



**NetGain
Motors, Inc.**

Micro 840™

Specifications

Performance & Drawings



Call Us
+1 (630) 243-9100

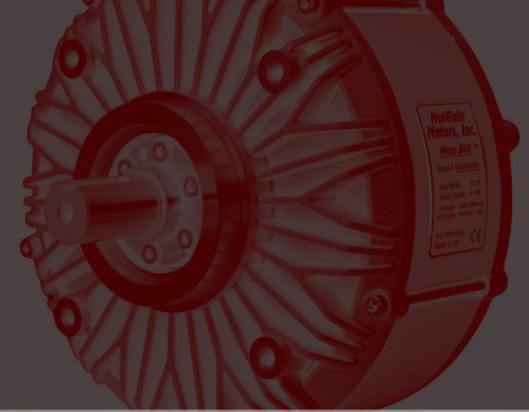
Visit Us
www.go-ev.com/motors-micro.html

Micro 840™

New to the NetGain Motors, Inc. product line, the Micro 840™ 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 840™ 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.



**NetGain
Motors, Inc.**



POWER

- Voltage: **48V Nominal**
- Current: **250-550 Arms**
- Peak Efficiency: **95%**
- S2-5min Power: **22.5kW**
- S2-60min Power: **5.5kW**
- Max Speed: **7,000RPM**
- Torque Peak: **52 lbs.-ft.**

SIZE

- Motor Diameter: **8.19in**
- Motor Length: **4.73in**
- Motor Weight: **25 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.

