



# SAER<sup>®</sup>

## ELETTROPOMPE



## BOREHOLE PUMPS

Can be used for water supply from deep wells or reservoirs. High wear resistance, excellent efficiency and reliability. Ideal for water distribution from boreholes with a minimum diameter of 156 mm. Typical applications include agriculture, mining, oil and gas, offshore installations, suitable for lifting and supply in civil and industrial systems, supplying autoclaves and cisterns, washing systems, irrigation and underground retraction.

### MOTOR AND PUMP

Rewindable motor screen motor

Single-phase 230V - 240V/50HZ

Three-phase 380V - 415V/50HZ

Pumps are designed according to the latest

European EEI norms

Curve tolerance according to ISO 9906

## BOREHOLE PUMP (NS)

- Power: 1 kW – 7.5 kW
- Max. Flow Rate: 30 m<sup>3</sup>/h
- Max. Head: 521 m



NS-95 / NS-96, 6NS-95 / 6NS-96

## BOREHOLE PUMP (NR)

- Power: 1.5 kW – 185 kW
- Max. Flow Rate: 230 m<sup>3</sup>/h
- Max. Head: 955 m



NR-151, 152, 201, 250 / 6NR-151, 152, 201, 250

## BOREHOLE MOTOR



## CONTROL BOX



## RESERVOIR PUMP

- Power: 1 kW – 4 kW
- Max. Flow Rate: 18 m<sup>3</sup>/h
- Max. Head: 113 m



MBS-X,Y,A,B,C, MBS-L, MBS-H

## MULTISTAGE CENTRIFUGAL PUMPS

Multistage centrifugal pumps for industrial use and urban water supply where high pressure is required, such as high buildings and fire fighting, lifting, long distance water transfer, refrigeration or heating plants, artificial snow or irrigation, washing systems and boilers. This pump can also be coupled to diesel engines with SAE3 connection. Possibility to change outlet and inlet orientation.

## MULTISTAGE HORIZONTAL PUMP (TM)

- Power: 3 kW – 710 kW
- Max. Flow Rate: 850 m<sup>3</sup>/h
- Max. Head: 642 m



TM SERIES, TMZ SERIES, TMS SERIES, TMXZ SERIES

## MULTISTAGE HORIZONTAL PUMP (TMB)

- Power: 3 kW – 900 kW
- Max. Flow Rate: 1020 m<sup>3</sup>/h
- Max. Head: 642 m



TM SERIES, TMZ SERIES, TMS SERIES, TMXZ SERIES

## MULTISTAGE VERTICAL PUMP (TMV)

- Power: 3 kW – 250 kW
- Max. Flow Rate: 310 m<sup>3</sup>/h
- Max. Head: 403 m



TMV SERIES, TMVZ SERIES

### PUMP

Cast iron, stainless steel, bronze pump body

Special anti-rust treatment

AISI 304 shaft

Max. liquid temperature 120 °C, Min. -15 °C

Max. working pressure 63 bar

### Motor

C & U Bearing

Motor with copper winding

Built-in thermal protector for single phase motor

Insulation class F

Protection class IP55

Maximum ambient temperature +40 °C

IE3 motor (three phase, power ≥ 1 kW)



**SPLIT CASING PUMPS**

One of the few examples of this type of product designed and produced in Italy, as proven by the short delivery times. High efficiency and reliability provide a pump with minimal maintenance costs. The pump can also be supplied coupled to a diesel engine. Various types of mechanical and soft shaft seals (standard). Applications: dams, municipalities, power plants, mining, irrigation, water supply whenever high flow rates are required.

PUMP	
Cast iron, Bronze pump body	Cast iron, stainless steel, bronze impeller
AISI 431, duplex shaft	
Max. liquid temperature 120 °C, Min. -15 °C	
Max. working pressure 17 bar	
Motor	
C & U Bearing	
Motor with copper winding	
Built-in thermal protector for single phase motor	
Insulation class F	
Protection class IP55	
Maximum ambient temperature +40 °C	
IE3 motor (three phase, power ≥ 1 kW)	

**SPLIT CASING PUMP**

- Power: 1 kW – 1200 kW
- Max. Flow Rate: 5000 m<sup>3</sup>/h
- Max. Head: 280 m



SKD SERIES

**END-SUCTION PUMP**

Ideal for recirculation and air conditioning systems, water supply and pressurisation groups. Various types of mechanical or soft shaft seals are available, also for food contact applications. Can be used for firefighting, heating and cooling systems, water supply, irrigation, industry and the naval and mining sectors. The pump can also be supplied coupled to a diesel engine.

**CLOSE COUPLED END-SUCTION PUMP (IR)**

- Power: 1 kW – 45 kW
- Max. Flow Rate: 525 m<sup>3</sup>/h
- Max. Head: 129 m



IR SERIES

**END-SUCTION WITH STUB SHAFT (MG)**

- Power: 1 kW – 75 kW
- Max. flow rate: 255 m<sup>3</sup>/h
- Max. head: 102 m



MG SERIES

PUMP	
Cast Iron, Stainless steel, Bronze pump body	Cast iron, stainless steel, bronze impeller
AISI 431, duplex shaft	
Max. liquid temperature 120 °C, Min. -15 °C	
Max. working pressure 10 bar	
Motor	
C & U Bearing	
Motor with copper winding	
Built-in thermal protector for single phase motor	
Insulation class F	
Protection class IP55	
Maximum ambient temperature +40 °C	
IE3 motor (three phase, power ≥ 1 kW)	

**BARESHAF END-SUCTION PUMP (NCB)**

- Power: 1 kW – 90 kW
- Max. Flow Rate: 675 m<sup>3</sup>/h
- Max. Head: 129 m



NCB SERIES

**HIGH FLOW RATE BARESHAFT END-SUCTION PUMP (NCBK)**

- Power: 55 kW – 400 kW
- Max. Flow Rate: 2300 m<sup>3</sup>/h
- Max. Head: 97 m



NCBK SERIES

**MULTISTAGE PUMP**

Compact, multi-stage vertical pumps, suitable for lifting plants with or without autoclave, irrigation and washing systems and all other applications where high pressure is required. These pumps are configured with a bearing designed to support the axial thrust of the pump and allow coupling to any other standardised motor. Dual wear ring and bushes to guarantee maximum reliability. Suitable for pumping clean water and chemically non-corrosive liquids, for residential uses, irrigation, agriculture and automated distribution in medium small tanks.

