

エアークベアリングと共に35年

 **LOADPOINT BEARINGS**

PRODUCT DATASHEETS



BUSINESS VISION

The Loadpoint Bearings business vision is to be the prime point of contact for customers, throughout the world, requiring Air Bearing Spindles for their individual applications, whether they are standard 'off the shelf' or bespoke models.

We consider we can continue to achieve this vision through the company culture of listening to our customers, innovative design capabilities and ongoing investment in technology and people skills.



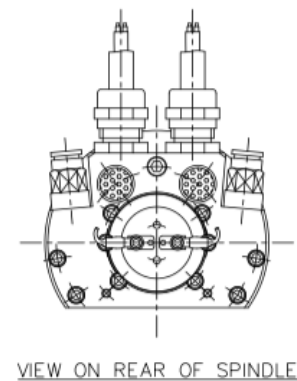
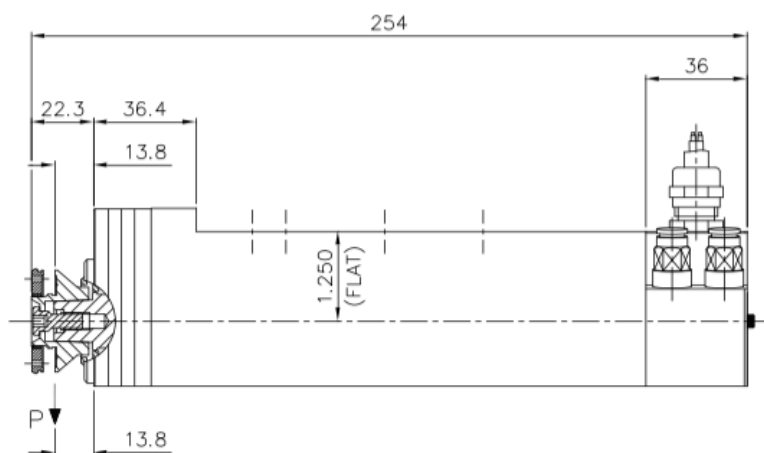
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D09160

DICING SPINDLE SURFACE MOUNTING

- + 60,000 min-1 DC Motor, optional 80,000 min-1
- + CW/CCW rotation available
- + 1.2, 1.8 and 2.4 kW Options Available
- + Hubbed and Hubless Wheelmounts
- + 50 - 76.2mm Blade Diameter



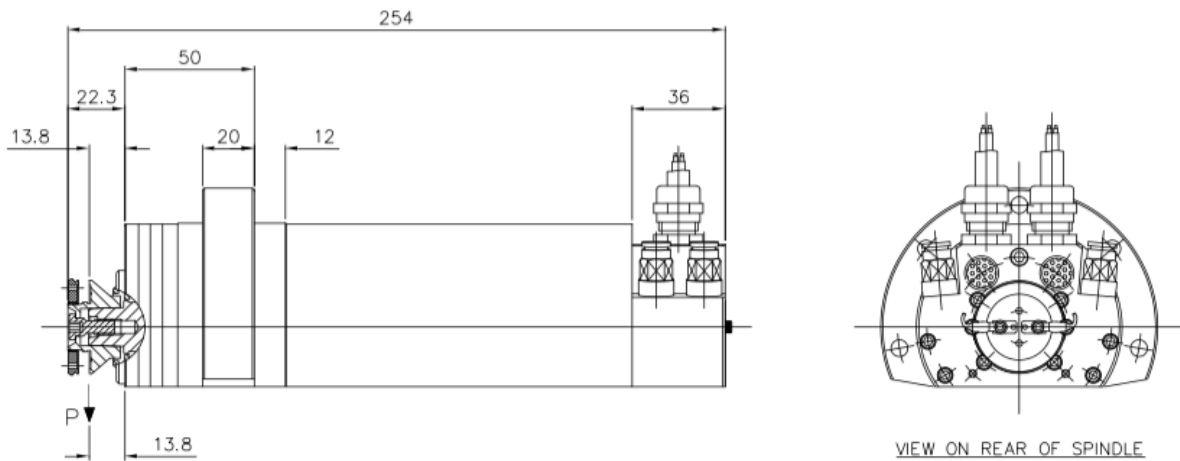
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	80 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	15 Kgs
Radial Stiffness	ラジアル剛性	0.7 Kg/um
Axial Failure Load	破壊アキシャル荷重	18 Kgs
Axial Stiffness	アキシャル剛性	1.0 Kg/um
Maximum Speed	最高回転数	60,000 min-1
Cooling Water Flow	冷却水流量	120 L/hr
Motor	モーター	Brushless DC - DCブラシレス
Motor Output Power		1.2 kW, 1.8 kW, 2.4 kW
Direction of Rotation		C.W or C.C.W