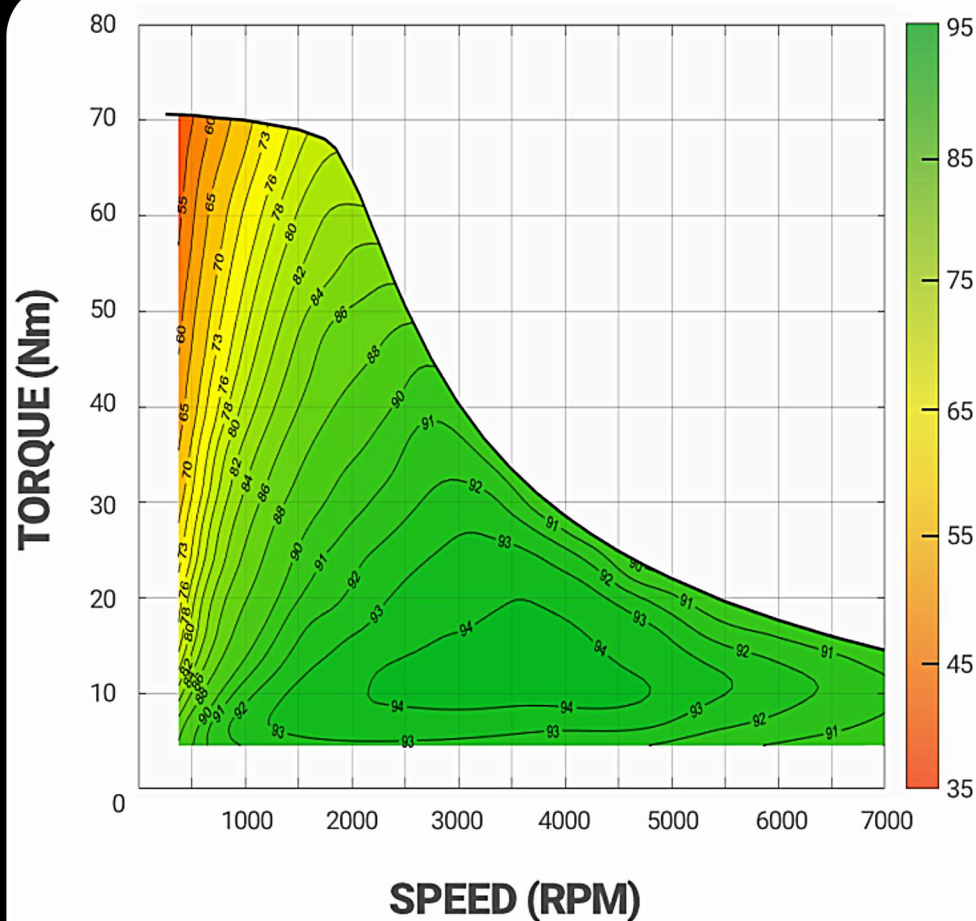
48V



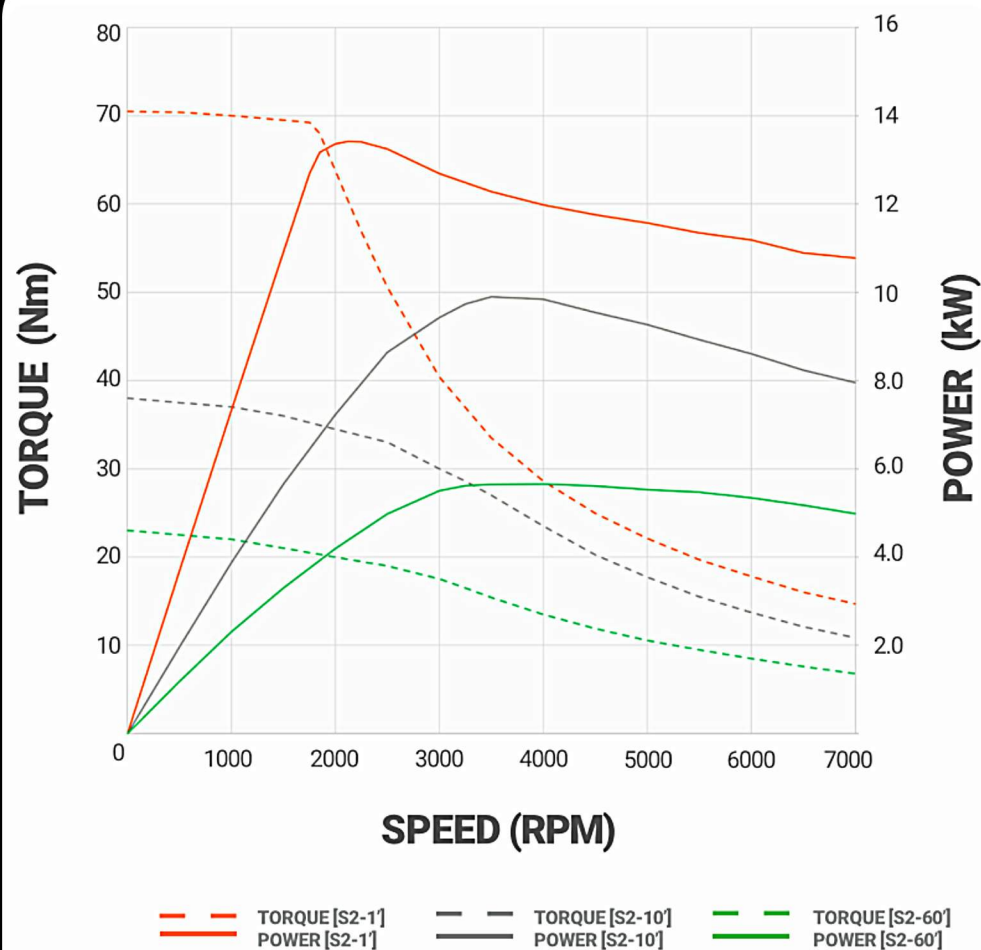
NetGain Motors, Inc.