PUMP	
Cast Iron, Stainless steel, Bronze pump body	Cast iron, stainless steel impeller
AISI 431, duplex shaft	
Max. liquid temperature 120 °C, Min. 0 °C	
Max. working pressure 38 bar	
Motor	
C & U Bearing	
Motor with copper winding	
Built-in thermal protector for single phase motor	
Insulation class F	
Protection class IP55	
Maximum ambient temperature +40 °C	
IE3 motor (three phase, power ≥ 1 kW)	

**MULTISTAGE VERTICAL (MK)**

- Power: 1 kW – 55 kW
- Max. Flow Rate: 110 m<sup>3</sup>/h
- Max. Head: 394 m



MK SERIES, MKM SERIES

**MULTISTAGE HORIZONTAL (OP)**

- Power: 1 kW – 12.7 kW
- Max. Flow Rate: 40 m<sup>3</sup>/h
- Max. Head: 162 m



OP SERIES, 6OP SERIES

The L series includes 27 models, from DN 32 up to DN 150, from 0,37 to 75 kW, 50 and 60 Hz, 2 and 4 poles. Applications: hot/cold water circulation for in line inlet/outlet pipe line, ideal for installation in series, directly to the conduit, in civil and industrial plants for heating, cooling, hot water for sanitary use and other civil and industrial applications. Available in different materials and configurations.

PUMP	
Cast iron pump body	
Cast iron, stainless steel, bronze impeller	
AISI 431, duplex shaft	
Max. liquid temperature 140 °C, Min. -15 °C	
Max. working pressure 10 bar	
Motor	
C & U Bearing	
Motor with copper winding	
Built-in thermal protector for single phase motor	
Insulation class F	
Protection class IP55	
Maximum ambient temperature +40 °C	
IE3 motor (three phase, power ≥ 1 kW)	

## INLINE VERTICAL PUMP

- Power: 1 kW – 75 kW
- Max. Flow Rate: 580 m<sup>3</sup>/h
- Max. Head: 90 m



L-2P SERIES, L-4P SERIES, L-IVE-2P SERIES

Self priming swimming pool pumps are used for water circulation in a small, medium and large-sized swimming pools. Slightly dirty water with solids in suspension can be perfectly filtered. KSM self-priming electric pumps for swimming pools, suitable for large filtering structures, with high flow rates.

PUMP	
Polypropylene reinforced fiber glass pump body	
Noryl impeller	
AISI 316 shaft	
Max. liquid temperature +40 °C	
Maximum suction +3.5 m	
Motor	
Copper or aluminium winding	
Built-in thermal protector for single phase motor	
Insulation class F	
Protection class IP55	

## SWIMMING POOL PUMP

- Power: 1 kW – 9.2 kW
- Max. Flow Rate: 206 m<sup>3</sup>/h
- Max. Head: 22 m



KPO/KPW/KSM SERIES, 6KPO/6KPW/6KSM SERIES

Small submersible electric pump suitable for installation in basements for the recovery of rainwater or in wells. TEX: submersible electric pumps for waste water, passage of solid bodies up to 28 mm. TEX-D: submersible electric pumps for drainage, passage of solid bodies up to 4mm. Submersible electric pumps for drainage and waste water, suitable for the difficult, complex and often extreme working conditions required in this sector. Suitable to be immersed in water for lifting water from the well or the pool and draining water from the basement.

PUMP	
Cast iron and stainless steel pump body	
Upper- and side-outlet	
Float switch ensures automatic cut-in and cut-out	
Max. liquid temperature + 40 °C	
Max. diameter of particle 28 mm	
Motor	
Motor with aluminium winding	
Built-in thermal protector	
Insulation class F	
Protection class IP55	

## SUBMERSIBLE ELECTRIC PUMP

- Power: 1 kW - 22 kW
- Max. Flow Rate: 516 m<sup>3</sup>/h
- Max. Head: 40 m



MINO 33, TEX/TEX D, PD

To achieve sustainable growth, reducing pollution and environmental care. This is SAER philosophy: with SL Solar System, new generation system working through solar energy for water supplying, committed to the development of greener energy. The system is composed of:

- Highly efficient permanent magnet 4" submersible motor – SL95
- Highly productive submersible pump – Series NP95
- Drive with inverter connectable to the panels
- Capacitive probe for controlling water levels in the well

PUMP	
Stainless steel pump body	
Stainless steel impeller	
AISI 431, duplex shaft	
Max. liquid temperature +40 °C	
Motor	
Copper or aluminium winding	
Built-in thermal protector for single phase motor	
Insulation class F	
Protection class IP55	

## SOLAR SYSTEM PUMP



SL 95, NP 96



Suitable for water pressurisation and distribution in civil, industrial and agricultural systems, heating and air conditioning systems and water recirculation. On request, pressurisation groups of up to 6 pumps can be supplied. Electromechanical or electronic switchboards, pressure switches and expansion tanks possible. Suitable for transferring liquids of low viscosity, non-inflammable and non-explosive, not containing solid particles or fibers. Water supply and drainage for high-rise buildings, filtration and transfer at waterworks, pressure boosting in main pipe. Washing and cleaning systems, boiler feeding, cooling water circulation, water treatment systems, auxiliary system, support equipment. Ultra-filtration, reverse-osmosis and distillation systems, separators, swimming pools.