D09209/2

DICING SPINDLE FRONT FLANGE MOUNTING

- + Rear Flange Mounting Available on Request
- + 60,000 min-1 DC Motor, optional 80,000 min-1
- + CW/CCW rotation available
- + 1.2, 1.8 and 2.4 kW Options Available
- + Hubbed and Hubless Wheelmounts
- + 50 - 76.2mm Blade Diameter



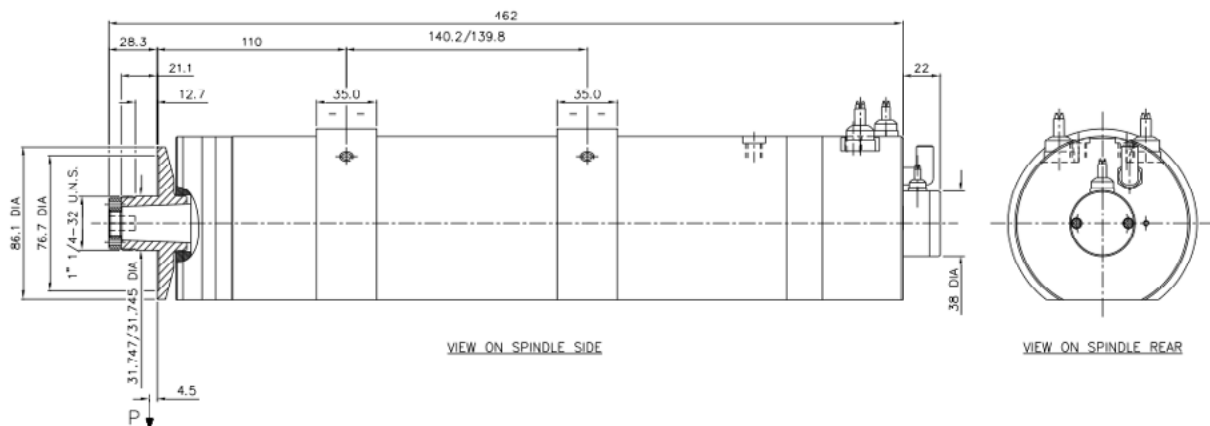
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	80 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	15 Kgs
Radial Stiffness	ラジアル剛性	0.7 Kg/um
Axial Failure Load	破壊アキシャル荷重	18 Kgs
Axial Stiffness	アキシャル剛性	1.0 Kg/um
Maximum Speed	最高回転数	60,000 min-1
Cooling Water Flow	冷却水流量	120 L/hr
Motor	モーター	Brushless DC - DCブラシレス
Motor Output Power		1.2 kW, 1.8 kW, 2.4 kW
Direction of Rotation		C.W or C.C.W

D03541

4" DICING SPINDLE

- + 4" Dicing Spindle
- + 30,000 min-1 DC Motor
- + High Power DC Brushless Motor 2.5 KW
- + 125 - 150 mm Blade Diameter Capacity