Micro 840™ - Efficiency 48V 550Arms

Micro 840™ - 48V Power Curves



*DATA RECORDED AT 25°C AMBIENT



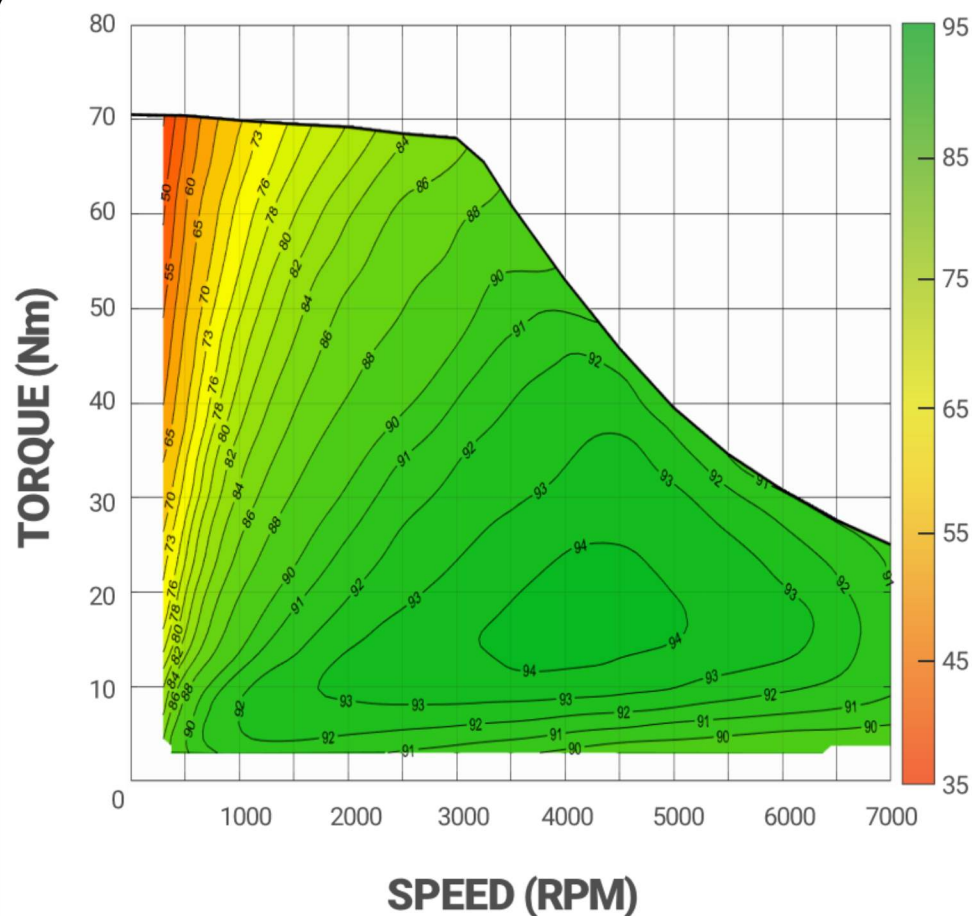
80V



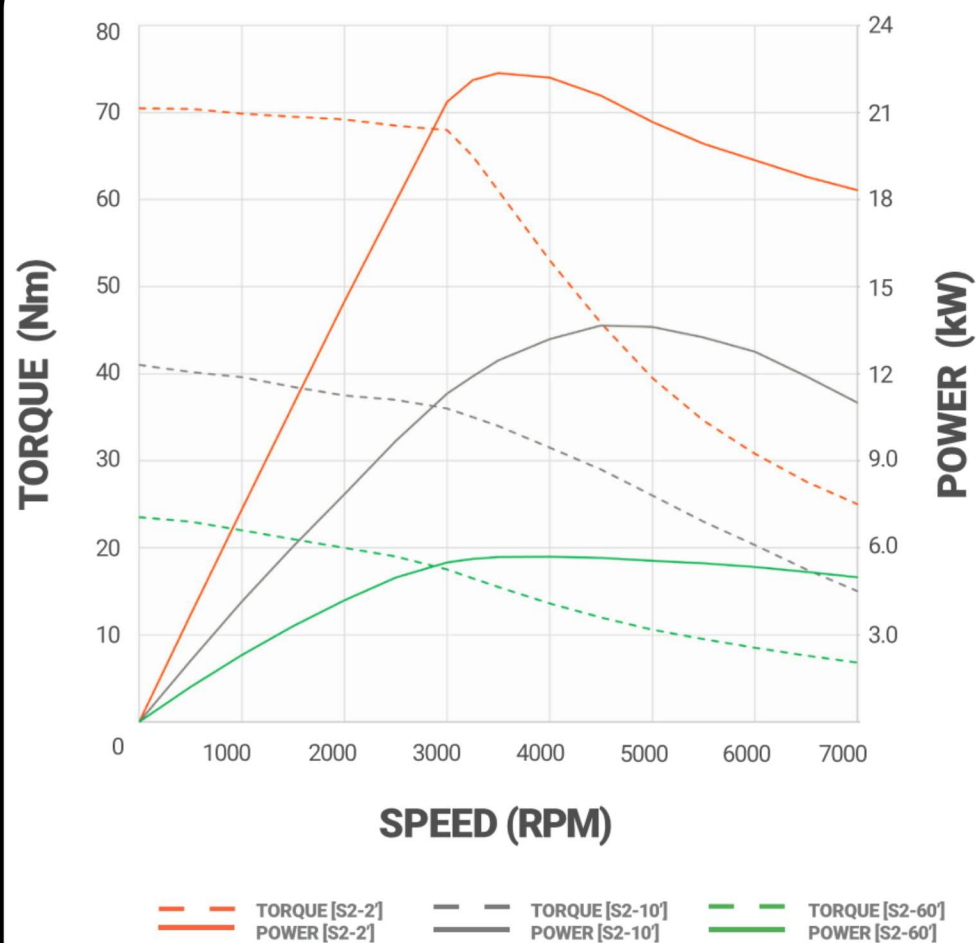
NetGain Motors, Inc.

Micro 840™ - Efficiency 80V 550Arms

Micro 840™ - 80V Power Curves



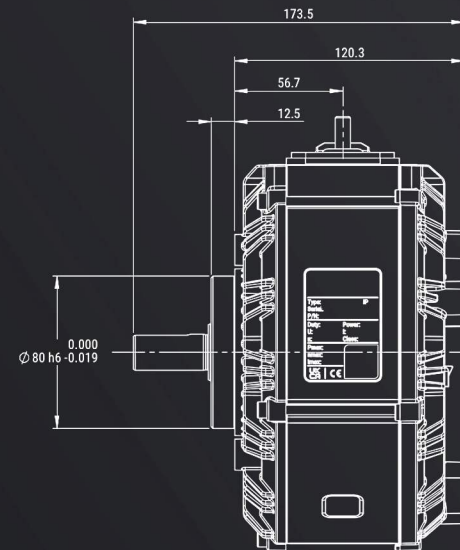
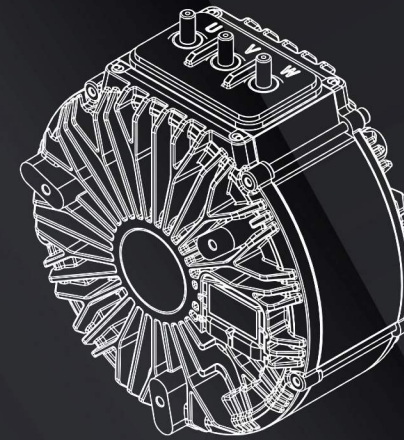
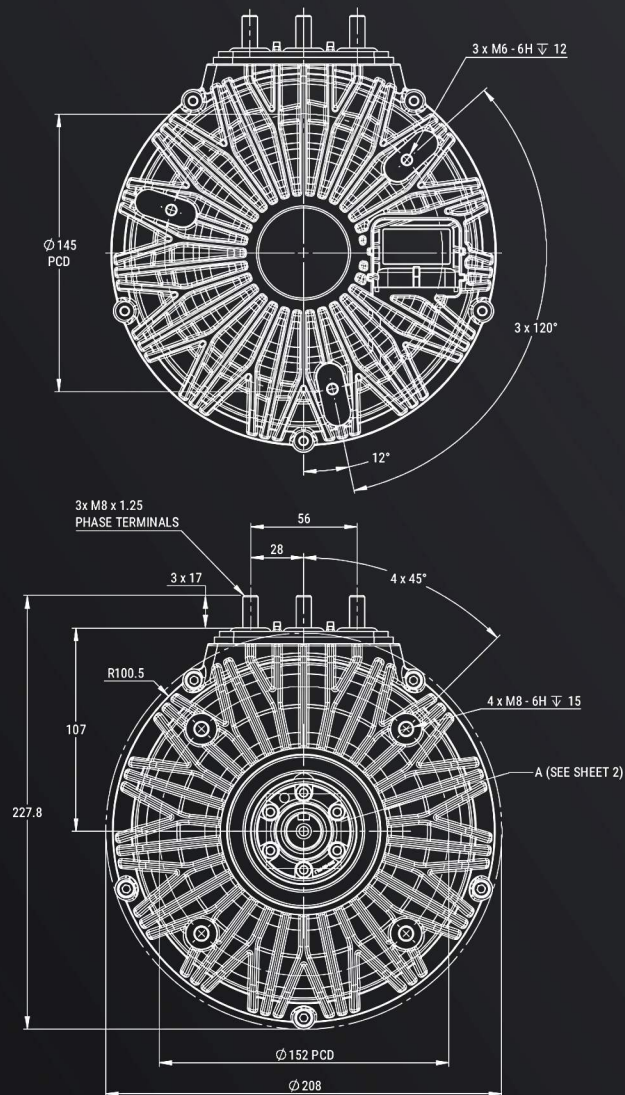
*DATA RECORDED AT 25°C AMBIENT