## PRESSURIZATION GROUPS WITH TWO OR MORE PUMPS

- Stainless steel vertical, horizontal multistage pump
- Cartridge seal
- Power: 0,5 kW/230V – 37 kW/380
- Max. Flow rate: 220 m<sup>3</sup>/h
- Max. Head: 350 m
- In- and outlet connection: 1" – 1"



Composed of a submersible electric pump inserted in a stainless steel tank which, controlled by an electronic apparatus, keeps the output pressure constant independently of the requested flow rate. Up to 8 parallel multipump modules which can be added at any time. The systems communicate via Bluetooth, no cable is required to connect them. It is applicable to household water supply, equipment support, pipeline pressurization, garden watering, fish farming and poultry raising, industrial and mining, water supply and drainage of enterprises and high-rise buildings.

## COMPACT PRESSURIZATION

- Power: 0,55 kW – 1,5 kW
- Max. Flow rate: 15 m<sup>3</sup>/h
- Max. Head: 66 m



### PUMP

Stainless steel wetted parts

### MOTOR

IE3 Motor

Totally enclosed and fan cooled

Protection class IP55

Standard voltage 50 Hz, 1 x 230V/ 3 x 380 V

### TB2 SERIES

### PUMP

AISI 304 shaft

Max. fluid temperature 35 °C, Min. -15 °C

Max. noiseless 60 dBA

Max. working pressure 10 bar

### MOTOR

Motor with copper winding

Built-in thermal protector for single phase motor

Insulation class F

Protection class IP55

Maximum ambient temperature +50 °C

### T-ONE SERIES

## Maintenance of Quality Management



## Warranty of 12 months

### GUARANTEE'S VALIDITY CONDITIONS

All products are sold with 12 months' guarantee from installation's date.

Electric material is constructed under CEI norms.

Guarantee covers faulty materials due to wrong quality or labour.

Any defect must be notified within 8 days from the date of the pump's installation.

In case of claim SAER requires the following data, in order to value any possible responsibility.

- 1) Sketch of the pump's installation.
- 2) Test of the feeding current for at least 3 days.
- 3) Water's test
- 4) Document's copy stating the date of buying.
- 5) Photocopy of the guarantee filled in by the seller

SAER will arrange for replacement of the faulty pieces, which will be delivered to its store, freight prepared, and after that its technicians have verified the defect's reasons. Guarantee does not cover materials which has been not properly installed, used for purpose different from the one indicated in the instruction manual or for touched goods.

In case of any dispute, the competent forum will be the one of Reggio Emilia, even if payment has been agreed on at the buyer's place.

# SAER<sup>®</sup>

## ELETTROPOMPE

L - SINGLE STAGE INLINE PUMPS

IE2  
HIGH EFFICIENCY

IE3  
PREMIUM EFFICIENCY

ErP  
COMPLIANT

50 Hz





L-2P 25-90



L-4P 40-160



L-2P 40-200



L-IVE-2P 32-125



L-IVE-2P 100-200



L-4P 100-315



L-4P 150-400



L-4P 125-315



## SICURA:

**Albero in acciaio inossidabile di serie. Le parti in pressione sono realizzate in ghisa sferoidale, rendendola la scelta ideale per funzionamento con liquidi sino a 140°C. Pressione di esercizio: PN16 di serie (PN25 a richiesta per grandezze fino a DN50).**

**SAFE:** Stainless steel shaft as a standard. The parts in pressure are made of spheroidal cast iron, making it the ideal choice to deal up with liquids up to 140 ° C. Operating Pressure: PN16 series (PN25 on request for sizes up to DN50).

**SEGURA:** fabricada en fundición de hierro esferoidal representa la opción ideal para trabajar con líquidos hasta 140°C. De serie, viene ejecutada con eje en acero inoxidable. Presión de ejercicio: PN16 estándar (PN 25 bajo pedido, hasta DN50).

**SÛRE:** Arbre en acier inoxydable standard. Les pièces en pression sont en fonte ductile, ce qui en fait le choix idéal pour une utilisation avec des liquides jusqu'à 140 ° C. Pression de service: Standard PN16 (PN25 sur demande pour les tailles jusqu'à DN50).

**BETRIEBSSICHER:** Standard Welle aus Edelstahl. Die Druckteile sind aus Sphaerguss gemacht. Diese Pumpe ist ideal fuer Betrieb mit Fluessigkeiten bis zu 140°C. Betriebsdruck: Standard PN16 (PN25 auf Anfrage fuer Baugroesse bis zu DN50).

**ПРОЧНЫЙ:** Вал из нержавеющей стали в стандартном исполнении. Компоненты, находящиеся под давлением исполнены из высокопрочного чугуна, делая данную серию идеальной для работы с жидкостями до 140°C. Рабочее давление: PN16 в стандартном исполнении (PN25 по запросу для типоразмеров до DN50).

## ENERGY SAVING:

**Conforme alla direttiva ErP per ridurre i costi di esercizio. Motori in classe di efficienza IE2 and IE3, possibilità di variatore di frequenza integrato a bordo motore fino a 15 kW. Prestazioni idrauliche con Minimum Efficiency Index (MEI)>0,7 per la maggior parte dei modelli. Geometria ottimizzata con sistemi CFD, dando una macchina altamente efficiente.**

**ENERGY SAVING:** In compliance with the ErP directive to reduce operating costs. IE2 and IE3 efficiency class motors, possibility of built-in frequency converter on motor board up to 15 kW. Hydraulic Performances with Minimum Efficiency Index (MEI)>0.7 for most models. Geometry optimized with CFD systems, giving highly efficient machines.