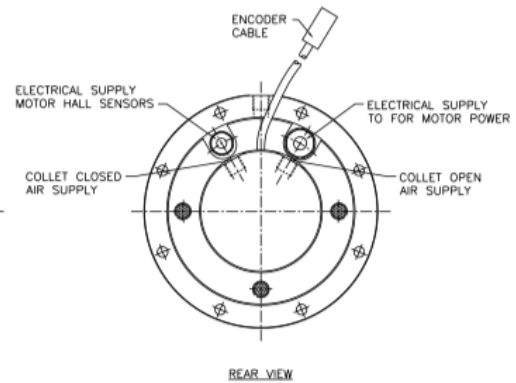
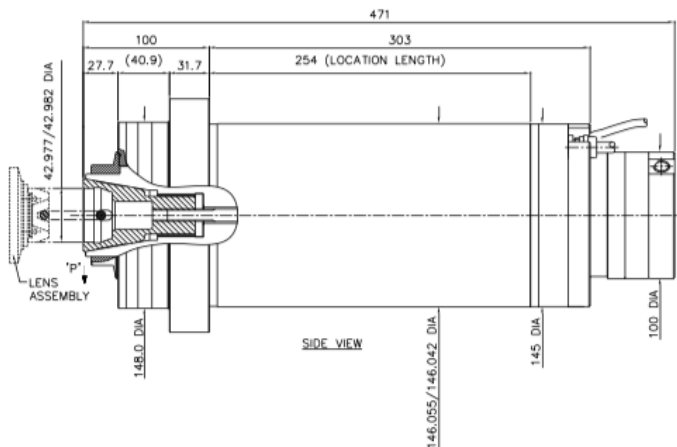
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	70 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	18 Kgs
Radial Stiffness	ラジアル剛性	1.8 Kg/um
Axial Failure Load	破壊アキシャル荷重	22 Kgs
Axial Stiffness	アキシャル剛性	3.0 Kg/um
Maximum Speed	最高回転数	30,000 min-1
Cooling Water Flow	冷却水流量	66 L/hr
Motor	モーター	Brushless DC - DCブラシレス

D07260

OPHTHALMIC LENS TURNING SPINDLE

- + Large Optics Lens Turning Spindle
- + 6,000 min-1
- + DC Motor/Encoder Interpolation
- + Auto Collet
- + Dynamic Runout sub 20nM, polish free optics
- + High Torque Machining Glass and Metal



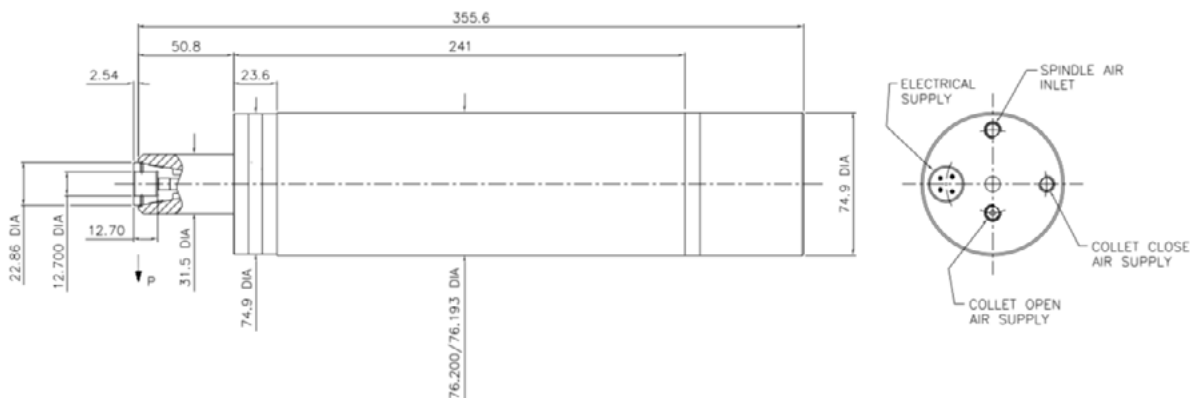
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	85 L/Min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	35 Kgs
Radial Stiffness	ラジアル剛性	4.0 Kg/um
Axial Failure Load	破壊アキシャル荷重	55 Kgs
Axial Stiffness	アキシャル剛性	7.0 Kg/um
Maximum Speed	最高回転数	6,000 min-1
Air Cooling	エア冷却	Air Cooling -エア冷却
Electrical Supply	電源供給	Brushless DC - DCブラシレス 300 Volts
Motor Power	モーターパワー	3.2 kW
Collet	コレット	A.T.C
Spindle Weight	スピンドル重量	36 Kg

