

Masflo



NORM Series Pumps

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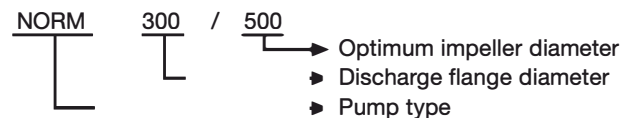


TECHNICAL DETAILS

- 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 9905.
- 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 PN 10 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 : $\varnothing 50 \div 600$
- Discharge flange diameter : $\varnothing 32 \div 500$
- Capacity range (Q) : 14-3100 m³/h
- Discharge head range (Hm): 5-90 mwc (1500 rpm)
- Operating temperature : $-10^{\circ}\text{C} \div 120^{\circ}\text{C}$



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:

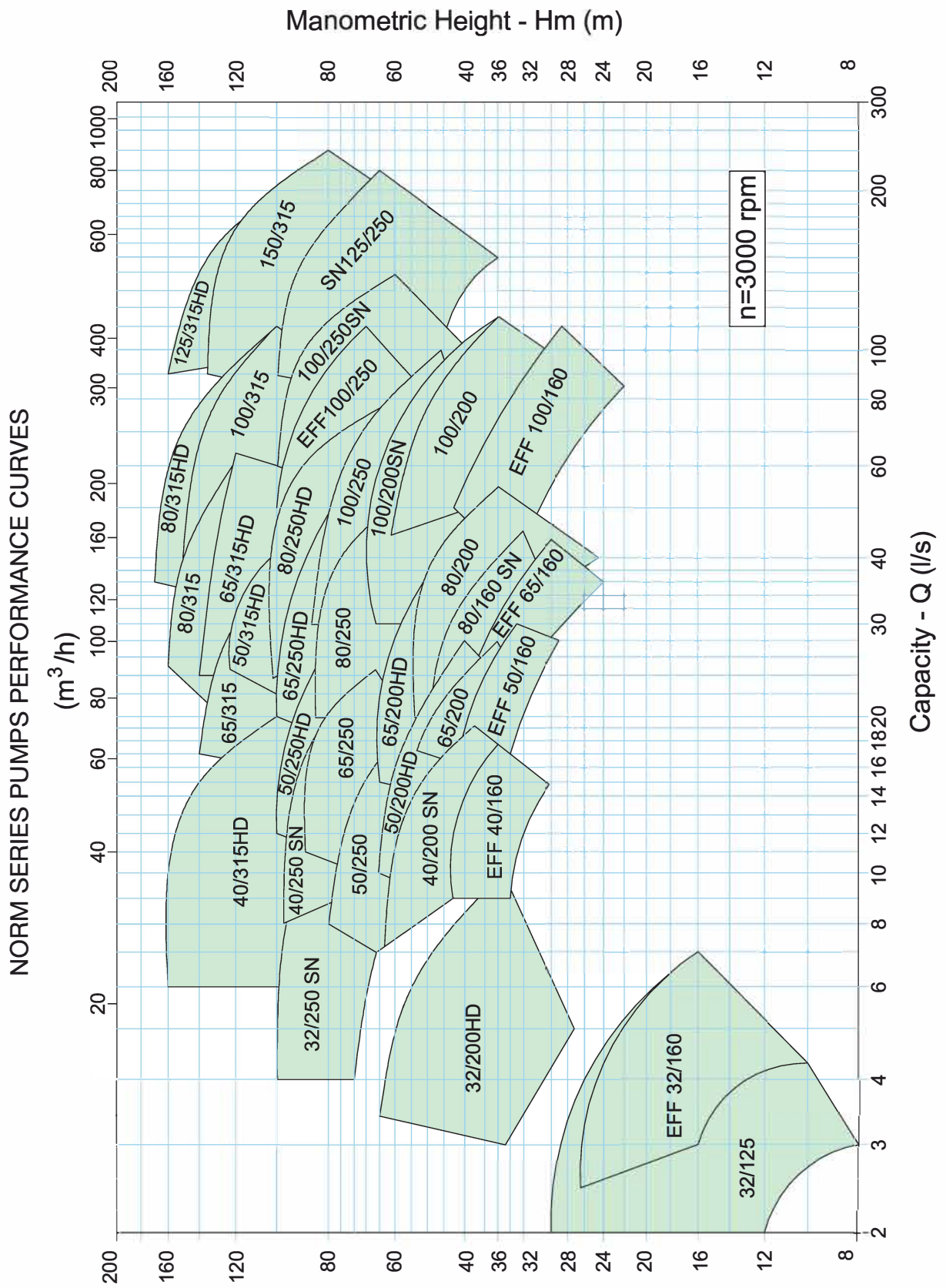
Volute casing	Cast iron (GJL 250) (EN-JL 1040)	Cast iron (GJL 250) (EN-JL 1040)
Impeller	Bronze	Cast iron (GJL 250) (EN-JL 1040)
Wear ring	Bronze	Cast iron (GJL 250) (EN-JL 1040)
Shaft	Stainless steel (AISI 420) (1.4021)	Carbon steel (1.0501)
Shaft sleeve	Stainless steel (AISI 420) (1.4021)	Stainless 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.

