



NORM Series Pumps

NORM SERIES PUMPS

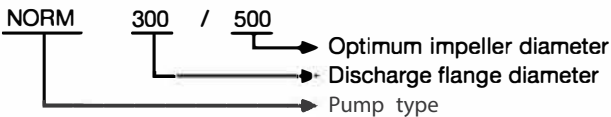
TECHNICAL DETAILS :

- The NORM series pumps are high efficiency low and medium pressure horizontal single stage (except for 3 two staged models), easy to maintain centrifugal pumps with volute casing, closed type impeller.
- In addition to 21 models complying with EN 733 (DIN 24255) and EN 22858 standards, Masflo has developed 29 different models with larger sizes reaching 51 different models for this series.
- NORM series pumps are manufactured according to ISO 9906.
- Pump impellers are statically and dynamically balanced according to ISO 1940 class 6.3
- The discharge flange of the NORM series pumps is located on the top as standard optionally discharge flange on sides available. Suction and discharge flanges are manufactured according to PN16/25 norm. Upon request other flange norms are available.
- Volute casings of NORM series pumps are fitted with renewable with wear rings on both impeller sides in order to prevent wear of volute casing
- Pumps have 6300 series ball bearings. Grease and oil lubrication are available options.
- Axial is trust balanced by balancing holes and two wear rings.
- NORM series pumps are manufactured with soft packing as a standard. Soft packing is located on shaft sleeves which are made of hardened stainless steel. Stuffing box lubrication is according to API PLAN 11 Mechanical seal is available optionally (EN 12756 / DIN 24250)
- All pumps tested according to ISO 9906



GENERAL INFORMATION:

- Suction flange diameter : Ø 50 ÷ 600
- Discharge flange diameter : Ø 32 ÷ 500
- Capacity range (Q) : 14-3100 m³/h
- Discharge head range (Hm): 5-160 mwc (1500-3000 rpm)
- Operating temperature : -10°C ÷ 120°C



MASFLO NORM TYPE EFF (HIGH EFFICIENCY) PUMPS:

After years of research work, Masflo introduces new EFF series end suction pumps. New series pumps have much higher efficiency values compared to standard end suction pumps. High efficiencies are achieved by a new impeller and volute geometries which are designed using CFD modelling software will decrease the energy cost of pump operation.

- NORM pumps equipped with closed type impellers and curved vanes. With this type impellers cavitation free operation for high suction head applications obtained.

MATERIALS:

COMPONENT	MATERIALS	
	BRONZE VERSION	CAST IRON VERSION
Volute casing	Cast iron (GJL 250) (EN-JL 1040)	Cast iron (GJL 250) (EN-JL 1040)
Impeller	Bronze	Cast iron (GJL 250) (EN-JL 1040)
Wear ring	Bronze	Cast iron (GJL 250) (EN-JL 1040)
Shaft	Stainless steel (AISI 420) (1.4021)	Carbon steel (1.0501)
Shaft sleeve	Stainless steel (AISI 420) (1.4021)	Stainless steel (AISI 420) (1.4021)
Painting	RAL 5010	RAL 5010

NOTE : All pump components can be manufactured in different materials optionally according to the properties of the liquid to be pumped.

