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# Datasheet VM630-28W0380

Art.-No: VM630-28W0380-AC30036-0110

## Market evaluation

### VM600M - Expert eMotors

Asynchronous electric motors and generators for mobile applications perfectly matched to the VP600 inverter product line.

#### VM600M Features

- maximum lifetime and easy maintenance
- high efficiency especially at partial load
- No losses in idle operation
- No generated voltage in idle operation
- No unwanted braking torque in case of error

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Product overview	
Article no.	VM630-28W0380-AC30036-0110
Finishing	Grey, RAL7016
Description	"DirectDrive" VECTOPOWER motor for mobile applications, optimized to 1:1 speed of the cardan shaft; Optimized for DC voltage of 670V.
Motor topology	Asynchronous

Size	
Weight	880 kg
Diameter shaft	80 mm
Length shaft	100 mm
Total length	975 mm
Length	882 mm
External diameter	560 mm

Technical data	
Noiminal torque <sup>1)</sup>	1650 Nm
Rated speed	1430 1/min
Max. speed $n_{max}$ <sup>4)</sup>	3600 1/min
Rated current $I_n$	415 A <sub>rms</sub>
Rated power <sup>3)</sup>	247 kW
Terminal voltage (AC)	430 V
Torque constant	4 Nm/A <sub>rms</sub>
Max. overload for 10 sec <sup>2)</sup>	4050 Nm
Peak current $I_{max}$	900 A <sub>rms</sub>
Max. overload for 1 min <sup>2)</sup>	4050 Nm
Max. overload for 10 min <sup>2)</sup>	1810 Nm
Efficiency at continuous load (up to)	93 %
Efficiency at 50% load (up to)	91 %
Number of pole pairs	2
Rotor moment of inertia	6.4 kgm <sup>2</sup>
Electrical wiring	Star connection
Heating	class of insulation H according to DIN60034-1
Rotary encoder	<ul style="list-style-type: none"> <li>• Resolver</li> </ul>
Encoder manufacturer name	Yingshuang
Encoder manufacturer type	YS J132XU9736
Temperature sensors	PT100, TriplePTC

## Technical data

### Technical notes

- <sup>1)</sup> Rated torque at: 1430 rpm, 670VDC, 30l/min coolant flow rate at 35°C and 25°C ambient
- <sup>2)</sup> Max. torque at: < 1250 rpm, 670VDC, 30l/min coolant flow rate at 35°C and 25°C ambient
- <sup>3)</sup> Rated power valid for 30 min.
- <sup>4)</sup> dependent on available DC-voltage

## Cooling

Liquid cooling	yes
Cooling medium	Water / glycol (50:50)
Cooling water connection (screw thread)	M24x1,5
Min. coolant throughput	30 l / min
Max. coolant pressure	2 bar
Min. coolant pressure	0.5 bar
Max. coolant temperature without derating	35 °C
Max. coolant temperature with derating	65 °C

## Properties

Plug type	Amphenol PowerLok 301
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## Environment

Max. ambient temperature in operation	75 °C
Min. ambient temperature in operation	-25 °C
Protection class according to EN 60529	IP65

## Pin settings

## ENC

### Properties

Plug type	A DF A 015
Plug design	17 pol., type "E"

pin-no.	operation	type	I/O
1	P+	male	
2	P-	male	
3	A+	male	
4	A-	male	
5	B+	male	

pin-no.	operation	type	I/O
6	B-	male	
7	N.C.	N.C.	
8	N.C.	N.C.	
9	N.C.	N.C.	
10	N.C.	N.C.	
11	N.C.	N.C.	
12	Interlock	male	
13	Interlock	male	
14	PT100	male	
15	PT100 GND	male	
16	PTC	male	
17	PTC GND	male	