D01983-36

LENS TURNING SPINDLE

- + Contact Lens Turning Spindle
- + 12,000 min-1 AC Motor
- + Auto Collet. Sub 50nM Runout



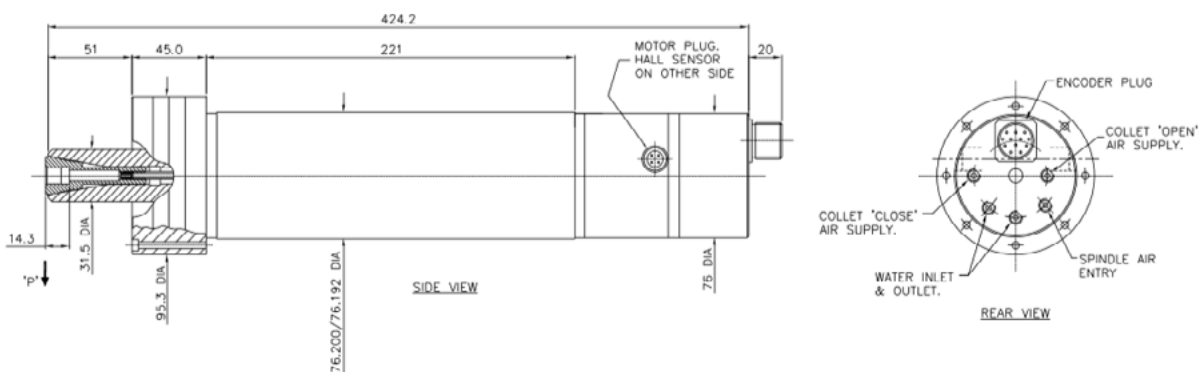
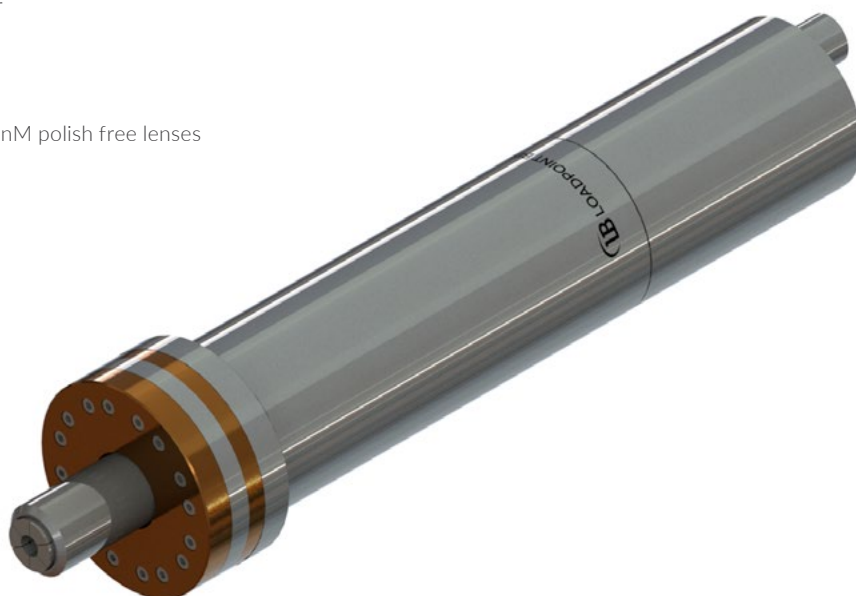
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	62 L/Min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	4.5 Kgs
Radial Stiffness at 'P'	ラジアル剛性	0.8 Kg/um
Axial Failure Load	破壊アキシャル荷重	22 Kgs
Axial Stiffness	アキシャル剛性	0.8 Kg/um
Maximum Speed	最高回転数	12,000 min-1
Motor Power	モーターパワー	0.39 Kw at 10,000 min-1
Motor	モーター	3 Phase, 0-220 Volts, 0-400 Hz

D02870-36

LENS TURNING SPINDLE (3" RETRO FIT)

- + Contact Lens Turning Spindle
- + 10,000 min-1 DC Motor
- + Encoder Interpolation
- + Auto Collet
- + Dynamic Runout sub 30nM polish free lenses



