KME CNC

5 AXIS SYSTEMS

LEADERS IN 5-AXIS SYSTEMS

KME CNC is a leader in American-made state of the art 5-axis systems. Our systems are unmatched at transforming existing 3-axis vertical machining centers and 4-axis horizontal machining centers into 5-axis production machines.

SMART TECHNOLOGY

All of KME CNC systems utilize SMART technology. SMART technology will save all work offsets and last positions as tombstones or trunnions move in and out of the machine tool. This is a perfect solution for pallet pool applications or job shops that have a lot of change-over in tombstones and fixturing. SMART technology will also save work offsets and last position in the event machines are shut off or power goes down in the plant.

MADE IN THE USA

All design, manufacturing, assembly, and programming is done at the KME CNC facility in Southern California. Even the control units are manufactured on site. All products are designed and built with personal care by a devoted development team that ensures the highest standard of customer service. “Whether you choose a standard model or need a custom 5-axis system, we will build a solution to match your specific machining needs.

BUILT FOR PRECISION, BUILT TO LAST

Every base for every tombstone, trunnion and indexer is machined from a solid block of Meehanite, the same cast iron used in high-end CNC machine castings. Our covers are machined from billet, minimizing any chance of a harmonic vibration. At the heart of every system is the harmonic drive unit. Adopting the concept from the robotics industry and applying it to the needs of metalworking, KME CNC is able to offer 250 foot pounds of torque on even our smallest rotary table and up to 1250 ft-lb workhorses. KME’s harmonic drives are guaranteed for 10,000 hours of zero backlash.

CUSTOM SOLUTIONS

In addition to its numerous standard configurations, KME CNC can design and build custom 5-axis tombstones and trunnions to meet your specific machining needs. Industries that have benefited from our groundbreaking systems include automotive, aerospace, firearm, defense, and medical manufacturing, just to name a few.
KME CNC is dedicated to helping you achieve accuracy, repeatability, and not to mention... profitability!

STREAMLINED INTEGRATION

KME CNC tombstones and trunnions are able to completely integrate with existing control systems. KME systems work with any CNC machine because they have their own brains, their own memory, and their own independent controller that allows them to interface with the desired equipment. So you do not need to program the control box. Our units work with direct G code from your machine controls.

There is no other product on the market that features such advanced technology and manufacturing flexibility

KME PROVIDES EXCELLENT CONSUMER SUPPORT. CONTACT US 24/7 THROUGH OUR TECHNICAL SUPPORT LINE.

(714) 345-5816 OR info@kmecnc.com

UPGRADING TO 5-AXIS: A NECESSITY!

Setups are the most important aspect of the machining process. Traditionally, complex components for milling require multiple setups and specific fixturing for intricate details. Every time a workpiece is touched or moved, it costs time, money and accuracy, as Gerard Vacio mentions in his Quick-Change Manufacturing article “Every time you touch it, it costs you money.”

5-AXIS POSITIONING ON VIRTUALLY ANY MACHINE

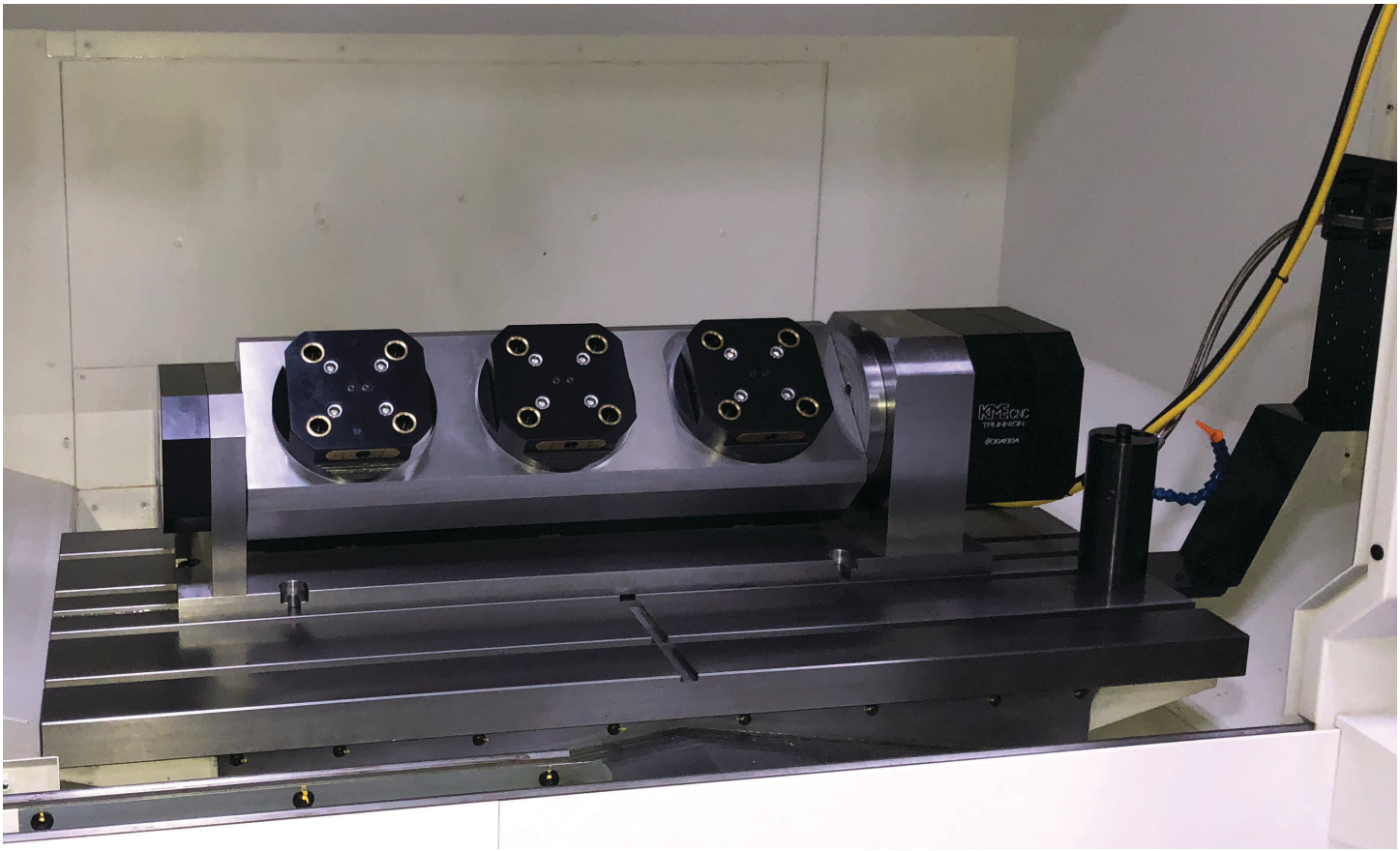
The majority of parts that require machining on multiple faces can be completed in a single setup with 5-axis positioning, 3+2 or 4+1 setups. KME CNC systems work in conjunction with the machines you already have and all of the popular workholding solutions you are already using. Decreasing setup and machining time while increasing accuracy and repeatability add up to profitability!

ACCURACY AND REPEATABILITY

Accuracy is crucial in the manufacturing world. KME CNC 5-axis systems help shops realize a high degree of accuracy by maintaining a single point of holding on a particular part. The machine tool can machine the first point and move to the second point with absolutely no relative deviation. Theoreticqlly, the position of each point within the five faces will be perfect in relation to the capability of the machine tool.

EXTREME PRODUCTIVITY AT AN AFFORDABLE COST

Adding a KME CNC 5-axis system to an existing machining center is an economical solution to achieving 5-axis productivity. Given that 95% of manufactured parts need 5-axis positioning rather than full 5-axis contouring, KME CNC 5-axis tombstones and 5-axis trunnions allow shops to meet their production demands and take on complex jobs they previously could not have accommodated.



5 AXIS WIRELESS TOMBSTONES

Wireless 5-axis tombstones are the future in horizontal machining centers.

SLEEK DESIGN

Our patented KME CNC 5 axis platters are built right into a precision machined, rigid meehanite cast iron body. Platters extend only a couple inches from the face of the tombstone, taking up less space within the HMC's work zone than a surface-mounted indexer.

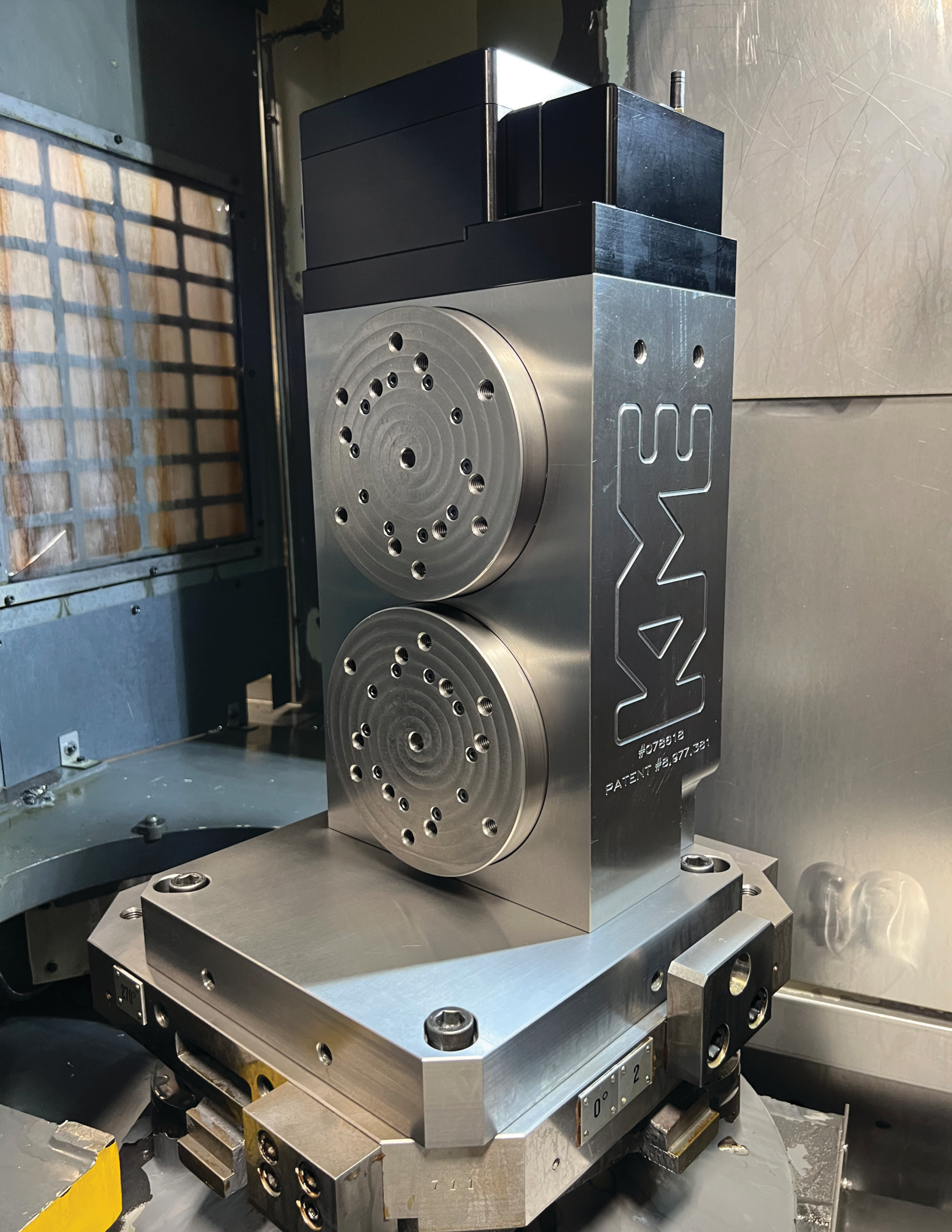
Standard models are equipped with four independent 5-axis platters on one side or two platters on both sides of the tombstone. Mill 5+ sides on four different platters with a single setup. Result: four completely machined parts at a time or more!

LIGHTS OUT MACHINING

Our wireless tombstones allow for more flexibility than ever before. This patented system comes with no wires, cables or any type of connections. Getting the tombstones in and out of your machines is now as easy as 1-2-3, allowing for change-over or pallet pool applications to run lights-out. (In the catalog there is a spacing issue in the bold area.)