Attachments

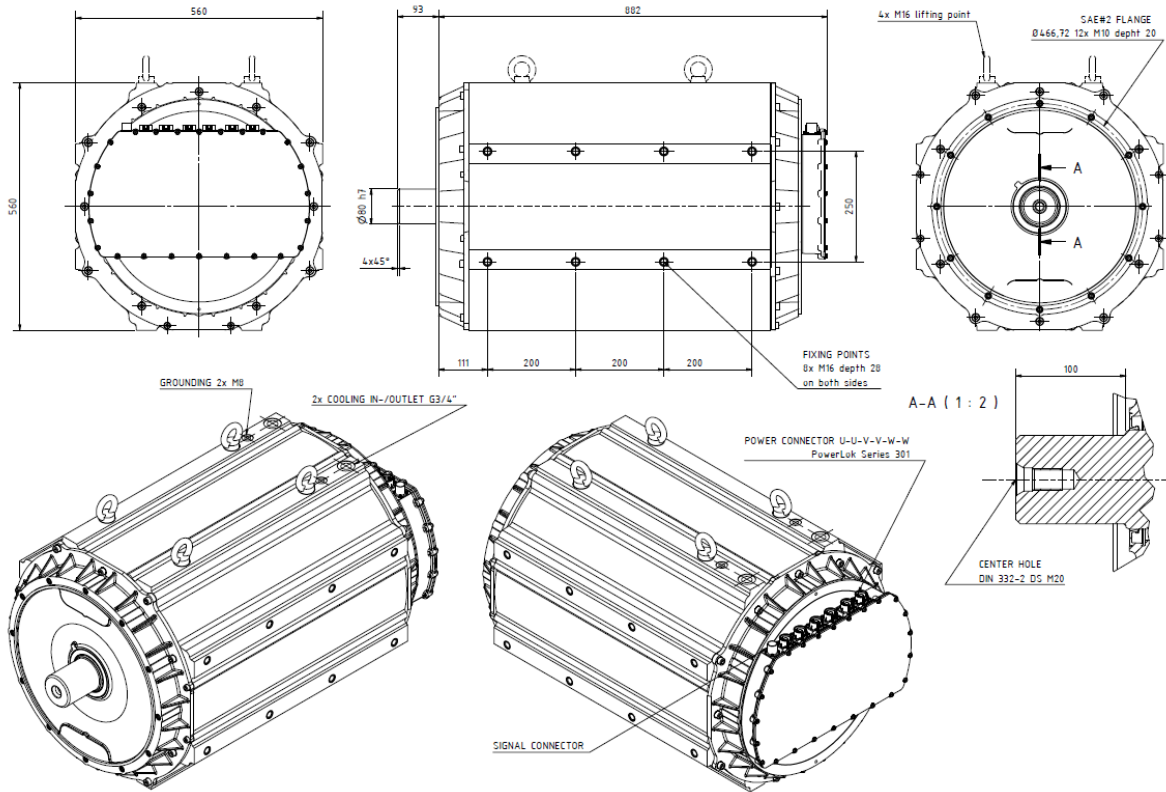


Illustration: Dimensions

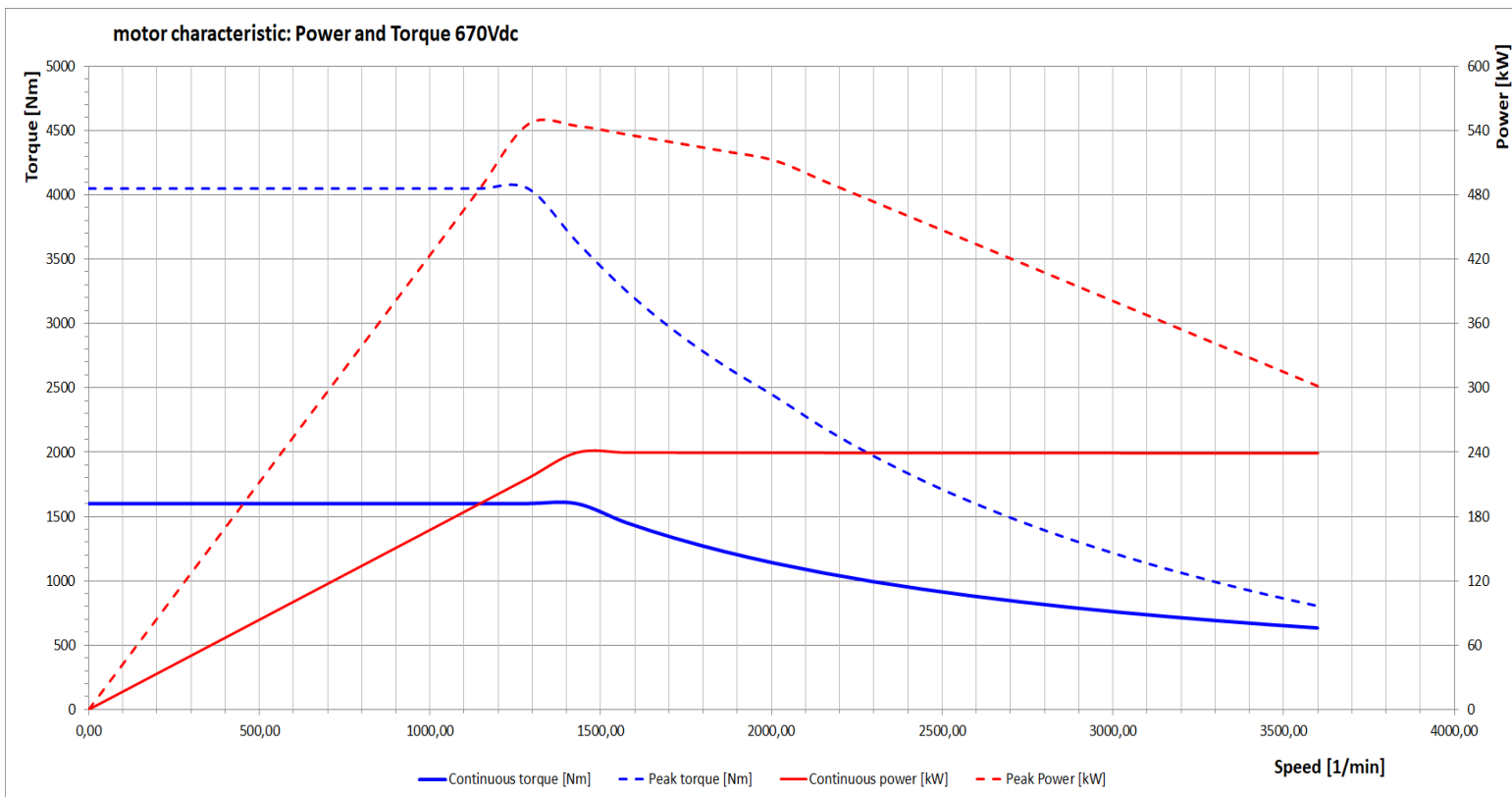


Illustration: S1 torque and power curve

