

Construction standards:
 NFE 44121
 DIN 24256
 ISO 2858
 ISO 5199

Capacity: up to 400 m³/h or 1,700 US gpm

Head: 165 m or 540 ft

Applications:
 corrosive or non corrosive clear process liquids

Materials of construction:
 cast iron, stainless steel, various alloy steels, bronze, Hastelloy, titanium, . . .

Note:
available design features:
 •impeller of open, semi-open or closed type
 •hydrodynamic shaft seal, mechanical seal or soft packing
 •magnetic drive
 •heating jacket
 •canned motor pump

Extended standards:
 NFE 44121
 DIN 24256
 ISO 2858
 ISO 5199

Capacity: up to 6,000 m³/h or 26,400 US gpm

Head: 200 m or 655 ft

Applications:
 •corrosive and/or clogging liquids
 •abrasive liquids whether neutral or corrosive, containing large size solids

Materials of construction:
 cast iron, alloy steels, bronze, stainless steel, chromium cast iron, Ni-hard

Note:
available design features:
 •pump with bearing frame suitable for V-belt transmission
 •oil-lubricated bearing for direct drive
 •wear plate on suction side
 •closed impeller with front/back vanes, torque flow impeller, semi-open impeller
 •hydrodynamic shaft sealing, soft packing or mechanical seal

Extended standards:
 NFE 44121
 DIN 24256
 ISO 2858
 ISO 5199

Capacity: up to 6,000 m³/h or 26,400 US gpm

Head: 200 m or 655 ft

Applications:
 •corrosive and/or clogging liquids
 •abrasive liquids whether neutral or corrosive, containing large size solids

Materials of construction:
 cast iron, alloy steels, bronze, stainless steel, chromium cast iron, Ni-hard

Note:
available design features:
 •pump with adjustable bearing frame for V-belt transmission
 •oil-lubricated bearing for direct drive
 •wear plate on discharge and/or suction side
 •closed impeller with front/back vanes, torque flow impeller, semi-open impeller
 •hydrodynamic shaft seal, soft packing or special mechanical seal for pumping slurries

Process pump with torque flow impeller

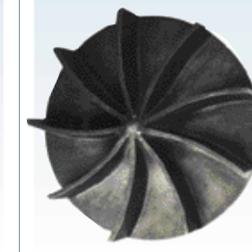
Capacity: up to 1,300 m³/h or 5,700 US gpm

Head: up to 70 m or 230 ft

Applications:
 abrasive liquids, whether neutral or corrosive, with or without large size solids

Materials of construction:
 cast iron, chromium cast iron, Ni-hard, stainless steel, Duplex, . . .

Note:
available design features:
 •dynamic axial thrust balancing system
 •shaft sealing by soft packing or mechanical seals



Capacity: up to 3,500 m³/h or 15,400 US gpm

Head: 100 m or 330 ft

Applications:
 very abrasive liquids with small to large size solids

Materials of construction:
 cast iron, chromium cast iron, Ni-hard, stainless steel, Duplex, . . .

Note:
available design features:
 •pump with adjustable bearing frame for V-belt transmission
 •oil or grease lubricated bearing for direct drive
 •wear plate on discharge and/or suction side
 •closed impeller with front/back vanes, torque flow impeller, semi-open impeller
 •hydrodynamic shaft seal, soft packing or special mechanical seal for pumping slurries

Construction standards:
 API 610 latest edition

Capacity: up to 3,000 m³/h or 13,200 US gpm

Head: 520 m or 1,700 ft

Applications:
 oil refineries, petrochemical industry, pipelines, offshore, . . .

Materials of construction:
 cast steel, alloy steel, stainless steel, Hastelloy, Zirconium, special alloys

Note:
available design features:
 •open or semi-open impeller
 •heating jacket

Capacity: up to 400 m³/h or 1,700 US gpm

Head: 960 m or 3,150 ft

Design pressure: 100 bar

Applications:
 boiler feeding, mine dewatering, booster

Materials of construction:
 cast iron, steel or chromium steel, stainless steel, Duplex

Note:
 •dynamic axial thrust balancing system
 •shaft sealing by soft packing or mechanical seals

Construction standards:
 API 610 or NFPA 20

Capacity: up to 7,600 m³/h or 33,500 US gpm

Head: 250 m or 820 ft

Applications:
 Transfer pumps, general services
 •circulation to cooling tower
 •plant cooling water supply
 •fire-fighting service

Materials of construction:
 cast iron, steel and cast iron, chromium steel, stainless steel

Note:
 •grease or oil lubricated bearing
 •soft packing or mechanical seal

Capacity: up to 3,300 m³/h or 14,500 US gpm

Head: 150 m or 500 ft

Applications:
 sump pump up to 1800 mm length

Materials of construction:
 cast iron, stainless steel, Duplex, chromium cast iron, special alloys

Note:
 special design for high temperatures up to 450°C (molten salts, concentrated caustic soda, ammonium nitrate etc.)