CUSTOM CONFIGURATIONS

Request a custom setup with up to four 5-axis drives per side. That's eight 5-axis units on one wireless tombstone! Place two wireless tombstones in your HMC for up to sixteen 5-axis parts ready to be machined. Other configuration options include aluminum tombstones, double sided tombstones, as well as drive configurations designed for your specific machining needs. needs. *There is no product on the market that offers this much flexibility combined with such close tolerances.*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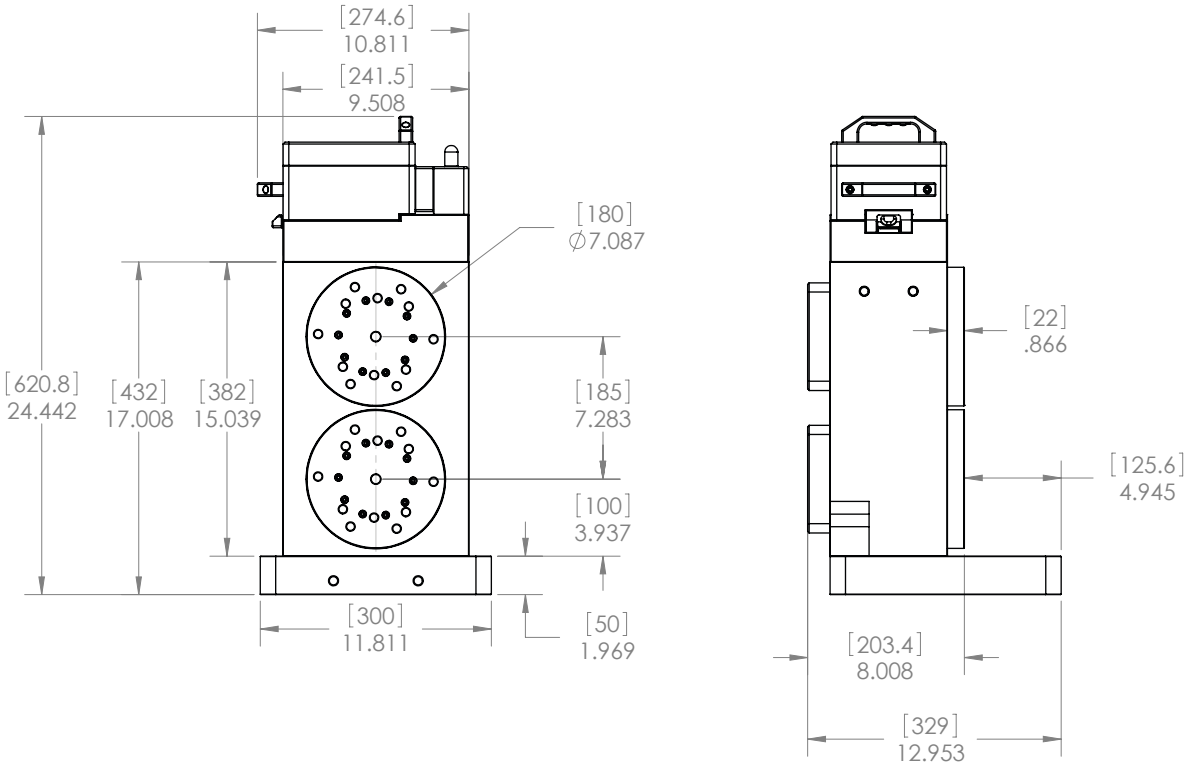
KME TOMBSTONE MECHANICAL DRAWINGS

KME-TS-300-2-0

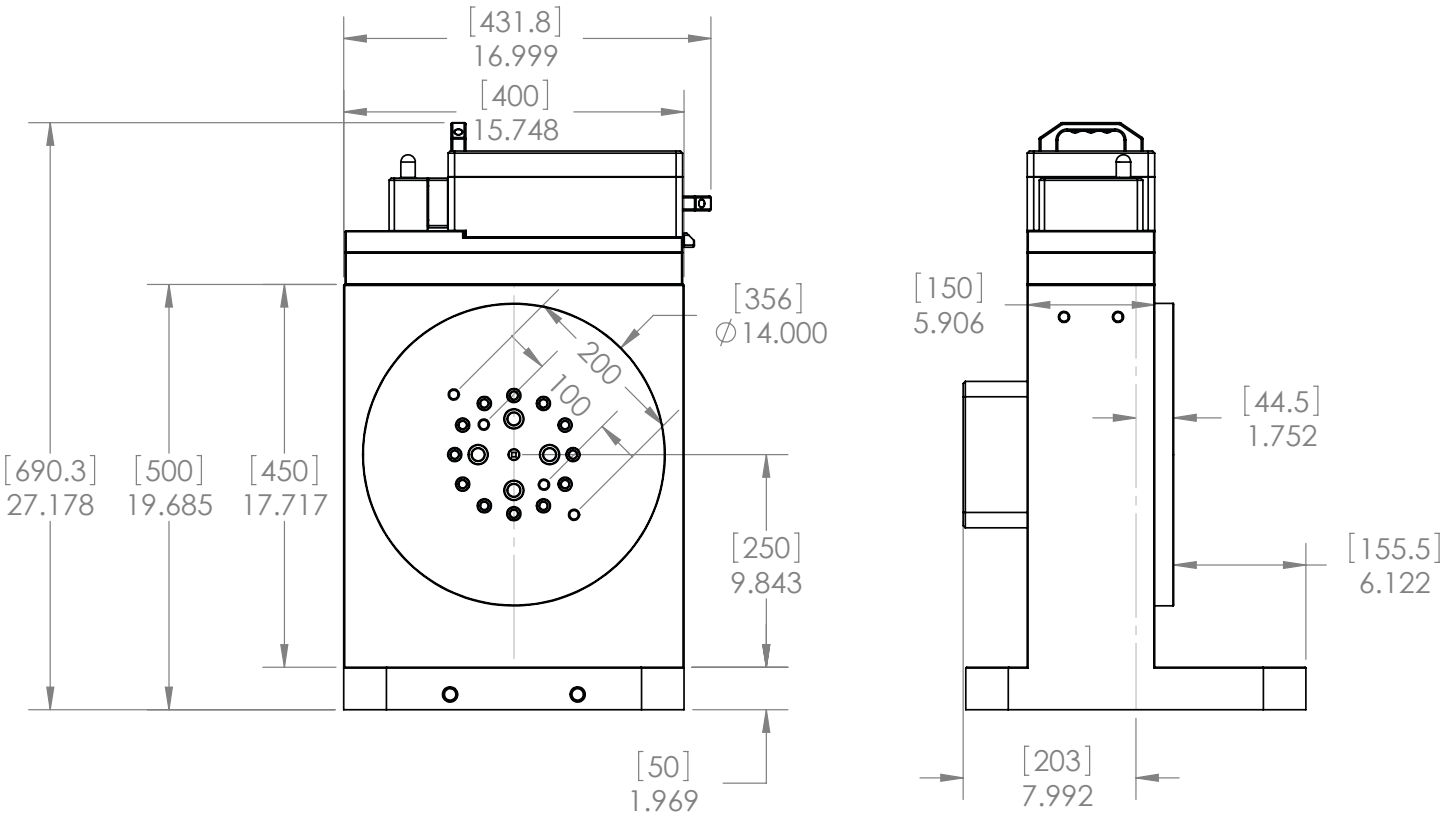


Models

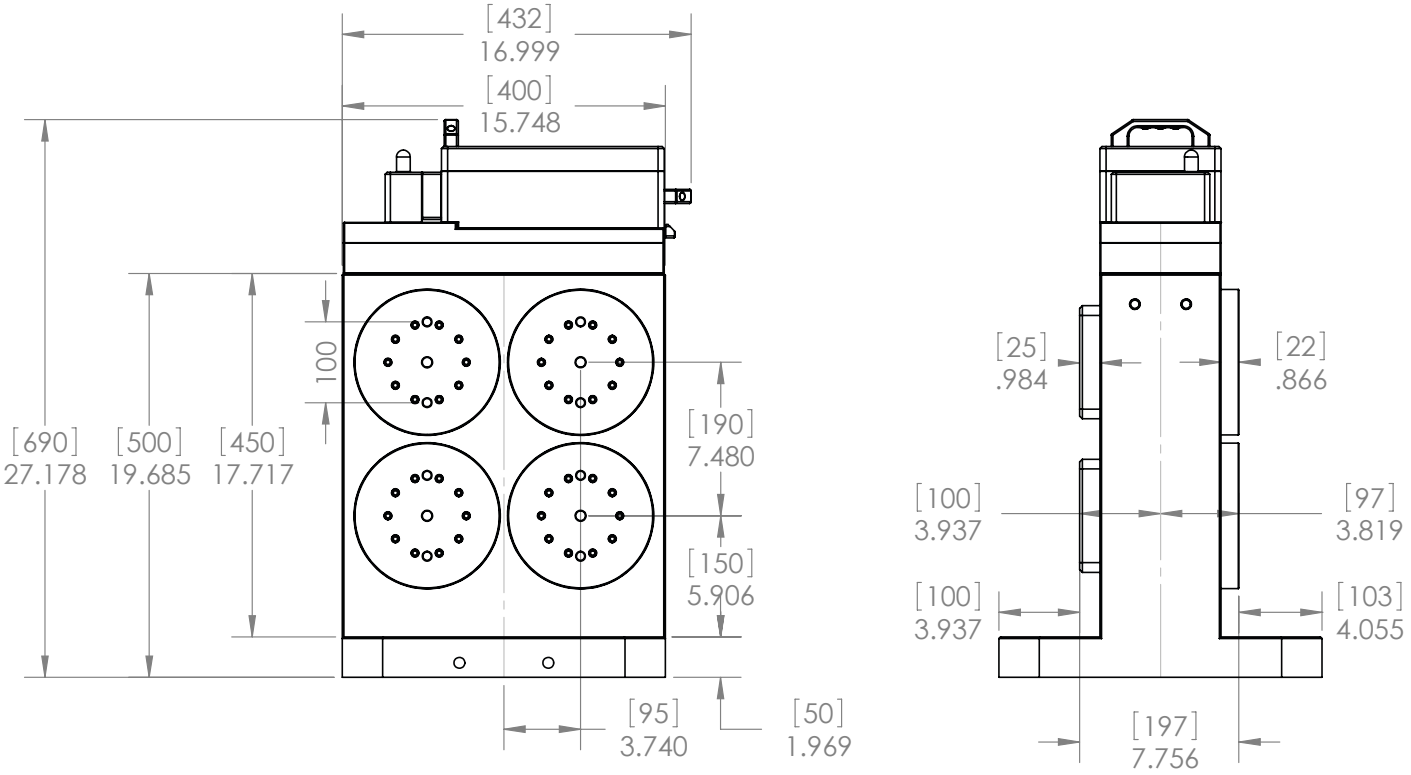
300mm 2-0

Part #	**KME-TS300-2-0**
Resolution	0.0018º
Max Rotation/Step	999.999º
Max Holding Torque	300 ft-lb / 339 N-m
Rotating Torque	45 ft-lb / 61 N-m
Side Load Torque	1250 ft-lb / 339 N-m
Accuracy	±10 Arc Sec
Repeatability	±5 Arc Sec
Gear Ratio	100:1
Max Part Size	5” (127mm)
Max Part Weight	40 lbs
Construction	Meehanite Cast Iron
Faceplate Diameter	135mm
Base Size	300mm Tombstone
Height (Tombstone)	595mm
Signal	Single M-Code Function
Approx. Weight	290 lbs

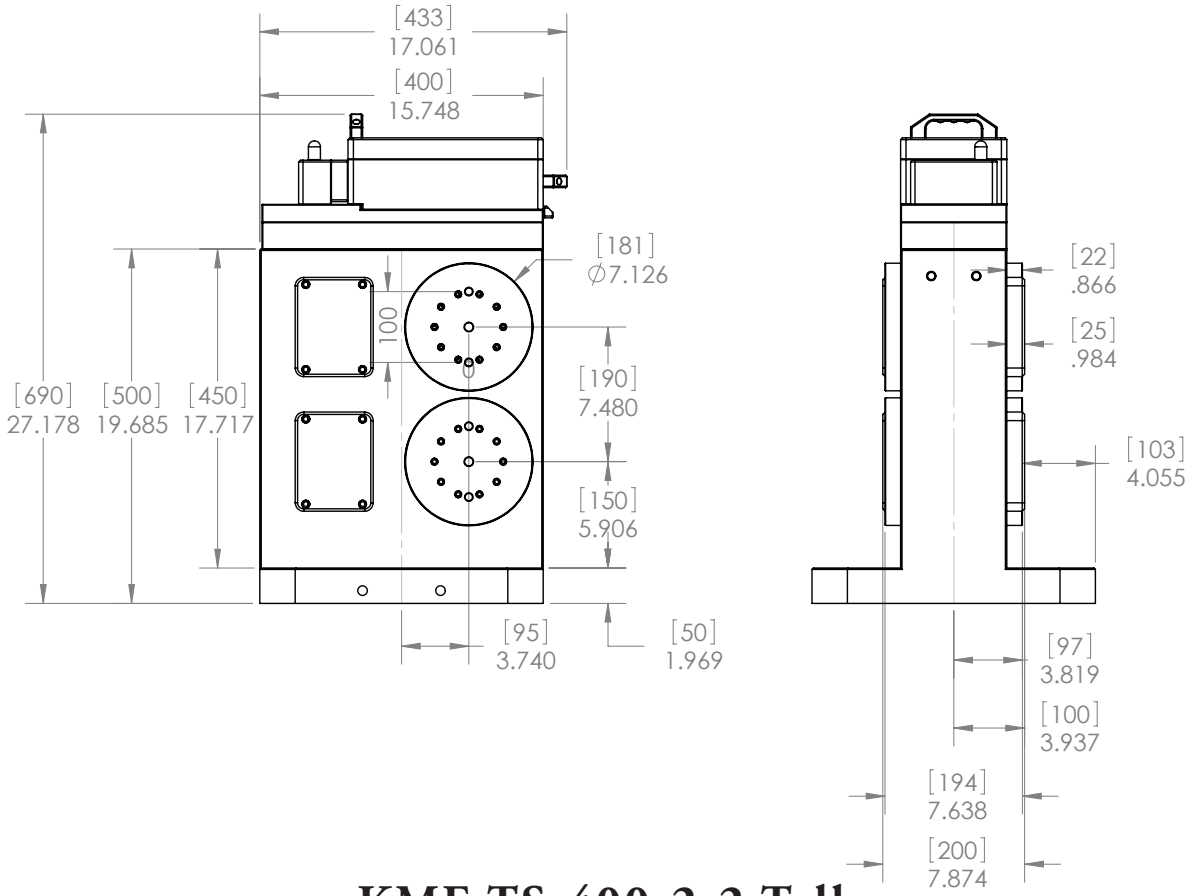
KME-TS-400-1-0 Offset; Tall available



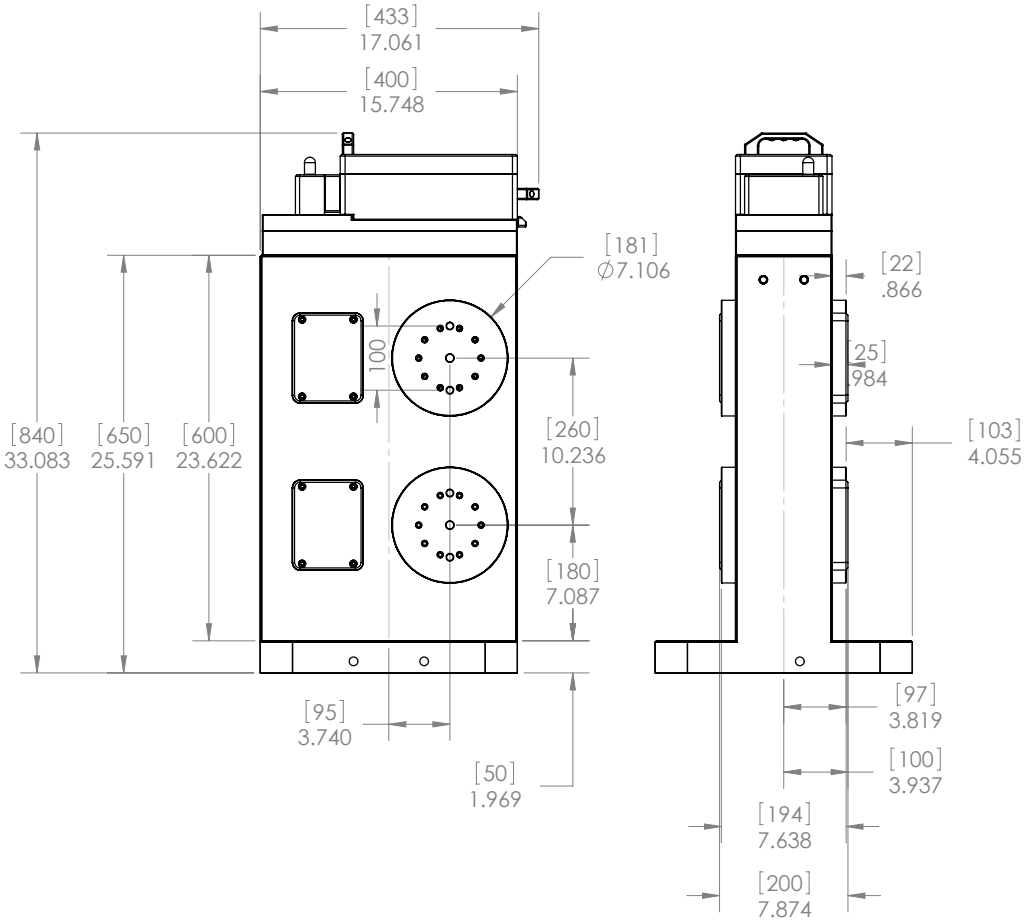
KME TS-400-4-0 Standard; Tall & Offset available