**AHORRO ENERGÉTICO:** Conforme a la directiva ErP para reducir los costos operativos. Motor de eficiencia clase IE2 e IE3, con posibilidad de variador de frecuencia integrado (hasta 15kW). Prestaciones hidráulicas con Minimum Efficiency Index (MEI)>0,7 para la mayor parte de los modelos. Diseño optimizado con sistema CFD, desarrollando un equipo altamente eficiente.

**ENERGY SAVING:** Conforme à la directive ErP pour réduire les coûts de fonctionnement. Moteurs avec la classe d'efficacité IE2 et IE3, possibilité de variateur de fréquence intégré sur le moteur jusqu'à 15 kW. Performances hydrauliques avec Index minimum d'efficacité (MEI)>0,7 pour la plupart des modèles. Géométrie optimisée avec systèmes CFD, donnant une machine très efficace.

**ENERGIESPAREND:** Die Pumpen entsprechen der ErP Richtlinie um die Betriebskosten zu reduzieren. Die Motoren sind nach Effizienzklasse IE2 und IE3 und gibt es auch die Möglichkeit den Frequenzumrichter integriert im Motor bis zu 15kW zu haben. Hydraulikleistungen mit Minimum Efficiency Index (MEI)>0,7 fuer die meisten Modelle. Optimierte Geometrie mit CFD Systemen, um eine hocheffiziente Maschine zu geben.

**ЭНЕРГОСБЕРЕЖЕНИЕ:** Изготовление согласно директиве ErP по экосовместимому проектированию позволило существенно снизить производственные расходы. Электродвигатели IE2 и IE3, встроенный ЧРП до 15 кВт. Гидравлический CFD-дизайн с высоким КПД и MEI>0,7. Оптимизирован корпус насоса для уменьшения турбулентности и повышения КПД.





## ADATTABILE:

Con una gamma di oltre 170 modelli e svariate opzioni disponibili (diverse tipologie di tenute meccaniche e materiali) troverete risposta alle vostre esigenze; grandezze da DN 32 fino a DN 150, potenze da 0,18 fino a 75 kW, 2 e 4 poli.

**ADAPTABLE:** With a range of more than 170 models and various options available (different types of mechanical seals and materials) you will find answers to your needs; sizes from DN 32 up to DN 150, powers from 0.18 up to 75 kW, 2 and 4 poles.

**ADAPTABLE:** Con una gama de 170 modelos con sus diferentes configuraciones (diversa tipología de cierres mecánicos y materiales), encontrarán respuesta a vuestras necesidades: dimensiones desde DN32 hasta DN 150, potencias desde 0,18 hasta 75kW, 2 y 4 polos.

**ADAPTABLE:** Avec une gamme de plus de 170 modèles et différentes options disponibles (différents types de garnitures mécaniques et matériaux), vous trouverez réponse à vos besoins; les tailles de DN 32 à DN 150, puissance de 0,18 jusqu'à 75 kW, 2 et 4 pôles.

**FLEXIBEL:** Mit einer Reihe von mehr als 170 Modelle und verschiedenen Optionen (mehrere Typologien von Gleitringdichtungen und Materialien) werden Sie das Antwort auf Ihre Beduerfnisse finden; Baugroessen von DN32 bis zu DN 150, Leistungen von 0,18 bis zu 75kW, 2 und 4-polig.

**ЛЕГКО ПРИСПОСАБЛИВАЕМЫЙ:** благодаря гамме, включающей 170 моделей и различные возможные опции (различные типы механических уплотнений и материалов) Вы найдёте подходящее решение для Ваших нужд. Размеры от DN32 до DN150, мощность от 0,18 до 75кВт, 2 и 4 полюсные исполнения.

## RESISTENTE:

Elevata qualità e varietà dei materiali selezionati la rendono adattabile a diverse applicazioni (riscaldamento, condizionamento, civile, industriale, approvvigionamento acque ecc.). Le giranti sono disponibili sia in ghisa che bronzo marino e acciaio inossidabile AISI 316. Test di laboratorio condotti per offrire una soluzione anche per le condizioni di lavoro più estreme

**RESISTANT:** The high quality and variety of selected materials make the pump adaptable to various applications (heating, air conditioning, civil, industrial, water supply, etc.). The impellers are available in cast iron, marine bronze and stainless steel AISI 316. Laboratory tests conducted to provide a solution even for the most extreme working conditions.

**RESISTENTE:** La alta variedad y calidad de los materiales empleados, hacen que sea adaptable a diferentes aplicaciones (calefacción, refrigeración, civil, industrial, suministro de agua, etc.). Disponibilidad de impulsores en fundición de hierro, bronce marino y acero inoxidable AISI 316. Las pruebas de laboratorio llevadas a cabo, avalan el equipo para las condiciones de trabajo más extremas.

**RESISTANTE:** Haute qualité et variété de matériaux sélectionnés font la pompe adaptable à différentes applications (chauffage, refroidissement, civil, industriel, fourniture de l'eau, etc.). Les roues sont disponibles en fonte et en bronze marine et acier inoxydable AISI 316. Essais de laboratoire effectués pour fournir une solution même pour les conditions de travail les plus extrêmes.

**HALTBAR:** Die Hochqualitaet und die Vielfalt von Materialien machen diese Pumpe anpassbar an verschiedene Anwendungen (Heizung, Klimaanlage, zivile und industrielle Anwendung, Wasserversorgung, etc.) Die Laufräder sind auf Gusseisen, Marinebronze und Edelstahl AISI316 verfuegbar. Wir fuehren Labortests um Loesungen auch zu den extremsten Betriebsbedingungen anzubieten.