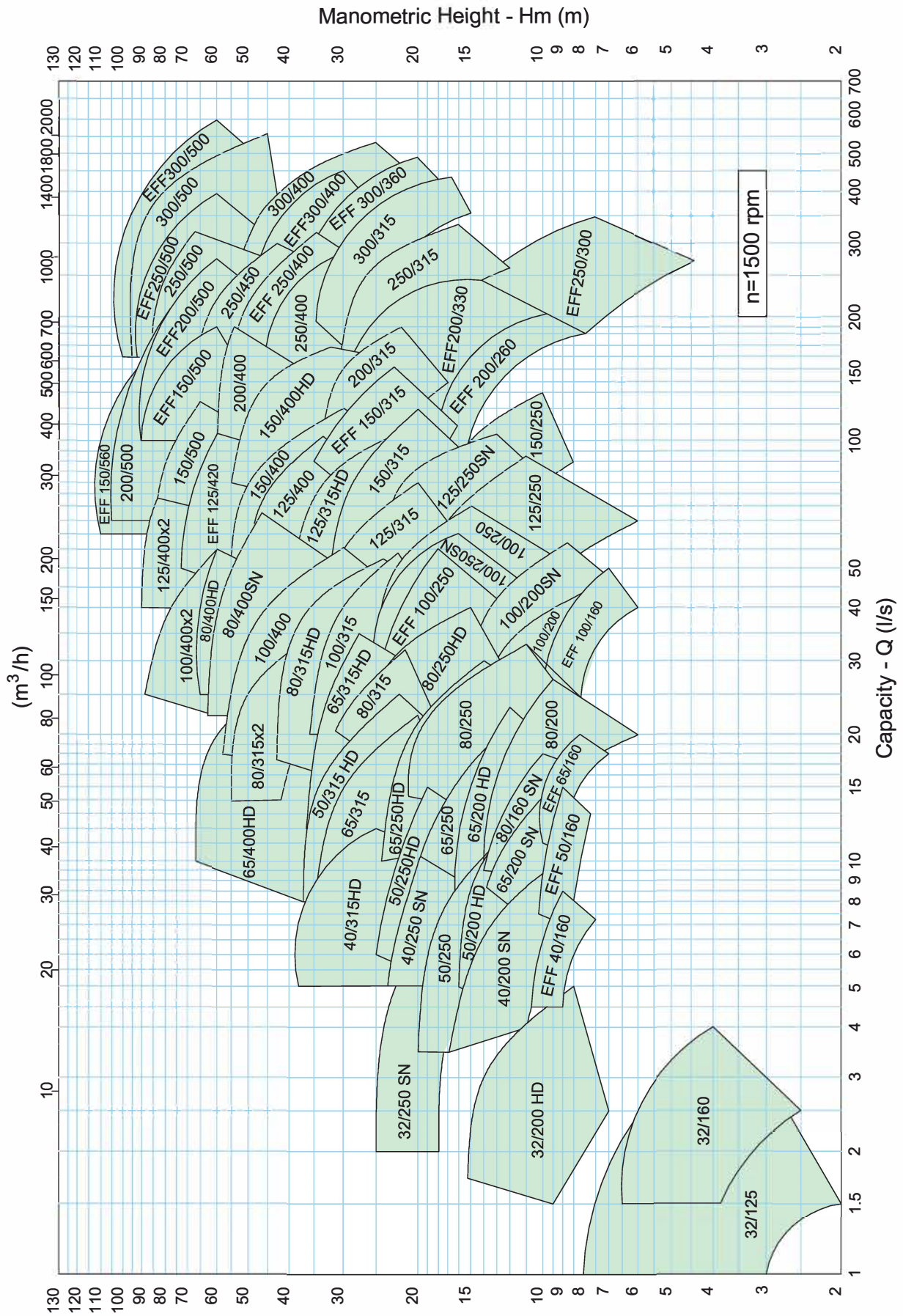
FIELDS OF APPLICATION

Masflo-NORM series pumps are suitable for

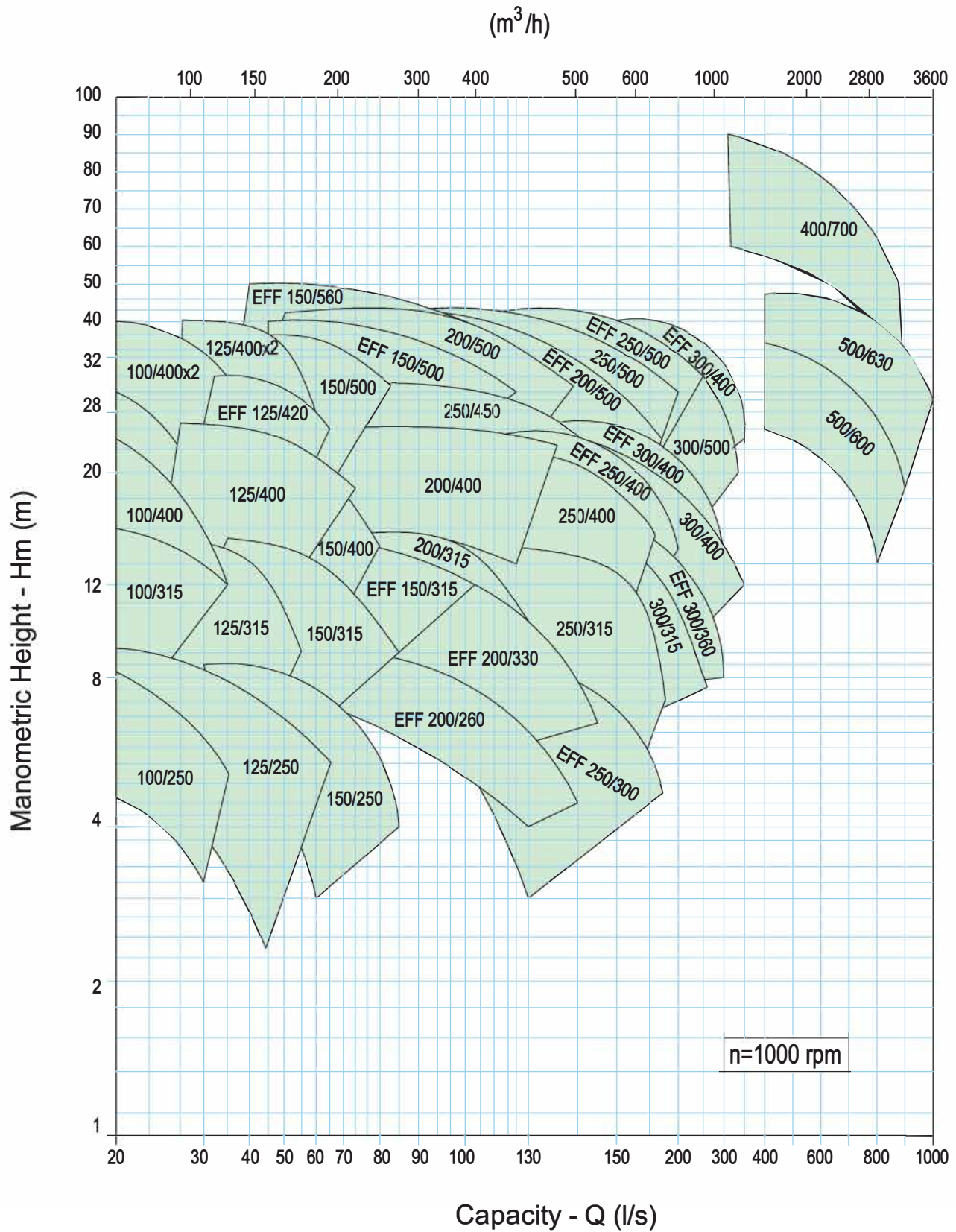
- ★ Water supply
 - ★ Irrigation and spraying systems,
 - ★ Drinking water supplies to buildings, communities and towns,
 - ★ Pumping liquids with low viscosity (i.e gasoline, oil, acid base etc.) in industries,
- ★ Cooling water systems,
 - ★ Industrial plants on duty 24 hours a day, like Iron & Steel works.
 - ★ Food and beverages industries,
 - ★ Paper and cellulose industries,
 - ★ Swimming pool water.