KME TS-400-2-2 Standard

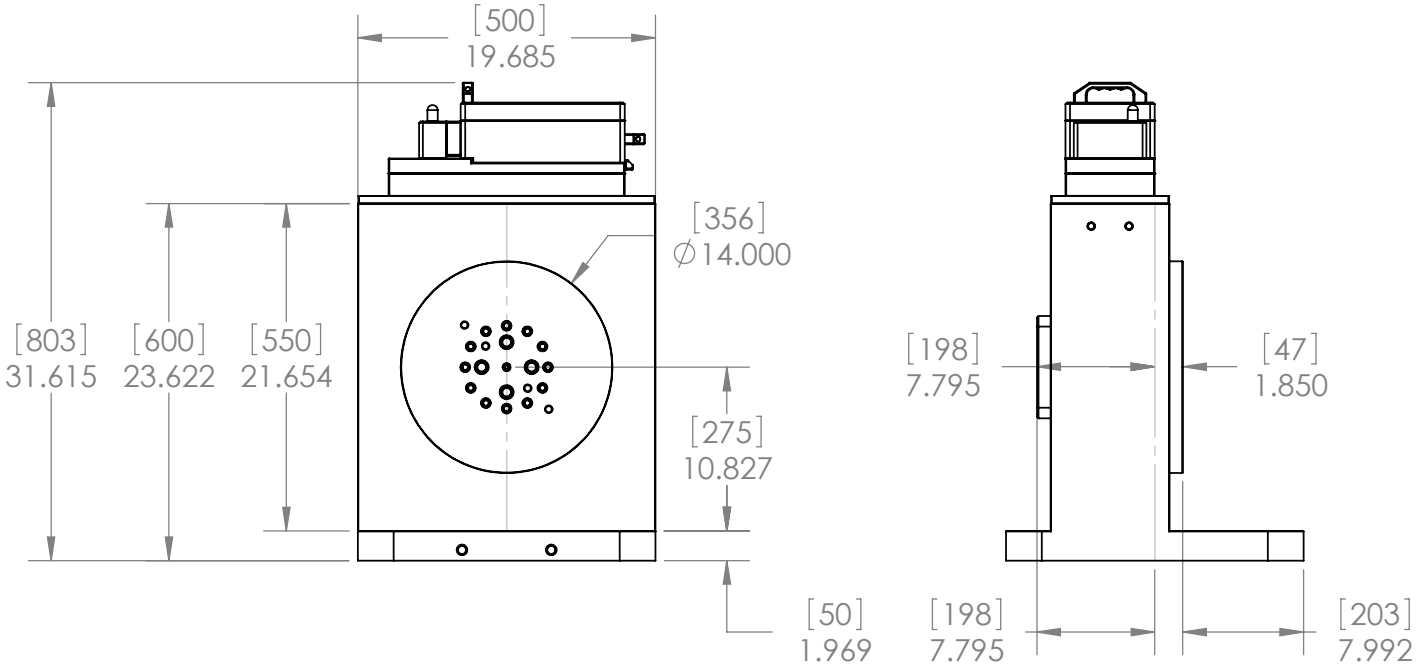


KME TS-400-2-2 Tall

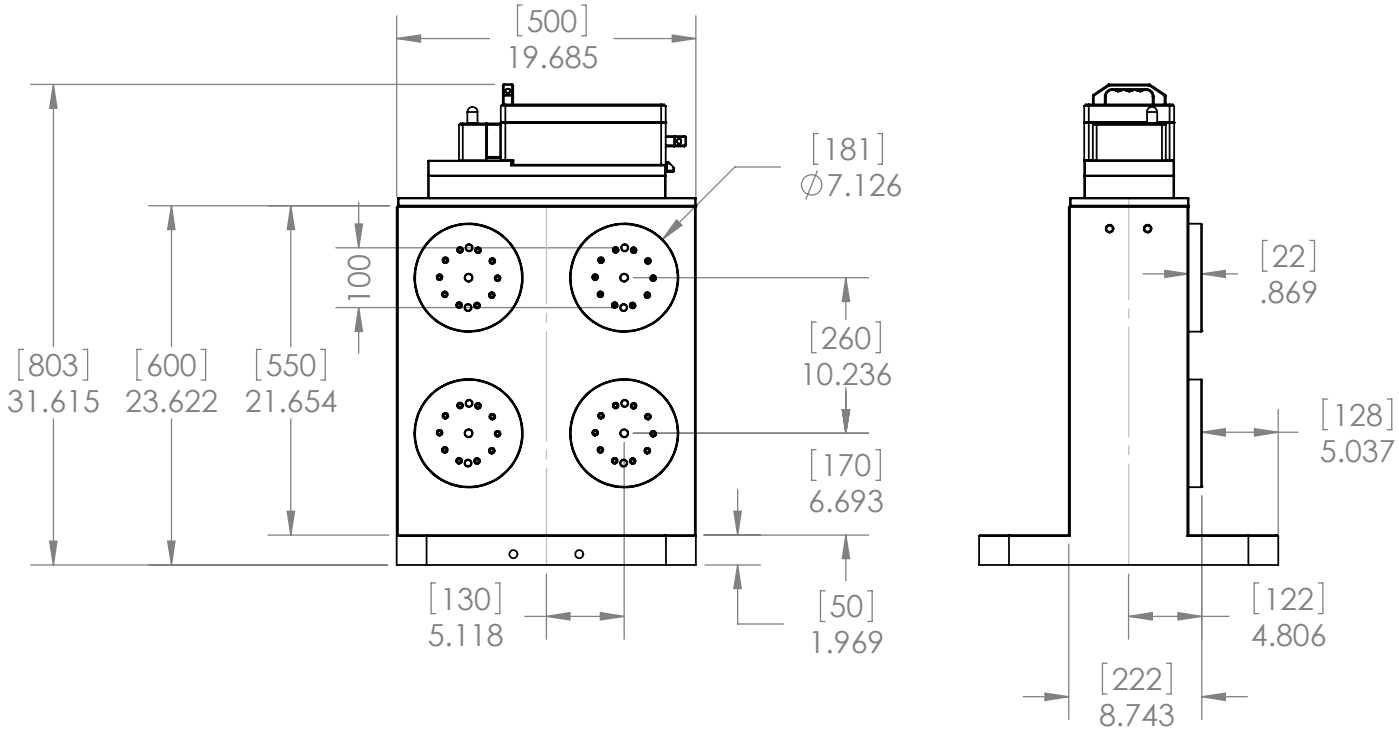


Models	KME-TS500-4-0 & 2-2 TALL	KME-TS400-1-1 & 2-0	KME-TS400-4-0 & 2-2	KME-TS400-4-0 & 2-2 TALL	KME-TS400-4-0 & 2-2 OFFSET
Resolution	0.0018º	0.0018º	0.0018º	0.0018º	0.0018º
Max Rotation/Step	999.999º	999.999º	999.999º	999.999º	999.999º
Max Holding Torque	750 ft-lb / 407 N-m	300 ft-lb / 407 N-m	300 ft-lb / 407 N-m	300 ft-lb / 407 N-m	300 ft-lb / 407 N-m
Rotating Torque	65 ft-lb / 88 N-m	45 ft-lb / 61 N-m	45 ft-lb / 61 N-m	45 ft-lb / 61 N-m	45 ft-lb / 61 N-m
Side Load Torque	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m
Accuracy	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec
Repeatability	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec
Gear Ratio	100:1	100:1	100:1	100:1	100:1
Max Part Size	12” (304.8mm)	7” (177.8mm)	7” (177.8mm)	7” (177.8mm)	7” (177.8mm)
Max Part Weight	140 lbs	100 lbs	100 lbs	100 lbs	100 lbs
Construction	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron
Faceplate Diameter	355mm	180mm	180mm	180mm	180mm
Base Size	400mm Tombstone	400mm Tombstone	400mm Tombstone	400mm Tombstone	400mm Tombstone
Height (Tombstone)	690mm	690mm	690mm	840mm	690mm
Signal	Single M-Code Function	Single M-Code Function	Single M-Code Function	Single M-Code Function	Single M-Code Function
Approx. Weight	425 lbs	440 lbs	450 lbs	450 lbs	450 lbs

