B. Motors & Pumps

1. Motors and Alternators

    a. Leroy Somer

        - Inductions Motors
        - Alternators

    b. Marelli

2. Pumps

    a. Allweiler pumps

    b. Garbarino pumps

1.a. LEROY SOMER: INDUCTION MOTORS

LS single phase TEFV induction motors

Single phase TEFV induction motors,
LS series, in accordance with IEC 34, 38, 72.
power from 0.09 to 5.5 kW
Frame size from 56 to 90 mm
2, 4 and 6 poles.

A.C. supply
230 V +10% -10%, 50 Hz

Protection
Standard IP 55, fully sealed against projected liquid and dust in an industrial environment.

Winding
standard class F type, formed on automatic machines to ensure repeat accuracy and reliability.
Impregnated on automatic production line with tropicalised Class H varnish ensuring correct operation in humid environments (up to 90% relative humidity).

Rotor
squirrel cage, pressure die-cast in aluminum, ensuring rigidity of turning part, balanced dynamically.

Possibilities

- For applications requiring high starting torque and continuous high torque : model "PR" (with electric relay) up to and including frame size 90.
- For applications which do not require high starting torque : model "P" (with permanent capacitor).

Individual checks before sending

- Routine check (no-load test, dielectric test, check resistors and direction of rotation).
- Vibration and noise levels in accordance with Class N and IEC 34 9 respectively.

Finish

- Assembled using protected fixing accessories.
  RAL 6000 (green) paint finish.
  Shaft end and flange protected against atmospheric corrosion.
  Individual anti-shock packaging.

LS 3-phase TEFV induction motors

3-phase TEFV induction motors,
LS series, conforming to IEC 34, 38, 72

Single speed : power 0.09 to 160 kW, frame size from 56 to 315 mm, 2, 4, 6, 8-pole; 230/400 V or 400 V Δ, 50 Hz.

Two-speed : power 0.09 to 160 kW, frame size 80 to 315 mm with 2/4, 4/6, 4/8, 6/8, 6/12 poles for general or centrifugal applications, PAM or Dahlander ; 400 V Δ or Y, 50 Hz.

To select a motor, choose between :

- D.O.L. starting on 230 V or 400 V power supplies with operation in :
  - delta connection (Δ) at 230 V,
  - star connection (Y) at 400 V.
- Star/delta connection (Y/Δ) on 400 V A.C. supply with :
  - star connection (Y) during the initial start time,
  - delta connection (Δ) in 400 V duty.

For starting two-speed motors indirectly : consult MSP

Finish

Assembled using protected fixing accessories. RAL 6000 (green) paint finish. Shaft end and flange protected against atmospheric corrosion. Individual anti-shock packaging.

A.C. supply

Standard in accordance with IEC 38, i.e. :

- 230/400 V +10 % -10 % at 50 Hz.

Standard construction for the following supplies :

- 220/380 V +5 % -5 % at 50 Hz,
- 230/400 V +10 % -10 % (IEC 38) at 50 Hz.
- 240/415 V +5 % -5 % at 50 Hz,
- 265/460 V +5 % -5 % at 60 Hz.

Voltages for power ratings equal to or greater than 3 kW :

- 380 V Δ+5 % -5 % at 50 Hz,
- 400 V Δ+10 % -10 % at 50 Hz,
- 415 V Δ+5 % -5 % at 50 Hz,
- 460 V Δ+5 % -5 % at 60 Hz,

Construction allowing Y/Δ starting

FLS 3-phase TEFV induction motors

3-phase TEFV induction motors
FLS series with cast iron frame, in accordance with to IEC 34, 38, 72, power from 0.55 to 750 kW, frame size from 80 to 450 mm.

Single speed 2, 4, 6, and 8-pole :
230/400 V or 400 V Δ, 50 Hz.
Dual speed, general or centrifugal applications 2/4, 4/6, 4/8 and 6/8-pole 400 V Yor Δ.

Protection

Standard IP55, fully sealed against projected liquid and dust in an industrial environment.

