

AGILIS™ ENCLOSED MOTOR, DRIVE & CONTROLS | DATA SHEET

File No: AG01
 Date: March, 2019
 Supersedes: New
 Date: New

PRODUCT DESCRIPTION

- A fully integrated system for longwall mining, designed to provide mechanical power to the Quinmax & Trimax series of hydraulic positive displacement pumps.

PUMP DESIGN DATA

- Available plunger sizes & example duty points achievable on the Quinmax pumps with a fixed gear ratio of 3:1 & a stroke length of 70mm.

Plunger ∅ (mm)	Pressure (Bar)	Flow (l/min)	Motor Speed (rev/min)	Absorbed Power (kW)	Torque Required (Nm)
50	375	485	2160	326	1439
60	260	698	2160	325	1437

* Pump can be ramped up & down to the desired pressure & flow.

TRIMAX & AGILIS DUTY POINTS

- Available plunger sizes & example duty points achievable on the Trimax pump with a fixed gear ratio of 3:1 & a stroke length of 60mm.

Plunger ∅ (mm)	Pressure (Bar)	Flow (l/min)	Motor Speed (rev/min)	Absorbed Power (kW)	Torque Required (Nm)
50	500	249	2160	223	987
60	350	359	2160	225	995

* Pump can be ramped up & down to the desired pressure & flow.
 Further design envelopes are available on request.

CONNECTION ORIENTATION

- Specified to customer requirements.

DRIVE DATA

Enclosure

- FLP Enclosure provides protection of the Motor, Drive, Power Electronics & an intrinsically safe enclosure for the Control System.

Cooling

- Liquid is cooled either by Emulsion (95% water + 5% oil), Water or Glycol (50% Ethelene Glycol + 50% Water).

Maximum Operating Ambient Temperature

- 40°C.

MOTOR DESIGN DATA

Torque/Speed Characteristics

- Nominal power rating is 330kW. Capable of continuous power rating of 330kW – describes the constant power curve, noting the separately specified values of maximum operating speed & continuous peak torque.
- Fixed ratio gearboxes; Quinmax series pumps a ratio of 3:1 is available. Trimax series a ratio of 3:1 is available.

Attribute	Trimax	Quinmax
Continuous rated power (kW)	312	312
Number of plungers	3	5
Cooling Means	Liquid*	Liquid*
Max Pump Speed (rev/min)	720	720
Drive Ratio (N:1)	3	3
Maximum motor speed	2160	2160
Continuous rated torque (Nm)	1379	1379

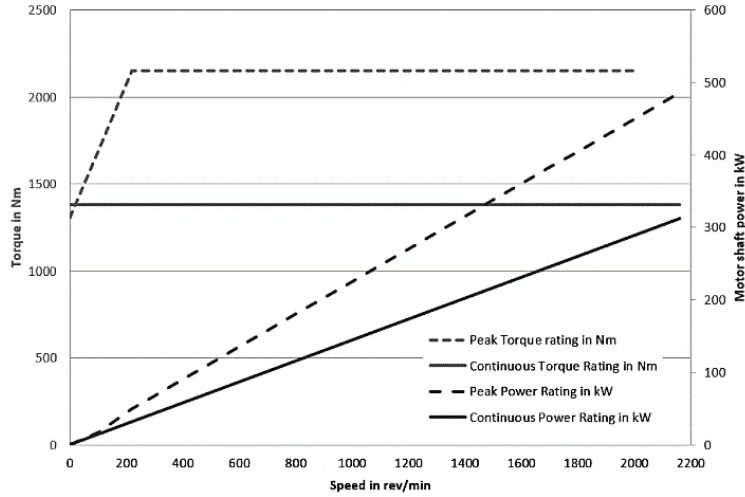
- Typical operation of the pump (52 weeks/annum):
 - 16 hrs/day seven days/week
 - 24 hrs/day six days/week
- The system is required to cycle frequently & intermittently within a speed range of 10% to 100% max speed. Service intervals - up to 12 months.

MAINS POWER SUPPLY

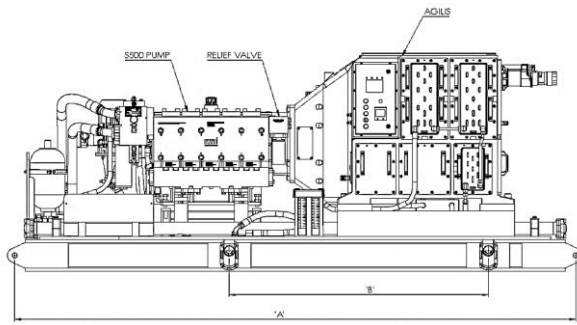
- Mains voltage supply range is 1026V – 10254V line-line, rms (i.e. 1140V +10%, -10%) at a frequency of 48Hz to 62Hz, the system will provide full torque/speed performance.
- For a supply voltage range at 912V – 1026V line-line rms (i.e. the range 1140V -20% to 1140V -10%) at a frequency of 48Hz to 62Hz, the system will provide a reduced torque/speed performance at high speed.

AUXILIARY ELECTRICAL POWER SUPPLY

- The control electronics for the VFD & IS Chamber will require a single-phase power supply of 85Vac – 264Vac @ 2.65A max.
- The Auxiliary Lube Pump Motor will require a power supply suitable for a 4kW electric motor.



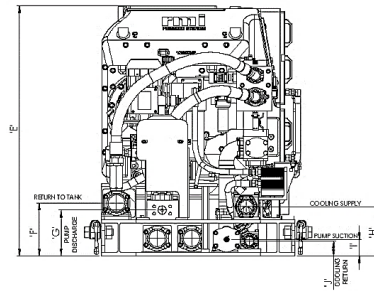
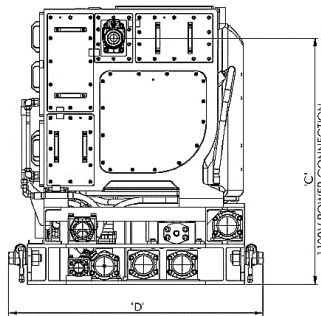
Torque Speed Curve for system at 330kW expected power



DIMENSION DATA

mm (inches)

A:	3900 (153.6)
B:	1800 (70.9)
C:	1352 (53.3)
D:	1379 (54.3)
E:	1527 (60.2)
F:	322 (12.7)
G:	280 (11.1)
H:	300 (11.9)
I:	101 (4)
J:	91 (3.6)



ALABAMA, USA
+1 (205) 483 0350

BEIJING, CHINA
+86 213756 6696

GUJARAT, INDIA
+91(0) 85058 95050

MANCHESTER, UNITED KINGDOM
+44 (0) 8444 145 145

NEW SOUTH WALES, AUSTRALIA
+61 (02) 4954 0163

SHANGHAI, CHINA
+86-21-3756-6696