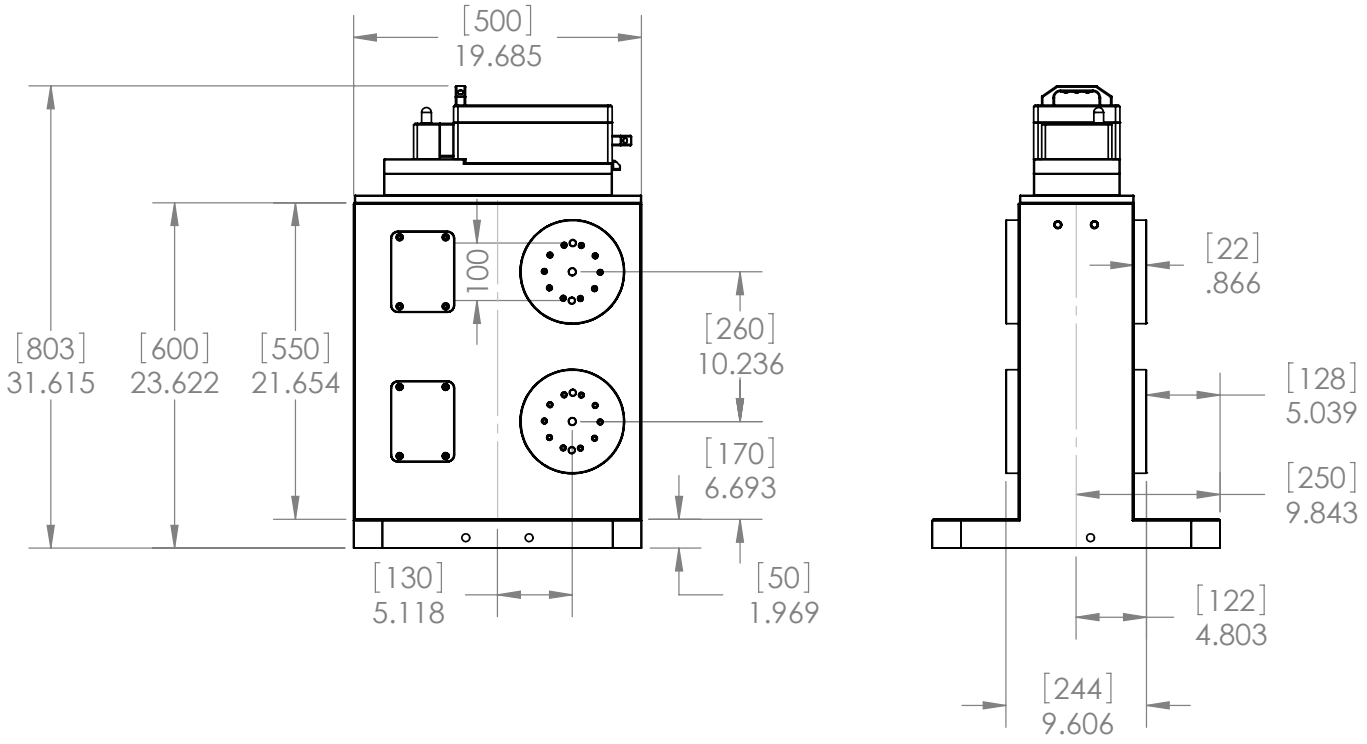
KME TS-500-1-0 Offset; Tall available



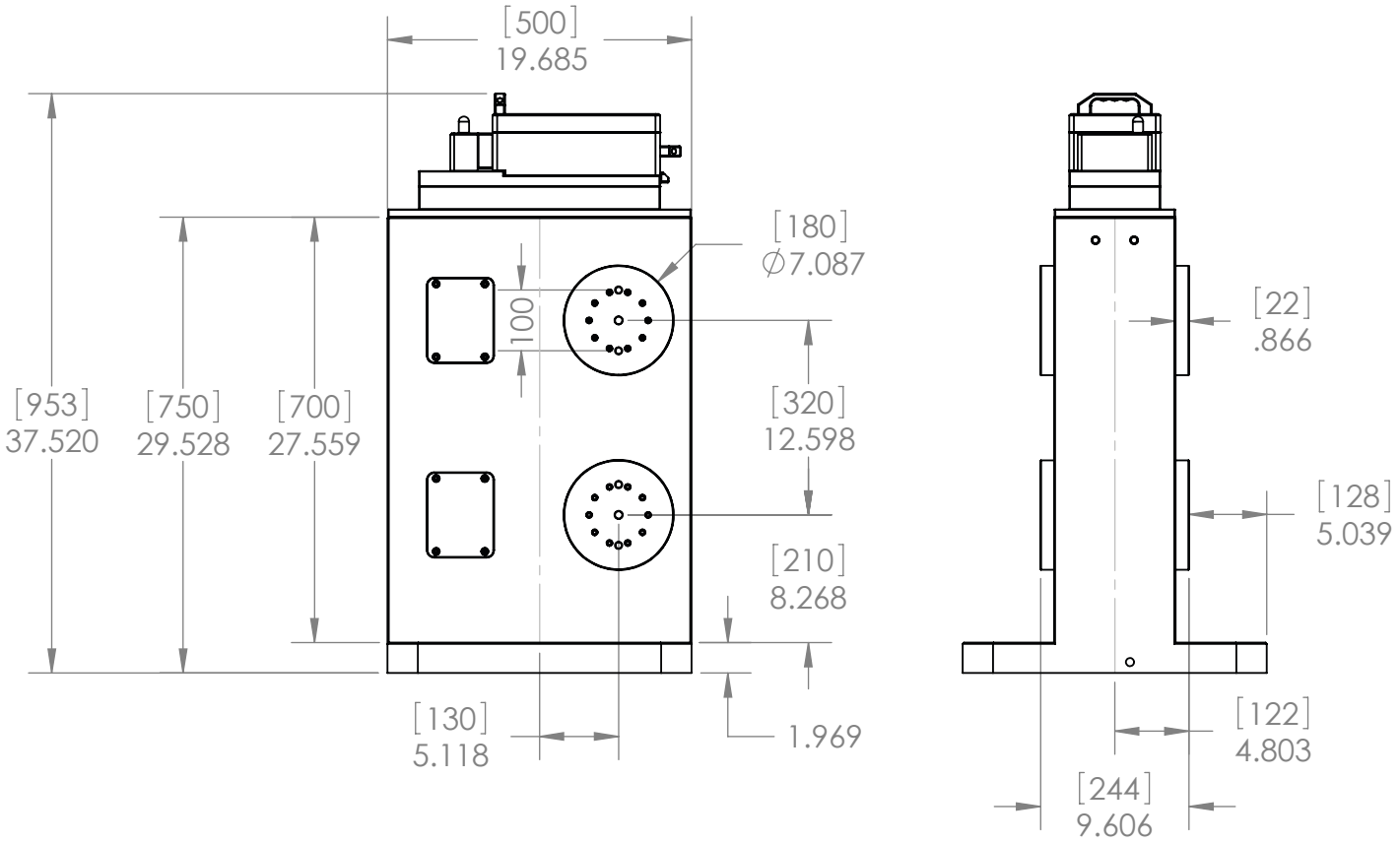
KME-TS-500-4-0; Tall & Offset available



KME TS-500-2-2 Standard

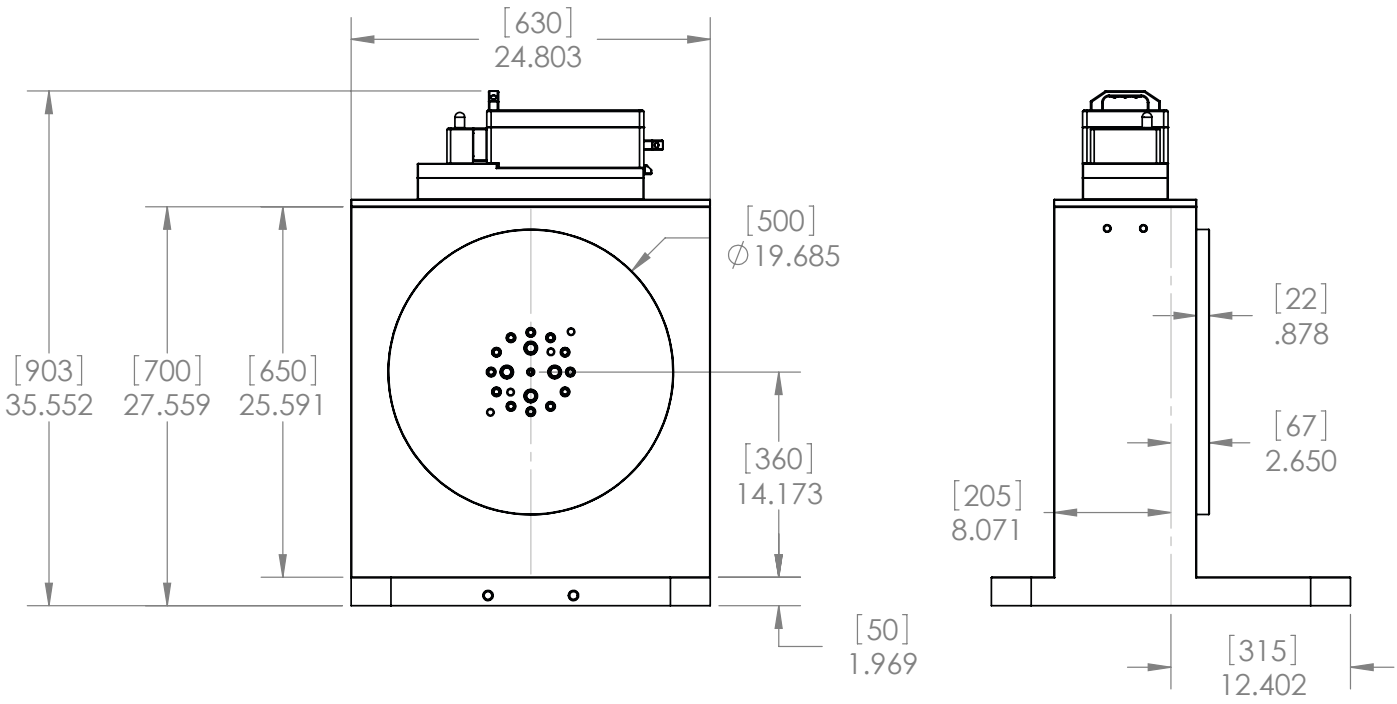


KME-TS-500-2-2 Tall

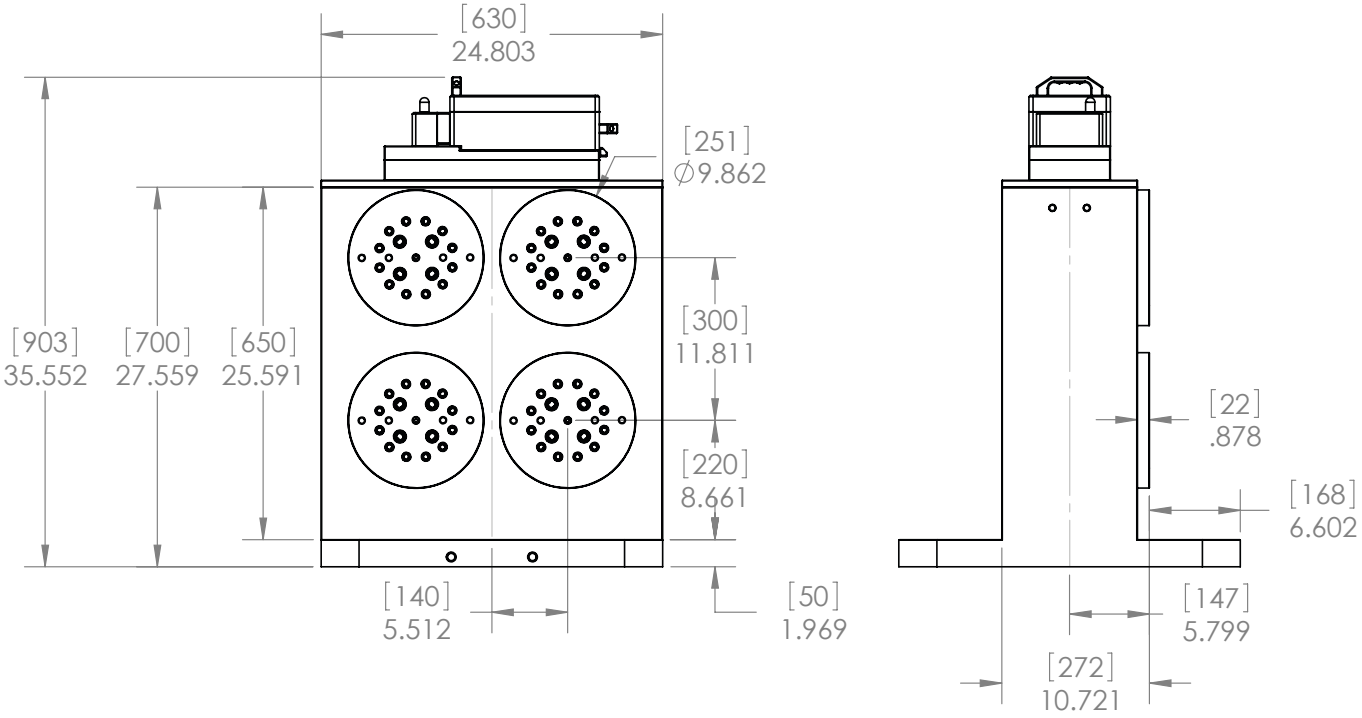


Models	KME-TS500-1-0 OFFSET	KME-TS500-1-1 & 2-0 (50-32)	KME-TS500-1-1 & 2-0 (72-50)	KME-TS500-4-0 & 2-2	KME-TS500-4-0 & 2-2 TALL
Resolution	0.0018º	0.0018º	0.0018º	0.0018º	0.0018º
Max Rotation/Step	999.999º	999.999º	999.999º	999.999º	999.999º
Max Holding Torque	750 ft-lb / 407 N-m	300 ft-lb / 407 N-m	750 ft-lb / 1017 N-m	300 ft-lb / 407 N-m	300 ft-lb / 407 N-m
Rotating Torque	65 ft-lb / 88 N-m	45 ft-lb / 61 N-m	65 ft-lb / 88 N-m	45 ft-lb / 61 N-m	45 ft-lb / 61 N-m
Side Load Torque	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m
Accuracy	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec
Repeatability	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec
Gear Ratio	100:1	100:1	100:1	100:1	100:1
Max Part Size	16” (406mm)	9” (229mm)	12” (304.8mm)	9” (228.6mm)	9” (228.6mm)
Max Part Weight	140 lbs	100 lbs	140 lbs	100 lbs	100 lbs
Construction	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron
Faceplate Diameter	TS	180mm	250mm	180mm	180mm
Base Size	500mm Tombstone	500mm Tombstone	500mm Tombstone	500mm Tombstone	500mm Tombstone
Height (Tombstone)	803mm	803mm	803mm	803mm	953mm
Signal	Single M-Code Function	Single M-Code Function	Single M-Code Function	Single M-Code Function	Single M-Code Function
Approx. Weight	640 lbs	640 lbs	650 lbs	650 lbs	650 lbs

