



**NetGain
Motors, Inc.**

Micro 880™

Specifications

Performance & Drawings



Call Us
+1 (630) 243-9100

Visit Us
www.go-ev.com/motors-micro.html

Micro 880™

New to the NetGain Motors, Inc. product line, the Micro 880™ stands out as a premium Internal Permanent Magnet (IPM) motor. This motor seamlessly pairs with any HyPer-Drive™ Inverter, forming the Micro 8 System™ - an optimal power-train solution for light-weight vehicles or industrial equipment. Distinguished by its high compression potted stator, the Micro 880™ ensures unparalleled reliability and thermal transfer. The independent protection rating of IP65 can be increased to IP67 with an optional shaft seal, or to IP69k when mated to a sealed gearbox.



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POWER

- Voltage: **80V Nominal**
- Current: **250-900 Arms**
- Peak Efficiency: **95%**
- S2-5min Power: **32kW**
- S2-60min Power: **10kW**
- Max Speed: **7,000RPM**
- Torque Peak: **103 lbs.-ft.**

SIZE

- Motor Diameter: **8.19in**
- Motor Length: **6.30in**
- Motor Weight: **40 lbs.**
- Shaft: **Multiple options**
- DE Mounting:
 - **4x M8 152mm BC**
- EE Mounting:
 - **3x M6 145mm BC**

FEATURES

- Type: **IPM**
- Insulation: **200°C**
- Position Sensor:
 - **Magnetic Sin/Cos**
- Recommended Software:
 - **SmartView**
- Protection: **IP65 - IP69K**
- Delivery: **From Stock**

INTEGRATION

Micro™ motors & *HyPer-Drive™* interters are characterized to one another, resulting in maximum performance and efficiency. Various power ranges are available through our diverse lines of motors and inverters.

ADAPTABLE ROTOR

Engineered with interface versatility in mind, *Micro 8™* motors feature a distinctive rotor design. Numerous bolt-on-shaft and adapter options enable seamless and straightforward motor installation into your application.

INNOVATIVE STATOR

The high compression potted stator of the *Micro 8™* is a significant breakthrough in IPM motor design, resulting in an advanced solution to common motor issues caused by vibration, ingress, and thermal gaps.

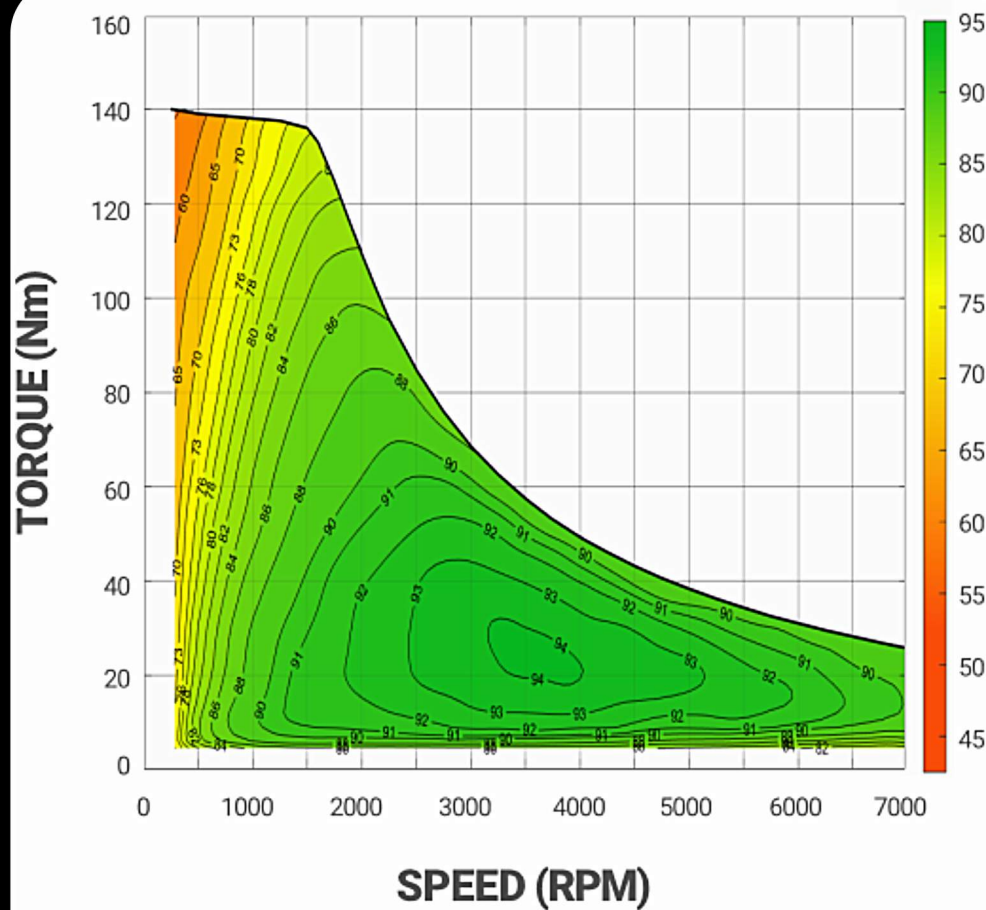
48V



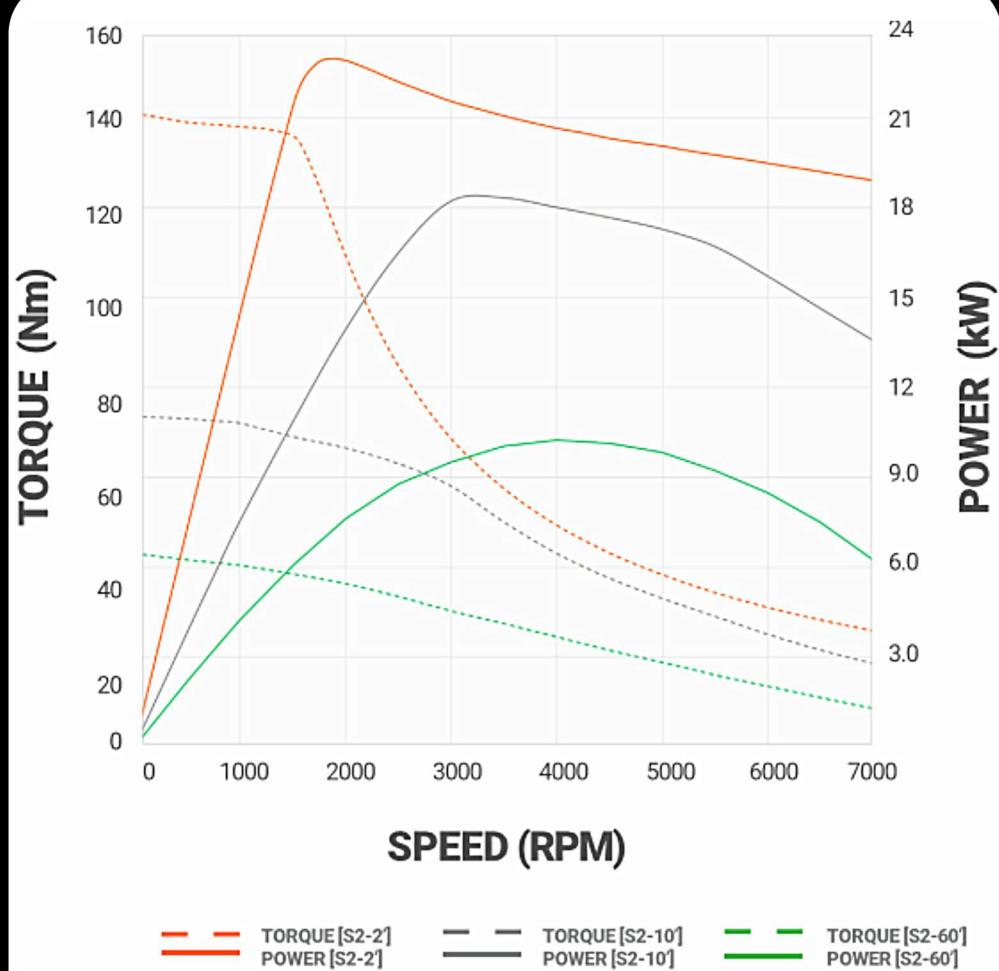
NetGain Motors, Inc.

