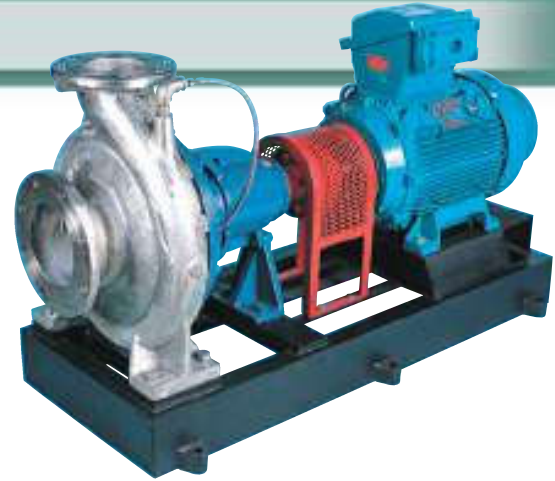


NORM SERIES PUMPS

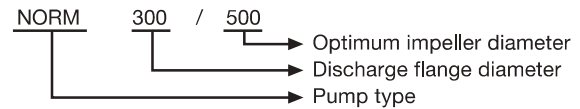
TECHNICAL DETAILS :

- 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, Turbosan 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 : Ø 50 ÷ 600
- Discharge flange diameter : Ø 32 ÷ 500
- Capacity range (Q) : 14-3100 m³/h
- Discharge head range (Hm): 5-90 mwc (1500 rpm)
- Operating temperature : -10°C ÷ 120°C



TURBOSAN NORM TYPE EFF (HIGH EFFICIENCY) PUMPS:

After years of research work, Turbosan 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	
	BRONZ 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

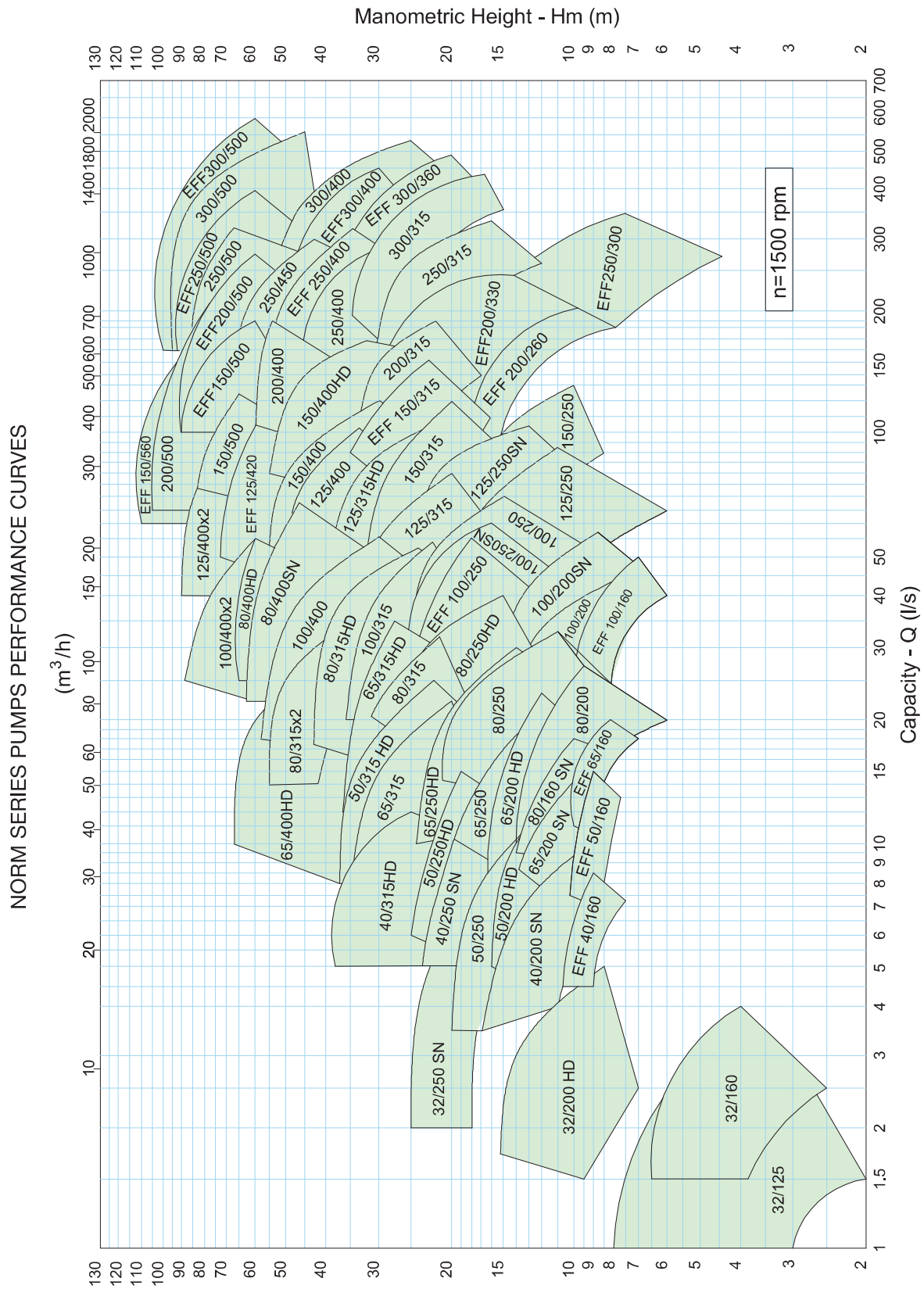
NOTE : All pump components can be manufactured in different materials optionally according to the properties of the liquid to be pumped.