**НАДЕЖНОСТЬ:** высокое качество и большой выбор материалов проточной части и механических уплотнений для разных сфер (отопление, кондиционирование, бытовое и промышленное водоснабжение и т.д.). Материал крыльчатки (рабочего колеса): чугун, бронза и нерж.сталь AISI316. Возможность работы в самых экстремальных условиях проверена при специальных лабораторных тестах.



## L-IVE VERSIONI CON INVERTER A BORDO MOTORE

Le pompe in line serie L, dotate di motore con convertitore di frequenza [inverter] integrato a bordo motore.

L'inverter regola la velocità di rotazione del motore, modificando così le prestazioni della pompa per adattarle alle condizioni di utilizzo. I vantaggi di una pompa equipaggiata con inverter:

- Risparmio energetico;
- Costo di vita ridotto per l'impianto;
- Basso impatto ambientale grazie ai consumi ridotti;
- Minor usura dei componenti meccanici;
- Riduzione del rischio di colpo d'ariete sull'impianto;

Principali caratteristiche di tutti gli inverter SAER:

- Programmazione semplice e funzionale grazie alla procedura di auto apprendimento;
- Protezioni presenti di serie:

- |                                  |                             |                        |
|----------------------------------|-----------------------------|------------------------|
| • marcia a secco                 | • squilibrio correnti       | • temperatura inverter |
| • funzionamento a mandata chiusa | • tensione massima e minima | • anticondensa         |
| • sovracorrenti                  | • termica motore            |                        |

- Involucro in alluminio per una migliore dissipazione del calore e maggior robustezza;
- Funzionamento in modalità multi pompa;

Inoltre, per le versioni con potenza da 7,5 kW e oltre:

- Scambiatore di calore ad alta efficienza di nuova generazione per una dissipazione del calore efficiente ed ottimale;
- Trasmissione dati tramite protocollo MODBUS, collegamento tramite cavo seriale RS485;
- Funzionamento in modalità multi pompa tramite collegamento senza fili con sistema Blue connect;
- Predisposizione per collegamento sonda PT100 (a richiesta);
- Ingressi analogici (0-10 Vdc o 4-20 mA);

## L-IVE VERSIONS WITH INVERTER ON MOTOR BOARD

The L series, in line pumps, featuring frequency variator [inverter] integrated on motor board.

The inverter adjusts the motor rotation speed, thus changing the performance of the pump to suit its operating conditions. The advantages of a pump equipped with inverters:

- Energy saving;
- Reduced lifecycles cost for the plant;
- Low environmental impact due to reduced consumption;
- Lower wear of mechanical components;
- Reduction of hammering risk on the plant;

Main features of all SAER inverters:

- Simple and functional programming thanks to the self-learning process;
- Standard Protections:

- |                      |                                   |                        |
|----------------------|-----------------------------------|------------------------|
| • dry running        | • current imbalance               | • inverter temperature |
| • shut off operation | • maximum and minimum voltage     | • anti-condensate      |
| • overloads          | • thermal protection on the motor |                        |

- Aluminum housing for better heat dissipation and greater sturdiness;
- Multi pump mode operation;

In addition, for versions with a power output of 7.5 kW or more:

- New generation high efficiency heat exchanger for efficient and optimal heat dissipation;
- Data transmission via MODBUS protocol, connection via serial RS485 cable;
- Multi-pump operation via wireless connection with Blue connect system;
- Arrangement for PT100 probe connection (on request);
- Analog inputs (0-10 Vdc or 4-20 mA);

## L-IVE VERSIÓN CON MOTO-INVERTER

Las bombas en línea de la Serie L, dotadas con variador de frecuencia [inverter] integrado al motor.

El inverter regula la velocidad de rotación del motor, modificando de esta manera las prestaciones de la bomba para adaptarlas al requerimiento hidráulico.

Ventajas de una bomba equipada con moto-inverter:

- Ahorro energético;
- Costo de vida reducido;
- Bajo impacto ambiental gracias a la disminución del consumo;
- Menor desgaste de los componentes mecánicos;
- Reducción del riesgo de sufrir golpes de ariete en la instalación.

Principales características de los inverter de SAER:

- Programación simple y funcional, gracias al sistema de auto-aprendizaje
- Protecciones de serie:

- |  |                            |                           |
|--|----------------------------|---------------------------|
| • trabajo en seco                      | • desequilibrio de voltaje | • temperatura del inverte |
| • funcionamiento con expulsión cerrada | • tensión máxima y mínima  | • anticondensación        |
| • picos de tensión                     | • termica motor            |                           |

- Revestimiento en aluminio para una mejor disipación del calor y mayor robustez;
- Funcionamiento en modalidad multi bomba;

Además, para las versiones con potencia a partir de 7,5kW inclusive:

- Intercambiador de calor de alta eficiencia, de nueva generación, para un eficiente y óptima disipación del calor;
- Transmisión de datos mediante protocolo MODBUS, conectado mediante cable serial RS485;
- Funcionamiento en modalidad multi-bomba mediante conexión sin cable, a través de sistema "blue connect".
- Predispuesta para conexión mediante sonda PT100 (bajo pedido).
- Entradas analógicas (0-10 Vdc o 4-20 mA)





## FR VERSIONS L-IVE AVEC VARIATEUR DE VITESSE AU BORD DU MOTEUR

Les pompes en série ligne L équipé d'un moteur avec variateur de vitesse, intégré au bord du moteur.

Le variateur règle la vitesse de rotation du moteur, en modifiant ainsi les performances de la pompe afin de les adapter aux conditions d'utilisation.