Micro 880™ - Efficiency 48V 900Arms

Micro 880™ - 48V Power Curves



*DATA RECORDED AT 25°C AMBIENT



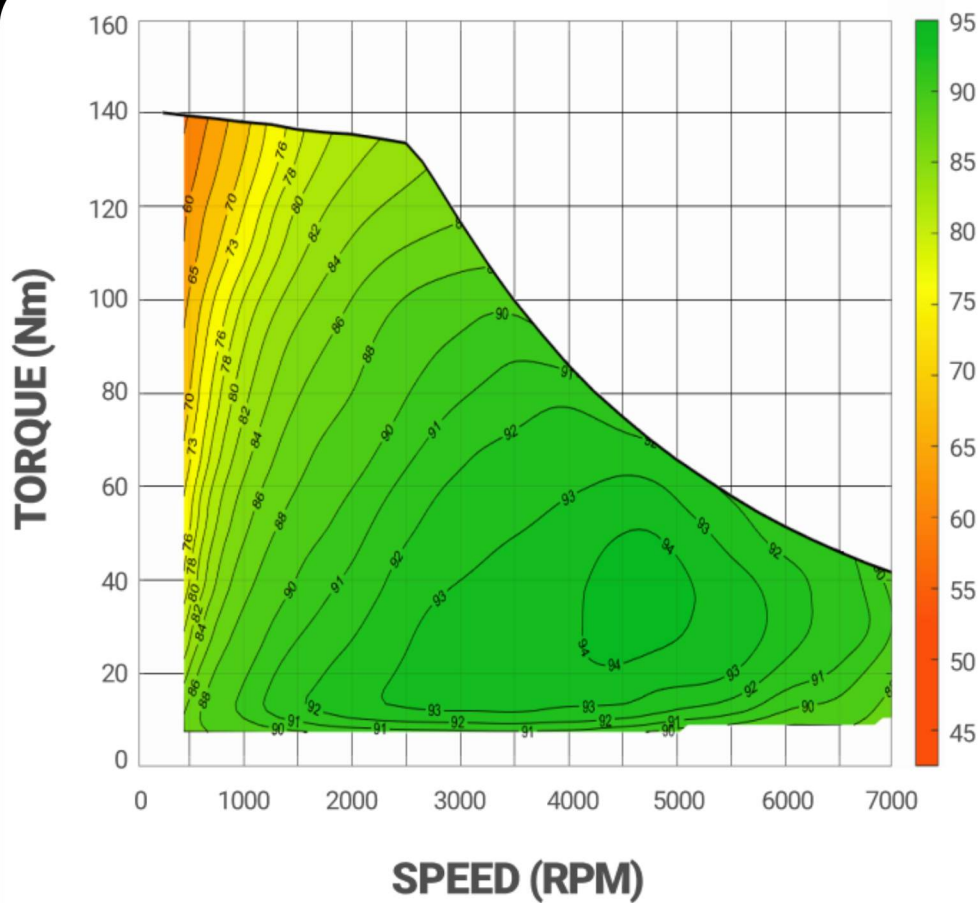
80V



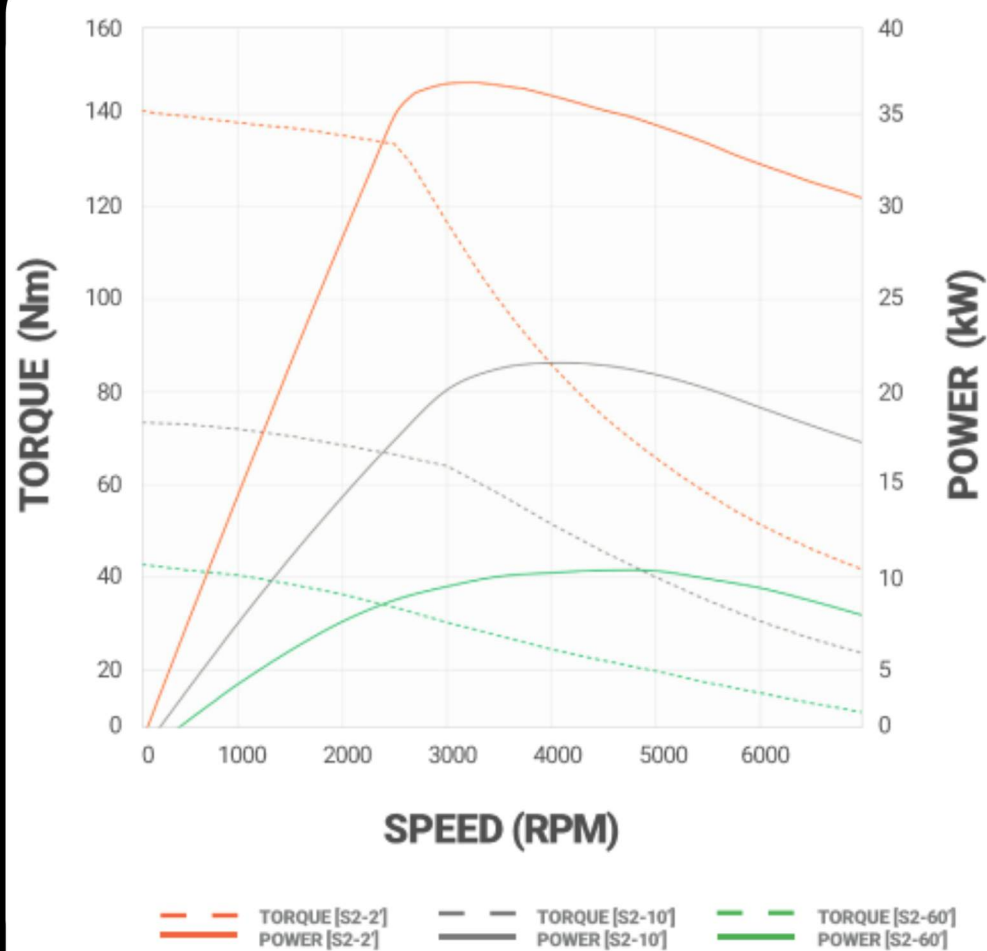
NetGain Motors, Inc.