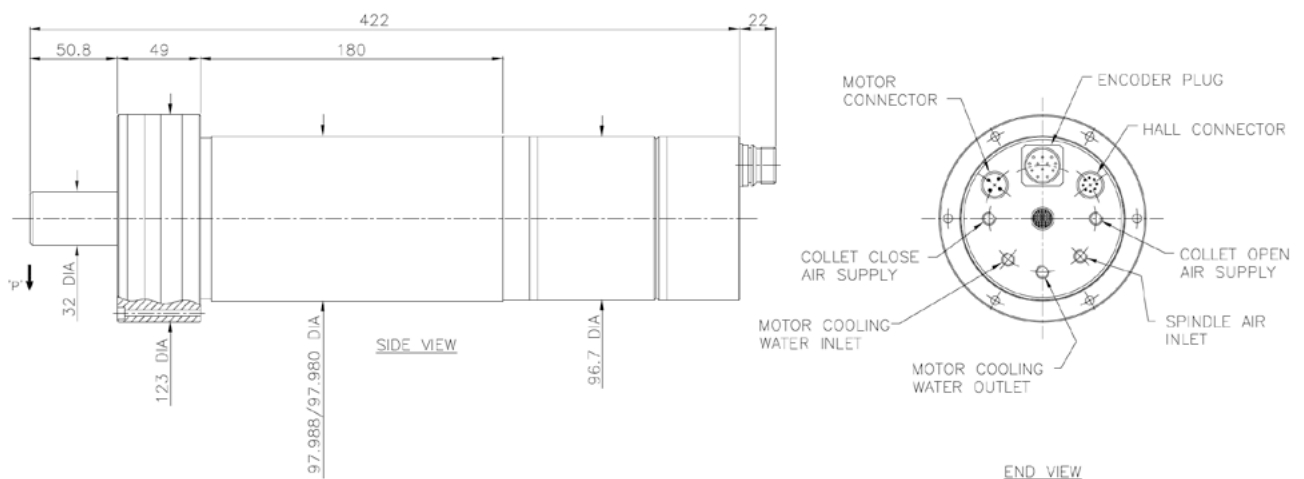
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	76 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	16 Kgs
Radial Stiffness	ラジアル剛性	1.8 Kg/um
Axial Failure Load	破壊アキシャル荷重	32 Kgs
Axial Stiffness	アキシャル剛性	2.8 Kg/um
Maximum Speed	最高回転数	10,000 min-1
Cooling Water Flow	冷却水流量	27 L/hr (Optional)
Motor	モーター	Brushless DC - DCブラシレス
Encoder	エンコーダー	5 Vdc, 500 Khz, 2,500 lines

D09421-36

LENS TURNING SPINDLE (LOW INERTIA)

- + Contact Lens Turning Spindle
- + 10,000 min-1 DC Motor
- + Encoder Interpolation
- + Auto Collet
- + Dynamic Runout sub 20nM, Polish free lenses