Micro 840™ OUTLINE



**NetGain
Motors, Inc.**



MOTOR TYPE	Micro 840™		ENCODER:	SUPERSEAL 1.5 SOCKET	CUSTOMER APPROVAL:
VOLTAGE	VDC	48		MATING PLUG P/N:	NAME:
IEC DUTY	SZ	60		282090-1	DATE:
RATED POWER	KW	5.5		MATING PIN P/N:	SIGNED:
RATED SPEED	RPM	4000		183035-1	
MAX. SPEED	RPM	8000	PIN 1: 5V		
MAX. FREQ.	HZ	667	PIN 2: TEMP		
IP RATING*	IP	65	PIN 3: SIN		
INSUL. CLASS	-	200	PIN 4: COS		
SENSOR CYCLES	CPR	5	PIN 5: GND		
TEMP SENSOR	PT1000	CLASS B	PIN 6: SHIELD		

NOTES:

- KEYWAY DIMENSIONS TO ISO/R773 - 30MM LONG
- SHAFT ROTATES CW, WHEN VIEWED FROM DRIVE END, WHEN COSINE SIGNAL LEADS SINE SIGNAL BY 90 DEGREES
- SHAFT ROTATES CW, WHEN VIEWED FROM DRIVE END, WHEN U-V-W WIRED PER DIAGRAM
- TERMINAL NUTS: TORQUE TO 15Nm
- SEE MANUAL FOR RECOMMENDED TORQUE VALUES OF MOTOR FASTENERS
- ESTIMATED ROTATIONAL MOMENT OF INERTIA: 6109 kg/mm²
- *IP RATINGS - SEE USER MANUAL FOR FURTHER DETAILS

INTERFACE OPTIONS ➔



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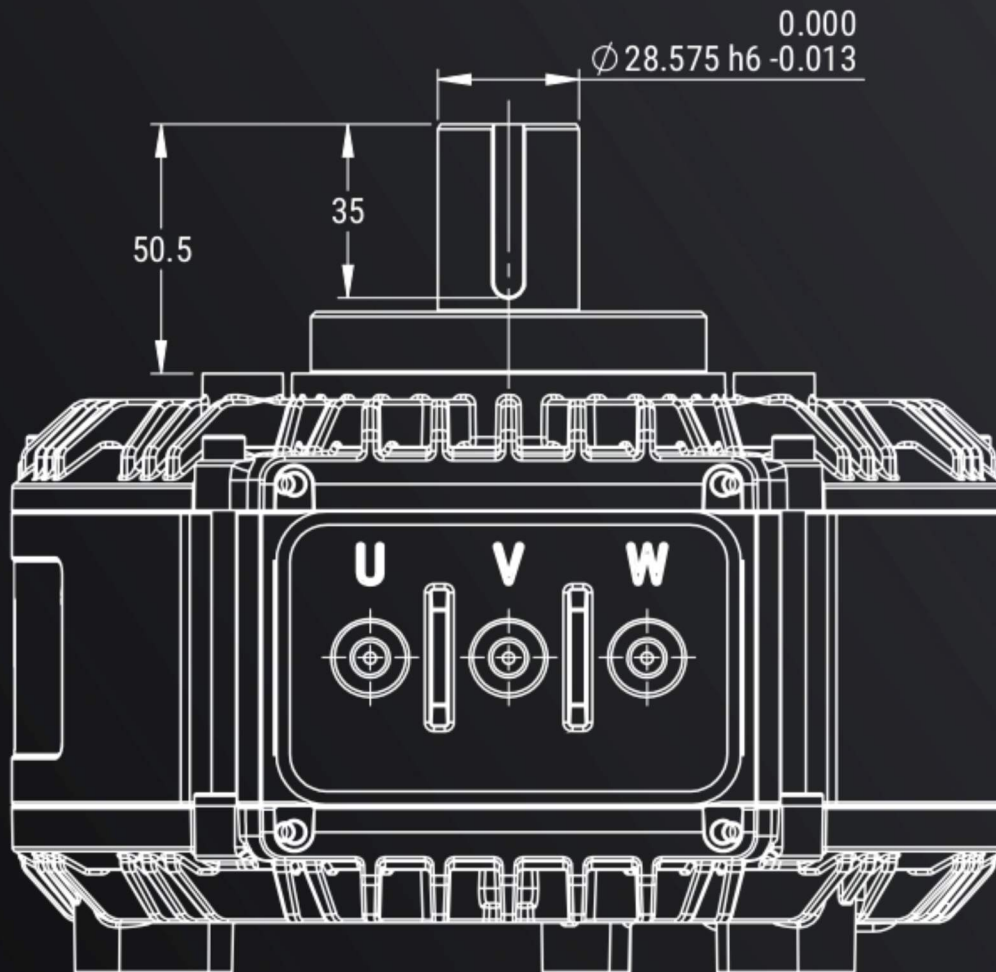
Micro 841™