Micro 880™ - Efficiency 80V 900Arms

Micro 880™ - 80V Power Curves



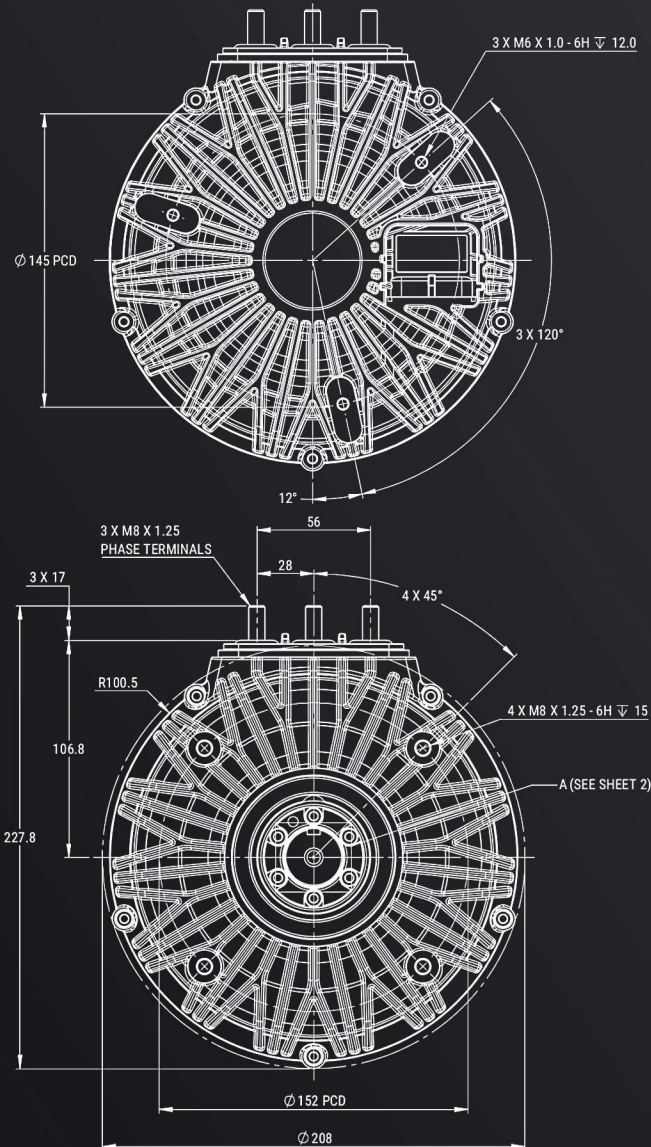
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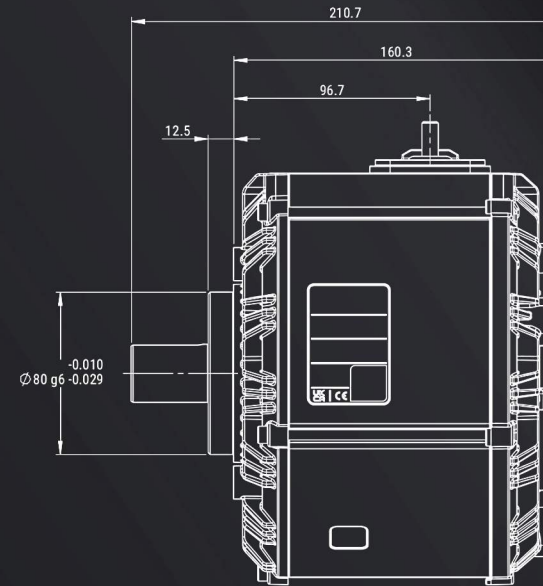
Micro 880™ OUTLINE



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ISOMETRIC VIEW



MOTOR TYPE	Micro 880™	ENCODER:	SUPERSEAL 1.5 SOCKET	CUSTOMER APPROVAL:
VOLTAGE	VDC	80		NAME:
IEC DUTY	S2	60		DATE:
RATED POWER	KW	10		SIGNED:
RATED SPEED	RPM	4000		
RATED FREQ.	HZ	333		
IP RATING*	IP	65		
INSUL. CLASS	-	200		
SENSOR CYCLES	CPR	5		
TEMP SENSOR	PT1000	CLASS B		



MATING PLUG P/N:
282090-1

MATING PIN P/N:
183035-1

NOTES:

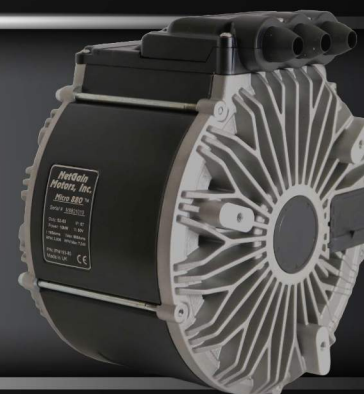
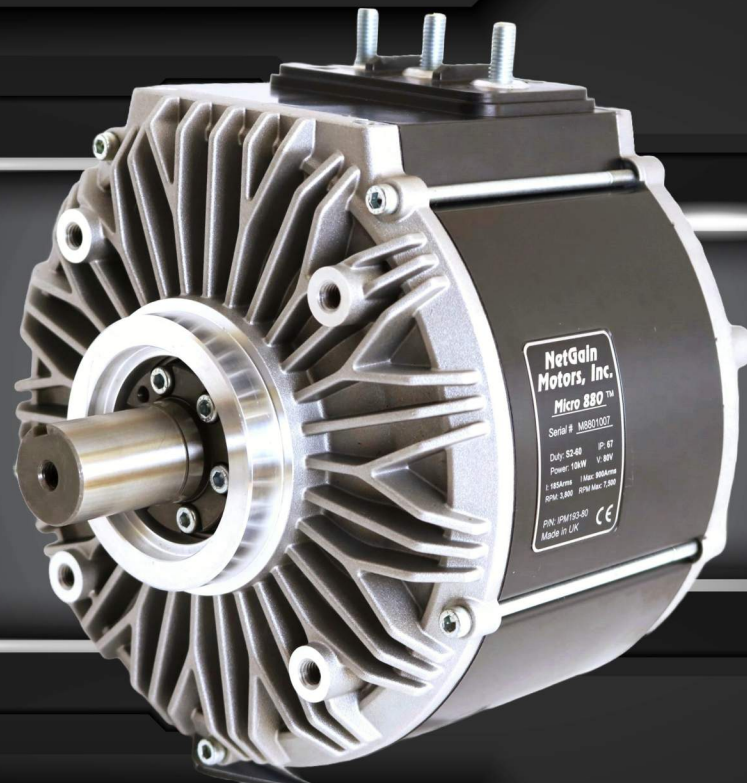
1. SHAFT ROTATES CW, WHEN VIEWED FROM DRIVE END, WHEN COSINE SIGNAL LEADS SINE SIGNAL BY 90 DE
2. SHAFT ROTATES CW, WHEN VIEWED FROM DRIVE END, WHEN U-V-W WIRED PER DIAGRAM
3. TERMINAL NUTS: TORQUE TO 15Nm
4. SEE MANUAL FOR RECOMMENDED TORQUE VALUES OF MOTOR FASTENERS
5. ESTIMATED ROTATIONAL MOMENT OF INERTIA: 1.1043 kg/mm²
6. * IP RATINGS - SEE USER MANUAL FOR FURTHER DETAILS

