

HIGH VOLTAGE PERMANENT MAGNET MOTOR



High Voltage Permanent Magnet Motors are electric motors with increased supply voltage, which have a larger number of reduced cross-section winding wire conductors in a stator's winding as compared to low voltage Permanent Magnet Motor. Low operating current provides additional energy savings by reducing heat losses in a cable line.

There is no power consumption for energy transfer to the rotor and related losses characteristic of asynchronous motors. Therefore, the energy conversion efficiency of PMMs is higher than that of asynchronous motors, and the values of operating currents and no-load currents are lower.

REDUCTION ENERGY CONSUMPTION TO 35%.

PMM series	Pump series	Power at 3000 rpm, hp	RPM control range	Voltage, V	Current, A	Energy conversion efficiency, %	Cos ϕ
319	For 272 and 319 series high-speed pumps	42-167	4000-6000	1200 - 2950	21-34	87	0,94
461	For 362 and 406 series standard pumps	32-187, (214-402)*	2100-4200	770 - 3345, (3220-3400)*	20-29 (33-63,5)*	90	0,95

* - in developing



FEATURES & BENEFITS

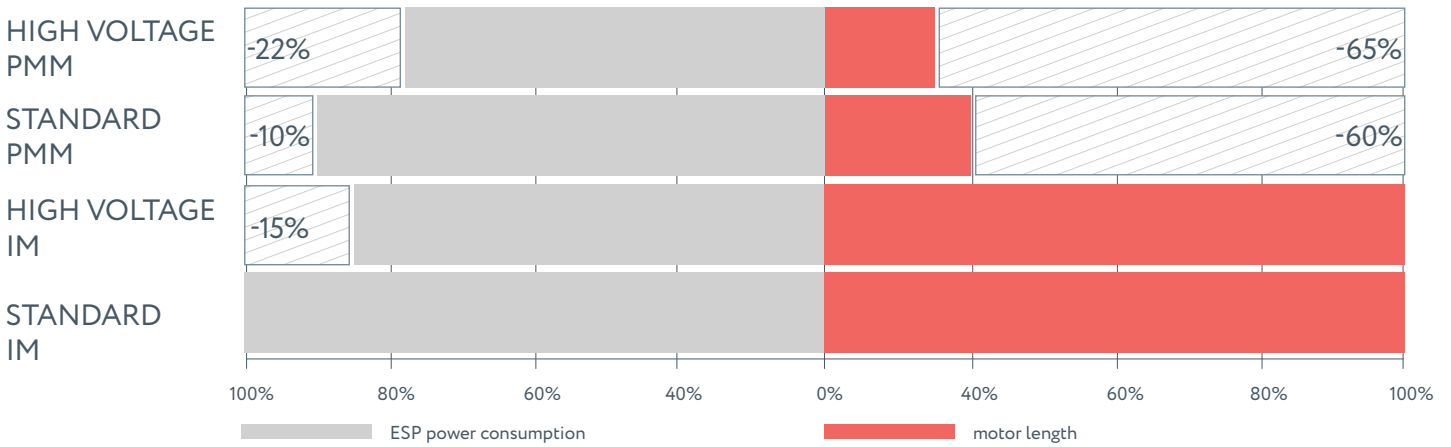
- high energy conversion efficiency, absence of electric losses in the rotor, low values of no-load and operating currents
 - reduce energy consumption;
- significant dependence of the operating current on the motor load
 - makes it possible to accurately measure the load on the drive and optimize its operation mode;
- the little dependence of torque on RPM
 - makes it possible to use brushless PMM motors in complicated wells with high reservoir temperatures and wells with unstable flow rates;
- motor's low overheating
 - increases its service life, thus enabling the motor to work under significant overload conditions;
- high torque overload capability and motor speed control
 - provide rapid rate stabilization of the unit;
- minimal weight and dimensions
 - make it possible to use electric centrifugal pumps in highly deviated and horizontal wells.