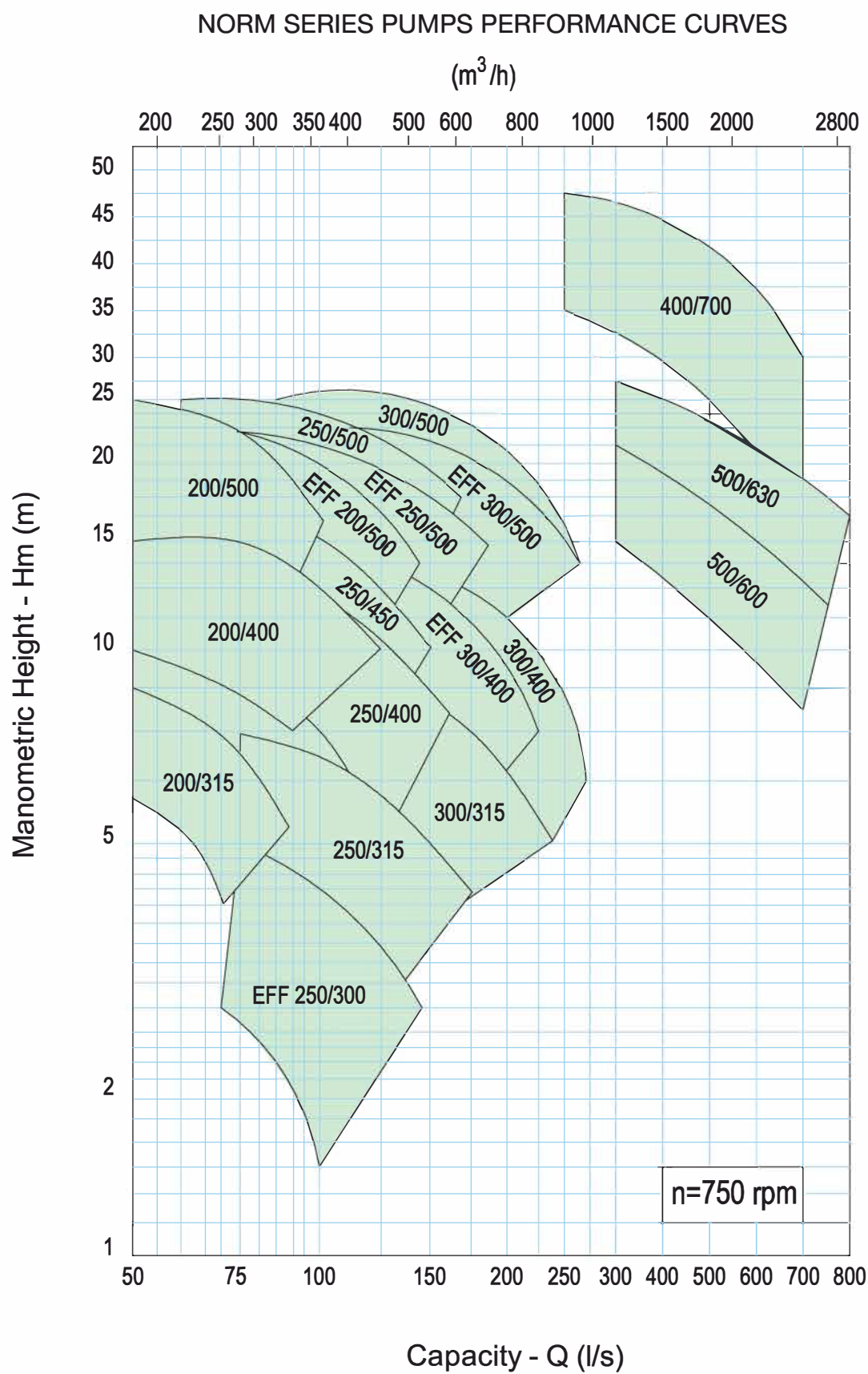


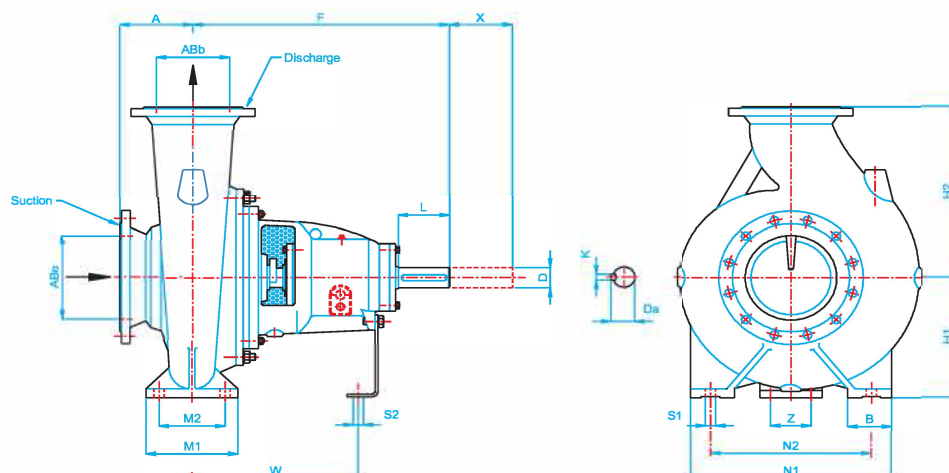
NORM SERIES PUMPS PERFORMANCE CURVES



NORM SERIES PUMPS PERFORMANCE CURVES







MODEL		ABb	ABe	A	F	H1	H2	B	M1	M2	N1	N2	S1	S2	D	Da	K	L	W	Z	Mechanical Seal Diameter	Weight ~Kg	x			
EN 733 (DIN 24255) MODELS	EXTENDED RANGE vs EN 22858																									
Norm 32/125	-	32	50	80	360	112	140				190	140	M12							260	110		32			
Norm 32/160	-				360	132	160	50	100	70			240	190										38		
HD-Norm 32/200	-				360	160	180								M10								80		37	
-	SN-Norm 32/250			100		180	225	65	125	95	320	250				24	27	8	50	250	80	25	60	100		
* Norm-EFF 40/160	-	40	65	80	360	132	160	50	100	70	240	190									110		40			
SN-Norm 40/200	-				160	180						265	212									260	80		50	
SN-Norm 40/250	-				100	200	225	65	125	95	320	250	M12												56	
-	HD-Norm 40/315			125	500	180	250				345	280				32	35	10	80	360	90	30	70	140		
* Norm-EFF 50/160	-	50	80	65	100	160	180	50	100	70	265	212				24	27	8	50		80	25	42			
-	HD-Norm 50/200				100	200	53					265	212	M10								260	80		42	100
Norm 50/250	-				65		180	225					320	250				24	27	8	50		90	25	57	
-	HD-Norm 50/250										320	250									80		62			
-	HD-Norm 50/315			125	470	225	280	65	125	95	345	280	M12				32	35	10	80	310	100	30	92	140	
* Norm-EFF 65/160	-	65	100	100	360	160	200				95	280	212				24	27	8	50	260	80	25	52	100	
SN-Norm 65/200	-				180	225						85	320	250											54	
-	HD-Norm 65/200				100	475	180	225	65	125	95	320	250					32	35	10	80	315		30	100	140
Norm 65/250	-	65	100	80		200	250				360	280	M16				32	35	10	80	310	100		76	140	
-	HD-Norm 65/250				100																			110	100	
Norm 65/315	-				80		225	280	80	160	120	400	315	M18									30		110	
-	HD-Norm 65/315				530						435	355	M16	M20		42	45	12	110	345			141	140		
-	HD-Norm 65/400				535	275	355				435	355								350	150	40	163			
SN-Norm 80/160	-	80	125	100	360	180	225	65	125	95	320	250	M12				24	27	8	50	260	80	25	64	100	
Norm 80/200	-					200	250					345	280												74	
Norm 80/250	-				125	470	225	280										32	35	10	80	310		30	98	140
-	HD-Norm 80/250			100							400	315									100		105			
-	HD-Norm 80/315			125	530	250	315									42	45	12	110	340		40	95			
-	Norm 80/315x2				530						435	355	M16	M20		42	45	12	110	345			147			
-	SN-Norm 80/400			100	228	470										32	35	10	80	310		30	148	250		
-				125	530	280	355				435	355				M16	42	45	12	110	345	150	40	158		
* Norm-EFF 100/160	-	100	125	100	360	180	225	65	125	95	320	250	M12				24	27	8	50	260	80	25	64	100	
Norm 100/200	-					200	250					345	280												74	
SN-Norm 100/200	-				125	470	225	280										32	35	10	80	310		30	98	140
-	Norm-EFF 100/250				530						400	315									100		105			
Norm 100/250	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
SN-Norm 100/250	-												400	315				32	35	10	80	310		30	147	