### VM630-28W0380-AC30036 -- Pressure drop

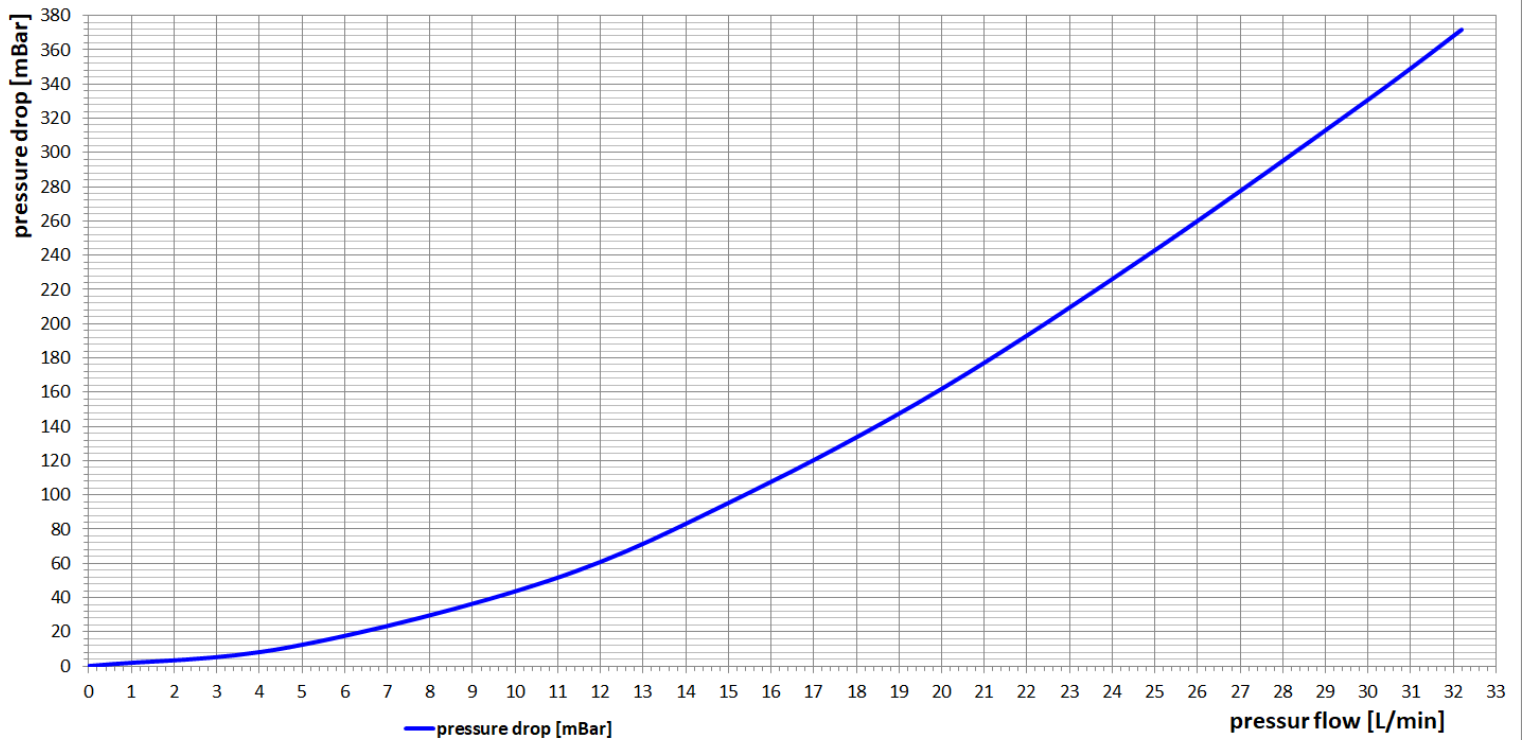


Illustration: pressure loss vs coolant flow