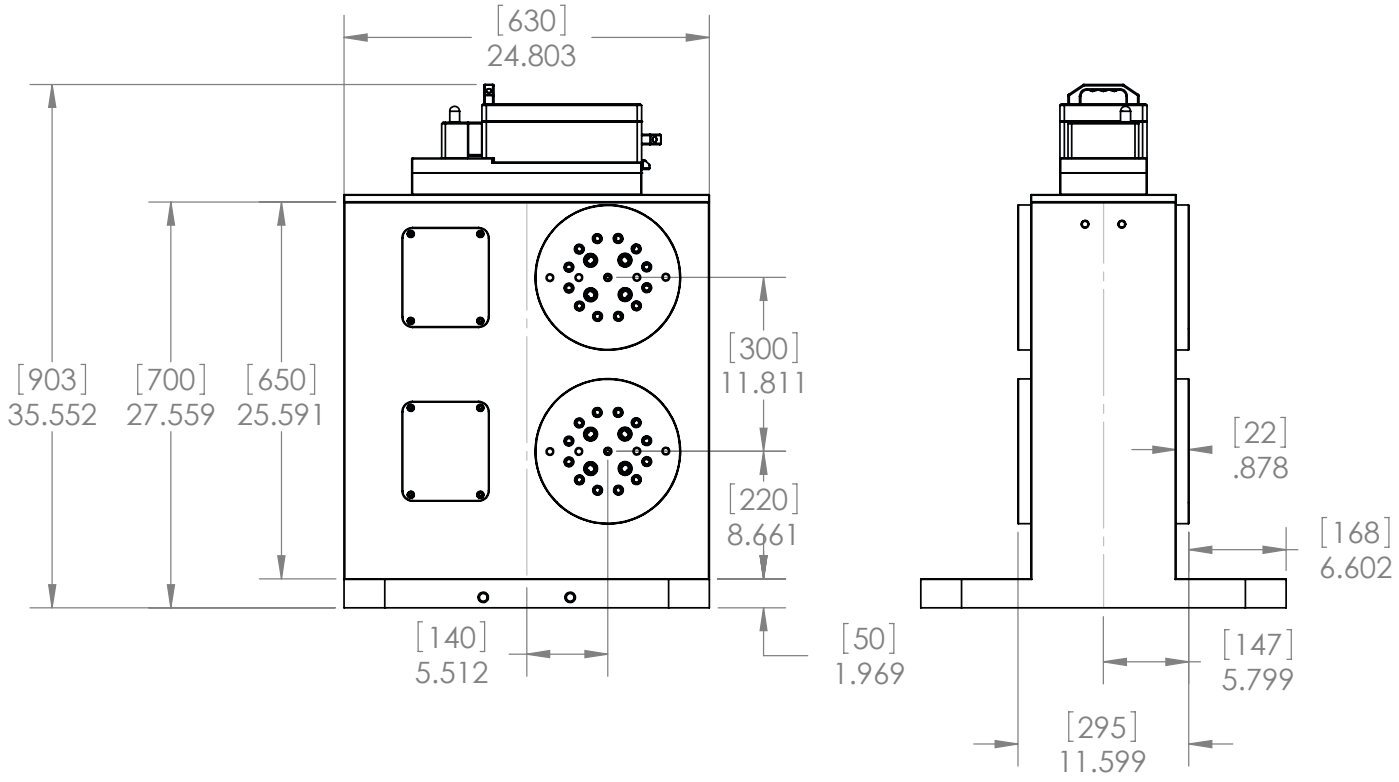
KME-TS-630-1-0 Offset; Tall available



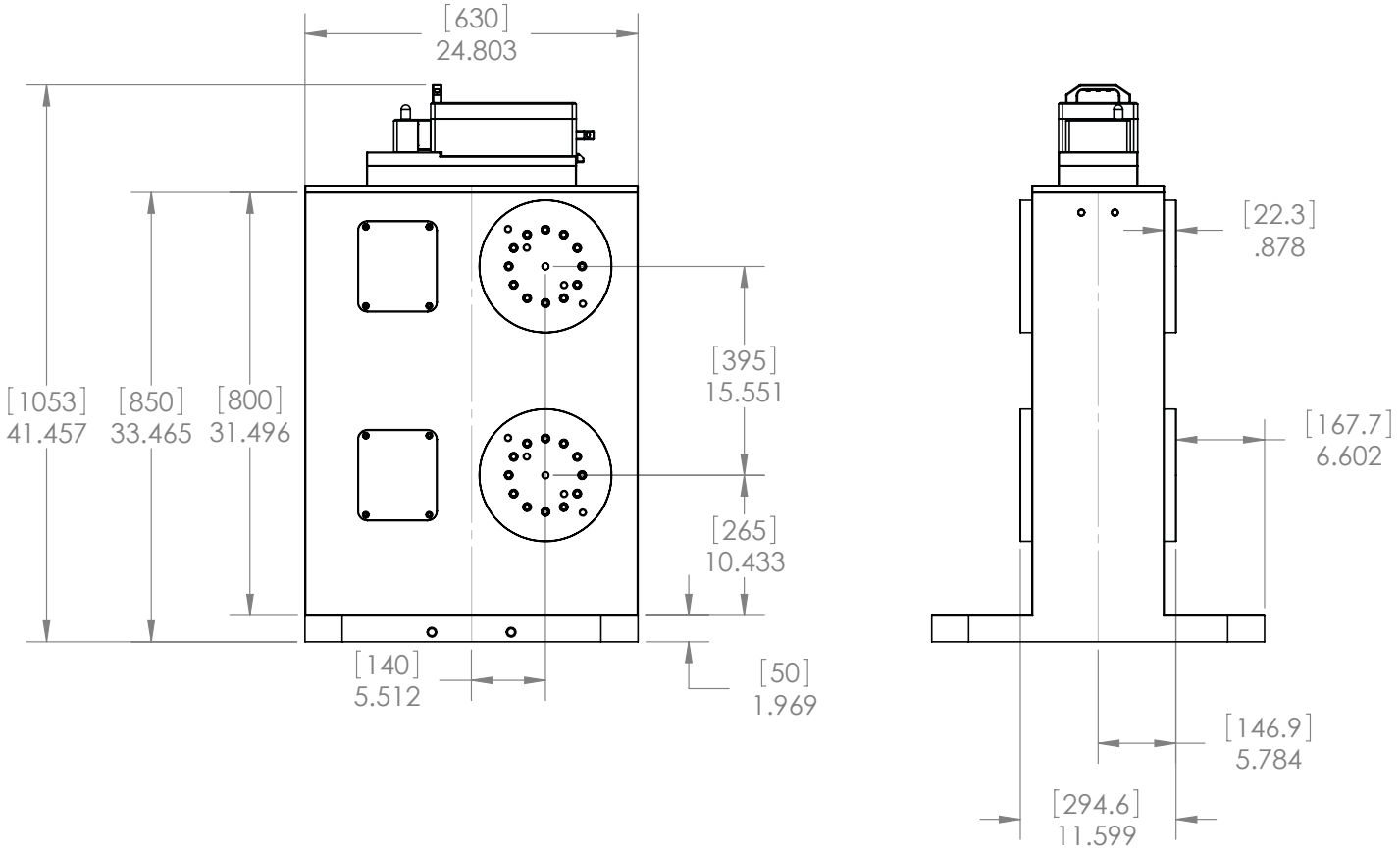
KME-TS-630-4-0; Tall & Offset available



KME-TS-630-2-2 Standard & Offset available



KME-TS-630-2-2; Tall & Offset available



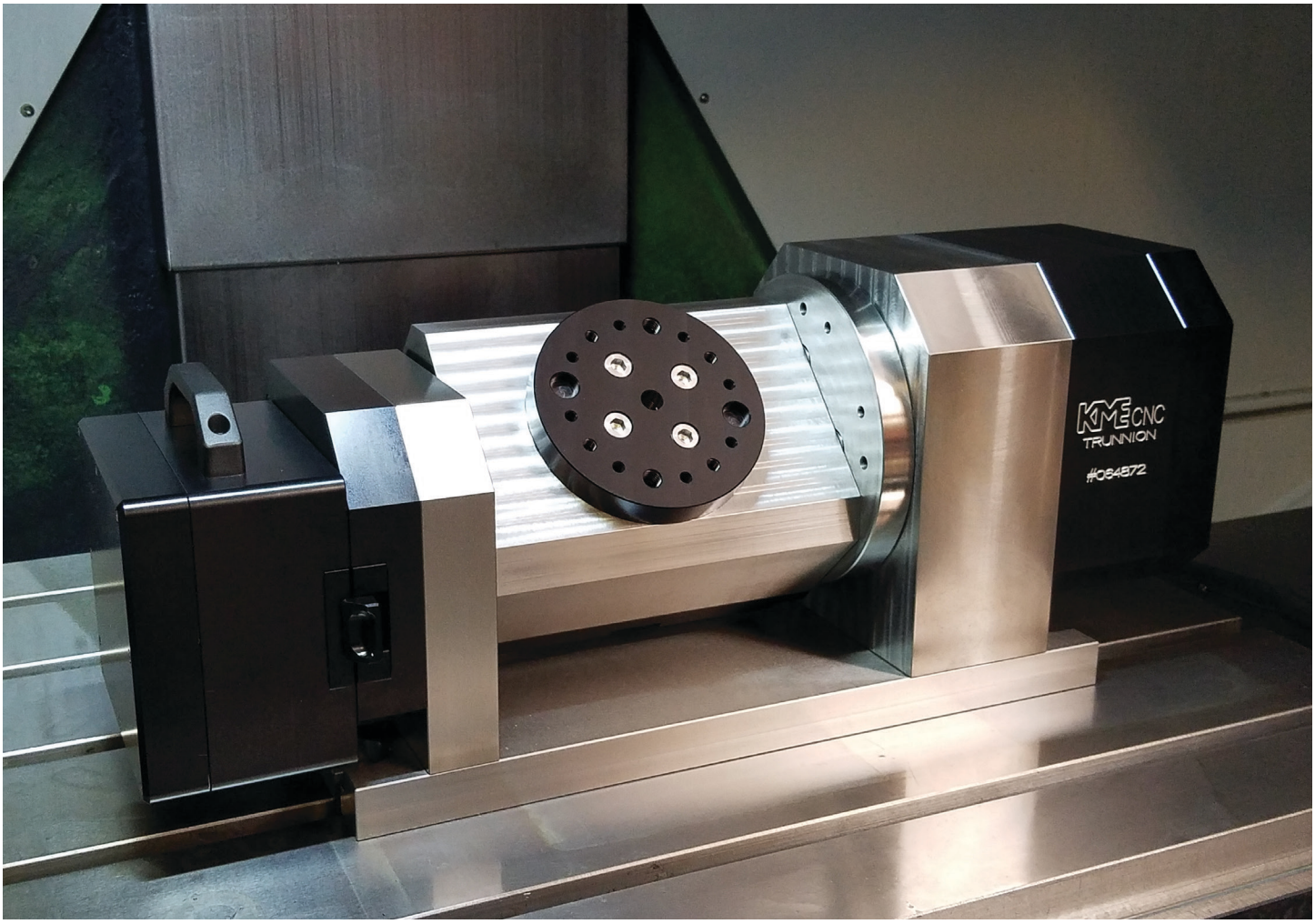
Models	KME-TS630-1-0 OFFSET	KME-TS630-1-1 & 2-0	KME-TS630-4-0 & 2-2
Resolution	0.0018º	0.0018º	0.0018º
Max Rotation/Step	999.999º	999.999º	999.999º
Max Holding Torque	750 ft-lb / 1017 N-m	750 ft-lb / 1017 N-m	750 ft-lb / 1017 N-m
Rotating Torque	65 ft-lb / 88 N-m	65 ft-lb / 88 N-m	65 ft-lb / 88 N-m
Side Load Torque	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m	1250 ft-lb / 1627 N-m
Accuracy	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec
Repeatability	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec
Gear Ratio	100:1	100:1	100:1
Max Part Size	16” (406mm)	12” (304.8mm)	12” (304.8mm)
Max Part Weight	140 lbs	140 lbs	140 lbs
Construction	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron
Faceplate Diameter	355mm	250mm	250mm
Base Size	630mm Tombstone	630mm Tombstone	630mm Tombstone
Height (Tombstone)	903mm	903mm	903mm
Signal	Single M-Code Function	Single M-Code Function	Single M-Code Function
Approx. Weight	1040 lbs	1025 lbs	1050 lbs

THE WORLD'S FIRST WIRELESS TRUNNION

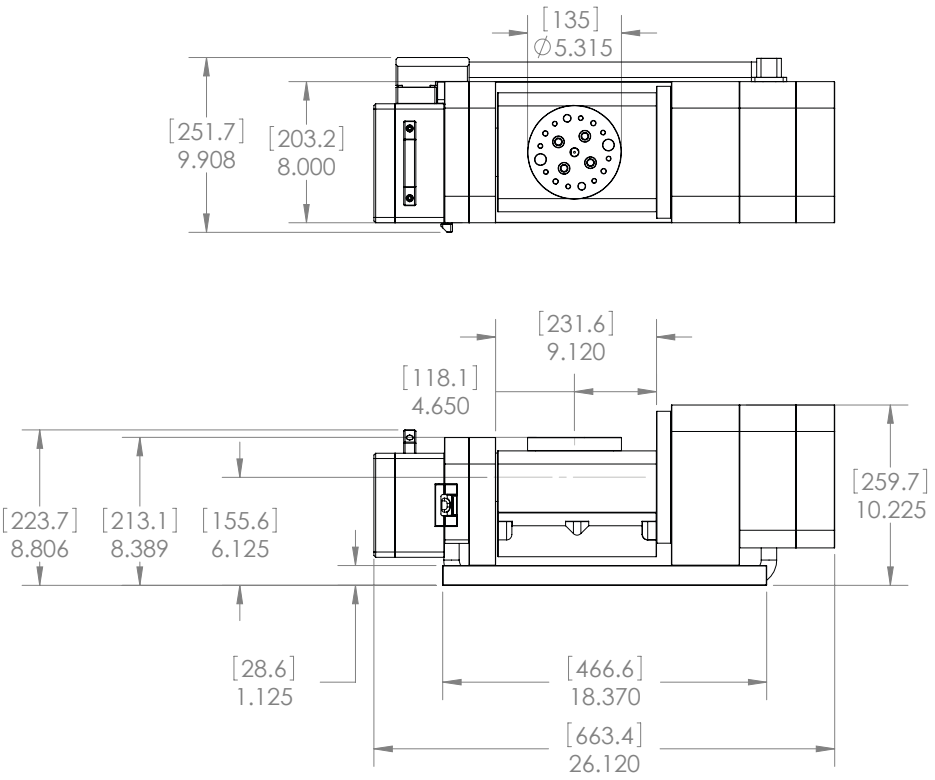
Constructed similarly to the standard trunnion, this compact unit is built out of Meehanite cast iron and billet aluminum covers and provides the same benefits. With its compact size it allows the operator to integrate the table on virtually any machine. It is suitable for VMCs with palleting tables and job shops that have high rate changeovers.

FEATURES OF KME CV'S 5 AXIS WIRELESS TRUNNION

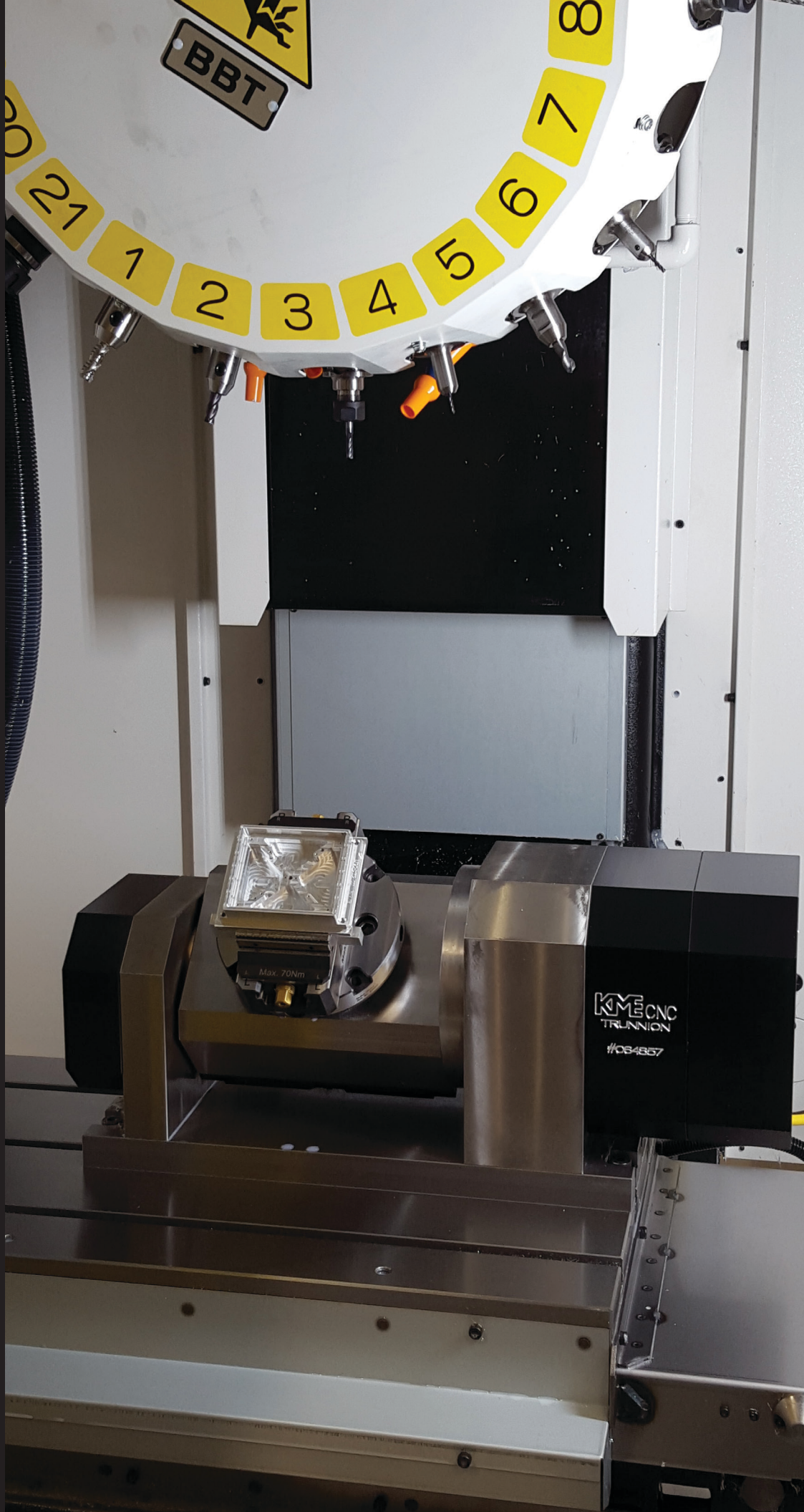
- Perfect application for palletizing VMC
- An easy to use system with no cables
- Ability to position parts for five sides machining
- Increasing operator's efficiency by reducing set up time
- Easy install on existing equipment with no additional drive cards
- Utilize existing space inside machine more efficiently
- Programmable directly through g-code
- Excellent dimensions for various machine sizes
- 250 ft/lbs of torque on C drive 600Ft/lbs on A drive
- 0 backlash for 10,000 hrs of continuous use