To select a motor, choose between :

- D.O.L. starting on 230 V or 400 V power supplies with operation in :
  - delta connection (Δ) at 230 V,
  - star connection (Y) at 400 V.
- Star/delta connection (Y/Δ) on 400 V A.C. supply with :
  - star connection (Y) during the initial start time,
  - delta connection (Δ) in 400 V duty.

For starting two-speed motors indirectly : consult MSP.

Finish

Assembled using protected fixing accessories.
RAL 6000 (green) paint finish.
Shaft end and flange protected against atmospheric corrosion.
Individual anti-shock packaging.

A.C. supply

Standard in accordance with IEC 38, i.e. :

- 230/400 V +10 % -10 % at 50 Hz.

Standard construction for the following supplies :

- 220/380 V +5 % -5 % at 50 Hz.
- 230/400 V +10 % -10 % at 50 Hz.
- 240/415 V +5 % -5 % at 50 Hz.
- 265/400 V +5 % -5% at 60 Hz.

Voltages for power ratings equal to or greater than 3 kW :

- 380 V Δ+5 % -5 % at 50 Hz
- 400 V Δ+10 % -10 % at 50 Hz
- 415 V Δ+5 % -5 % at 50 Hz
- 460 V Δ+5 % -5 % at 60 Hz

Construction allowing Y/Δ starting

FLSC 3-phase TEFV induction motors

FLSC 3-phase TEFV induction motors, cast iron housing, in accordance with IEC 34, 38, 72, rated power 0.55 to 750 kW, frame size from 80 to 450 mm. Single speed 2, 4, 6, and 8-pole : 230/400 V or 400 V Δ, 50 Hz. Dual speed, general or centrifugal applications 2/4, 4/6, 4/8 and 6/8-pole 400 V Yor Δ.

FLSC Corrobloc finish
The Corrobloc finish is added to the FLS cast iron motor. The basic cast iron motor construction is treated with special finishes, which in the long term will improve its resistance to corrosion in particularly harsh environments.

To select a motor, choose between :

- D.O.L. starting on 230 V or 400 V power supplies with operation in :
  - delta connection (Δ) at 230 V,
  - star connection (Y) at 400 V.
- Star/delta connection on 400 V A.C. supply with :
  - star connection (Y) during the initial start time,
  - delta connection (Δ) in 400 V duty.

For starting two-speed motors indirectly : consult MSP.

Finish
Assembled using protected fixing accessories. RAL 6000 (green) paint finish. Shaft end and flange protected against atmospheric corrosion. Individual anti-shock packaging.

Protection
Standard IP 55, fully sealed against projected liquid and dust in an industrial environment.

A.C. supply
Standard in accordance with IEC 38 ie : 230/400 V +10 % -10 % at 50 Hz.

Standard construction for the following supplies :

- 220/380 V +5 % -5 % at 50 Hz.
- 230/400 V +10 % -10 % at 50 Hz.
- 240/415 V +5 % -5 % at 50 Hz.
- 265/460 V +5 % -5 % at 60 Hz.

Voltages for power ratings equal to or greater than 3 kW :

- 380 V Δ+5 % -5 % at 50 Hz
- 400 V Δ+10 % -10 % at 50 Hz
- 415 V Δ+5 % -5 % at 50 Hz
- 460 V Δ+ 5 % - 5 % at 60 Hz.

Construction allowing Δ / Ystarting.

3-phase TEFV induction motors FLSB FLSLB slip-ring motors

3-phase TEFV induction motors with wound slip-ring rotor.
Rated power from 7.5 to 300 kW for frame sizes from 160 to 355 mm.
Voltage : 220 V Δ/ 380 V Y, 50 Hz (other voltages and frequencies on request).
Insulation class F, temperature rise B.
Standard IP 55.

Performance
With an appropriate rheostat inserted in the rotor circuit, the motor with wound slip-ring rotor offers the following possibilities :

- adapting the motor torque to that of the driven motor;
- tolerating long starts;
- limiting the current inrush on starting;
- adjusting the speed of rotation with the aid of a permanent slip regulator (for this application, please consult our technical department).

