHAFT SEAL	Packed gland stuffing box or expeller seal	Mechanical seal

An optional heavy duty bearing assembly is available from Battlemax Pumps for applications where additional power or bearing loading is required.

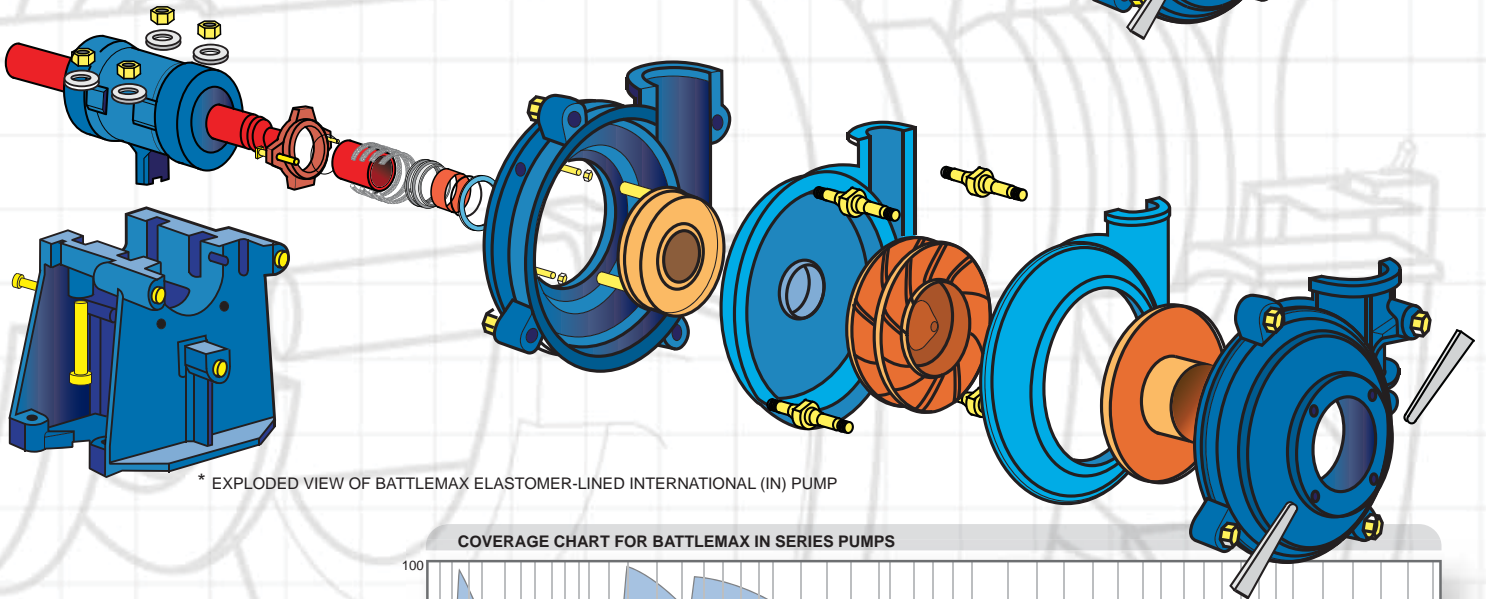
STD. BEARING ASSy		HD. BEARING ASSy	
Size	kW Max	Size	kW Max
C	30	CC	55
D	60	DD	110
E	120	EE	225
F	260	FF	425



(BATTLEMAX PUMP LINER AND IMPELLER MATERIAL HAVE INTERCHANGEABLE WEAR PART COMBINATIONS)