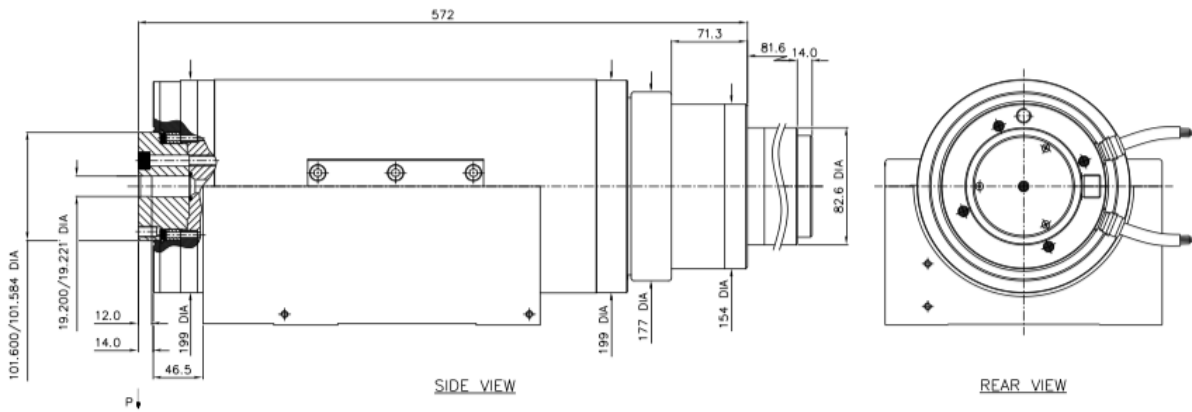
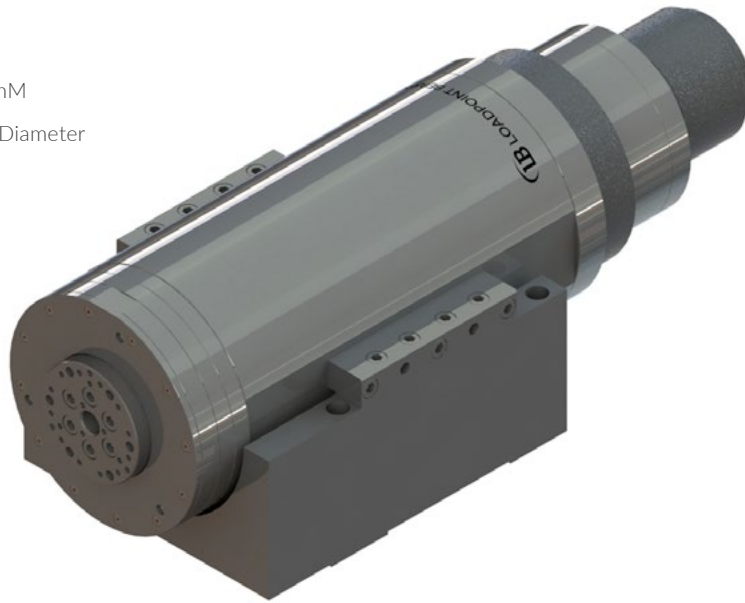
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	76 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	45 Kgs
Radial Stiffness	ラジアル剛性	2.9 Kg/um
Axial Failure Load	破壊アキシャル荷重	45 Kgs
Axial Stiffness	アキシャル剛性	5.8 Kg/um
Maximum Speed	最高回転数	10,000 min-1
Cooling Water Flow	冷却水流量	27 L/hr (Optional)
Motor	モーター	Brushless DC (8 pole) - DCブラシレス (8 pole)
Encoder ERO1225 (TTL)	エンコーダー ERO1225 (TTL)	5 Vdc, 300 Khz (max), 2048 lines
Encoder ERO1285 (Sinusoidal)	エンコーダー ERO1285 (Sinusoidal)	5 Vdc, 180 Khz, 1,000 lines

D04982

DIAMOND TURNING SPINDLE

- + Diamond Turning Spindle
- + 10 - 10,000 min-1 DC Motor
- + Encoder Interpolation
- + Asynchronous Motion Error <20nM
- + Large Area Optics up to 1 meter Diameter