APPLICATIONS

- exploration wells
- multilateral wells
- wells after workover operations with a reduced inner diameter of production casing
- highly deviated and horizontal wells
- conventional wells

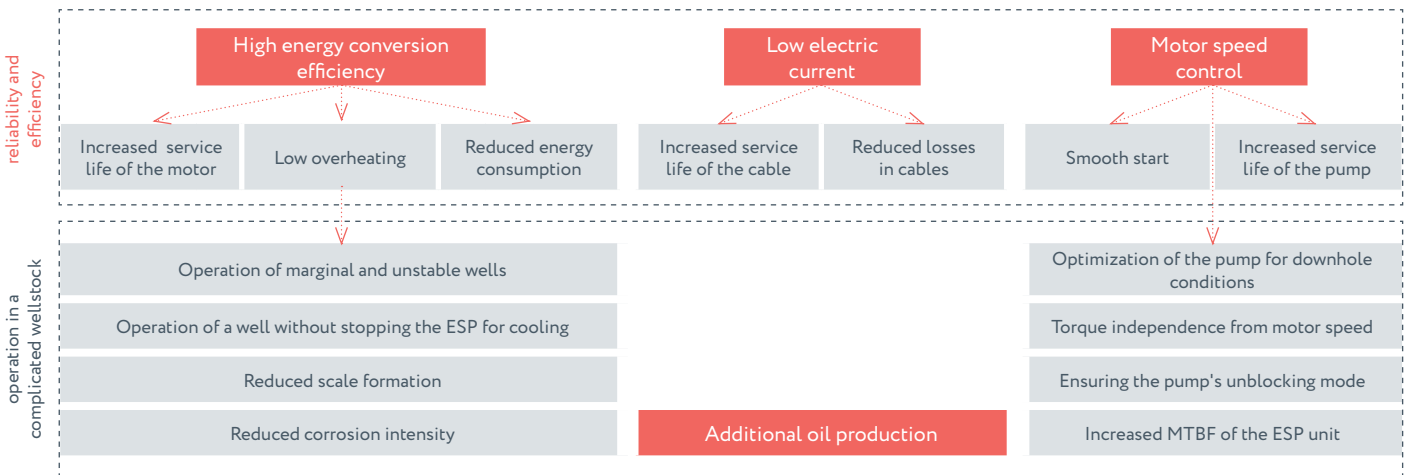
IMPLEMENTATION OF SPECIAL ELECTRICAL ENGINEERING MATERIALS FOR MANUFACTURING ELECTRIC MOTORS MAKES IT POSSIBLE TO OPERATE THE MOTORS IN WELLS WITH RESERVOIR FLUID TEMPERATURES UP TO 170°C (338°F)

PMM VS IM MOTORS. COMPARATIVE DIAGRAM.



HIGH VOLTAGE PERMANENT MAGNET MOTOR AND MATERIALS

- axial thrust bearings made of silicon carbide, or PEEK coated ones;
- locking devices prevent slipping of radial bearings in the housing;
- application of ENMAFLON fluoroplastic tubes as slot insulation for the stator;
- stators are made using winding wire with heat resistance up to 200°C
- vacuum impregnation of a stator with heat-resistant varnish or compound;
- high-temperature design of current feedthrough:
 - made of PPS-A4 material with operating temperature up to 250°C;
 - made of PEEK material with operating temperature up to 300°C.



JSC RIMERA HQ

Skolkovo Innovation Center,
Bolshoy Boulevard 40,
Moscow 121205, Russian Federation
T. +7 495 981-01-01 add 53716
export@rimera.com

RIMERUS LLC

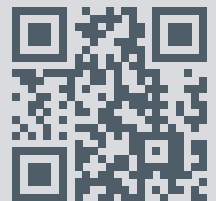
2925 Richmond Ave,
Houston TX77098,
United States of America
T. +1 682 259 52 33
export@rimera.com

RIMERA OVERSEAS DMCC

Jumeirah Lake Towers,
JLT-PH1-I2,
Dubai, United Arab Emirates
T. +971 (0)4 514-0238
export@rimera.com

RIMERA-SERVICE

Rumipamba E2-194 y Avenida República,
Quito 170507,
Republic of Ecuador
T.+593 24 76 06 92
export@rimera.com



www.rimera.com