WIRELESS TRUNNION DRAWINGS & SPECIFICATIONS



Model	**Single Drive Trunnion**
Part #	**KME-TR100 RF**
Resolution	0.0018º
Max Rotation/Step	999.999º
Max Torque A Drive	750 ft-lb / 1017 N-m
Rotating Torque A Drive	65 ft-lb / 88 N-m
Max Torque C Drive	250 ft-lb / 339 N-m
Rotating Torque C Drive	45 ft-lb / 61 N-m
Side Load Torque C Drive	250 ft-lb / 339 N-m
Accuracy	±10 Arc Sec
Repeatability	±5 Arc Sec
Gear Ratio	100:1
Max Part Size	7” (177.8mm)
Max Part Weight / each C-Drive	45 lbs
Construction	Meehanite Cast Iron
Base Length	466.6mm
Faceplate Diameter	135mm
Centerline Height - C Drive	155.6mm
Signal	Single M-Code Function
Approx. Weight	220 lbs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KME CNC
TRUNNION
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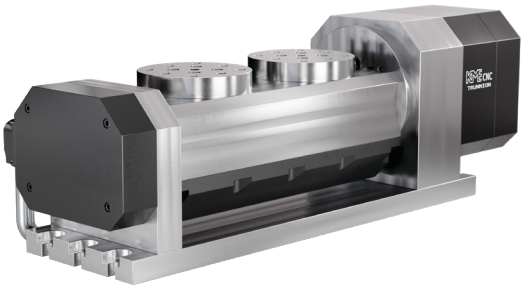
5 AXIS TRUNNIONS



KME CNC's 5-axis platters are built right into a precision rigid meehanite cast iron trunnion frame and table. Trunnions are designed specifically for Vertical Machining Centers. Our standard models come with one, two, or three independent 5-axis platters on the trunnion table, giving your VMC full-range production capability.

Custom 5-axis trunnions can be made to specific matching needs including different drive configurations, large or smaller sizes, less or more platters.

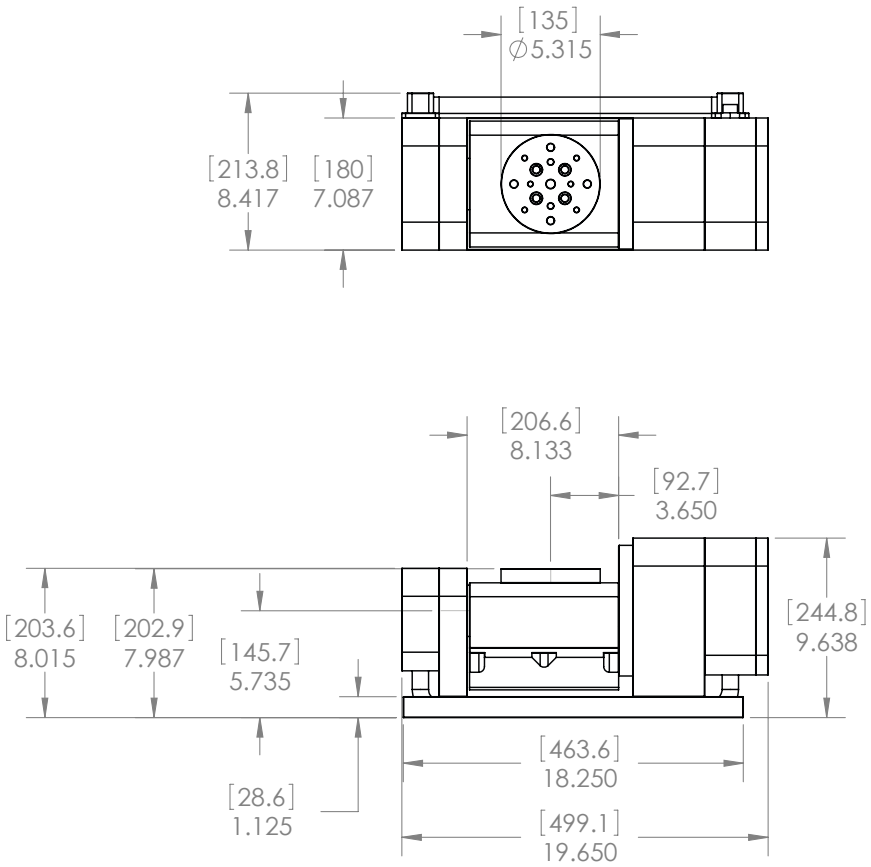
Yes, just like the 5-axis tombstones, KME CNC' trunnions are able to completely integrate with control systems. So you do not need to program the Transmitter/Receiver Module. Our units will work with direct g-code from your machine controls.

KME CNC can design a trunnion for your specific application. Large or Small parts are not a problem!
KME CNC's trunnions have the lowest platter height in the industry, with 7.87" from table to platter, allowing maximum Z height clearance. KME CNC can also manufacture trunnions with larger platters, depending on customers' specific needs.

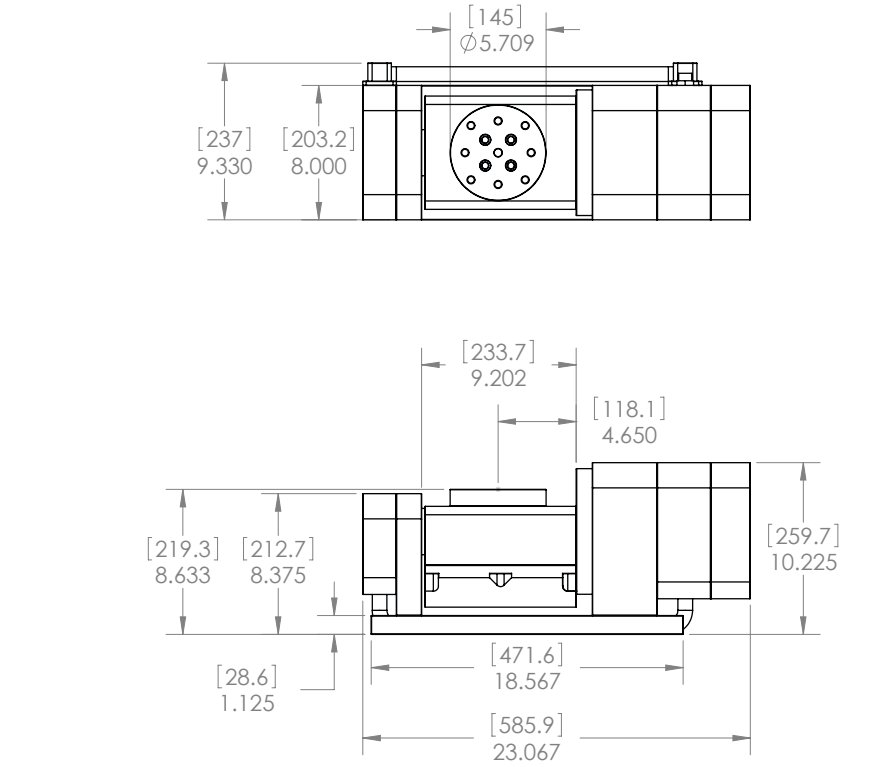
Models	Single Drive Trunnion Small	Single Drive Trunnion	Single Drive Trunnion Large	Dual Drive Trunnion Large
Part Number	**KME-TR100S**	**KME-TR100/TR200/TR300**	**KME-TR100X/TR200X/TR300X**	**KME-TR100XL/TR200XL/TR300XL**
Resolution	0.0018º	0.0018º	0.0018º	0.0018º
Max Rotation/Step	999.999º	999.999º	999.999º	999.999º
Max Torque A Drive	300 ft-lb / 407 N-m	750 ft-lb / 1017 N-m	750 ft-lb / 1017 N-m	900 ft-lb / 1017 N-m
Rotating Torque A Drive	45 ft-lb / 61 N-m	65 ft-lb / 88 N-m	65 ft-lb / 88 N-m	65 ft-lb / 88 N-m
Max Torque C Drive	250 ft-lb / 339 N-m	250 ft-lb / 339 N-m	300 ft-lb / 407 N-m	600 ft-lb / 813.49 N-m
Rotating Torque C Drive	45 ft-lb / 61 N-m	45 ft-lb / 61 N-m	45 ft-lb / 61 N-m	45 ft-lb / 61 N-m
Side Load Torque C Drive	250 ft-lb / 339 N-m	250 ft-lb / 339 N-m	300 ft-lb / 407 N-m	1250 ft-lb / 1627 N-m
Accuracy	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec
Repeatability	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec
Gear Ratio	100:1	100:1	100:1	100:1
Max Part Size	7" (177.8mm)	7" (177.8mm)	8.5" (215.9mm)	8.5" (215.9mm)
Construction	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron
Base Length	463.55mm	466.60mm	503.55mm	730.25mm
Faceplate Diameter	135mm	135mm	190mm	190mm
Centerline Height - C Drive	145.7mm	155.6mm	184.8mm	184.8mm
Signal	Single M-Code Function	Single M-Code Function	Single M-Code Function	Single M-Code Function
Approximate Weight	180 lbs	200 lbs / 256lbs / 420lbs	278 lbs / 368lbs / 420lbs	358 lbs / 448lbs / 568lbs

KME TRUNNION MECHANICAL DRAWINGS

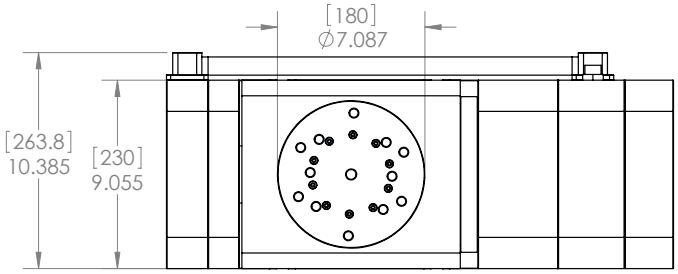
KME-TR-100S

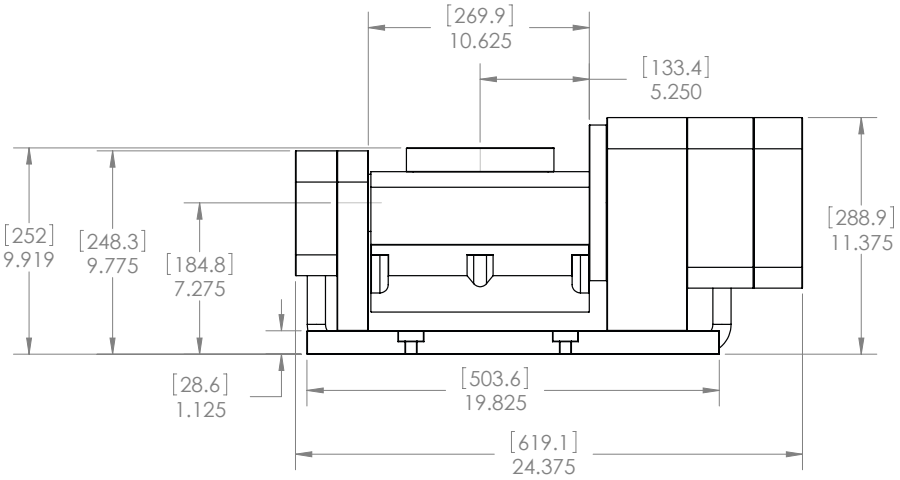


KME-TR-100

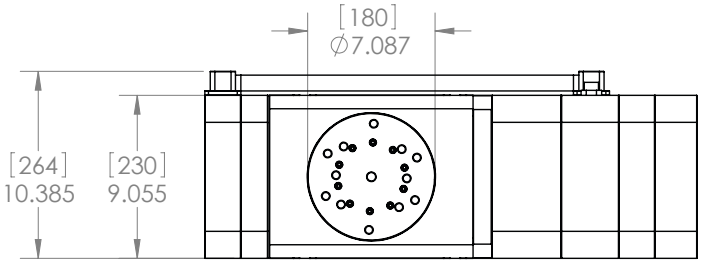


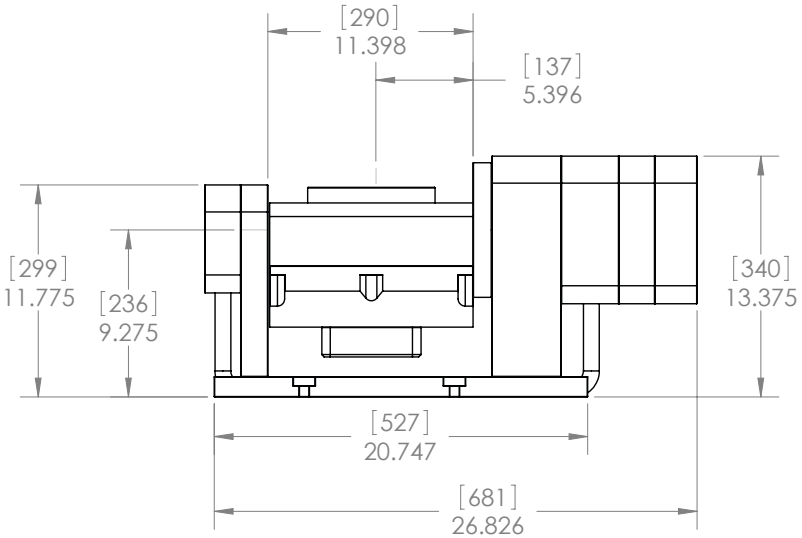
KME-TR-100X





KME-TR-100XL





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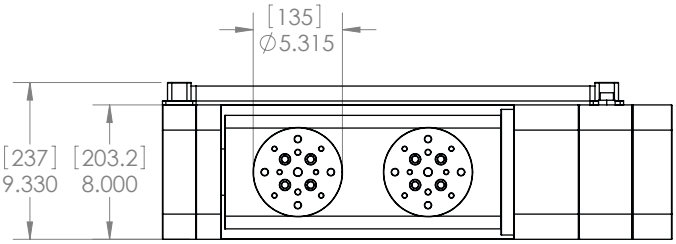