Norm 100/315	-				100	228	470											32	35	10	80	310		30	148	250
-	SN-Norm 80/400			125	530	280	355				435	355				M16	42	45	12	110	345	150	40	158		
* Norm-EFF 100/160	-	100	125	100	360	180	225	65	125	95	320	250	M12				24	27	8	50	260	80	25	64	100	
Norm 100/200	-					200	250					345	280												74	
SN-Norm 100/200	-				125	470	225	280										32	35	10	80	310		30	98	140
-	Norm-EFF 100/250				530						400	315									100		105			
Norm 100/250	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
SN-Norm 100/250	-												400	315				32	35	10	80	310		30	147	
Norm 100/315	-				100	228	470											32	35	10	80	310		30	148	250
Norm 100/400	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
-	Norm 100/400x2												400	315				32	35	10	80	310		30	147	
-					100	228	470											32	35	10	80	310		30	148	250
* Norm-EFF 100/160	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
Norm 100/200	-												400	315				32	35	10	80	310		30	147	
SN-Norm 100/200	-																	32	35	10	80	310		30	148	250
-	Norm-EFF 100/250				530						400	315									100		105			
Norm 100/250	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
SN-Norm 100/250	-												400	315				32	35	10	80	310		30	147	
Norm 100/315	-				100	228	470											32	35	10	80	310		30	148	250
Norm 100/400	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
-	Norm 100/400x2												400	315				32	35	10	80	310		30	147	
-					100	228	470											32	35	10	80	310		30	148	250
* Norm-EFF 100/160	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
Norm 100/200	-												400	315				32	35	10	80	310		30	147	
SN-Norm 100/200	-																	32	35	10	80	310		30	148	250
-	Norm-EFF 100/250				530						400	315									100		105			
Norm 100/250	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
SN-Norm 100/250	-												400	315				32	35	10	80	310		30	147	
Norm 100/315	-				100	228	470											32	35	10	80	310		30	148	250
Norm 100/400	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
-	Norm 100/400x2												400	315				32	35	10	80	310		30	147	
-					100	228	470											32	35	10	80	310		30	148	250
* Norm-EFF 100/160	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
Norm 100/200	-												400	315				32	35	10	80	310		30	147	
SN-Norm 100/200	-																	32	35	10	80	310		30	148	250
-	Norm-EFF 100/250				530						400	315									100		105			
Norm 100/250	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
SN-Norm 100/250	-												400	315				32	35	10	80	310		30	147	
Norm 100/315	-				100	228	470											32	35	10	80	310		30	148	250
Norm 100/400	-	100	125	140	470	250	315									42	45	12	110	340		40	95			
-	Norm 100/400x2												400	315				32	35	10	80	310		30	147	
-					100	228	470											32	35	10	80	310		30	148	250
* Norm-EFF 100/160	-	100	125	140	470	250	315									42	45	12								