Starting
The motor with wound slip-ring rotor does not depend on the stator's being connected in order to start. A rheostat is used to start the motor.

Leroy-Somer recommends the liquid resistance rheostat, generally known as the Polystart Electrolytic Starter. With this type of starter, a series resistance can be inserted in the rotor circuit, the effect of which is gradually reduced until it disappears completely by short-circuiting at the end of starting.

Caution : the Polystart is not suitable for lifting applications.

Conditions of use

- **S3 duty (FLSB series)** for general applications,
- **S4/S5 duty (FLSLB series)** for lifting and material handling.

FLSD flameproof 3-phase TEFV induction motors

FLSD flameproof 3-phase TEFV induction motors, in accordance with IEC 34, 38, 72, 79, EN 50014, EN 50018, EN 50019. FLSD series, power from 0.55 to 400 kW.

Finish
EExd II BT4 protection mode. Paint finish RAL 7031 epoxy (gray). Shaft end and flange protected against atmospheric corrosion.

Protection
Standard IP 55, fully sealed against projected liquid and dust in an industrial environment.

A.C. supply

Standard construction for the following supplies :

- 220/380 V Δ+10 % -5 % at 50 Hz
- 230/400 V Δ+6 % -10 % at 50 Hz
- 380 V Δ+10 % -5 % at 50 Hz
- 400 V Δ+6 % -10 % at 50 Hz

LS MV 3-phase TEFV induction motors

3-phase TEFV induction motors conforming with IEC 34-72.

The LS MV motor is the product of Leroy-Somer's experience in speed variation and developments in the performance of new electronic controllers.

- Power from 0.75 kW to 132 kW. Frame size from 80 to 315 mm. 2-pole, 4-pole, 6-pole. 3-phase power supply 380/415 V, IP 55 protection.

The LS MV is the basis for a large range of motors for variable speed control. Leroy-Somer can also supply FLS MV motors in cast iron housings, FLSC MV motors with reinforced mechanical protection, and motors in aluminum housings with IP 23 PLS MV protection.

Other ranges available : FLS MV (cast iron housing).
Power rating : =/>160 kW.
Frame size from 315 to 450 mm.

Using LS MV motors together with LEROY-SOMER AC electronic controllers range ensure good torque and speed performance during operation.

VARMECA

variable speed motors

VARMECA is a new solution of integrated electronic drive.

3-phase variable speed TEFC motor in accordance with IEC and Low Voltage directives.

E 211799

Protection degree: IP65
Operating temperature :
-20°C to +40°C
(up to 50°C with derating)

- Power rating : 0.25 to 11 kW for frame sizes 71, 80, 90, 100, 112, 132, 160.

- Power supply :

3-phase
- 400 V / 480 V ± 10 %, 50/60 Hz ± 5 %.
- 200 V / 240 V ± 10 %, 50/60 Hz ± 5 %.

single phase
- 200 V / 240 V supply ± 10 %,
50/60 Hz ± 5 %.

3-phase TEFV induction motors for smoke extraction Lucifer HTA- HTF

3-phase TEFV induction motors
for accident-related operation at high temperatures (for a specified length of time). Adapted to European safety standards for smoke extractor fans in case of fire.

HTA 200° - 120 min range
These motors are designed to operate in an ambient temperature of 200°C for 120 min. The stated power rating corresponds to the rated power in S1 duty at an ambient temperature of 40° C.

- Single speed : 3-phase induction motors in accordance with IEC 34, 72. From 1.1 to 132 kW, with frame size 90 to 315 mm : 230/400 V or 400 V Δ, 50 Hz.
- 2-speed : 3-phase induction motors in accordance with IEC 34, 72. Frame size 90 to 315 mm : 4/8-pole and 6/12-pole Dahlander connection, for centrifugal applications, 400 V.

For 2-speed/double winding motors, please contact MSP.

Protection
Standard IP 55, fully sealed against projected liquid and dust in an industrial environment.