Capacity: up to 25,000 m³/h or 110,000 US gpm

Head: 250 m or 820 ft

Applications:
 •all industries
 •vertical mounting with concentric discharge
 •handling of large flowrates at medium or high heads

Materials of construction:
 •cast iron, chromium cast iron, steel, bronze, stainless steel, titanium, 254SMo, special alloys
 •available in cast or fabricated version

Note:
 manufactured in two designs:
 •wet or dry pit installation (length under grade level max. 25 m)
 •can-mounted vertical pumps ("barrel" type) for liquefied gases or for low NPSH available

Capacity: up to 1,800 m³/h or 7,920 US gpm

Differential head: up to 35 m or 115 ft in one stage

Applications:
 •production of concentrated acid
 •circulation to drying and absorption towers

Materials of construction:
 acid-proof cast iron, chromium cast iron, special stainless steel

Design:
 •vertical submersible with concentric discharge, immersion depth up to 4 metres
 •mounting outside tank

In the chemical industry:
 •molten sulphur
 •water or clear corrosive liquid (submersible pumps of IM range)
 •long sump pumps (up to 25 m) (VL)
 •molten salt at high temperatures (VNYR –VEYR)

Materials of construction:
 alloy steels, Hastelloy, nickel, chromium cast iron, titanium, zirconium, 254SMo

Design:
 •according to application / installation requirements
 •steam heating of pump casing and discharge column available upon request

Capacity: up to 25,000 m³/h or 110,000 US gpm

Head: 15 m or 50 ft

Applications:
 handling of very large flow-rates at low heads or recycling (concentration, crystallisation, evaporation)

Materials of construction:
 cast iron, ductile iron, steel, stainless steel, Hastelloy, nickel, nickel and titanium alloys

Note:
available design features:
 •cast propeller with fixed blades
 •horizontal or vertical mounting
 •suction axial or top, radial perpendicular to shaft
 •HP version for petrochemical applications up to 75 bar g (PP/PE reactors etc.)

Motor: EEx de IIC T4

Casing construction standards:
 ISO 2858, API 610, . . .

Capacity: up to 1,000 m³/h or 4,400 US gpm

Head: up to 500 m or 1,640 ft

Fluid temperature:
 from -100 °C to + 400 °C

Materials of construction:
 various cast iron and steel grades, stainless steel, Hastelloy, . . .

Applications:
 any hazardous or polluting media; corrosive, explosive, harmful, radioactive liquids; extreme temperatures; liquefied gases, crystallising liquids, liquids with solids content

Design:
 motor cooled by the pumped medium or by an auxiliary fluid, overpressurised motor, motor cooled by exchanger, motor with heating jacket; self-priming pumps; in-line, multistage, axial flow, canmounted ("barrel" type) pumps; horizontal or vertical mounting

Capacity: up to 11,000 m³/h or 48,500 US gpm

Absolute suction pressure:
 up to 60 mmHg

Applications:
 evaporation under vacuum, filtration, crystallisation, . . .

Materials of construction:
 cast iron, cast iron and bronze, stainless steel, Duplex, . . .

Note:
 connection to a set of ejectors possible for vacuum values exceeding 700 mmHg

Gears

Lobes

Elliptic piston

Capacity: up to 80 m³/h or 3,500 US gpm

Pressure: 10 bar

Applications:
 viscous liquids

Materials of construction:
 cast iron, bronze, stainless steel, . . .

Note:
available design features:
 •double jacket
 •by-pass
 •shaft sealing by mechanical seal

Other available constructions:
To meet your requirements, we are also able to supply:
 •Low Pressure In-Line pumps to BS 4082 Class L
 •NP10 water pumps
 •Two-channel impeller pumps
 •Shaft seals tailored to every medium:
 •soft packing
 •mechanical seals
 •hydrodynamic sealing by relief impellers (expellers)
 •Ceramic pumps
 •Diesel-driven pumpsets: a number of references, e.g. for pipe filling and testing units (up to 900 bar)
 •Lined pumps
 •Submersible pumps
 •Magnetic drive pumps
 •Self-priming pumps

Standardised chemical pumps

Pumps for turbid liquids

Slurry pumps

Pumps for liquids containing solids in suspension

Armoured pumps

API 610 Pumps

Multi-stage pumps

Axial split casing pumps

Vertical cantilever shaft pumps without column bearings and without shaft sealing device

Vertical centrifugal and mixed flow pumps

Vertical sulphuric acid pumps

Special pumps

Axial flow pumps

Canned motor pumps

Liquid ring vacuum pumps

Positive displacement pumps

A market leader

next door ...