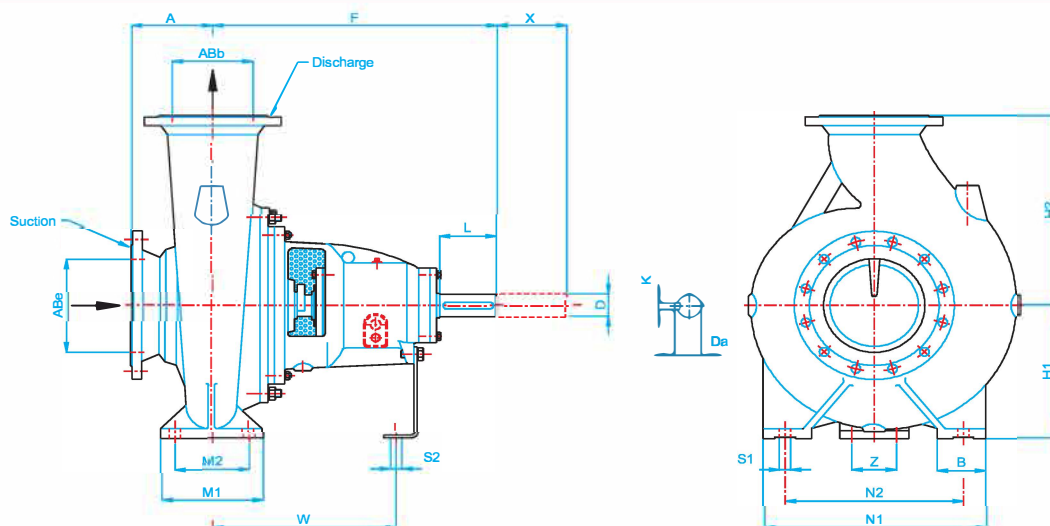
NOTE:

1) Dimensions "mm". Masflo reserves right to make any changes in dimensions without giving prior notice.

2) Flanges conforming to DIN 2501 and TS EN 1092-2

3) "X" spacer length.

4) (*) These pumps are on the project stage.