FIELDS OF APPLICATION

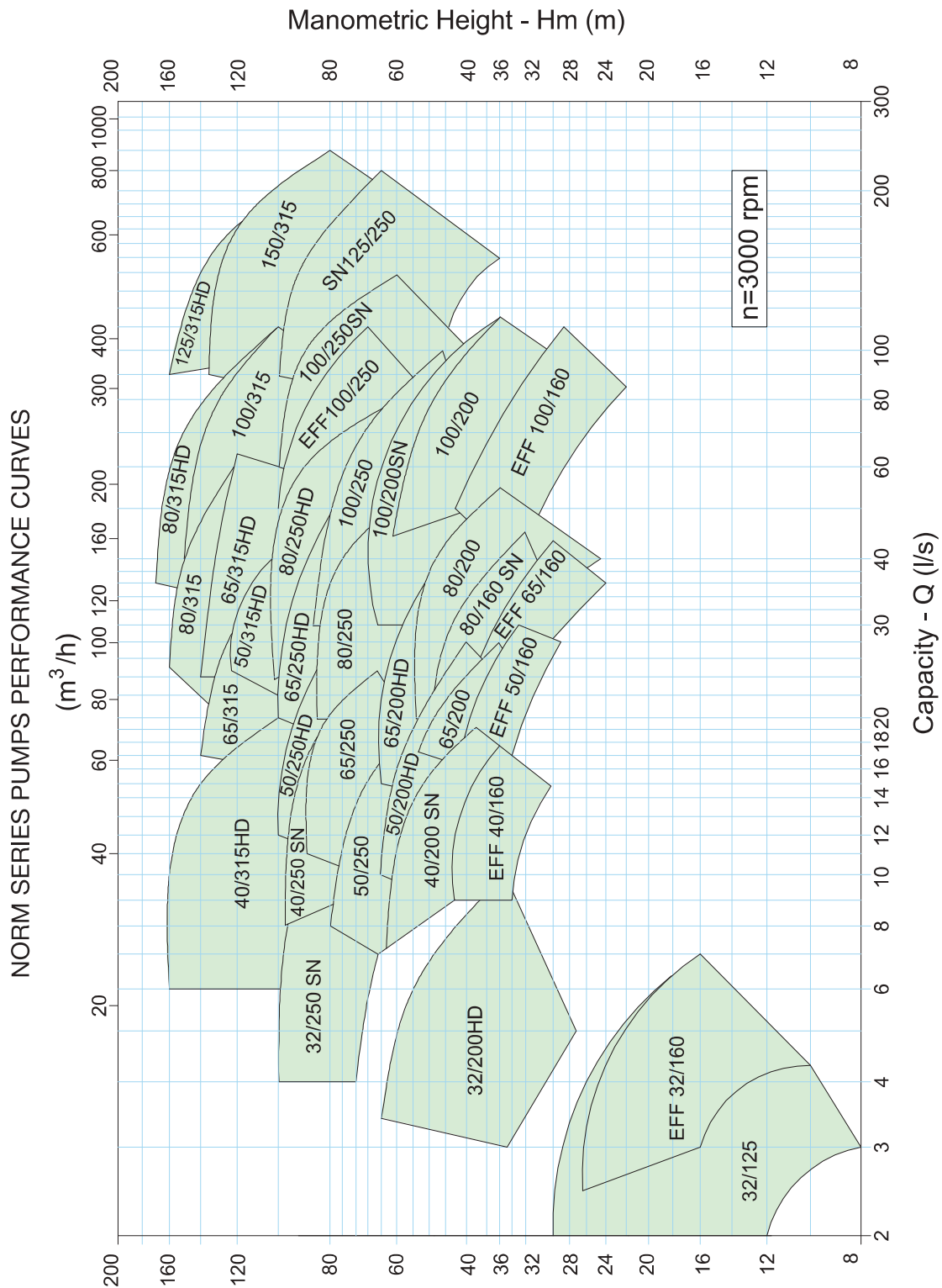
Turbo-NORM series pumps are suitable for

- ★ 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 GROUP PERFORMANCE CURVES (n=1500 rpm)



NORM SERIES PUMPS GROUP PERFORMANCE CURVES (n=3000 rpm)



NORM SERIES PUMPS GROUP PERFORMANCE CURVES (n=1000 rpm)