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

DIMENSIONS ➔

Micro 841™





**NetGain
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Micro 842™



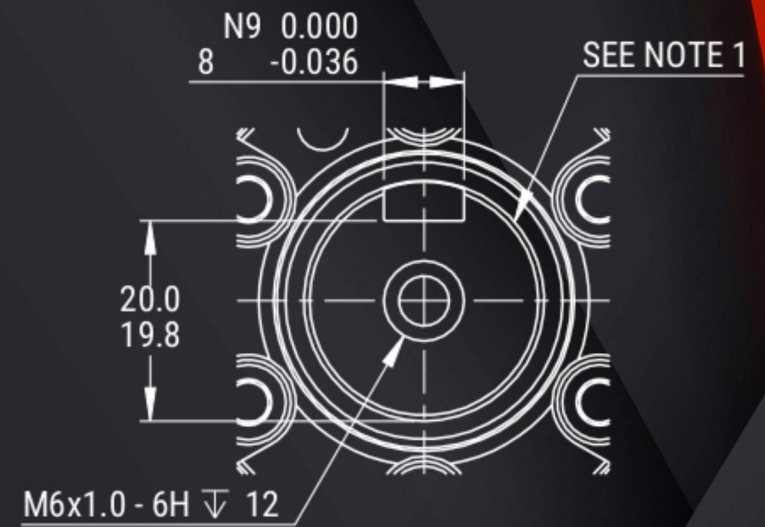
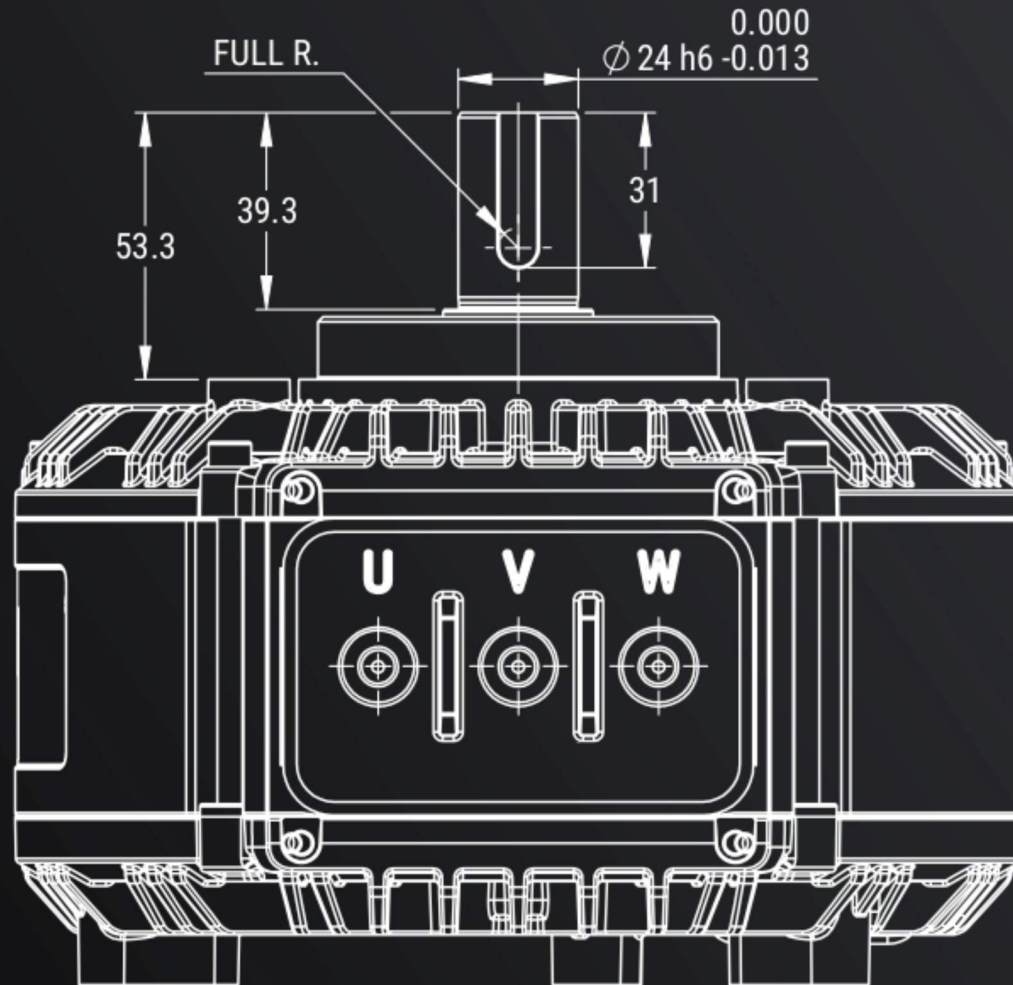
24MM
8MM | DIAMETER
KEYWAY

