

### HARDALLOY CONSTRUCTION, SINGLE AND DOUBLE STAGED

- Impeller, volutes, sleeves, suction covers and discharge elbows all hardalloy
- Built-in thermal overload protection
- Double mechanical seals
- Moisture detection
- Heavy duty lip seals
- Heavy duty thrust bearings
- Shafts made of 420 SS
- Custom designed pumps can be provided for specific applications
- Can be operated at higher temperatures and longer cycle times

PUMP MODEL	POWER (hp)	SPEED (rpm)	MAX FLOW (gpm)	MAX HEAD (ft)	DISCHARGE (in)
S-FP	5.5 to 25	1750 - 3500	260	190	2.5
603-H	15 to 40	1750 - 3500	550	165	3
K125-H	15 to 50	1150 - 1750	660	165	3
1004-H	25 to 60	880 - 1150	1300	130	4
1706/99-H	40 to 75	880 - 1150	1600	120	6

Four score and seven years ago, our forefathers brought forth on this continent, a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal.

### RUBBER LINED CONSTRUCTION

- Rubber lined versions with Hardalloy-impellers
- Designed for heavy duty slurry applications with rubber lined casings
- Power ranging from 1 to 100 hp, and speeds from 735 to 3,500 rpm
- Capacities up to 1,585 gpm (360 m3/h)
- Maximum available pressures from 88 to 103 psi (6-7 bar)
- Mechanical seals are of Silica or Tungsten Carbide
- Bearings are grease lubricated to deliver long-life
- Thermal probes (for the control of motor temperature) and oil level probes (for slurry leak detection inside the oil chamber)
- Electric device for the analysis of the signals from the thermal probes

PUMP MODEL	POWER (hp)	SPEED (rpm)	MAX FLOW (gpm)	MAX HEAD (ft)	DISCHARGE (in)
33	1.5 to 4	1750 - 3500	80	65	1
302	3 to 4	1750 - 3500	100	65	1.5
403	5.5 to 12	1750 - 3500	180	100	2
503	5.5 to 25	1750 - 3500	220	150	2.5
533	5.5 to 25	1750 - 3500	400	150	3
603	15 to 40	1750 - 3500	480	165	3
804	15 to 30	1750 - 3500	660	85	3
K125	25 to 50	1150 - 1750	660	165	3
1004	25 to 60	1150 - 1750	1000	130	4
1706/99	40 to 75	880 - 1150	1600	120	6
G230	40 to 100	880 - 1150	2400	120	8
I-270	60-150	88 - 1150	3200	120	8

But, in a larger sense, we cannot dedicate -- we cannot consecrate -- we cannot hallow -- this ground. The brave men, living and dead, who struggled here, have consecrated it.

# PEMO PUMPS

## SUMBMERSIBLE SLURRY PUMPS

PEMO Pumps, headquartered in Vimodrone, Italy, is world renowned for designing and manufacturing customized centrifugal pumps for the most difficult abrasive and/or acid applications in the mining, utility, aggregate, quarry, ceramics and chemical processing industries.

Since opening doors in 1947, PEMO has built and shipped over 30,000 pumps, and has representatives and agents selling PEMO pumps around the world including United States, Spain, Portugal, France, Holland, Poland, Brazil, Egypt, Singapore, Peru and Chile.



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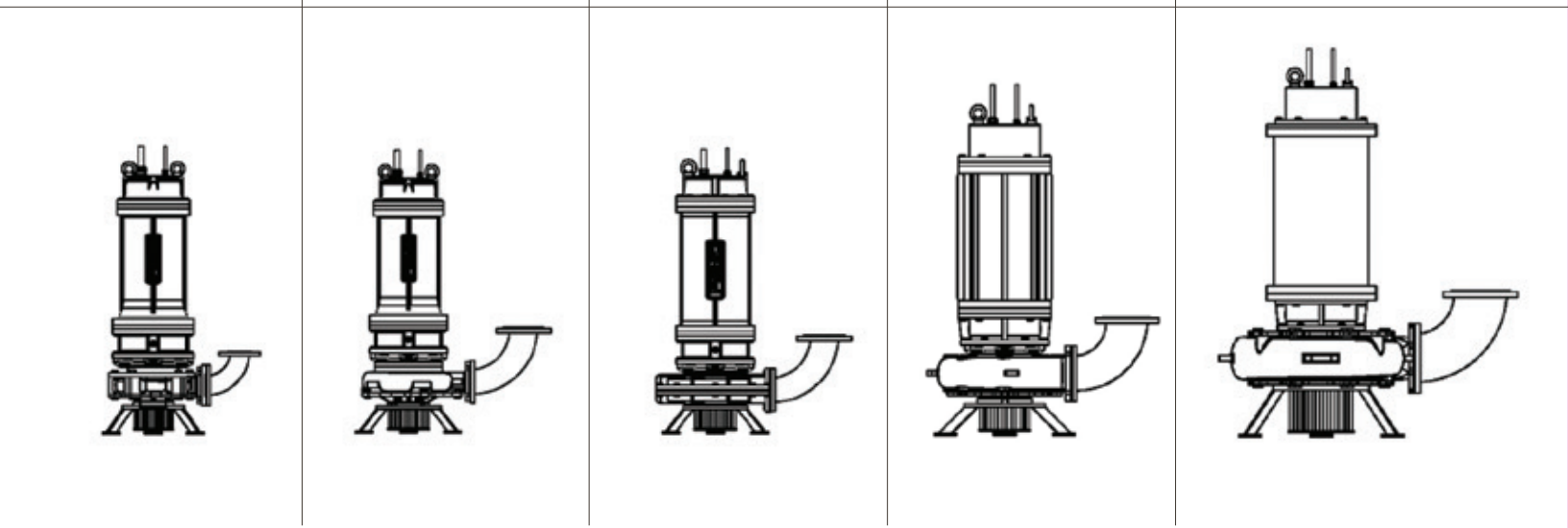




# PEMO HARDALLOY SUBMERSIBLE PUMPS

The hardest, most rugged submeribles in the industry today.