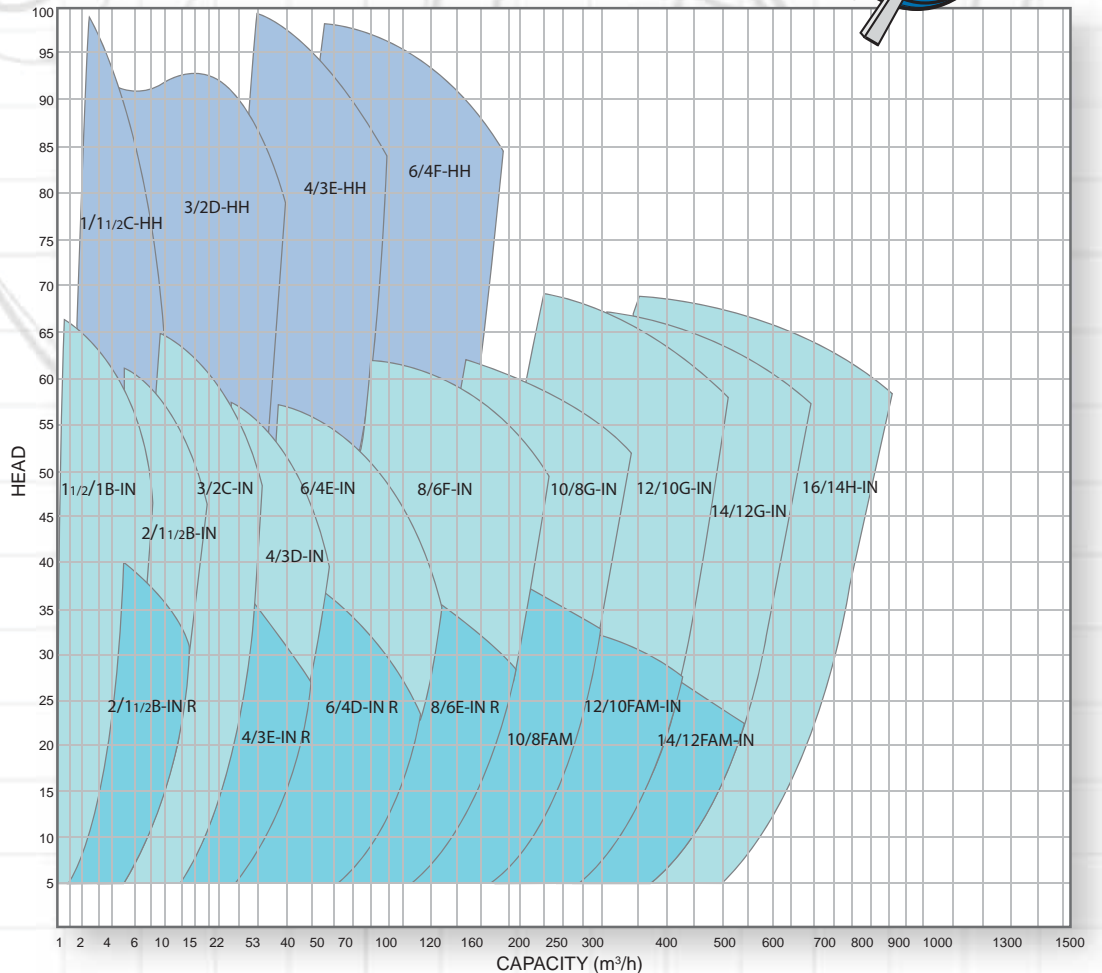


* EXPLODED VIEW OF BATTLEMAX METAL-LINED INTERNATIONAL (IN) PUMP



* EXPLODED VIEW OF BATTLEMAX ELASTOMER-LINED INTERNATIONAL (IN) PUMP

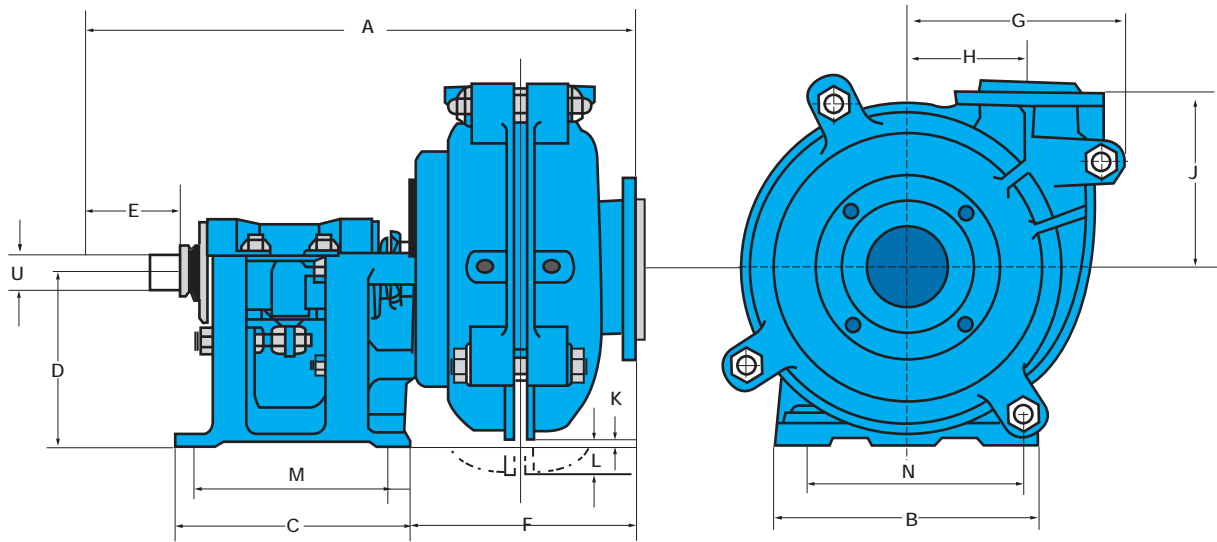
COVERAGE CHART FOR BATTLEMAX IN SERIES PUMPS