Les avantages d'une pompe équipée avec variateur de vitesse :

- Economie d'énergie;
- Coût réduit de la vie de l'installation;
- Faible impact environnemental grâce à une consommation réduite;
- moins d'usure des composants mécaniques;
- Réduction du risque du coup de bélier sur le système;

Caractéristiques principales de tous les variateurs de vitesse SAER :

- Programmation simple et fonctionnel grâce au processus d'auto-apprentissage;
- Protections équipés en standard :
  - fonctionnement à sec
  - déséquilibre du courant
  - température du variateur de vitesse
  - fonctionnement avec reflux fermé
  - tension maximale et minimale
  - anti-condensation
  - surintensités
  - thermique du moteur

- Revêtement en aluminium pour une meilleure dissipation de la chaleur et une résistance accrue;
- Fonctionnement en modalité multi-pompe;

De plus, pour les versions avec puissance de 7,5 kW et plus :

- Échangeur de chaleur à haute efficacité de nouvelle génération pour une dissipation thermique efficace et optimale;
- Transmission des données via protocole MODBUS, connexion par câble série RS485.
- Fonctionnement multi-pompe par réseau sans fil avec le système Blue connect;
- Prédiposition pour la connexion de la sonde PT100 (sur demande);
- Entrées analogiques (0-10 Vdc ou 4-20 mA);

## DE L-IVE AUSFUEHRUNGEN MIT INTEGRIERTEM FREQUENZUMRICHTER IM MOTOR

Die inline Pumpen der Serie L koennen den integrierten im Motor Frequenzumrichter (Inverter) haben. Der FU stellt die Drehzahl des Motors ein, und regelt er dann die Leistungen der Pumpe um eine bessere Anpassung an die Betriebsbedingungen zu bewirken. Vorteile einer Pumpe mit FU ausgeruestet:

- Energieeinsparung;
- Reduzierte Lebenshaltungskosten der Anlage;
- Geringe Umweltbelastung wegen reduzierten Verbrauch;
- Weniger Verschleiss der mechanischen Komponenten;
- Risikominderung von Wasserschlag gegen die Anlage;

Hauptmerkmale von allen SAER Frequenzumrichter:

- Einfache und funktionale Programmierung dank dem Selbstlernverfahren;
- Standard Schutz:
  - Trockenlauf
  - Stromunsymmetrie
  - Temperatur des Frequenzumrichters
  - Geschlossene Foerderbetrieb
  - Maximal- und Minimalspannung
  - Betauungsschutz
  - Ueberstrom
  - Termischer Motorschutz

- Aluminiumgehäuse fuer bessere Waermeabfuhr und erhoehnte Festigkeit;
- Mehrpumpenbetrieb;

Ausserdem, fuer die Ausfuehrungen mit Leistung von 7,5kW:

- Hocheffizienter Waermetauscher von neuer Generation fuer eine effiziente und optimale Waermeabfuhr;
- Datuebertragung durch MODBUS Protokoll, Verbindung durch serielles Kabel RS485;
- Mehrpumpenbetrieb durch wireless Verbindung mit System Blue Connect;
- Vorbereitung fuer Verbindung der PT100 Sonde (auf Anfrage);
- Analogeingaenge (0-10 Vdc oder 4-20 mA);

## RU L-IVE ИСПОЛНЕНИЯ С ЧАСТОТНЫМ ПРЕОБРАЗОВАТЕЛЕМ, ВСТРОЕННЫМ В ДВИГАТЕЛЬ

Инлайн насосы серии L, снабжённые частотным преобразователем, встроенным в двигатель насоса. Частотный преобразователь регулирует скорость вращения двигателя, изменяя таким образом параметры насоса, чтобы приспособить их к рабочим условиям. Преимущества насоса, снабжённого частотным преобразователем:

- энергосбережение;
- низкое воздействие на окружающую среду благодаря низким потребностям;
- меньший износ механических компонентов;
- сокращение рисков гидравлического удара в системе.

Основные характеристики всех частотных преобразователей SAER:

- лёгкое и функциональное программирование благодаря функции автообучения;
- Защита, включённые в стандартное оснащение:

- сухой ход
- дисбаланс токов
- температура частотного преобразователя
- работа при закрытом наплевании
- минимальное и максимальное напряжение
- антиконденст
- сверхток
- термозащита двигателя

- Оболочка из алюминия для лучшего рассеивания тепла и большей прочности;
- Работа в режиме нескольких насосов

Кроме того, для исполнений мощностью от 7,5кВт и выше:

- теплообменник высокой производительности нового поколения для рассеивания тепла, высокопроизводительный и оптимальный;
- передача данных через протокол MODBUS, подключение осуществляется посредством серийного кабеля RS485
- Работа в режиме нескольких насосов посредством беспроводного подключения через систему Blue connect
- возможность подключения датчика PT100 (по запросу)
- аналоговый выход (0-10Vdc и 4-20 mA);



# MATERIALI E COMPONENTI PRINCIPALI

Materials and main parts • Materiales y componentes principales • Matériaux et principaux composants • Materialien und hauptbestandteile • материалы и основные компоненты