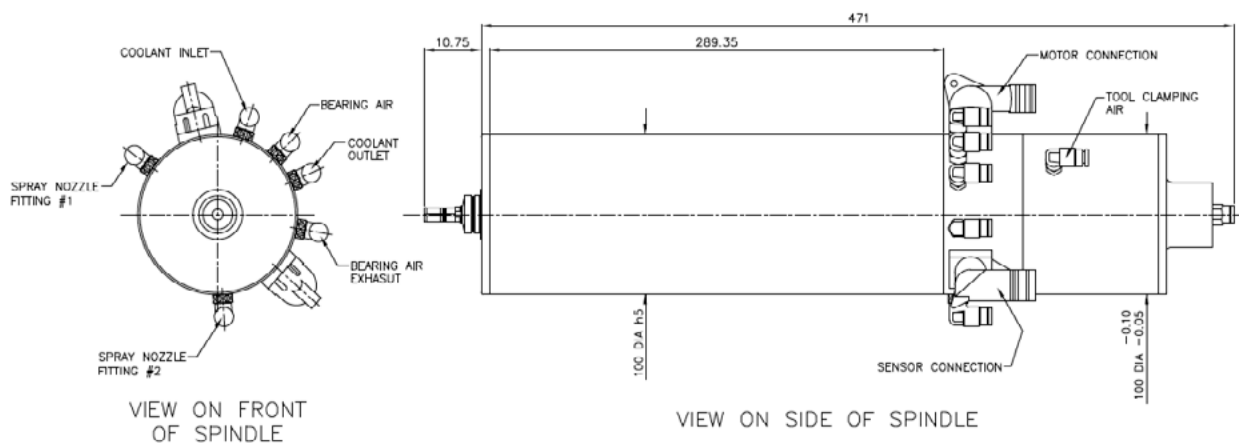
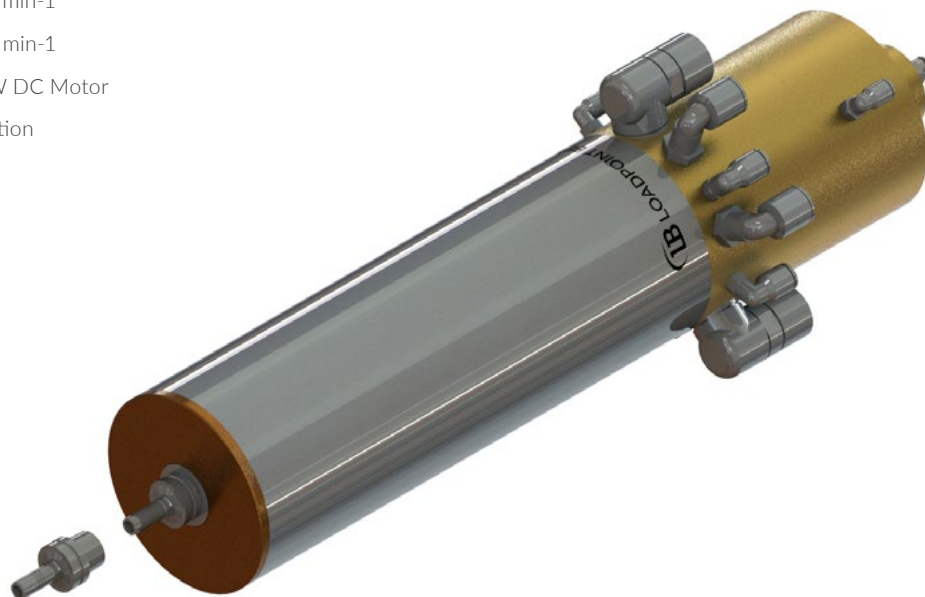
SPECIFICATION

Air supply Pressure	供給エア圧力	6.0 Bar
Air Consumption	エア消費量	140 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	100 Kg
Radial Stiffness	ラジアル剛性	11 Kg/um
Axial Failure Load	破壊アキシャル荷重	100 Kg
Axial Stiffness	アキシャル剛性	12 Kg/um
Maximum Speed	最高回転数	10,000 min-1
Cooling Water Flow	冷却水流量	99 L/hr
Motor	モーター	Brushless DC - DCブラシレス

D09412/D09429

MICROMACHINING, GRINDING AND MILLING (HSK AUTO TOOL CHANGE)

- + Air Bearing Spindle
- + D09412 - 60,000 min-1
- + D09429 - 90,000 min-1
- + High Power 2.5kW DC Motor
- + Encoder Interpolation
- + HSK-25 Collet