DIMENSIONS ➔

Micro 842TM



**NetGain
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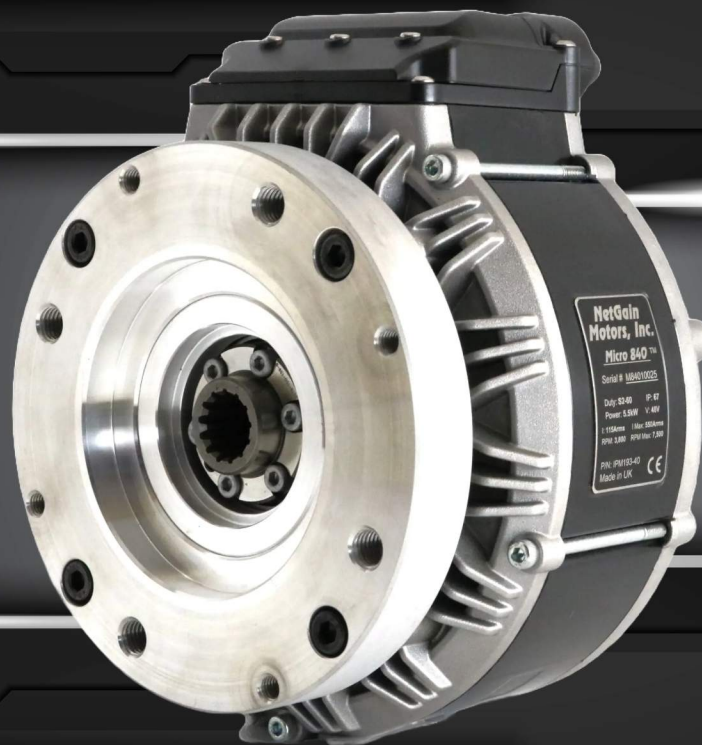


DETAIL A
SCALE 1 : 1



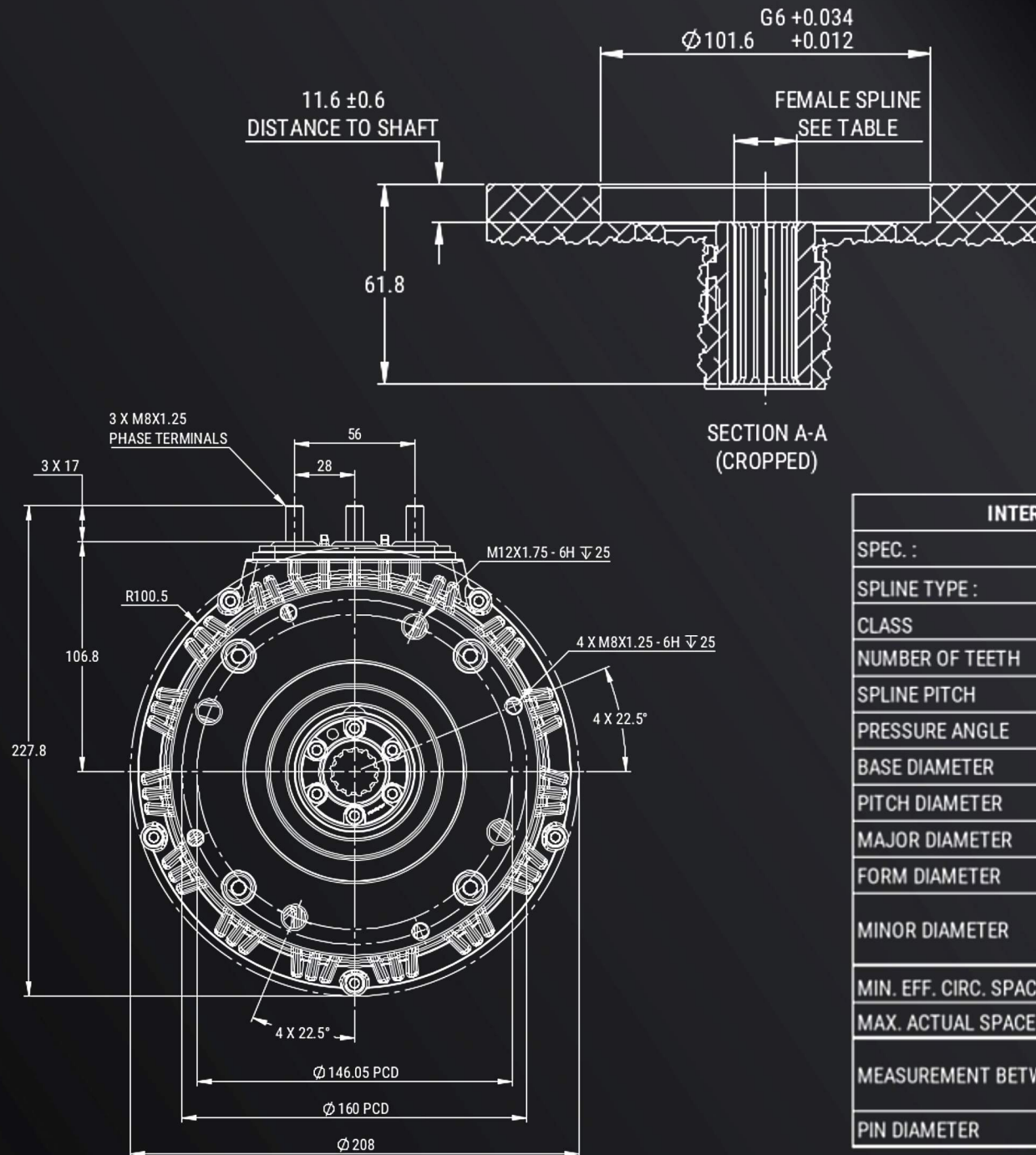
**NetGain
Motors, Inc.**

Micro 843™



**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	

NetGain Motors, Inc.
Micro 840™
 Serial # MDA27014

Qty 25.00	IP 67
Power 5.5kW	1/2 HP
115V/208V	1/2 HP 208V/240V
115V/208V	1/2 HP 208V/240V