Two family concerns, Ensival, founded in 1905 and Moret, in 1868, have contributed to the European industrial development throughout their histories by consistently producing pumping equipment at the forefront of technological progress. Both have a presence world-wide in mining, in the oil industry, in the chemical and petrochemical sectors, in the paper industry and in the agro-food industry.

In order to take up the challenges of the 21st century, these two companies have now joined forces to bring into being a new industrial group with strategically combined capabilities, offering yet greater expertise, enhanced service, an extensive range of products and unique quality insurance. Preserving at the same time its human dimension, the *Ensival-Moret group* stays flexible, close to users and capable of quick responsiveness to their specific needs.

With a global service network (ten service centers, sixty active agents) and 60 % of its production exported to a hundred countries, the group emerges straight away as a world market leader in the design and manufacture of pumps for the toughest services, such as phosphoric and sulphuric acids, slurries or critical applications in the sugar and paper industries. The two manufacturers jointly propose a comprehensive range of centrifugal and mixed flow pumps (capacities to 25,000 m³/h, heads to 2,000 mic, operating temperatures from -160 to +900 °C, installed powers to 4,000 kW). This manufacturing programme also includes a series of self-priming pumps, liquid ring vacuum pumps, high capacity submersible pumps and canned motor pumps.



ENSIVAL-MORET BELGIUM SA
Rue Hodister, 44 B-4860 WEGNEZ-PEPINSTER
Tel.: +32-(0)87/ 46.81.11. Fax : +32 (0)87/ 46.81.00
E-mail : emwegnez@em-pumps.com
ISO 9001



ENSIVAL-MORET FRANCE SA
Chemin des ponts et Chaussées, F-02100 SAINT-QUENTIN
Tel.: +33- (0)3/ 23.62.91.00 Fax: +33- (0)3/ 23.62.02.30
E-mail : emstquentin@em-pumps.com
ISO 9001



ENSIVAL-MORET-KESTNER SA Tours
Avenue du Danemark, 59 F-37100 TOURS
Tel.: +33- (0)2/ 47.88.31.31 Fax : +33- (0)2/ 47.41.51.73
E-mail : emtours@em-pumps.com
ISO 9002



ENSIVAL-MORET-KESTNER SA Bordeaux
Z.I du Grillon, B.P.30 F-33810 AMBES
Tel.: +33- (0)5/ 56.77.08.78 Fax : +33- (0)5/ 56.77.10.16
E-mail : embordeaux@em-pumps.com
ISO 9001



ENSIVAL-MORET-DEPLECHIN SA
Avenue de Maire, 28 B-7500 TOURNAI
Tel.: +32 (0)69/ 89.00.89 Fax : +32 (0)69/ 89.00.60
E-mail : emtournai@em-pumps.com
ISO 9001



ENSIVAL-MORET SHANGHAI
Lj Jia Pan, Gucao Lu Cao Lu Town Pu Dong New Zone 201209 SHANGHAI - CHINA (PRC)
Tel : +86- (0)21/ 58.63.73.63. Fax : +86- (0)21/ 58.63.54.59.
E-mail : emshanghai@em-pumps.com
ISO 9001