MODEL		ABb	ABe	A	F	H1	H2	B	M1	M2	N1	N2	S1	S2	D	Da	K	L	W	Z	Mechanical Seal Diameter	Weight ~Kg	x											
EN 733 (DIN 24255) MODELS	EXTENDED RANGE vs EN 22858																																	
*-	Norm-EFF 150/420	150	200	160	590	315	450	100	200	150	550	450	M20		52	56	16	110	380	150	50	295	170											
-	Norm-EFF 150/500				700		500														460				465									
-	Norm 150/500			180	704	380	530	130		180	560								60	64	18	140		465	190	60	420							
-	Norm-EFF 150/560				700	400	500															460				493								
-	Norm-EFF 200/260	200	250		550	315	400	250	150	500	400		M24	M20	42	45	12		365		40	192	200											
-	Norm 200/315			200	584		450								110						52	56	16	110	375	150	50	300						
-	Norm-EFF 200/330				600	360										180									390			246						
-	Norm 200/400				704	355	505								120		550	450			60	64	18		465		60	410						
-	Norm-EFF 200/500	250	300		820			160	300	240	720	600			70	74,5	20		575		70	535	250											
-	Norm 200/500			210	785		500																	540			512							
-	Norm-EFF 250/300				245	687	400	110									540	450							437		50	430						
-	Norm 250/315				197	701										430						60		64	18		452			410				
-	Norm-EFF 250/400	300	350		710		500	150	280	200	650	500	M24		60	64	18		461		60	475	280											
-	Norm 250/400			240		785																			540			495						
-	Norm 250/450				252		545																			540			545					
-	Norm-EFF 250/500				794	425	500	160	300	240	720	600														550	190		575					
-	Norm 250/500	400	500		785	545							M36	M16	100	106	28	210	915	200	100	2150												
-	Norm 300/315				250	820	400	535		280	200	650											500						576		70	550		
-	Norm-EFF 300/360										240																			550			583	
-	Norm-EFF 300/400			300		794	450	500	150																					560			750	
-	Norm 300/400	500	600		280	805	500	300	200	800	660								558			685	375											
-	Norm-EFF 300/500				300	802	450												600			245									540			690
-	Norm 300/500				300	785	450																											2070
-	Norm 400/700			400																400	300	1150		1000										2130
-	Norm 500/600	500	500	350	1275	700	1000	250	440	340	1250	1100																						
-	Norm 500/630A																																	
-	Norm 500/630B		600																															

NOTE:

1) Dimensions "mm". Masflo reserves right to make any changes in dimensions without giving prior notice.

2) Flanges conforming to DIN 2501 and TS EN 1092-2

3) "X" spacer length.

4) (*) These pumps are on the project stage.