115V 208V/240V
 Made in UK



19MM
6MM

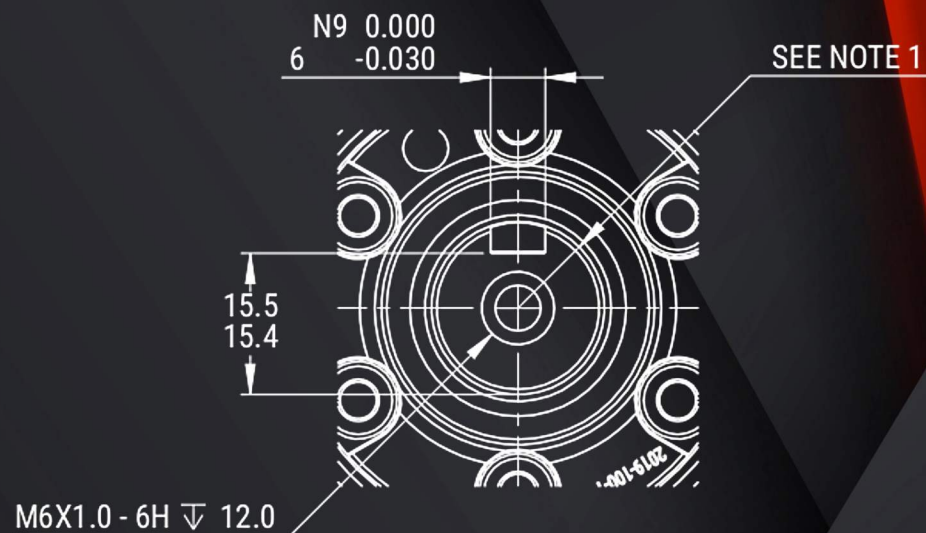
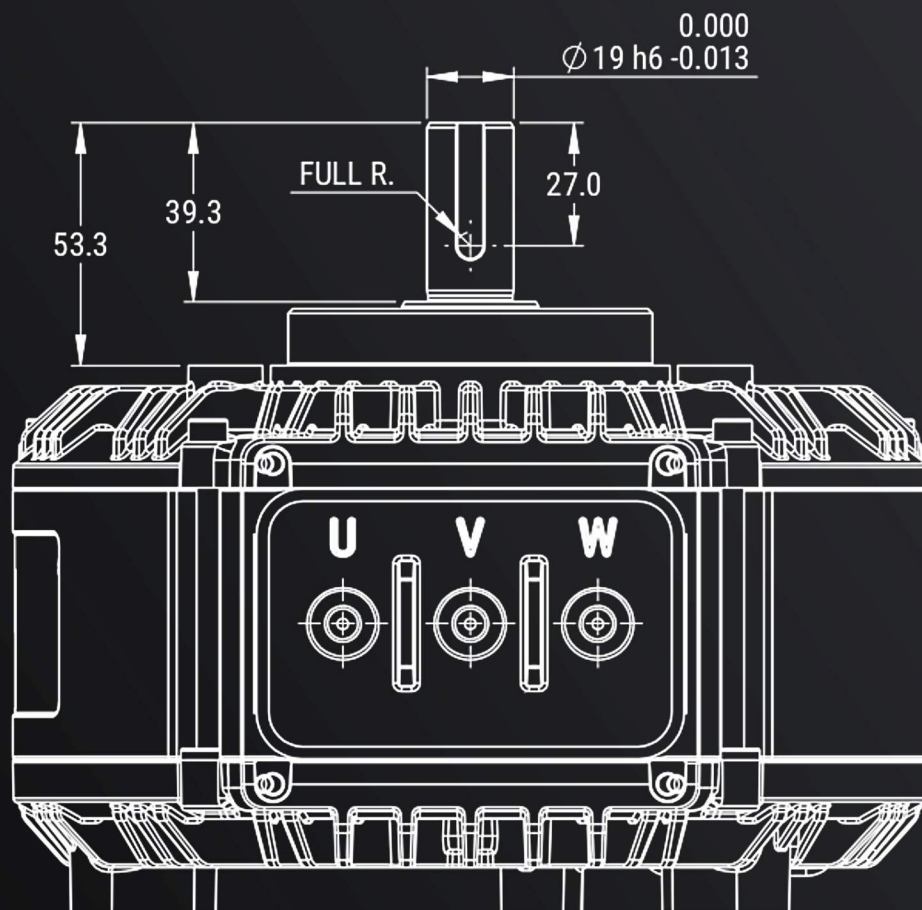
DIAMETER
KEYWAY