INTERFACE OPTIONS ➔



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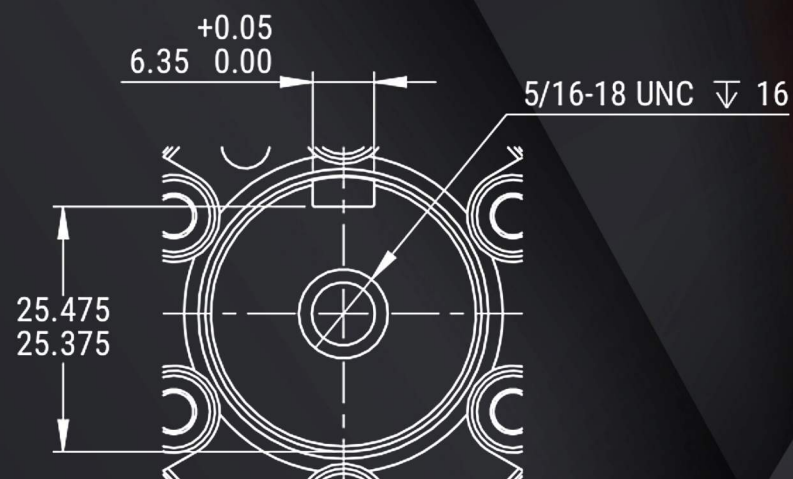
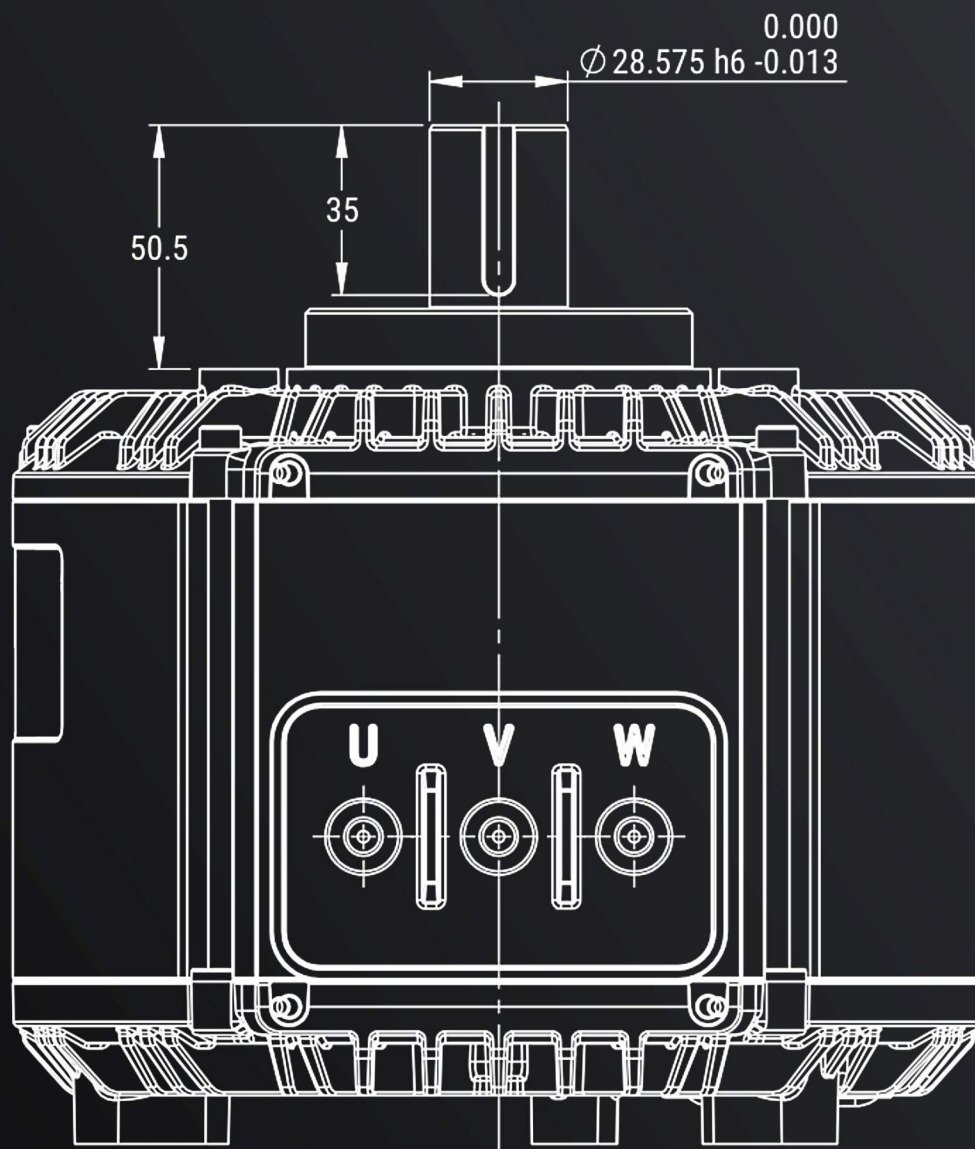
1-1/8" | DIAMETER
1/4" KEYWAY

DIMENSIONS ➔

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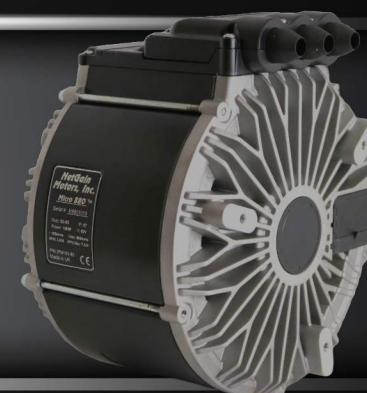