For conventional packed stuffing box and lantern ring construction, gland service water must be provided at a minimum of 1 BAR above discharge pressure to ensure positive flow.

Where suction conditions allow, the Battlemax expeller seal can eliminate the need to supply water to the stuffing box. Where high suction pressures or series pumping is required other methods of sealing must be utilised.

Expeller and expeller ring are constructed of Hi-Chrome material. Shaft sleeve material is 420SS hardened to 550 Brinell to protect the shaft from wear.



PUMP MEASUREMENT CHART

TYPE	A	B	C	D	U	E	F	G	H	J	K	L	M	N	INTAKE FLANGE				DISCHARGE FLANGE				PUMP WEIGHT KG
															OD	No. of holes	Hole dia.	PCD	OD	No. of holes	Hole dia.	PCD	
1.5/1B-IN	583	295	248	197	28	79	206	181	98	171	46	106	143	254	152	4	16	114	165	4	16	127	91
1.5/1C-INHH	759	406	311	254	42	121	306	270	194	254	---	11	175	356	152	4	17	114	152	4	17	114	318
2/1.5B-IN	592	295	248	197	28	79	217	205	114	184	33	114	143	254	184	4	19	146	165	4	19	127	104
3/2C-IN	768	406	311	254	42	121	281	238	138	210	71	151	175	356	216	4	19	178	184	4	19	146	191
3/2D-INHH	986	492	364	330	65	164	389	384	254	368	---	51	213	432	216	8	19	178	208	4	19	165	750
4/3C-IN	843	406	311	254	42	121	354	292	149	262	24	187	175	356	279	4	22	235	228	4	22	190	263
4/3D-IN	943	492	364	330	65	164	353	292	149	262	100	187	213	432	279	4	22	235	228	4	22	190	363
4/3E-INHH	1240	622	448	457	80	222	492	492	330	432	---	---	257	546	254	8	19	209	254	8	19	209	1250
6/4D-IN	1021	492	364	330	65	164	421	406	229	338	11	---	213	432	336	4	22	292	279	4	22	235	626
6/4E-IN	1178	622	448	457	80	222	433	406	229	338	138	219	257	546	336	4	22	292	336	4	22	235	728
6/4F-INHH	1668	920	780	450	120	280	596	616	413	546	---	134	640	760	336	8	22	292	305	8	22	260	2880
8/6E-IN	1302	622	448	457	80	222	557	551	318	460	---	292	257	546	406	8	20	324	368	8	20	324	1473
8/6F-IN	1360	680	590	350	85	215	---	511	318	460	---	170	490	560	406	8	20	356	368	8	20	324	1655
8/6G-INHH	2275	1150	1040	650	150	350	852	835	584	813	---	160	880	900	432	8	28	374	432	8	28	374	6586
200EM-IN	1337	622	448	457	80	222	584	613	381	470	---	318	257	546	502	8	29	445	527	8	29	470	1625
250FIN-M	1395	680	590	350	85	215	---	613	381	470	---	324	490	560	527	8	25	470	432	8	29	375	1836
10/8G-IN	1748	1150	780	650	120	280	692	673	419	635	27	333	620	900	432	8	28	444	432	8	28	375	3570
12/10G-IN	1816	1150	780	650	120	280	762	755	464	674	---	381	620	900	527	12	25	470	527	12	25	470	4318
14/12G-IN	1873	1150	780	650	120	280	812	937	629	832	---	406	620	900	584	12	35	520	552	12	25	495	6409
16/14H-IN	2320	1460	1050	900	150	350	953	1048	660	889	---	455	860	1200	705	8	35	641	673	12	28	610	10000
20/18TU-IN	2475	1460	1050	900	150	350	1100	1420	940	1230	---	420	860	1200	900	12	42	800	900	12	42	800	18864

* Do not use for construction purposes
 ** Rotation is clockwise viewed from shaft end

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