DIMENSIONS

Micro 844™



**NetGain
Motors, Inc.**



DETAIL A (SEE SHEET 2)
SCALE 1 : 1

Micro 845™



9T
SAE-A | SPLINE
ADAPTER PLATE

DIMENSIONS

Micro 845TM

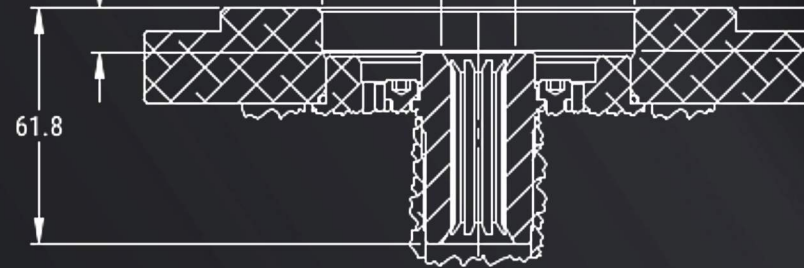


**NetGain
Motors, Inc.**

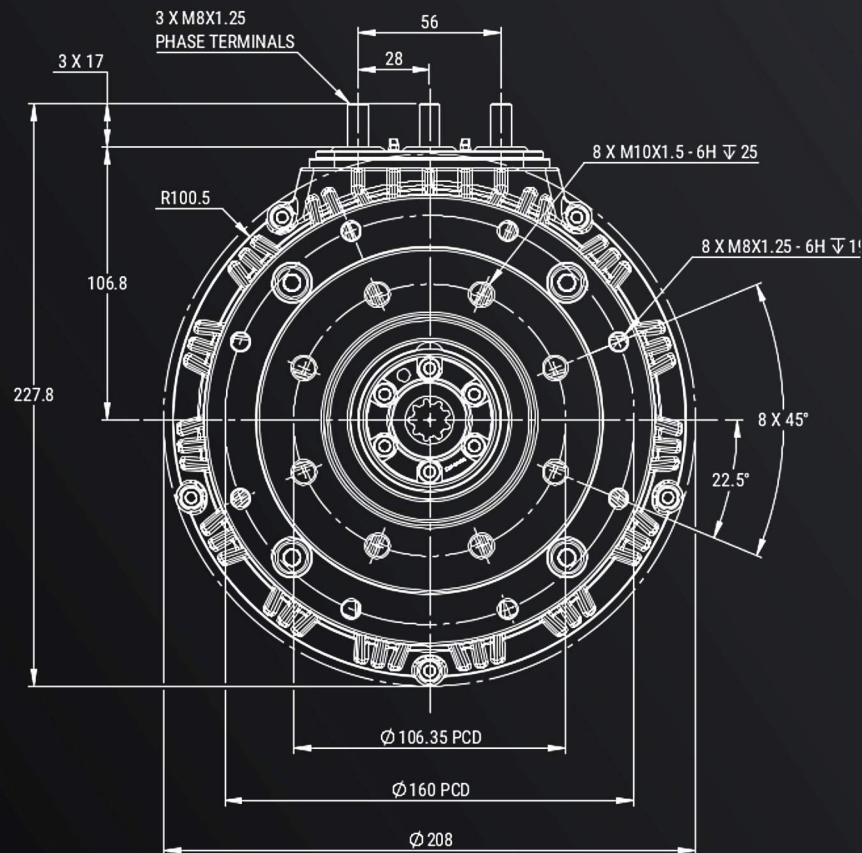
11.6 ±0.6
(DISTANCE TO SHAFT)

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	



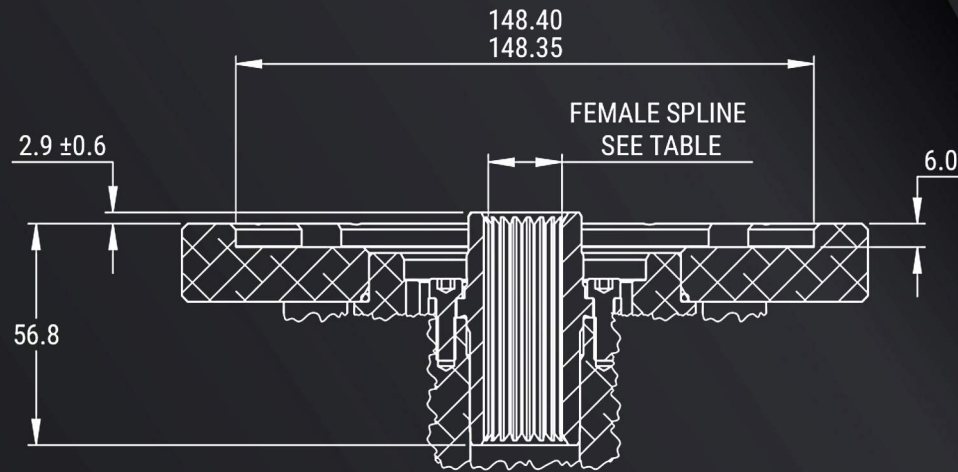
**NetGain
Motors, Inc.**

Micro 846™

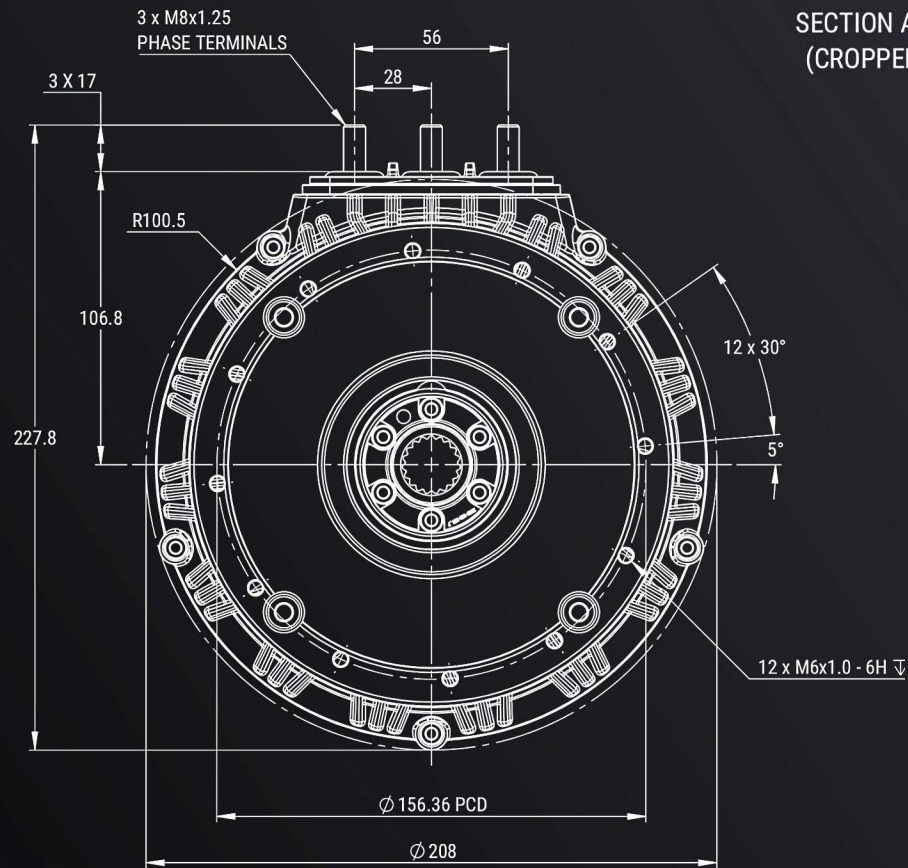


19T
E-AXLE | SPLINE
ADAPTER PLATE

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 (Sv)	MM	1.875	
MAX. ACTUAL. SPACE WIDTH (Sv)	MM	1.941	
MEASUREMENT BETWEEN PINS	MM	17.054	
		17.005	
PIN DIAMETER	MM	2.032	