COMPONENTE COMPONENT - COMPONENTE - COMPOSANT - COMPONENT - КОМПОНЕНТЫ	STANDARD	A RICHIESTA - UPON REQUEST - BAJO PEDIDO SUR DEMANDE - AUF ANFRAGE - ПО ЗАПРОСУ																						
<ul style="list-style-type: none"> <li>• Corpo pompa</li> <li>• Pump body</li> <li>• Cuerpo bomba</li> <li>• Corps pompe</li> <li>• Pumpengehäuse</li> <li>• корпус насоса</li> </ul>		<ul style="list-style-type: none"> <li>• Ghisa</li> <li>• Cast iron</li> <li>• Hierro fundido</li> <li>• Fonte</li> <li>• Gußesen</li> <li>• Чугун</li> </ul> <p><b>EN-GJS-500</b></p>																						
<ul style="list-style-type: none"> <li>• Disco/coperchio porta tenuta</li> <li>• Seal holding cover/disc</li> <li>• Discotapa anillo intermedio</li> <li>• Plateau/couvercle porte garniture mécanique</li> <li>• Scheibe/Dichtungsdeckel</li> <li>• Диск уплотнительной крышки</li> </ul>		<ul style="list-style-type: none"> <li>• Ghisa</li> <li>• Cast iron</li> <li>• Hierro fundido</li> <li>• Fonte</li> <li>• Gußesen</li> <li>• Чугун</li> </ul> <p><b>EN-GJS-500</b></p>																						
<ul style="list-style-type: none"> <li>• Girante</li> <li>• Impeller</li> <li>• Impulsor</li> <li>• Turbine</li> <li>• Laufrad</li> <li>• Рабочее колесо</li> </ul>		<ul style="list-style-type: none"> <li>• Ghisa</li> <li>• Cast iron</li> <li>• Hierro fundido</li> <li>• Fonte</li> <li>• Gußesen</li> <li>• Чугун</li> </ul> <p><b>EN-GJL-250</b></p>	<ul style="list-style-type: none"> <li>• Acciaio al carbonio microfuso</li> <li>• Precision casted carbon steel</li> <li>• Acero carbono microfundido</li> <li>• Acier au carbone de microfusion</li> <li>• Feinguss - Kohlenstoffstahl</li> <li>• легкая углеродистая сталь</li> </ul> <p><b>G20Mn5</b></p>	<ul style="list-style-type: none"> <li>• Acciaio inox microfuso</li> <li>• Precision casted stainless steel</li> <li>• Acero inox microfundido</li> <li>• Acier inox de microfusion</li> <li>• Edelstahlguss</li> <li>• легкая нержавеющая сталь</li> </ul> <p><b>AISI316 [CF8M - 1.4408]</b></p>	<ul style="list-style-type: none"> <li>• Bronzo</li> <li>• Bronze</li> <li>• Bronze</li> <li>• Bronze</li> <li>• Бронза</li> <li>• G-CuSn10</li> </ul>																			
<ul style="list-style-type: none"> <li>• Sporgenza albero</li> <li>• Shaft end</li> <li>• Saliente de eje</li> <li>• Extension de l'arbre</li> <li>• Welleende</li> <li>• Конусный вал</li> </ul>		<ul style="list-style-type: none"> <li>• Acciaio inossidabile</li> <li>• Stainless steel</li> <li>• Acero inoxidable</li> <li>• Acier inoxydable</li> <li>• Rostfreier Stahl</li> <li>• нержавеющая сталь</li> </ul> <p><b>AISI431 [1.4057]</b></p>																						
<ul style="list-style-type: none"> <li>• Tenuta meccanica</li> <li>• Mechanical seal</li> <li>• Cierre mecánico</li> <li>• Garniture mécanique</li> <li>• Mechanische Dichtung</li> <li>• Механическое уплотнение</li> </ul>	<table border="1" data-bbox="748 1214 928 1289"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>A</td> <td>Qt</td> <td>V</td> <td>GG</td> </tr> </table>		1	2	3	4	A	Qt	V	GG	<table border="1" data-bbox="1126 1193 1307 1304"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Qt</td> <td>Qt</td> <td>V</td> <td>GG</td> </tr> <tr> <td>B</td> <td>Qt</td> <td>E</td> <td>GG</td> </tr> </table>		1	2	3	4	Qt	Qt	V	GG	B	Qt	E	GG
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A	Qt	V	GG																					
1	2	3	4																					
Qt	Qt	V	GG																					
B	Qt	E	GG																					
<ul style="list-style-type: none"> <li>• Parti in gomma</li> <li>• Rubber parts</li> <li>• Juntas de caucho</li> <li>• Joints en caoutchouc</li> <li>• Bestandteile aus Gummi</li> <li>• Части из резины</li> </ul>		<ul style="list-style-type: none"> <li>• EPDM</li> <li>• FPM</li> </ul>																						
<ul style="list-style-type: none"> <li>• Guarnizione</li> <li>• Gasket</li> <li>• Empaquetadura</li> <li>• Joint</li> <li>• Dichtung</li> <li>• уплотнение</li> </ul>		<ul style="list-style-type: none"> <li>• Fibra aramidica</li> <li>• Aramidic fiber</li> <li>• Fibra aramida</li> <li>• Aramide</li> <li>• Aramidfaser</li> <li>• Арамидное волокно</li> </ul>																						

**Tenuta meccanica • Mechanical seal • Cierre mecánico • Garniture mécanique • Механическое уплотнение • Mechanische Dichtung**

- 1) Anello rotante - Rotating seal - Anillo deslizable - Grain mobile - Подвижное кольцо - Gleitring
- 2) Anello fisso - Fixed seal - Anillo fijo - Grain fixe - Неподвижное кольцо - Gegenring
- 3) Elastomero - Rubber elements - Elastómeros - Elastomères - Дюринер - Elastomere
- 4) Molle e Componenti metallici - Spring and metal bellows - Muelle y componentes metálicos - Ressort et composants métalliques - Гвоздики и металлические компоненты - Feder und Metallbestandteile

- (A): Carbonio impregnato antimonio - Carbon impregnated with antimony - Carbono embebido con antimonio - Carbone imprégné avec antimoine - Kohlenstoff mit Antimon getränkt - Углерод пропитанный сурьмой
- (B): Carbonio impregnato di resine - Carbon impregnated with resin - Carbono embebido con resina - Carbone imprégné avec résine - Kohlenstoff mit Harz getränkt - Углерод пропитанный смолой
- (M-1): Ossido di alluminio-Alumina oxide-Oxido de aluminio-Oxide d'alumine-Tonerdióxido-Oxyaluminium
- (M-2): Carburo di silicio-Silicon carbide-Carburo de silicio-Carbure de silicium-Karbid (grünlich)-Karbursubstanz
- (E): EPDM
- (N): FPM
- (S): Acciaio inox - Stainless steel - Acero inoxidable - Acier inoxydable - Нержавеющая сталь - Rostfreier Stahl - Аустенит