DETAIL A
SCALE 1 : 1



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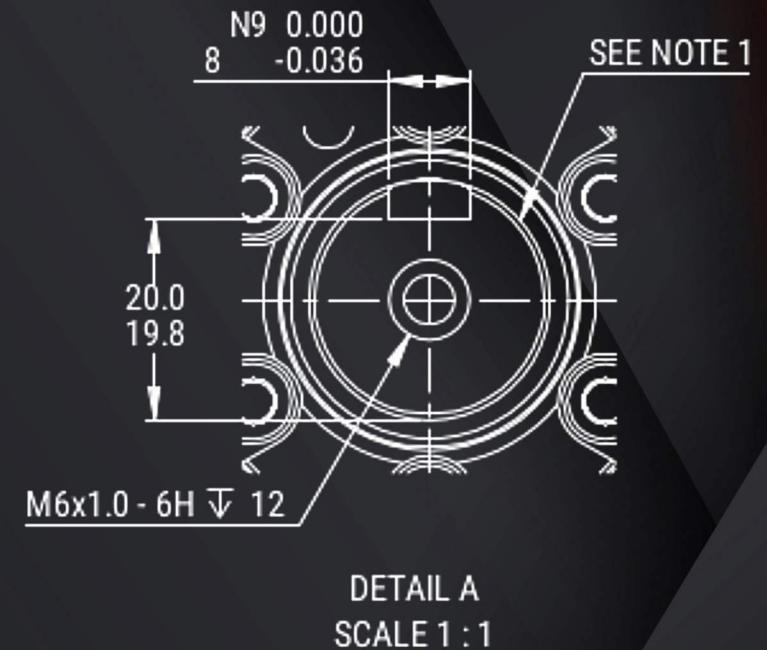
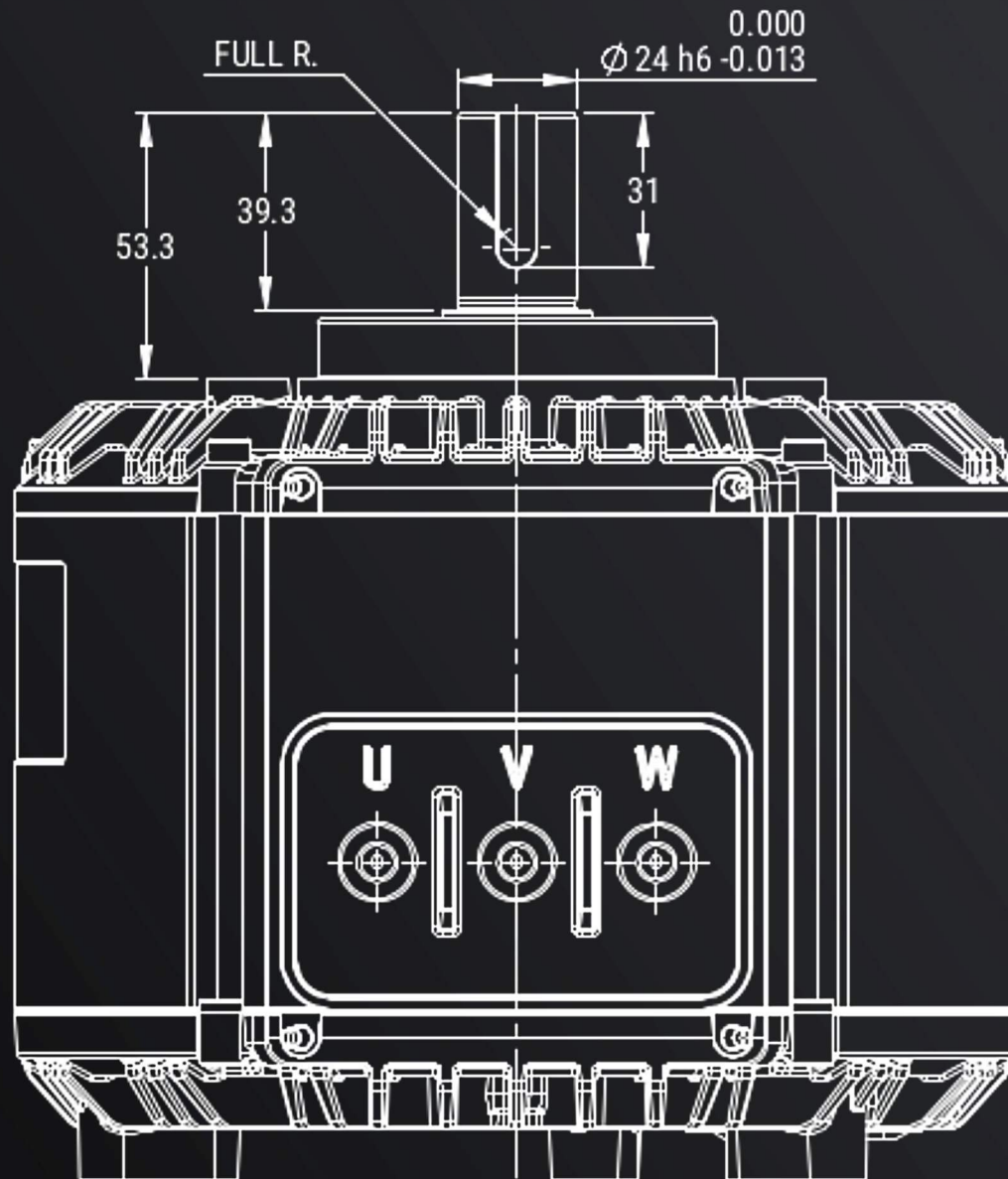
24MM
8MM | DIAMETER
KEYWAY