A.C. supply

- standard in accordance with IEC 34-1 ie
  - 230/400 V +5 -5 % at 50 Hz.
- special construction for the following supplies :
  - 220/380 V +5 % -5 % at 50 Hz
  - 230/400 V +5 -5 % at 50 Hz.
  - 240/415 V +5 -5 % at 50 Hz.

Voltages for power ratings equal to or greater than 3 kW (construction allowing Y /Δ starting)

- 380 V Δ +5 -5 % at 50 Hz
- 400 V Δ +5 -5 % at 50 Hz
- 415 V Δ +5 -5 % at 50 Hz

PLS drip-proof 3-phase induction motors

PLS drip-proof 3-phase induction motors in accordance with IEC 34, 38, 72, power rating from 11 kW to 900 kW, frame size from 160 to 400 mm, 2, 4, 6 and 8 pole; 230/400 V
or 400 V Δ, 50 Hz.

Protection
Standard IP 23 ensuring excellent motor cooling by an internal air flow.

A.C. supply

- Standard in accordance with IEC 38, i.e. :
  230/400 V +10 % -10 % at 50 Hz.

Our standard construction is suitable for the following supplies :

- 220/380 V or 380 V Δ+5 % -5 % at 50 Hz
- 230/400 V or 400 V Δ+10 % -10 % at 50 Hz
- 240/415 V or 415 V Δ+5 % -5 % at 50 Hz
- 265/460 V or 460 V Δ+5 % -5 % at 60 Hz

Construction allowing Y/Δ starting.

1.a. LEROY SOMER: ALTERNATORS

ALTERNATOR LSA 37 Shunt

SPEED (RPM)	3 000 / 3 600
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	14 ... 28 kVA
POWER 60 Hz 3 Phase 480V	18,2 ... 36,3 kVA

ALTERNATOR LSA 42.2

SPEED (RPM)	3 000 / 3 600
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	27 … 50 kVA
POWER 60 Hz 3 Phase 480V	34 … 62.5 kVA

ALTERNATOR LSA 37 ACC

SPEED (RPM)	1 500 / 1 800 min -1
VOLTAGE	1 Phase
POWER 50 Hz 3 Phase 400V	5 … 10 kVA
POWER 60 Hz 3 Phase 480V	6 … 12 kVA

LEROY SOMER: ALTERNATORS

ALTERNATOR LSA 37 ATR

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	7,5 … 17 kVA
POWER 60 Hz 3 Phase 480V	10 … 21 kVA

ALTERNATOR LSA 42.2

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	17,5 … 31,5 kVA
POWER 60 Hz 3 Phase 480V	22 … 38 kVA

ALTERNATOR LSA 43.2

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	35 … 80 kVA
POWER 60 Hz 3 Phase 480V	44 … 95 kVA

LEROY SOMER: ALTERNATORS

ALTERNATOR LSA 44.2

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	90 … 165 kVA
POWER 60 Hz 3 Phase 480V	115 … 206 kVA

ALTERNATOR LSA 46.2

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	180 … 315 kVA
POWER 60 Hz 3 Phase 480V	228 … 381 kVA

ALTERNATOR LSA 47.2

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	365 … 600 kVA
POWER 60 Hz 3 Phase 480V	456 … 750 kVA

LEROY SOMER: ALTERNATORS

ALTERNATOR LSA 49.1

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	660 … 910 kVA
POWER 60 Hz 3 Phase 480V	792 … 1092 kVA

ALTERNATOR LSA 50.1

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	910 … 1580 kVA
POWER 60 Hz 3 Phase 480V	1092 …1900 kVA

ALTERNATOR LSA 51.2

SPEED (RPM)	1 500 / 1 800 min
VOLTAGE	3 Phase
POWER 50 Hz 3 Phase 400V	1800 …2250 kVA
POWER 60 Hz 3 Phase 480V	2160 …2700 kVA

1.b. MARELLI: MOTORS

Flameproof LV motors

D1 - D4 series are explosion-proof motor enclosed in an explosion-proof casing (EEx-d),
Three-phase with squirrel-cage rotor and external surface fan cooling.
Coupling dimensions

Comply with IEC standards, publications 72 and comprise shaft height from 71 to 400 mm.
This series motors are formed by two separate casings with the following certificates:

- **Main casing** containing the active parts comply with the following compatible European standard:
CEI 31-8 publication 459
CENELEC EN 50014 general rules

CEI 31-1 publication 472
CENELEC EN 50018 “d” explosion-proof casing.