## LIMITI DI FUNZIONAMENTO - VERSIONI STANDARD

Operation limits - Standard versions • Limites de funcionamiento - Ejecuciones estandar • Limites de fonctionnement - Versions standard • Betriebsgrenze - Standardausführung • Рабочие Пределы - Стандартные Исполнения

			2900 1/min					
DN			25	32	40	50	65	80
1	Qmin - Qmax	m <sup>3</sup> /h	0,5 + 11	2 + 30	4 + 45	5 + 65	12 + 105	20 + 155
2	H (Q=0)	m	11	9,6	10,2	9,9	9,3	63,5
3	PN	bar	16 (25*)					
4	P <sub>2</sub> max	kW	0,37	15	18,5	22	37	37
5	T <sub>w</sub>	°C	-15 / +14,0					
6	T <sub>a</sub>	°C	-10 / +4,0					
7		g/m <sup>3</sup>	65					
8		mm	3					
9		min	5 (acqua-water-вода T 20°C)					

			1450 1/min							
DN			32	40	50	65	80	100	125	150
1	Qmin - Qmax	m <sup>3</sup> /h	2 + 28	3 + 29	5 + 40	5 + 90	15 + 160	20 + 260	150+400	150+800
2	H (Q=0)	m	23,5	25,5	26	25	40	39	37	58
3	PN	bar	16 (25*)							
4	P <sub>2</sub> max	kW	2,2	2,2	3	7,5	10,5	30	55	92
5	T <sub>w</sub>	°C	-15 / +14,0							
6	T <sub>a</sub>	°C	-10 / +4,0							
7		g/m <sup>3</sup>	85							
8		mm	3							
9		min	5 (acqua-water-вода T 20°C)							

[\*] A richiesta • On request • Bajo demanda • Sur demand • Auf anfrage • По запросу

- 1.** Campo di portata - Flow range  
- Champ de débit - Abance de caudal - Fördermenge -  
Иск-Область подачи
- 2.** Prevalenza massima (Q=0) - Max. head (Q=0) -  
Maxima altura (Q=0) - Débit maximum (Q=0) -  
Max. Förderhöhe H (Q=0) -  
Максимальный напор (Q=0)
- 3.** Pressione massima d'esercizio; massima pressione ammissibile considerando la somma della pressione massima in aspirazione e della prevalenza a portata nulla (Temperatura del liquido pompato 20°C) - Max operation pressure (max allowed pressure in consideration of the sum of max. suction pressure and of the head with null flow rate) (Temperature of the pumped liquid 20°C). For pressure-temperature limits refer to the tables in the technical appendix. - Presión máxima de funcionamiento; máxima presión admisible en consideración de la suma de la presión máxima en aspiración y de la carga hidrostática con caudal nulo (Temperatura del líquido bombeado 20°C). Para los límites de presión temperatura consultar las tablas en apéndice técnico. - Pression max. d'emploi; pression max. admissible en considération de la somme de la pression max. en aspiration et de l'hauteur avec débit nul (Température du liquide pompé 20°C). Pour les limites pression température se référer à la table de l'annexe technique. - Max. Betriebsdruck; Max. erlaubter Druck unter Berücksichtigung der Summe des Max. Saugdrucks und der Förderhöhe mit Null-Fördermenge (Temperatur des Fördermediums 20°C) Für die Temperatur- und Druckgrenzen beziehen sich auf die Tabelle in im Technischen Anhang. - Макс. рабочее давление; под максимальными рабочими давлениями подразумеваются суммарное давление в насосе и напор в нагнетательном насосе при нулевой подаче (Температура перекачиваемой жидкости 20°C). Границы температуры-давления отведены в таблицах вложенных в техническое приложение
- 4.** Potenza max. - Max. power - Potencia máxima -  
Maxima potencia - Max. Leistung - Максимальная мощность
- 5.** Temperatura del liquido pompato - Temperature of the pumped liquid -  
Temperatura del líquido bombeado - Temperatur des Fördermediums -  
Температура перекачиваемой жидкости
- 6.** Temperatura ambiente - Ambient temperature -  
Temperatura ambiente - température ambiante -  
Umgebungstemperatur - Температура окружающей среды
- 7.** Contenuto massimo di corpi solidi - Max. solids content -  
Contenu de substance solide maximum - Contenido máx de sólidos -  
Maximaler stabler Substantzinhalt - Максимальное содержание твердой частицы
- 8.** Dimensione massima corpi solidi - Solids maximum dimension -  
Dimensione máxima cuerpo sólidos - Taille maximale solide -  
Maximale Größe der Festkörper - Максимальные размеры твердых частиц
- 9.** Tempo massimo di funzionamento a bocca chiusa (per acqua a 20°C) -  
Max working time with closed delivery (for water at 20°C) -  
Tempo de trabajo con entrega cerrada (para agua a 20°C) -  
Temps de fonctionnement à avec la livraison fermée (Pour eau à 20°C) -  
Maximale Betriebszeit beim geschlossenen Stillen (Für Wasser 20°C) -  
Максимальное время работы при закрытой подаче (для воды температура 20°C)

DN Aspirazione e mandata - Delivery & outlet DN - DN aspiración y expulsión - DN aspiration et reliquage - DN Abzug und Druckverteilung - DN всасывание и нагнетание