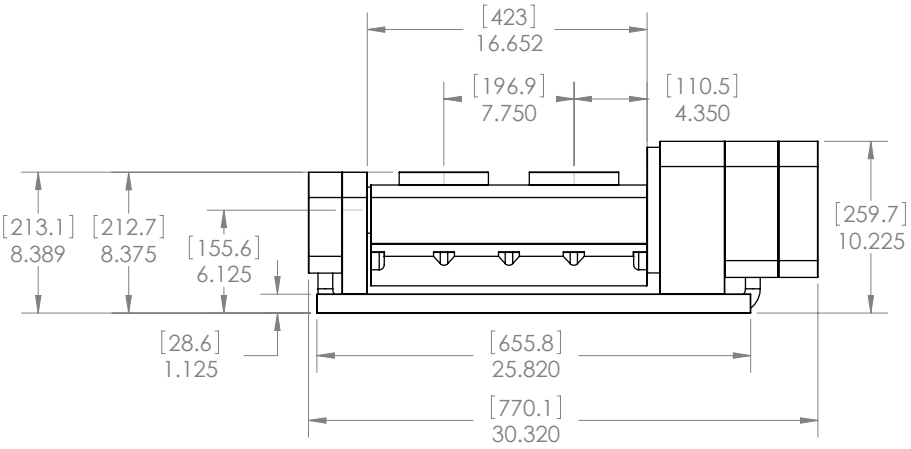

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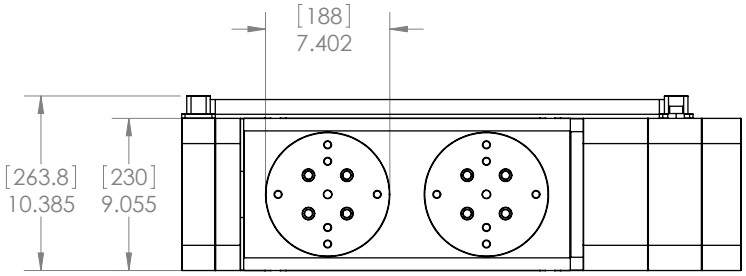
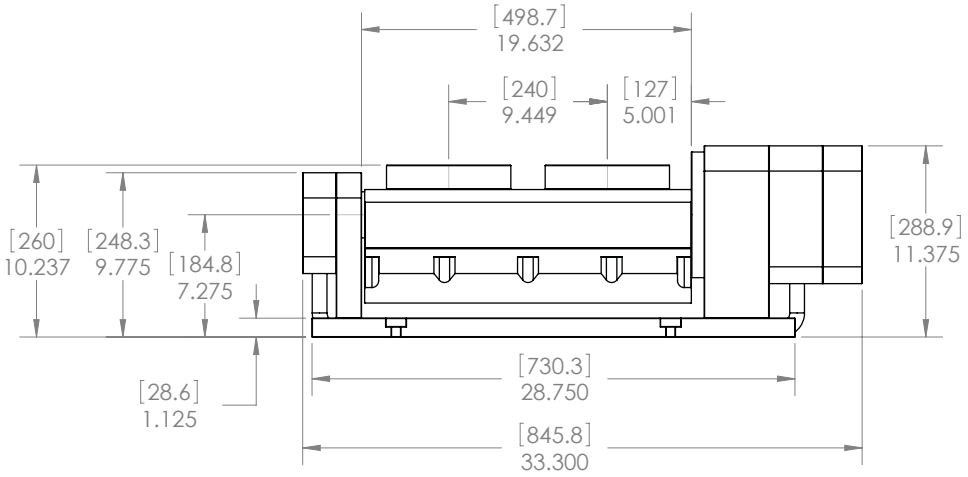
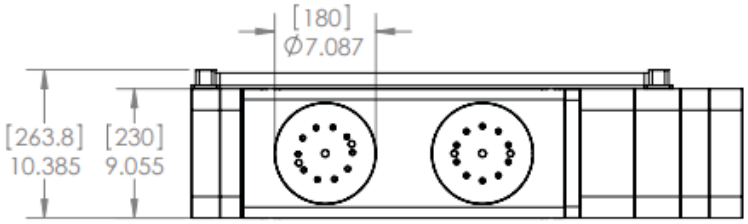
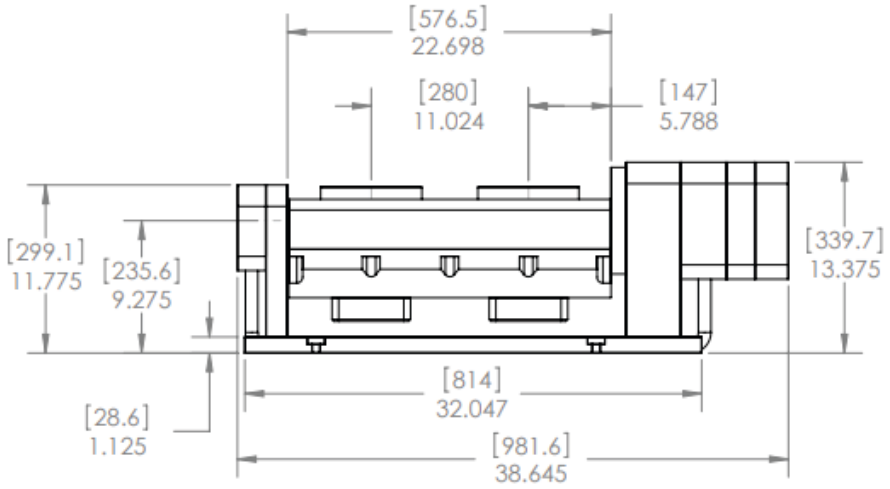


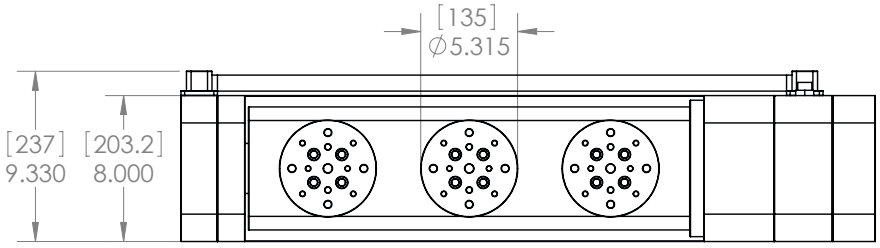


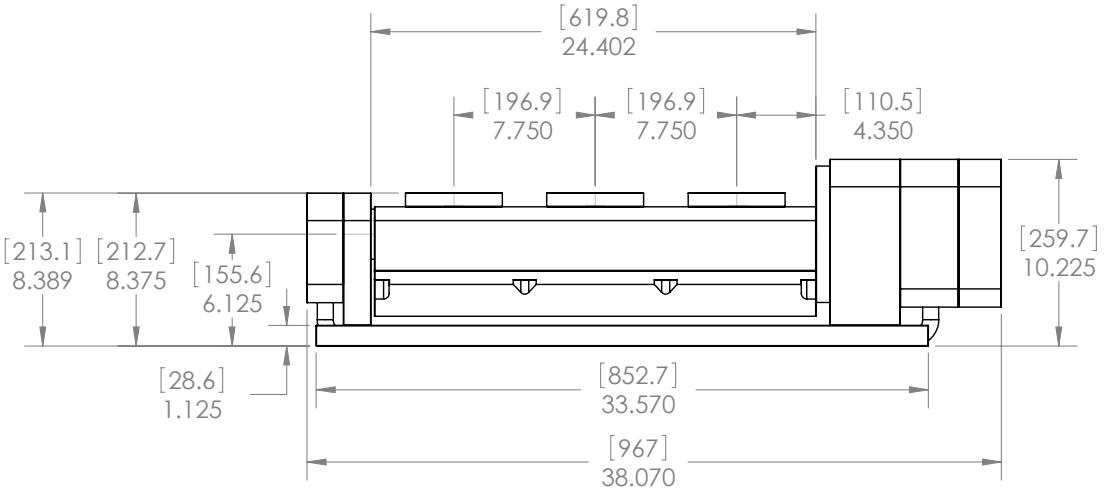
KME-TR-200XL High Torque



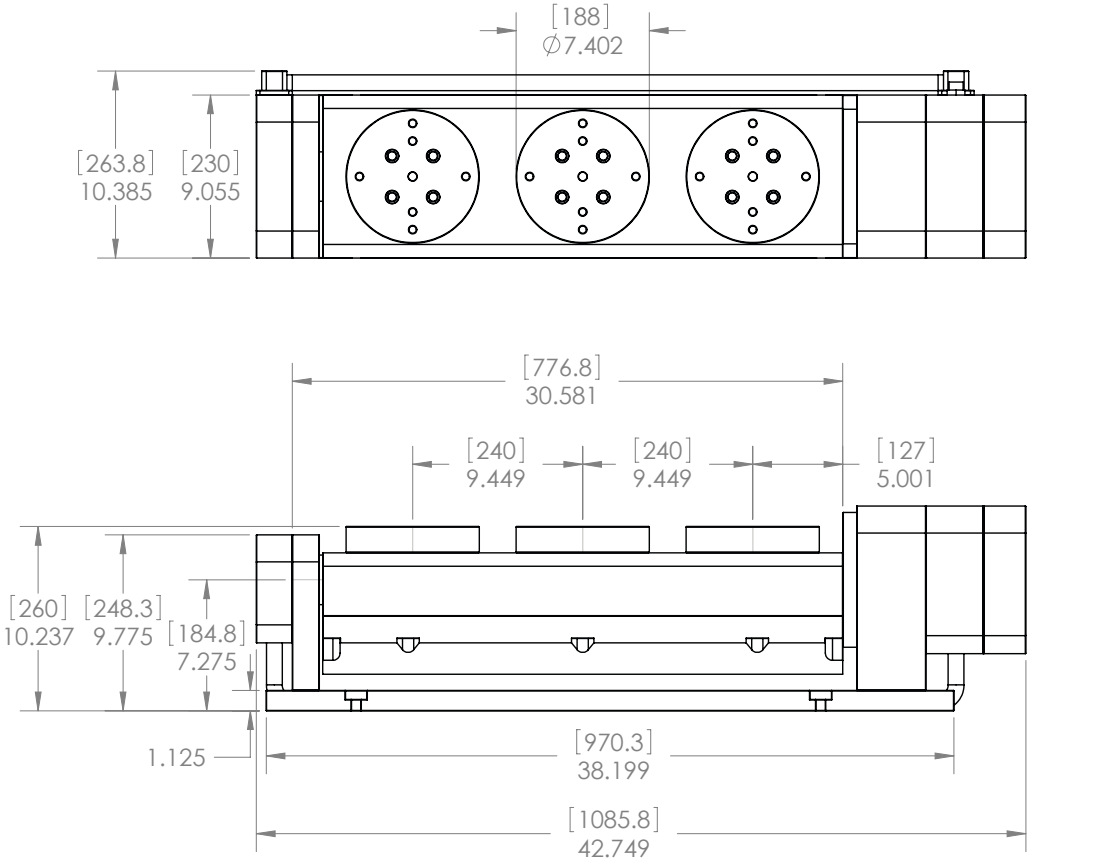


KME-TR-300

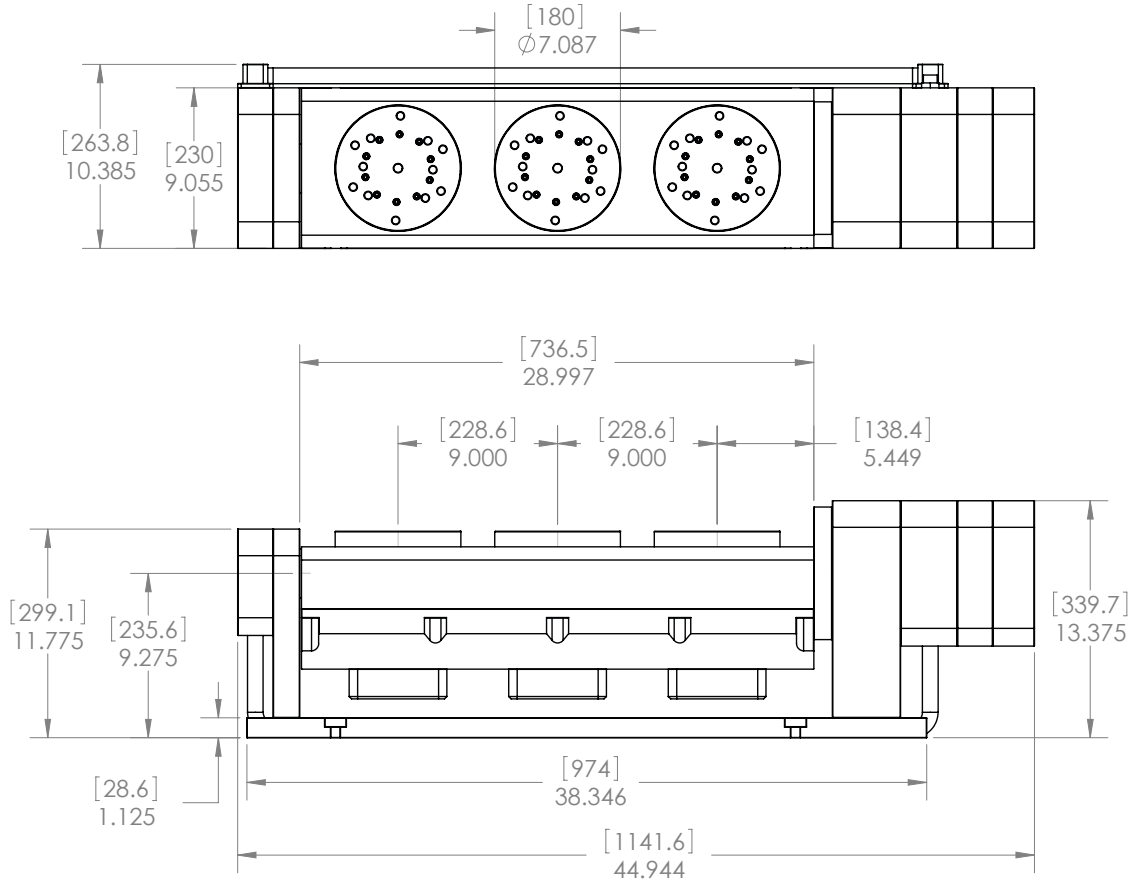




KME –TR-300X



KME –TR-300XL



KME INDEXERS

Engineered to tailor complex machining needs, KME's rotary tables can easily integrate with your vertical machining centers. It can turn your vertical machining centers from 3rd axis into 4th, or 4th into a 5th by simply mounting the rotary table right on any pallet.