-**Terminal board** with winding terminal complying with the above-mentioned standard and the following compatible standards:
CEI 31-7 publication 458
CENELEC EN 50019
Increased safety and protection “e”.
The compliance with the above-mentioned standards has been checked and verified by “CESI” (Italian Electrotechnical Experimental Centre).

NEW GENERATION

The New 355 frame is the result of the latest designed methodologies developed in MarelliMotori for obtain a New Motor Generation.

Main Features

STANDARD FEATURES
Three- phase multivoltage 50 / 60 Hz - Protection IP 55 - IEC 34- 5 - TEFC Cooling IC 411 - IEC 34- 6 - Dimensions according to IEC - 72 - Design N - IEC 34- 12 - Cast iron frame and end shields - Large cast iron terminal box - EEx- e - Squirrel cage rotor - Insulation class F - Temperature rise 80 K - Service Factor 1.15 - F/ F - Heavy ball regreasable bearings - Labyrinth seal on both endshields - Double Vacuum Pressure Impregnation - Anticorrosive protection - Bidirectional low noise fan Balanced to vibration severity grade R Thermistor PTC in auxiliary terminal box - Drain holes - Stainless steel laser engraved name plates - SPM arrangement - Earth facilities on frame and terminal box

OPTIONAL FEATURES

Winding and bearings thermal protection PT100 - Space heaters - Suitable for inverter duty - Forced ventilation set - Encoder - Roller bearing for heavy loads - Protection IP 56 - Vibration severity grade S - Double shaft extension - Double speed - Voltage up to 6.6 kV

TEFC Motors
for industrial applications

The motors are three phase totally enclosed, fan cooled with squirrel-cage rotor.
Frame size range from 63 to 630 mm.
These motor comply with the following foreign standard:
Germany(D)VDE0530
Belgium (B) NBNC 51-101.1976
France (F) NFC 51
Switzerland (CH) SEV 3009.2966
Great Britain (GB)BS 5000.BS 4999
Holland (NL) NEN 3173.1977
Sweden (S) SEN 260101.1974

Motor complying with the NEMA MG1 American Regulation only in regard to the electrical standard may also be supplied.
Spain (E) UNE 20106

Main Features
International standards IEC 34-1 / 34-2 / 34-5 / 34-6 / 34-7 / 34-8 / 34-9 / 34-14 / 72.
The motor are fitted with bidirectional flow fans IC 411. On request, motor can be supplied with cooling IC 410 and IC 416.

2.a. ALLWEILER PUMPS

CENTRIFUGAL PUMP NI TYPE

REFERENCE	U3DW19
FLUID	FRESH WATER
CORPSE	CAST IRON GG25
WHEEL	CAST IRON GG 20
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

REFERENCE	U3DW18
FLUID	FRESH WATER
CORPSE	CAST IRON GG25
WHEEL	CUPRO-ALU G-CuAL10Ni
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

REFERENCE	U3DW3
FLUID	FRESH WATER
CORPSE	CUPRO-ALU G-CuAL10Ni
WHEEL	CUPRO-ALU G-CuAL10Ni
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

ALL PUMP DIMENSIONS AVAILABLE UPON REQUEST

CENTRIFUGAL PUMP NIM TYPE

REFERENCE	U3DW19
FLUID	FRESH WATER
CORPSE	CAST IRON GG25
WHEEL	CAST IRON GG 20
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

REFERENCE	U3DW18
FLUID	FRESH WATER
CORPSE	CAST IRON GG25
WHEEL	CUPRO-ALU G-CuAL10Ni
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