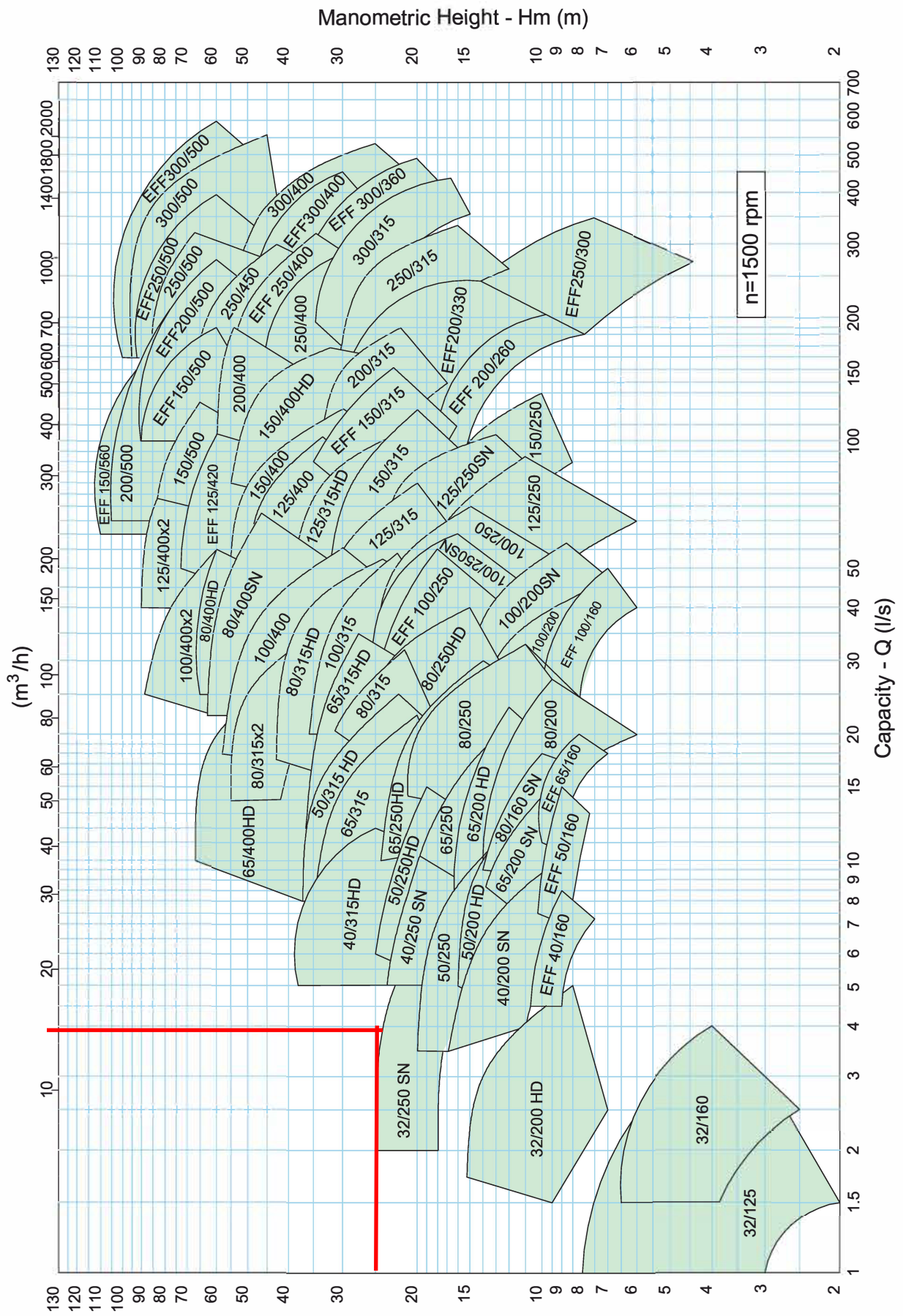
FIELDS OF APPLICATION

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.