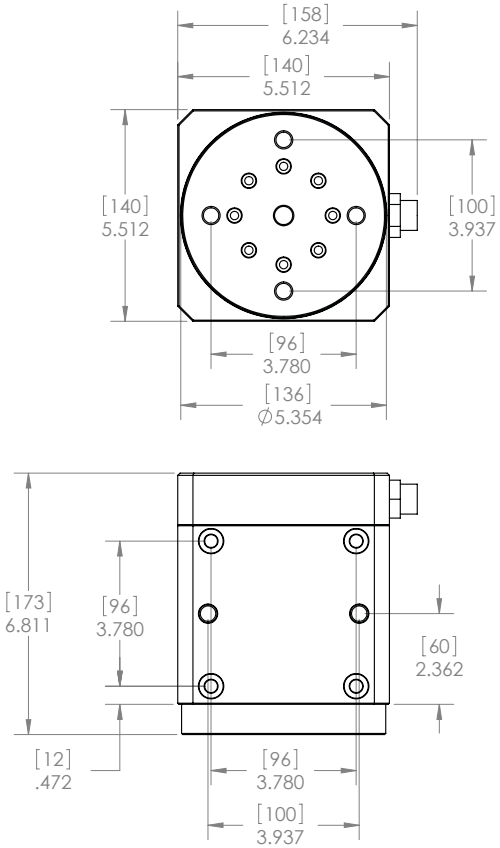
With the rigid build, a solid meehanite cast body frame, to the tremendous torque capacity (250 ft-lbs), this little compact unit has a torque rating that is unmatchable. Its compact size allows it to be used in numerous applications and with its seamless interface, you will find this rotary table to be a simple plug-and-play!

All KME indexers have the option of becoming wireless.

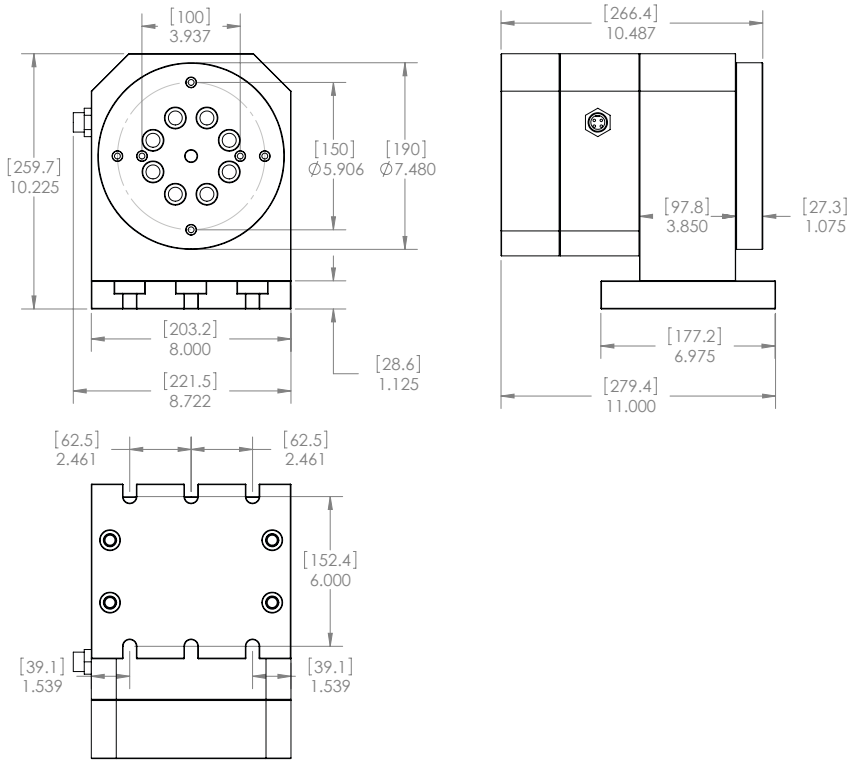
Models	KME NDX 135	KME-NDX-210	KME-NDX-250
Resolution	0.0018º	0.0018º	0.0018º
Max Rotation/Step	999.999º	999.999º	999.999º
Max Holding Torque	200 ft-lb / 271 N-m	750 ft-lb / 1017 N-m	750 ft-lb / 1017 N-m
Rotating Torque	30 ft-lb / 40 N-m	65 ft-lb / 88 N-m	65 ft-lb / 88 N-m
Side Load Torque	200 ft-lb / 271 N-m	500 ft-lb / 678 N-m	1250 ft-lb / 1627 N-m
Accuracy	±10 Arc Sec	±10 Arc Sec	±10 Arc Sec
Repeatability	±5 Arc Sec	±5 Arc Sec	±5 Arc Sec
Gear Ratio	100:1	100:1	100:1
Max Part Size	5.5" (139.7mm)	9" (228.6mm)	12" (304.8mm)
Max Part Weight	40 lbs	100 lbs	140 lbs
Construction	Meehanite Cast Iron	Meehanite Cast Iron	Meehanite Cast Iron
Faceplate Diameter	135mm	190mm	250mm
Base Length	140mm	177.8mm	225mm
Center Line Height	70mm	155.575mm	255mm
Faceplate Diameter	135mm	190mm	250mm
Signal	Single M-Code Function	Single M-Code Function	Single M-Code Function
Approx. Weight	32 lbs	105 lbs	200 lbs

KME INDEXERS MECHANICAL DRAWINGS

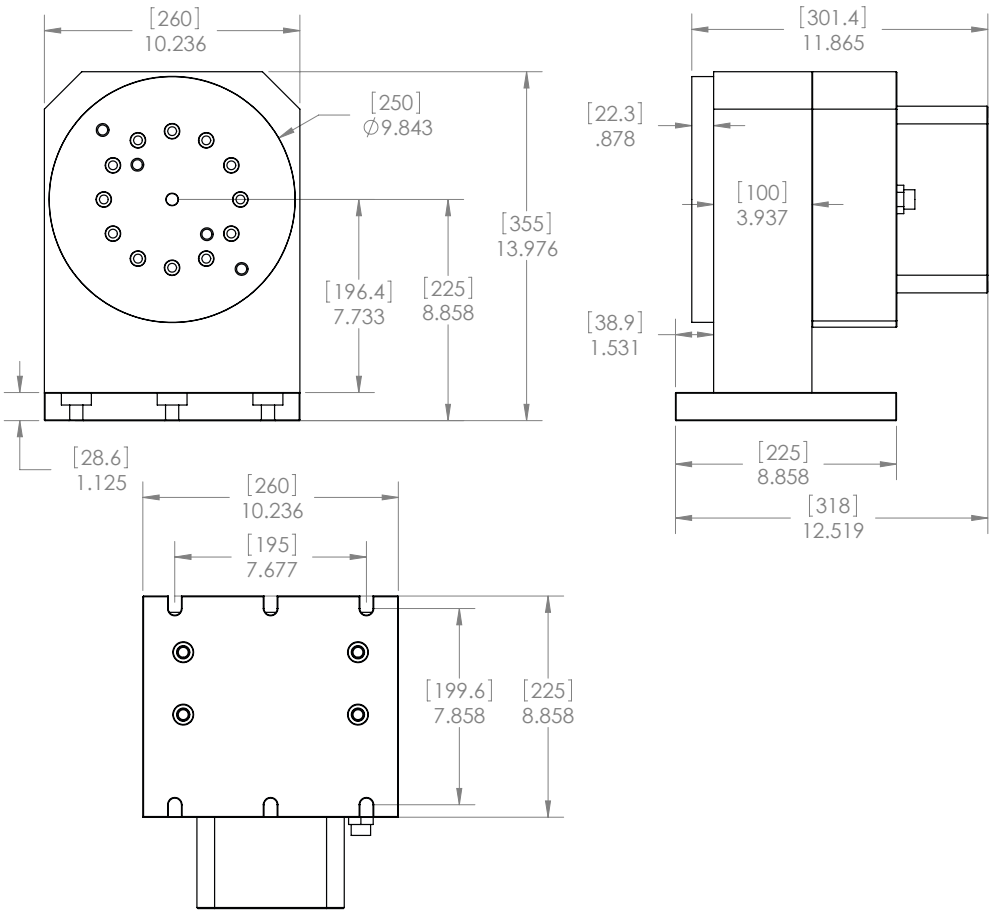
KME-NDX-135 Wired; Wireless Available

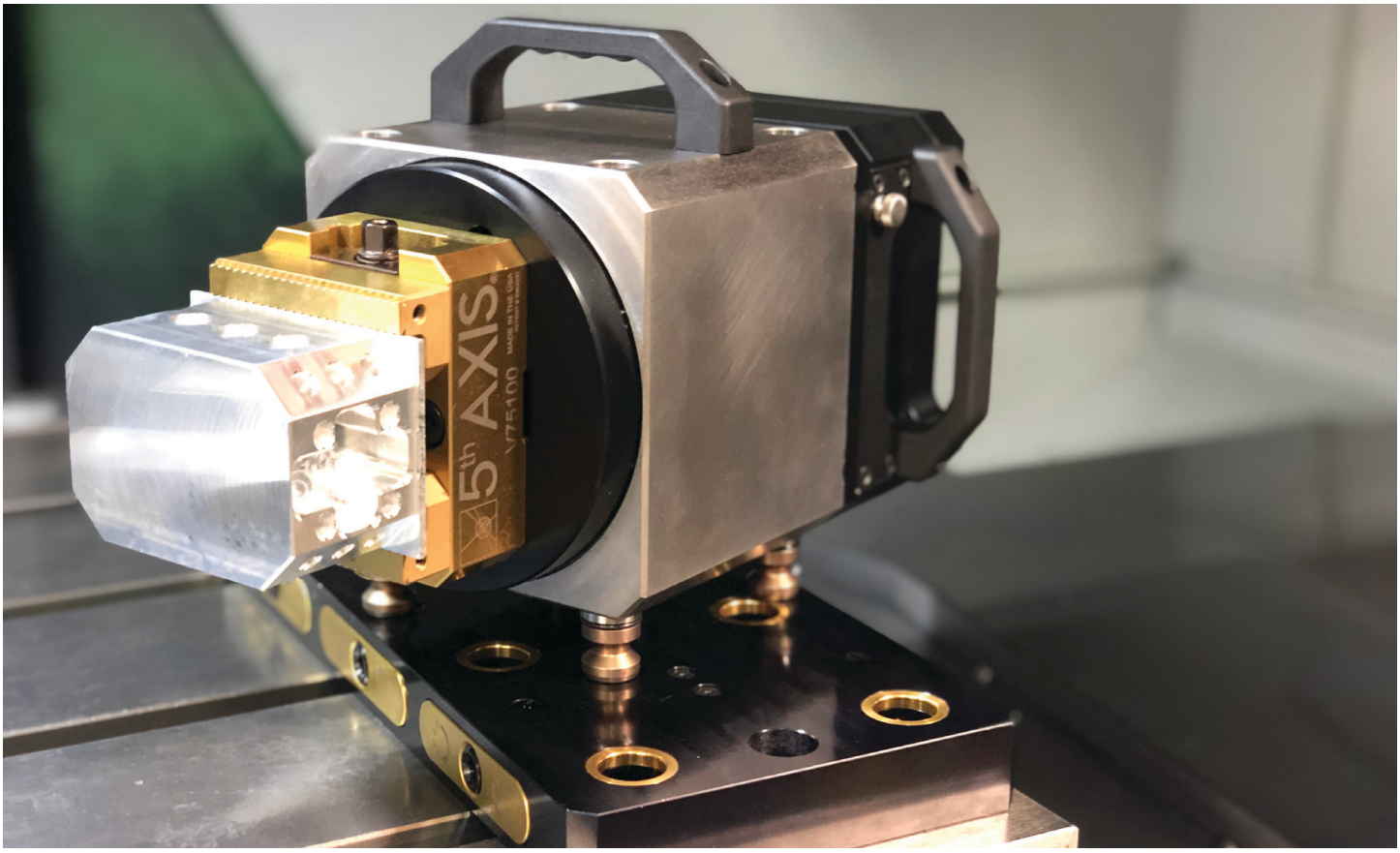


KME-NDX-210 Wired; Wireless Available



KME-NDX-250 Wired; Wireless Available





KMECNC

5 AXIS SYSTEMS

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