DIMENSIONS ➔

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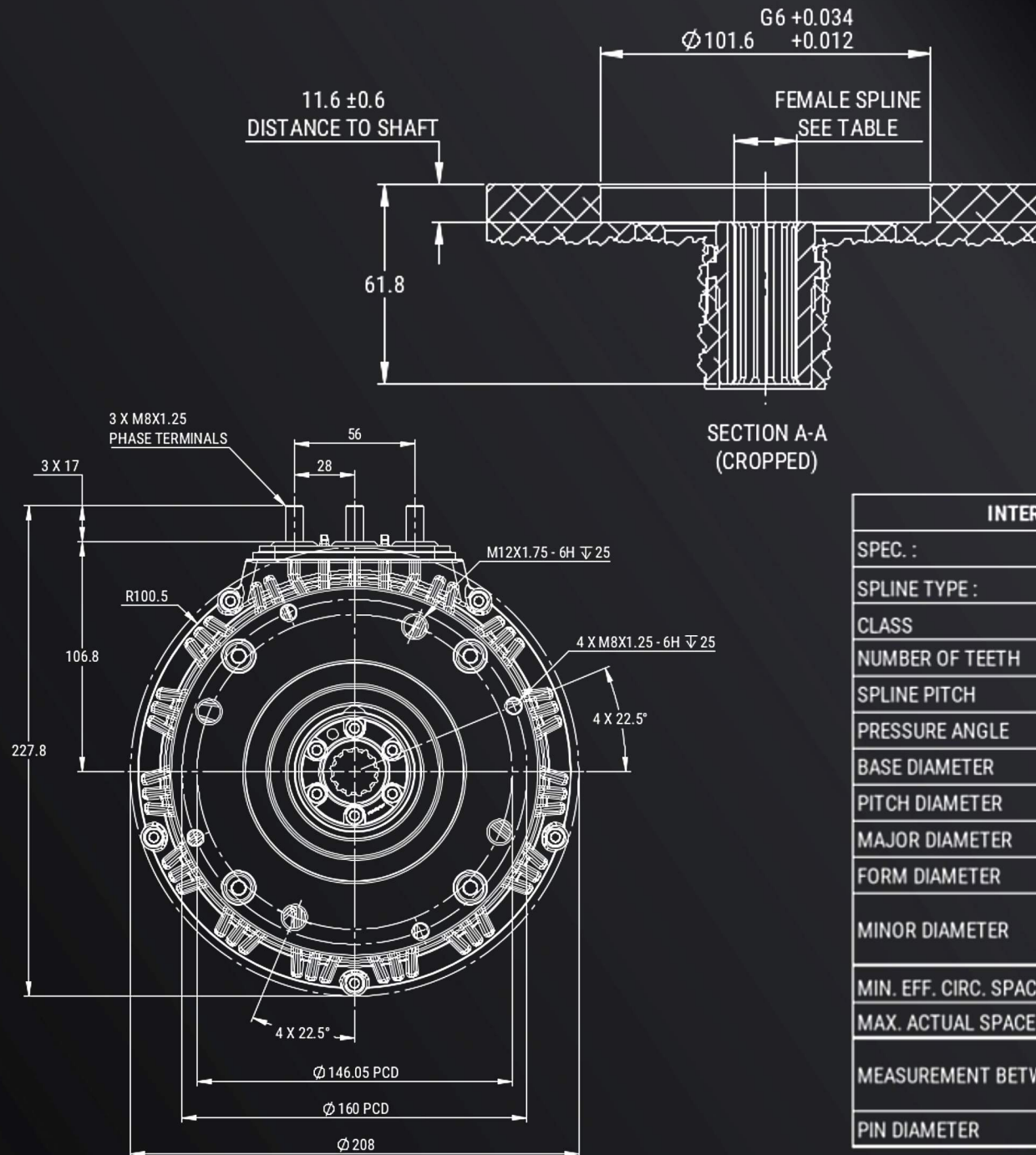
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Micro 883™



13T
SAE-B | SPLINE
ADAPTER PLATE

DIMENSIONS →



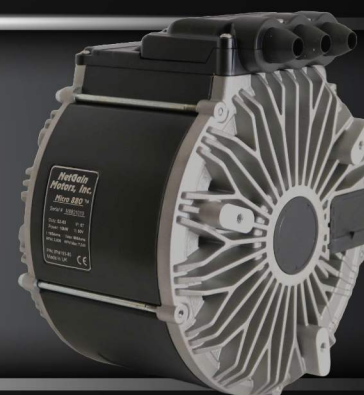
INTERNAL INVOLUTE SPLINE DATA

SPEC. :	ANSI B92.1 1996		
SPLINE TYPE :	FLAT ROOT / SIDE FIT		
CLASS		5	
NUMBER OF TEETH		13	
SPLINE PITCH		16/32	
PRESSURE ANGLE	°	30	
BASE DIAMETER	MM	17.873	REF
PITCH DIAMETER	MM	20.638	REF
MAJOR DIAMETER	MM	22.885	MAX
FORM DIAMETER	MM	22.327	
MINOR DIAMETER	MM	19.279	
		19.152	
MIN. EFF. CIRC. SPACE WIDTH (Sv)	MM	2.494	
MAX. ACTUAL SPACE WIDTH (Sv)	MM	2.560	
MEASUREMENT BETWEEN PINS	MM	16.589	
		16.540	
PIN DIAMETER	MM	2.743	



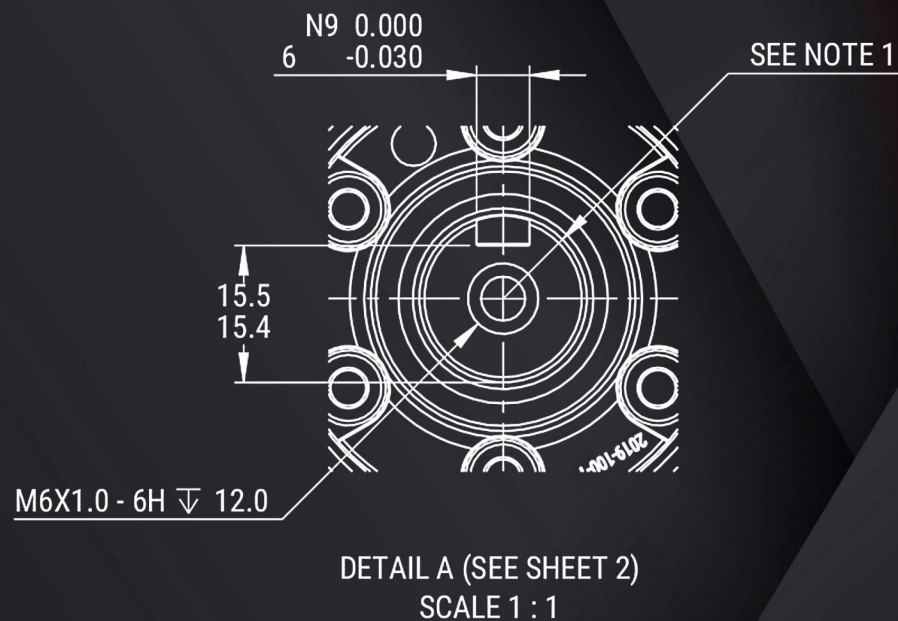
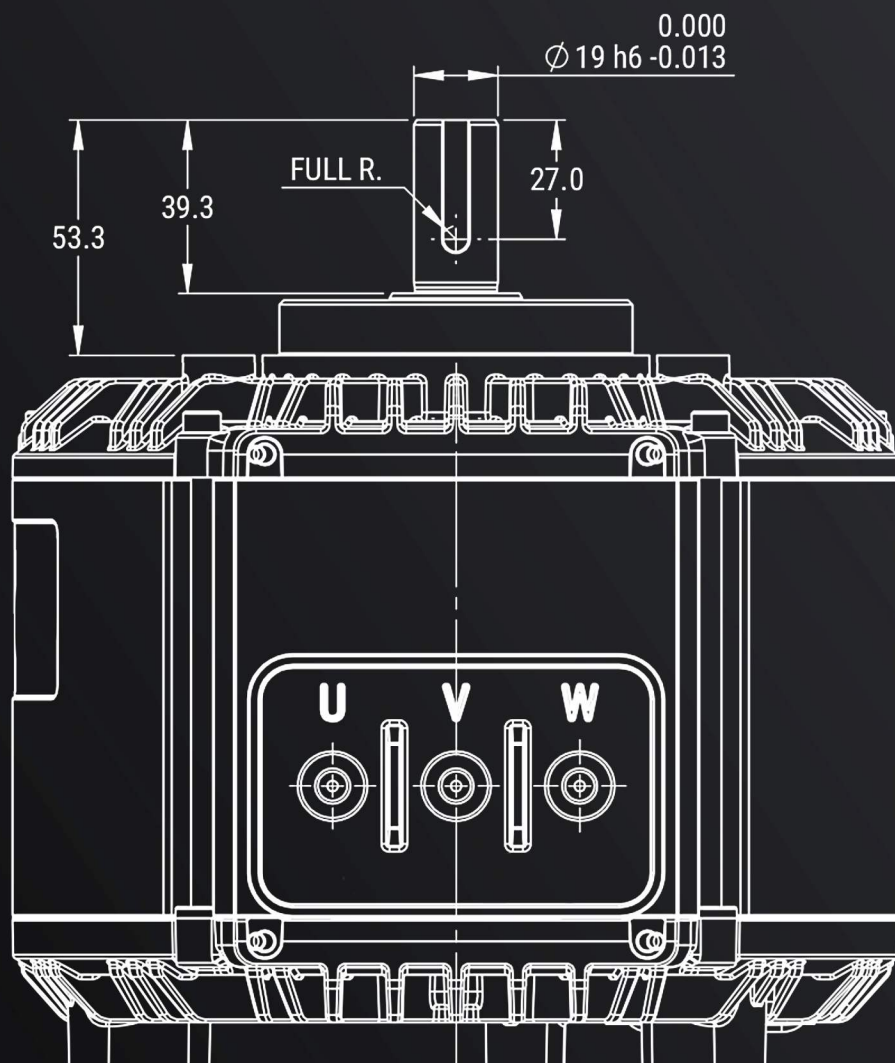
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Micro 884™