REFERENCE	U3D W3
FLUID	FRESH WATER
CORPSE	CUPRO-ALU G-CuAL10Ni
WHEEL	CUPRO-ALU G-CuAL10Ni
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

ALL PUMP DIMENSIONS AVAILABLE UPON REQUEST

CENTRIFUGAL PUMP NISM TYPE

REFERENCE	U3DW19
FLUID	FRESH WATER
CORPSE	CAST IRON GG25
WHEEL	CAST IRON GG 20
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

REFERENCE	U3DW18
FLUID	FRESH WATER
CORPSE	CAST IRON GG25
WHEEL	CUPRO-ALU G-CuAL10Ni
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

REFERENCE	U3D W3
FLUID	FRESH WATER
CORPSE	CUPRO-ALU G-CuAL10Ni
WHEEL	CUPRO-ALU G-CuAL10Ni
TREE	STAINLESS STEEL 1,4404
TREE WATERTIGHTNESS	CARBON/CERAMIC EDPM SEAL

ALL PUMP DIMENSIONS AVAILABLE UPON REQUEST

CENTRIFUGAL PUMP MI TYPE

REFERENCE	U15DW97
FLUID	FRESH WATER
CORPSE	CAST IRON GS GGG40
WHEEL	CAST IRON GG 20
TREE	STAINLESS STEEL 1,4571
TREE WATERTIGHTNESS	CARBON/CAST IRON Cr NBR SEALS

REFERENCE	U15DW88
FLUID	FRESH WATER
CORPSE	CAST IRON GS GGG40
WHEEL	CUPRO – ALU G –CuAl10Ni
TREE	STAINLESS STEEL 1,4571
TREE WATERTIGHTNESS	CARBON/CAST IRON Cr NBR SEALS

REFERENCE	U15DW3
FLUID	FRESH WATER
CORPSE	CUPRO-ALU G-CuAL10Ni
WHEEL	CUPRO-ALU G-CuAL10Ni
TREE	STAINLESS STEEL 1,4571
TREE WATERTIGHTNESS	CARBON/CAST IRON Cr NBR SEALS

ALL PUMP DIMENSIONS AVAILABLE UPON REQUEST

2.b. GARBARINO PUMPS

TYPE MULBB PUMP

FLUID	SEA WATER
EXECUTION	VERTICAL IN LINE
CASING	BRONZE RG5
IMPELLER	ALU - BRONZE

TYPE MULBB PUMP

TYPE MULGB PUMP

FLUID	FRESH WATER
EXECUTION	VERTICAL IN LINE
CASING	CAST IRON
IMPELLER	ALU - BRONZE

TYPE MUORBB PUMP

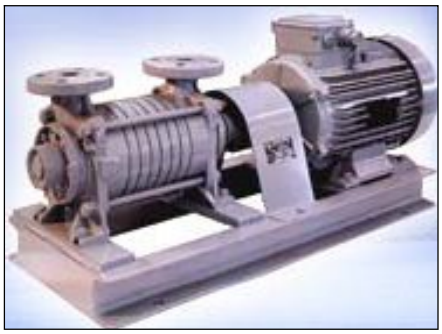
FLUID	
EXECUTION	HORIZONTAL
CASING	BRONZE RG5
IMPELLER	ALU - BRONZE

TYPE MUORBB PUMP

ALL DIMENSIONS AND TYPES AVAILABLE UPON REQUEST

TYPE MUORGB PUMP

FLUID	
EXECUTION	HORIZONTAL
CASING	CAST IRON
IMPELLER	ALU - BRONZE



TYPE BTGB PUMP

TYPE BTGB PUMP

FLUID	
EXECUTION	SIDE CHANNEL
CASING	CAST IRON
IMPELLER	ALU - BRONZE

BOILER FEEDING PUMP

BOILER FEEDING PUM – TYPE G01/GHBA PUMP

FLUID	
EXECUTION	MULTISTAGE
CASING	CAST IRON
IMPELLER	ALU - BRONZE

ALL DIMENSIONS AND TYPES AVAILABLE UPON REQUEST