<p><b>S-FP</b> Designed for severe duty submersible applications with abrasive, corrosive slurries.</p> <p><b>Power plants. Underground mines.</b></p>	<p><b>603-H</b> Designed for submersible low solids content applications requiring high heads.</p> <p><b>Power plants. Seawater sand slurry. Lime slurry.</b></p>	<p><b>K125-H</b> Used in submersible application with large, clogging or stringy material.</p> <p><b>Mining. Coal and slurry transfer. Mill scale and ash pits.</b></p>	<p><b>1004-H</b> For submersible low solids content applications requiring high heads.</p> <p><b>Barge clean-out. Tank sludge cleanout.</b></p>	<p><b>1706/99-H</b> Designed for severe duty submersible applications with abrasive, corrosive slurries.</p> <p><b>Power plants. Deep or inaccessible wells.</b></p>
<p><b>CAPACITIES</b> 100 to 24,000 gpm 23 to 5,400 m<sup>3</sup>/hr</p>	<p><b>CAPACITIES</b> 100 to 24,000 gpm 23 to 5,400 m<sup>3</sup>/hr</p>	<p><b>CAPACITIES</b> 100 to 24,000 gpm 23 to 5,400 m<sup>3</sup>/hr</p>	<p><b>CAPACITIES</b> 100 to 24,000 gpm 23 to 5,400 m<sup>3</sup>/hr</p>	<p><b>CAPACITIES</b> 100 to 24,000 gpm 23 to 5,400 m<sup>3</sup>/hr</p>
<p><b>HEADS</b> 20 to 450 ft 6 to 140 m</p>	<p><b>HEADS</b> 20 to 450 ft 6 to 140 m</p>	<p><b>HEADS</b> 20 to 450 ft 6 to 140 m</p>	<p><b>HEADS</b> 20 to 450 ft 6 to 140 m</p>	<p><b>HEADS</b> 20 to 450 ft 6 to 140 m</p>
<p><b>KEY FEATURES</b> Built-in thermal overload protection.</p> <p>Double mechanical seals.</p> <p>Moisture detection.</p> <p>Heavy duty lip seals.</p> <p>Heavy duty thrust bearings.</p> <p>420 SS shafts.</p> <p>Rubber lined versions with Hardalloy-I impellers.</p>	<p><b>KEY FEATURES</b> Built-in thermal overload protection.</p> <p>Double mechanical seals.</p> <p>Moisture detection.</p> <p>Heavy duty lip seals.</p> <p>Heavy duty thrust bearings.</p> <p>420 SS shafts.</p> <p>Rubber lined versions with Hardalloy-I impellers.</p>	<p><b>KEY FEATURES</b> Built-in thermal overload protection.</p> <p>Double mechanical seals.</p> <p>Moisture detection.</p> <p>Heavy duty lip seals.</p> <p>Heavy duty thrust bearings.</p> <p>420 SS shafts.</p> <p>Rubber lined versions with Hardalloy-I impellers.</p>	<p><b>KEY FEATURES</b> Built-in thermal overload protection.</p> <p>Double mechanical seals.</p> <p>Moisture detection.</p> <p>Heavy duty lip seals.</p> <p>Heavy duty thrust bearings.</p> <p>420 SS shafts.</p> <p>Rubber lined versions with Hardalloy-I impellers.</p>	<p><b>KEY FEATURES</b> Built-in thermal overload protection.</p> <p>Double mechanical seals.</p> <p>Moisture detection.</p> <p>Heavy duty lip seals.</p> <p>Heavy duty thrust bearings.</p> <p>420 SS shafts.</p> <p>Rubber lined versions with Hardalloy-I impellers.</p>



## PEMO PUMPS

All metal, the PEMO submersible pumps are designed with long life and low maintenance as a priority. The wetted parts of the pump, (volute(s), impeller(s), inlet flange(s), and shaft sleeve(s)) are made of an extremely hard iron alloy called, "Hardalloy" which has a hardness rating of over 800 BHN. The hardness of the pump components is the key to reliable performance in rugged applications ranging up to 70% solids, with max size of particles up to 20mm in diameter.

Flows can range from 100 to 24000 GPM, with heads up to 450 feet TDH.

### PEMO's submersible pump design includes:

- Hardalloy or rubber lined pump ends
- Rubber lined design includes hardalloy impellers
- Volute and impellers are abrasion resistant coated
- Double mechanical seals, (hard faced)
- Double row ball bearings, (top and bottom)
- High efficiency, air filled motors, (IE3) (10 meter long power cord)
- Motor thermal probes for over heat protection of the motor stator
- Seal leak detection probes, (mechanical seal oil chamber)
- Pump stand for free standing bottom mount pump operation
- Optional mechanically or hydraulically driven agitators
- Optional float switches for level sump level control

PEMO submersible pumps will provide years of troublefree service.

Coupled to the heavy-duty waterproof electric fully submersible motor through a coupling cage containing the dual opposed seal with independent permanent lubrication.

They are ideal for use in deep wells where a vertical pump would be too costly or impossible to install.

Pemo Submersible Pumps are installed without masonry or special structures. They can be set on the bottom of the well or hung from a rope, chain or other suspension devices.

A float switch controls the pump, keeping it constantly covered with fluid