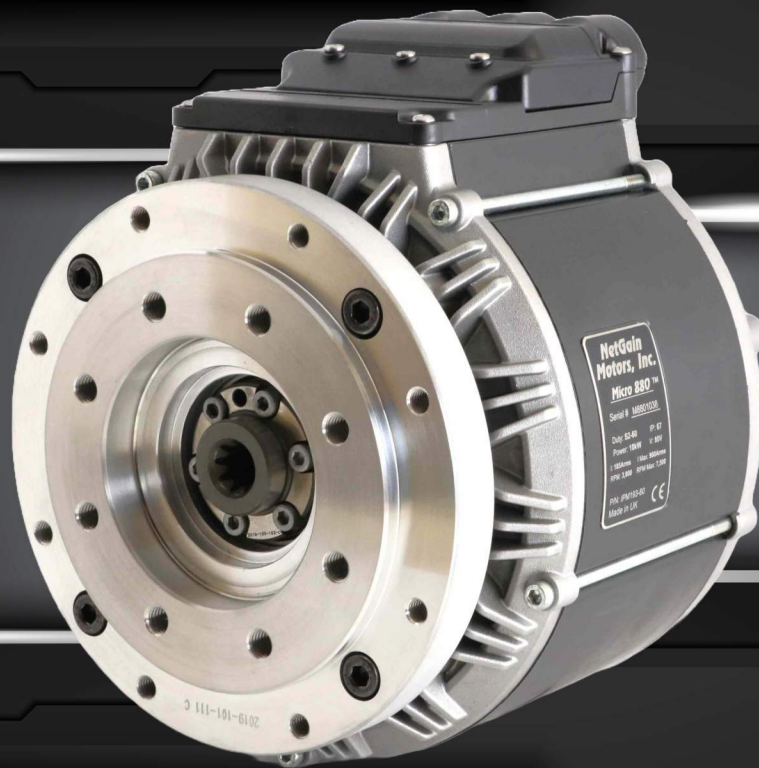


19MM
6MM | DIAMETER
KEYWAY

DIMENSIONS ➔



Micro 885™



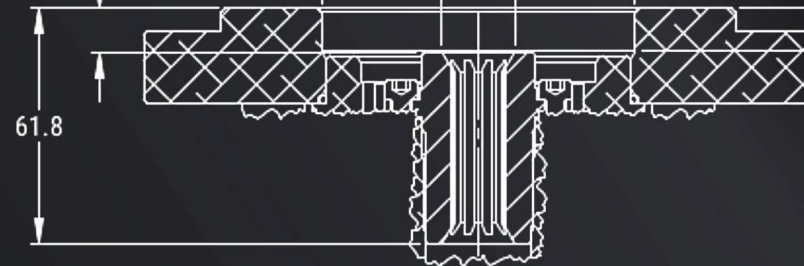
9T
SAE-A | SPLINE
ADAPTER PLATE

DIMENSIONS ➡

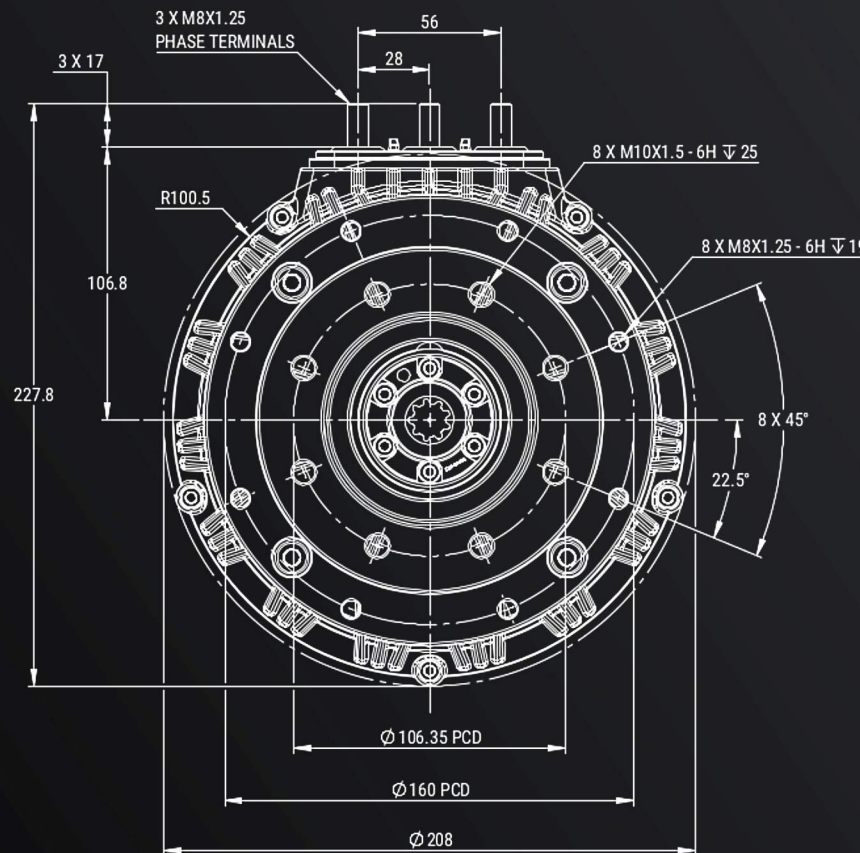
11.6 ±0.6
(DISTANCE TO SHAFT)