Internet : <http://www.ensival-moret.com>



MANUFACTURING RANGE

<http://www.ensival-moret.com>

EM 151001 PROGFABEN

AGENCY s.a. <http://www.agency.be>

	CHEMICAL PETROCHEMICAL PETROLEUM	PAPER CELLULOSE	AGRO-FOOD INDUSTRY		POWER PLANTS
			Sugar-mill Brewery	Oil-mill Cannery	
Standardised chemical pumps	Electrolytes, acids, ammonia, glycol, synthetic products, demineralised water, refinery products, gas washing	White, green or black liquor. White water with up to 1% fibres. Firefighting. Fan pump (1st dilution mix). Starch	Wort, mashes, oil, juice, alcohol		Demineralised water Condensate recovery pump
API 610 pumps	Hydrocarbons and various organics				Boiler circulation under very high pressure (basic API 610 design – tailored to the service)
Slurry pumps	Brines, acids, bases, waste water Liquids containing suspended fibers Moderately viscous liquids Slurries Liquids containing crystals or ores	White, green or black liquor. White water with up to 1% fibres. Firefighting. Fan pump (1st dilution mix). Paper pulp up to 7% (broke and screen pits, cleaner recovery etc.). 100% waste paper pulp (staples, gravel, glass, etc.). Water with wooden plates in cellulose.	Faecula, juice, wort, starch. River water Glucose, residuary liquor. Fibrous liquids, starch, malt. Raw cane juice, sludge, malt, foam, hydraulic transfer of vegetables.		Gas washing Water
Armoured pumps	Very abrasive liquids with high solids content, milk of lime, thick liquors	Kaolin, talc for coating	Cane juice, milk of lime, sludge, liquors		Removal of waste water containing abrasive solids
Multi-stage pumps	Boiler-feed Clear liquid HP circuit	Boiler-feed - HP circuit HP washer - Edge cutter	Boiler-feed HP circuit		Boiler-feed
Positive displacement pumps	Oil, grease, paint additives, tar, pitch, heavy fuel	Coating slip Glues Heavy fuel	Oil, molasses, drains, syrups, glucose, pulp, massecuite, heavy fuel		Tar, heavy oils
Cantilever shaft pumps	Acids, waste water Acid or basic effluents, clear or containing solids				Sump pumps for effluents containing abrasive solids
Vertical centrifugal and mixed flow pumps	Waste water treatment Pit dewatering Sea and river water	Waste water treatment in paper-mills (with sludge, fibers etc.) Pulp water treatment, rejects or residues from pulper, deflaker, refiner	Waste water treatment Pit dewatering		
Horizontal and vertical axial flow pumps	Fertilisers. Synthetic fibers Basic and acid solutions/ mineral salts Lifting and circulation on evaporators	Lifting Circulation or recycling	Juice and water circulation Irrigation Drainage		Crystallisation / evaporation in flue gas desulphurisation plants
Liquid ring vacuum pumps	Vacuum evaporators Vacuum filtration				Vacuum condensor
Axial split casing pumps	Water supply at high flows, cooling, desalination of seawater Fire-fighting				Cooling pumps Water supply to power plant
Canned motor pumps			Soda, potash, acid solvents		Radio-active or contaminated liquids
Vertical sulphuric acid pumps	Sulphuric acid production Drying/absorption towers - Acid transfer				
Special pumps					

	WASTE WATER		MINES		MISCELLANEOUS	
	Lifting Treatment	Marine Desalination	Transfer Spreading	Ore treatment	Cement works	Iron and steel works Automobile industry
Standardised chemical pumps	Waste water without solids Acids, bases Demineralised water		Acid solutions for ore treatment		Surface treatment liquids Demineralised water Diathermic fluids	
API 610 pumps	Refinery waste treatment (offsites)					
Slurry pumps	Decanted and screened waste water Biological sludges HP spreading Waste water laden with clogging or fibrous matters Waste water containing plastic scraps and large size, abrasive or corrosive matters		Run-off water treatment Waste water laden with clogging or fibrous matters Barbotine Liquids containing large size solids Cement milk		Sea-water Converter cooling Paint cabin Coke slashing Paints Liquids of medium viscosity Sludge with high solids content	
Armoured pumps	Waste water containing sand or highly abrasive matters		Ore washing Sand treatment Sludge, cement milk		Sludge Thick liquors Water laden with scales	
Multi-stage pumps	Spraying Spreading		Mine dewatering Boiler-feed HP circuit		Boiler-feed HP circuit Descaling pumps	
Positive displacement pumps	High viscosity products		Oils, greases and viscous products		Oils, greases and viscous products	
Cantilever pumps	Neutralisation sump, water + traces of solids		Sump pumps, recovery of ore residues			
Vertical centrifugal and mixed flow pumps	Clear waste water treatment and pit dewatering Basin water recovery		Waste water treatment		Waste water treatment Waste water lifting	
Horizontal and vertical axial flow pumps	Activated sludge Rain water Tank drainage		Dewatering Groundwater drainage		Dam-supply Dewatering	
Liquid ring vacuum pumps	Vacuum filtration		Vacuum filtration		Vacuum filtration	
Axial split casing pumps	Cooling Fire-fighting circulating feed-water		Mine dewatering at medium depths Water supply		Cooling Sea-water Water supply	
Canned motor pumps						
Vertical sulphuric acid pumps						
Special pumps	High capacity submersible pumps Unchokeable two-channel impeller pumps				High capacity submersible pumps	