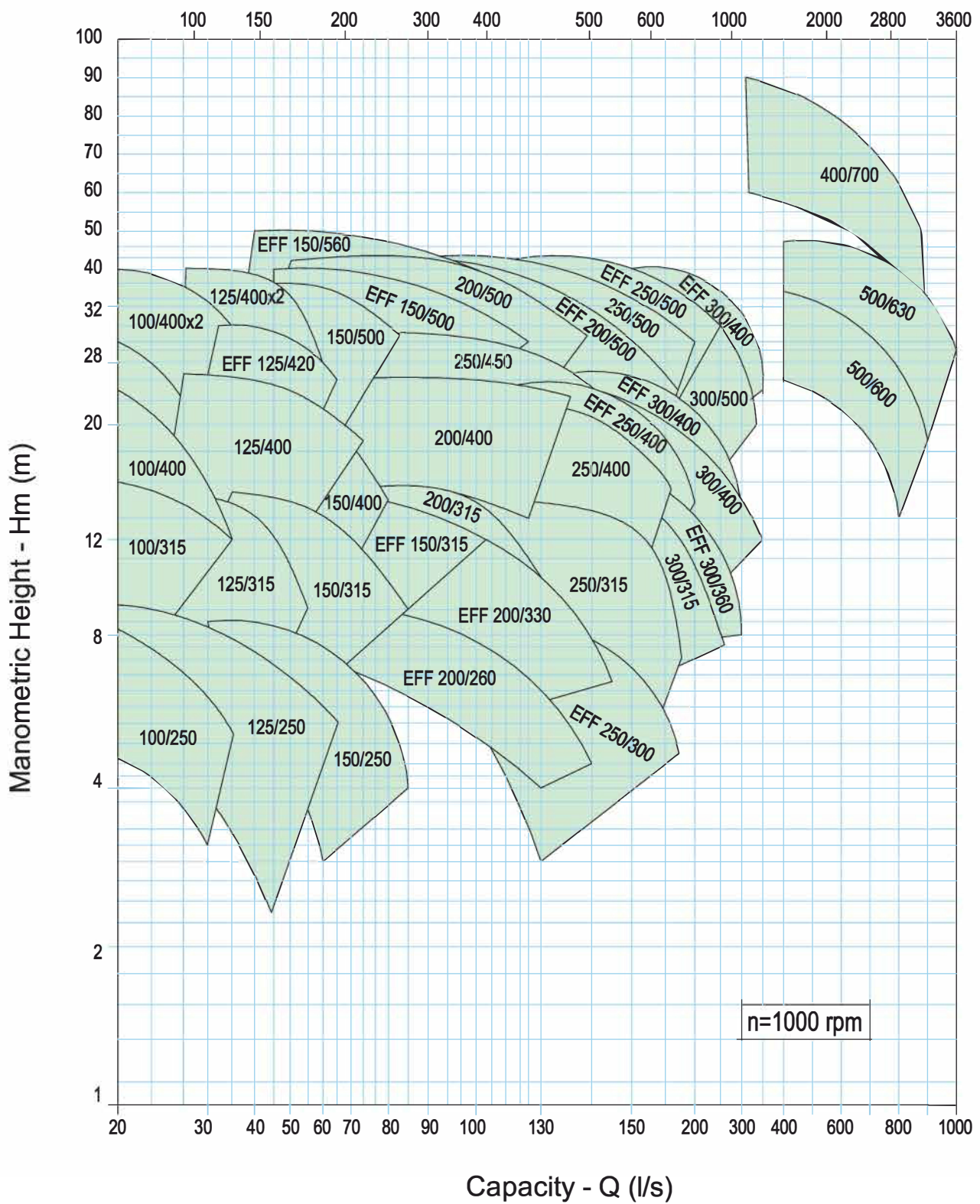


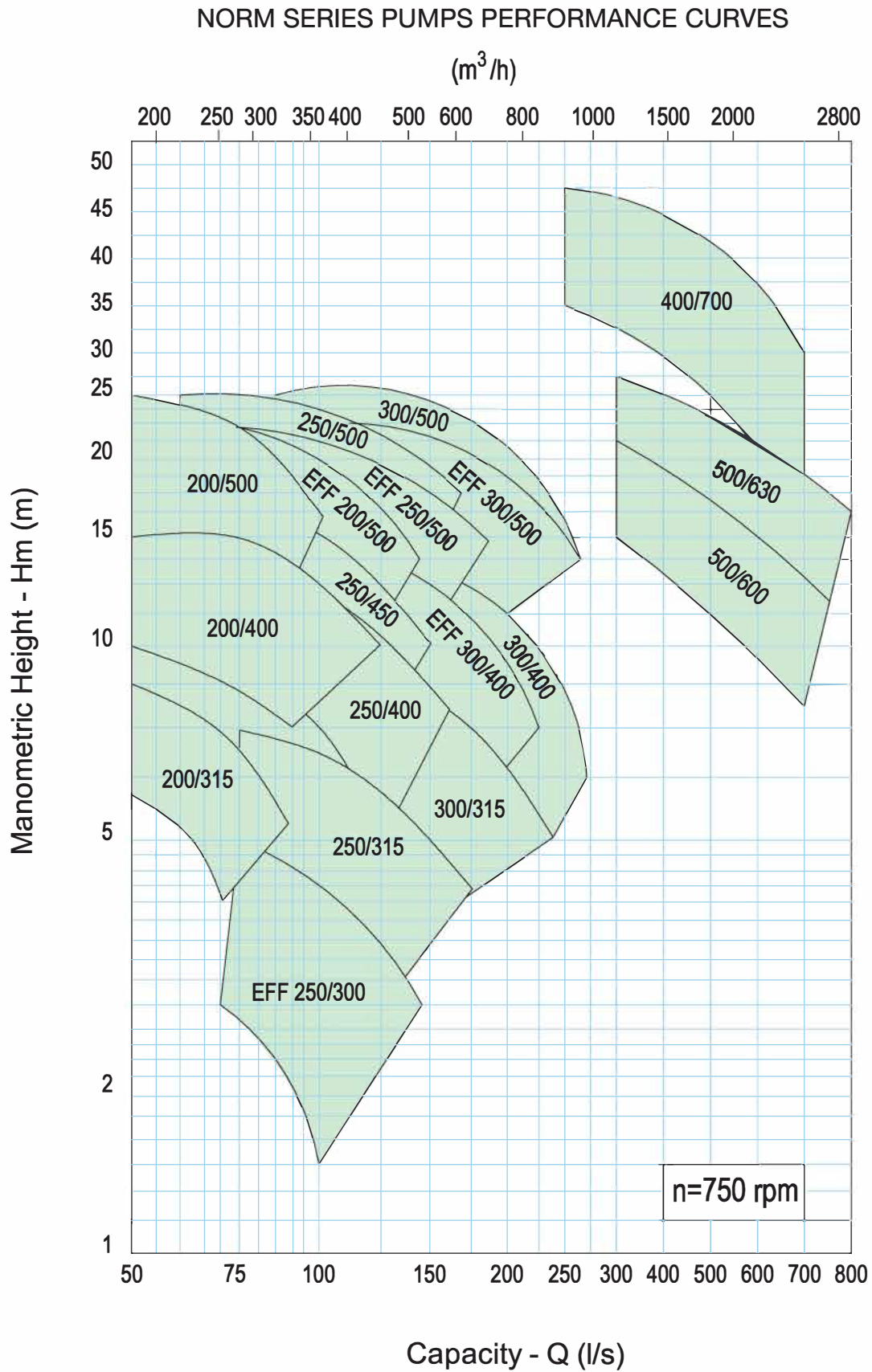
NORM SERIES PUMPS PERFORMANCE CURVES

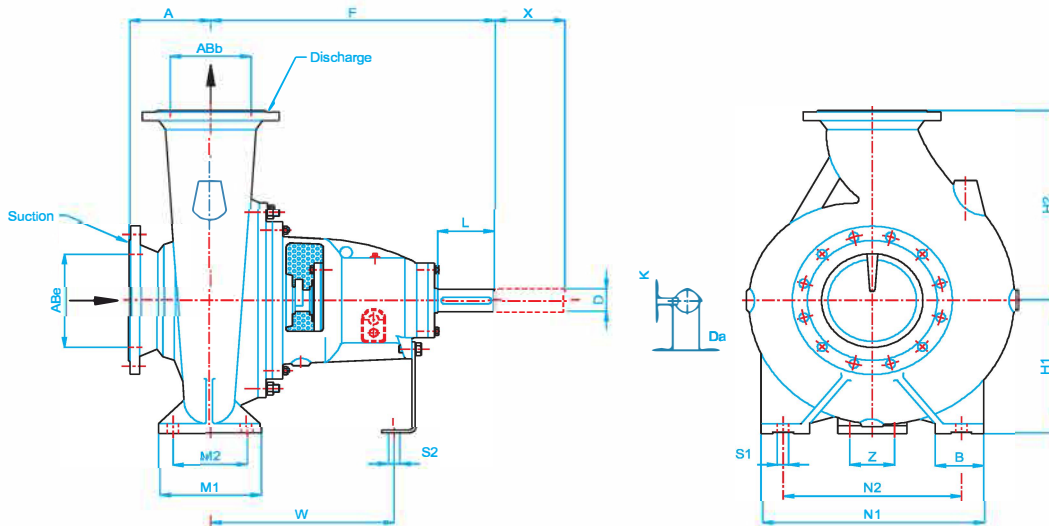


NORM SERIES PUMPS PERFORMANCE CURVES

(m³/h)







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		M20		52	56	16	110	380	150	50	295	170												
-	Norm-EFF 150/500			700		500																													
-	Norm 150/500			180	704	380	530	130				180			560	450			60	64	18	140		465	190	60	420								
-	Norm-EFF 150/560			700	400	500														460		493													
-	Norm-EFF 200/260	200	250	200	550	315	400		250	150			M24	M20	42	45	12		365		40	192	200												
-	Norm 200/315			584		375						500			400								150	50	300										
-	Norm-EFF 200/330			600	360	450					180								52	56	16		390		60	246									