G6 +0.034
+0.012
Ø 82.55

FEMALE SPLINE
SEE TABLE



SECTION A-A
(CROPPED)



INTERNAL INVOLUTE SPLINE DATA

SPEC:	ANSI B92.1 1996		
SPLINE TYPE :	FLAT ROOT / SIDE FIT		
CLASS		5	
NUMBER OF TEETH		9	
SPLINE PITCH		16/32	
PRESSURE ANGLE	°	30	
BASE DIAMETER	MM	12.373	REF
PITCH DIMETER	MM	14.288	REF
MAJOR DIAMETER	MM	16.535	MAX
FORM DIAMETER	MM	15.977	
MINOR DIAMETER	MM	13.056	
		12.929	
MIN. EFF. CIRC. SPACE WIDTH (Sv)	MM	2.494	
MAX. ACTUAL. SPACE WIDTH (Sv)		2.560	
MEASUREMENT BETWEEN PINS	MM	10.089	
		10.041	
PIN DIAMETER	MM	2.743	



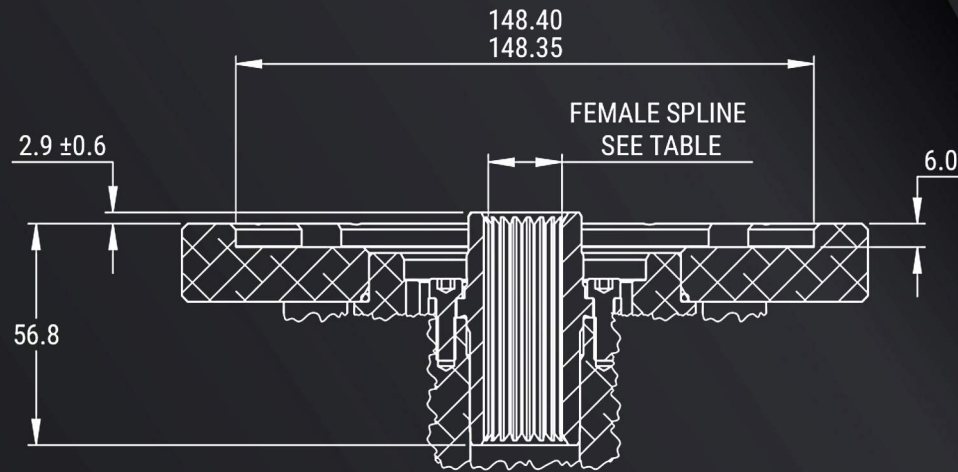
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Micro 886™

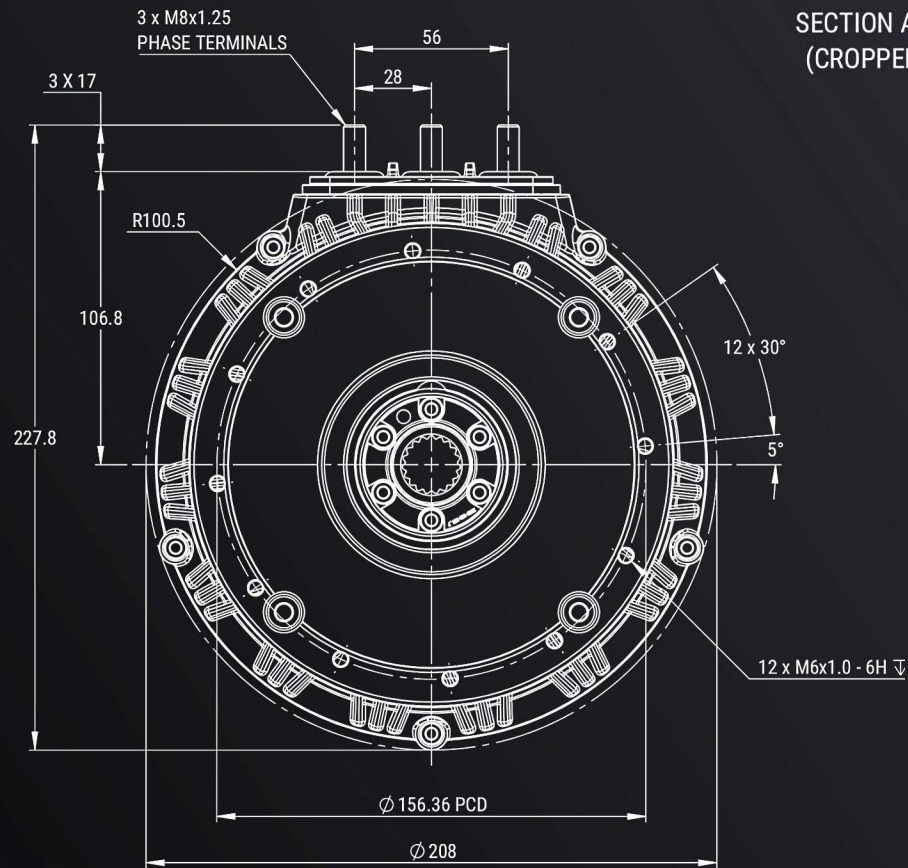


19T
E-AXLE | SPLINE
ADAPTER PLATE

DIMENSIONS ➔



SECTION A-A
(CROPPED)



INTERNAL INVOLUTE SPLINE DATA

SPEC:	ANSI B92.1 1996		
SPLINE TYPE :	FILLET ROOT / SIDE FIT		
CLASS		5	
NUMBER OF TEETH		19	
SPLINE PITCH		24/48	
PRESSURE ANGLE	°	45	
BASE DIAMETER	MM	14.219	REF
PITCH DIMETER	MM	20.108	REF
MAJOR DIAMETER	MM	21.819	MAX
FORM DIAMETER	MM	21.285	
MINOR DIAMETER	MM	19.609	
		19.482	
MIN. EFF. CIRC. SPACE WIDTH (S _v)	MM	1.875	
MAX. ACTUAL. SPACE WIDTH (S _v)		1.941	
MEASUREMENT BETWEEN PINS	MM	17.054	
		17.005	
PIN DIAMETER	MM	2.032	