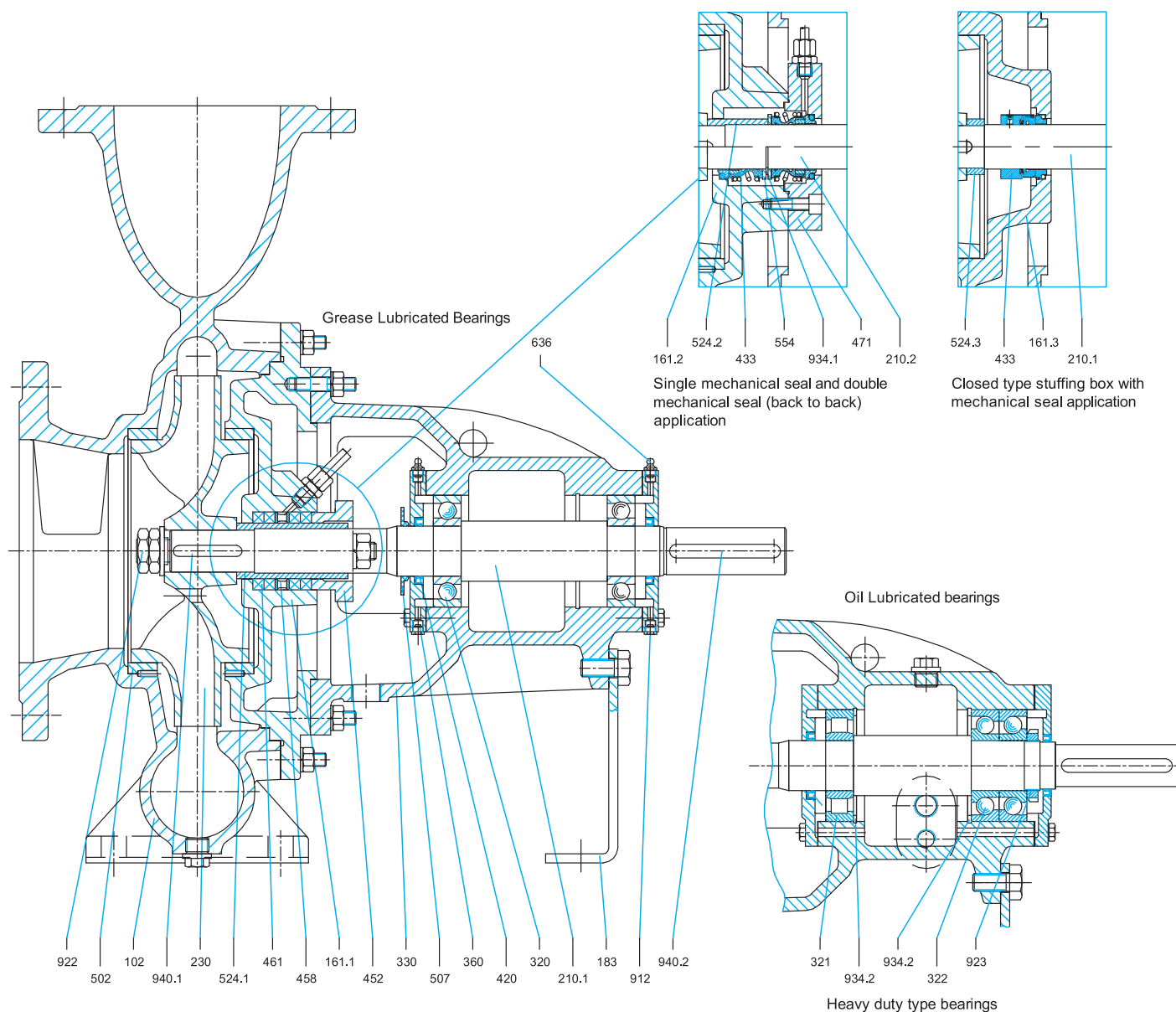
ECO DESIGN:

- Masflo designs and manufactures pumps in accordance with ErP (Energy Related Products) 2009/125/EC directive and EU 547/2012 directive by using up to date design and manufacturing methods.

- In case requested Masflo pumps can be delivered with IE 3 efficiency class electric motors increasing overall system efficiency.



NORM PUMP SECTIONAL DRAWING AND PARTS LIST FOR STANDARD CONSTRUCTION



102- Volute Casing	330- Bearing Frame	524.2- Shaft Sleeve (Single mechanical seal arrangement)
161.1- Stuffing Box	360- Bearing Cover	524.3- Impeller Washer (for closed stuffing box)
161.2- Stuffing box (double mechanical seal type)	420- Oil Seal	554- Mechanical seal washer
161.3- Stuffing box (closed type)	433- Mechanical Seal	636- Grease Nipple
183- Support Foot	452- Gland	912- Draining valve
210.1- Shaft	458- Lantern Ring	922- Counter nut
210.2- Shaft (double mechanical seal type)	461- Soft Packing	923- KM Nut
230- Impeller	471- Mechanical Seal Cover	934.1- Circlip for shaft (Double Mechanical Seal)
320- Bearing (63....)	502- Wear Ring	934.2- Circlip for hole (Bearing) (Heavy duty)
321- Bearing (NU....) (Heavy Duty)	507- Water Thrower	940.1- Impeller key
322- Bearing (73....) (Heavy Duty)	524.1- Shaft Sleeve (soft packing version)	940.2- Coupling key

NOTE : Cross sectional drawing is for information, actual part list subject to change according to ordered type construction



INTERNATIONAL PUMPING SYSTEM - IPS PUMP

118 Avenue de Stalingrad - 92700 Colombes - France

Tel : +33 4 91 92 01 18

Fax: +33 4 91 98 11 30

Web: www.masflo.fr

Contact : info@masflo.fr