-	Norm 200/400			704	355	505	120				550	450			60	64	18		465		60	410													
-	Norm-EFF 200/500			210	820		500	160			720	600			70	74,5	20		575		70	535													
-	Norm 200/500			785															540		70	512													
-	Norm-EFF 250/300	250	300	245	687				300	240			M24	M20	60	64	18			437		50	430	250											
-	Norm 250/315			197	701	400	430	110				540						450								452		60	410						
-	Norm-EFF 250/400			240	710		500	150	280	200	650	500															461		60	475					
-	Norm 250/400			252	785		545												540		60	495													
-	Norm 250/450			252	785		545												540		60	545													
-	Norm-EFF 250/500			240	794	425	500	160	300	240	720	600							550		190	575													
-	Norm 250/500			785		545													540		70	567													
-	Norm 300/315			250	820	400	535		280	200	650	500			70	74,5	20		576		70	550													
-	Norm-EFF 300/360	300	350	300	794	450	500	150		240			M24	M16	100	106	28	210	915	200	100	583	280												
-	Norm-EFF 300/400			280	805	500			300		200	800										660								550		70	572		
-	Norm 300/400			300	802	450	600				245																			560		70	750		
-	Norm-EFF 300/500			300	802	450	600												558		70	685													
-	Norm 300/500			300	785	450													540		70	690													
-	Norm 400/700	400							400	300	1150	1000									200	2070													
-	Norm 500/600	500	600	350	1275	700	1000	250		440	340	1250	1100	M36	M16	100	106	28	210	915	200	100	2130	375											
-	Norm 500/630A																																		
-	Norm 500/630B																																		

NOTE:

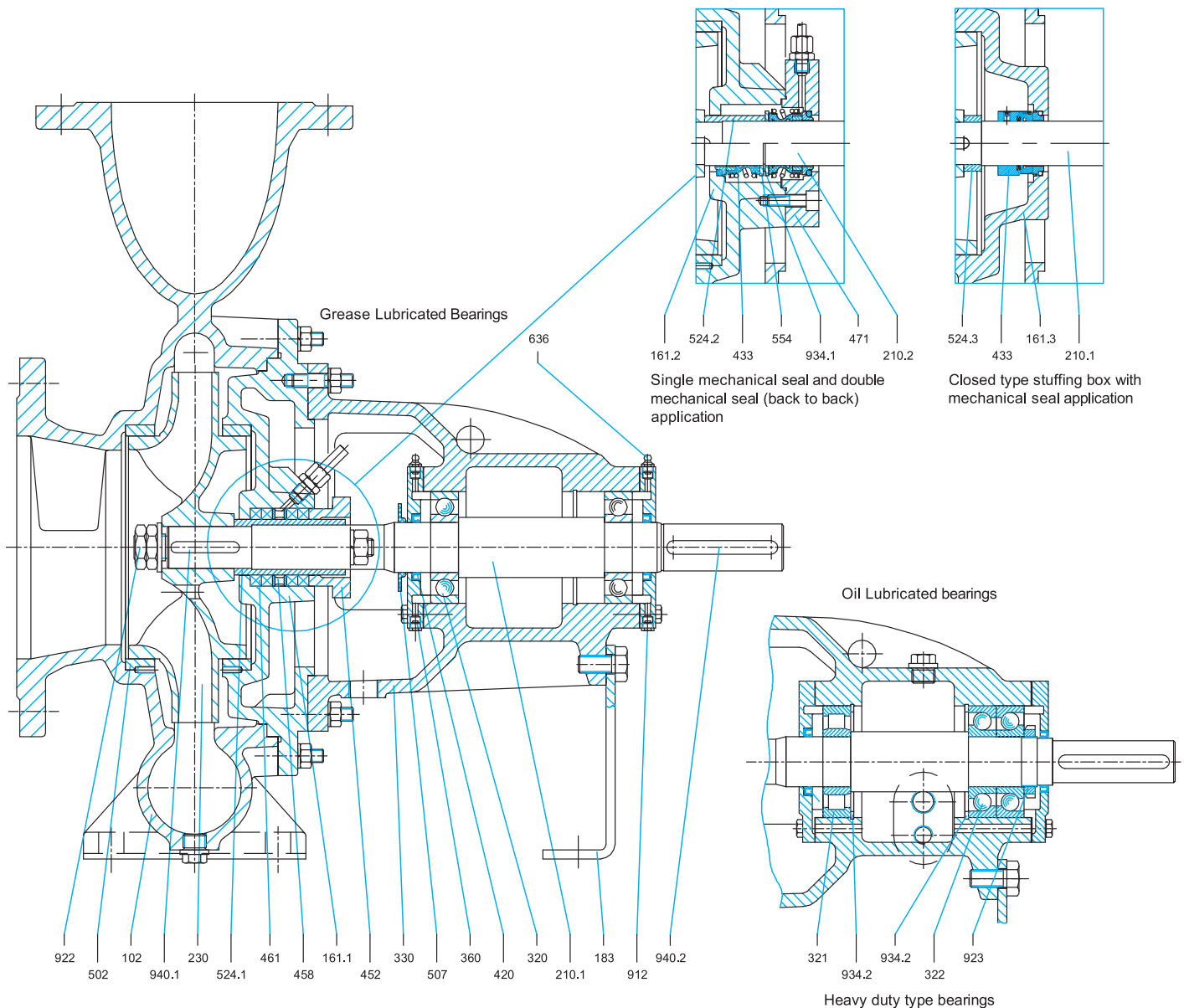
- 1) Dimensions "mm". Masflo reserves right to make any changes in dimensions without giving prior notice.
- 2) Flanges conforming to DIN 2501 and TS EN 1092-2
- 3) "X" spacer length.
- 4) (*) These pumps are on the project stage.

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 upto date desing and manufacturing methods.
- Incase 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 STANDART 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

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