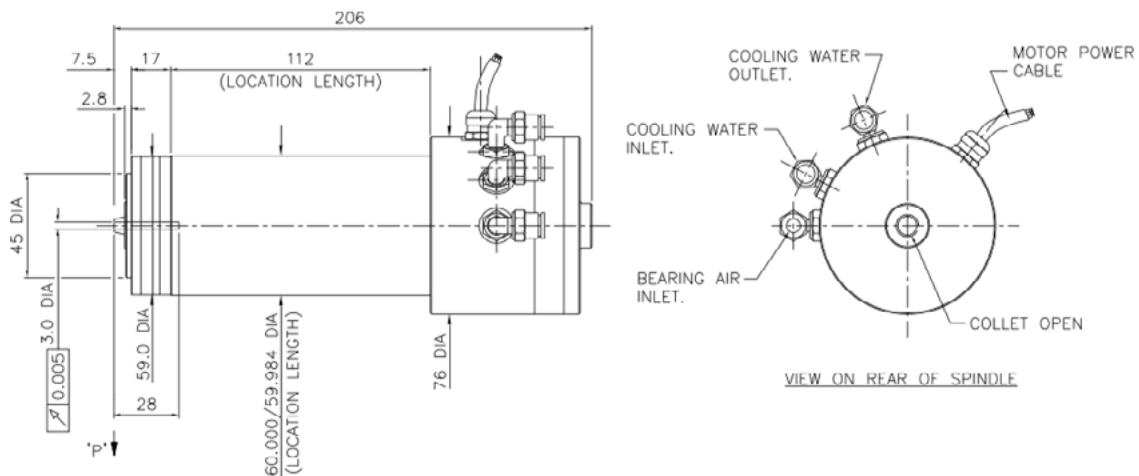
SPECIFICATION

Air supply Pressure	供給エア圧力	5-10 Bar (10 Recommended)
Maximum Speed	最高回転数	60,000 min-1 / 90,000 min-1
Motor Power	モーターパワー	2.5 kW
Motor	モーター	Brushless DC - DCブラシレス
Encoder	エンコーダー	5 V, 80 Lines, 1 VSS

D08873

MICROMACHINING, GRINDING AND MILLING SPINDLE (WITH ATC COLLET)

- + High Speed Micro Machining Spindle
- + 160,000 min-1
- + DC Motor
- + Auto Collet
- + Sub 25nM surfaces



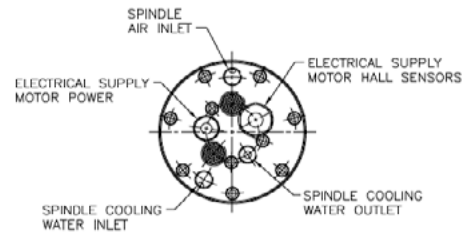
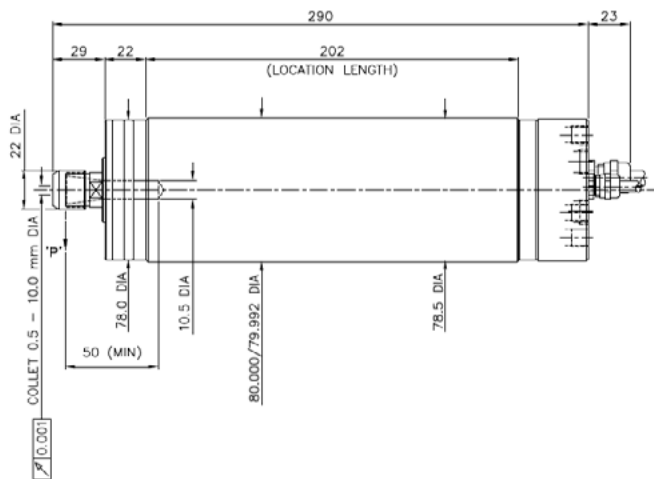
SPECIFICATION

Air supply Pressure	供給エア圧力	6.0 Bar
Air Consumption	エア消費量	85 L/Min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	5 Kgs
Radial Failure Load at 'P' (160,000 RPM)	破壊ラジアル荷重(エア圧力"P" 160,000min-1時)	7.5 Kgs
Axial Failure Load	破壊アキシャル荷重	12 Kgs
Maximum Speed	最高回転数	160,000 lb/inch
Collet Actuation Pressure	コレット作動圧力	5.5 Bar
Cooling Water Flow	冷却水流量	1.8 L/Min
Motor	モーター	Brushless DC - DCブラシレス (190V)
Collet	コレット	3.0mm (Type Bonded)
Spindle Weight	スピンドル重量	5 Kgs

D08392

MICROMACHINING, GRINDING AND MILLING SPINDLE

- + Optical Milling Spindle
- + 60,000 min-1
- + High Power 1.8kW DC Motor
- + Manual Collet ER-16 0.5- 10.0mm
- + Sub 25nm surfaces



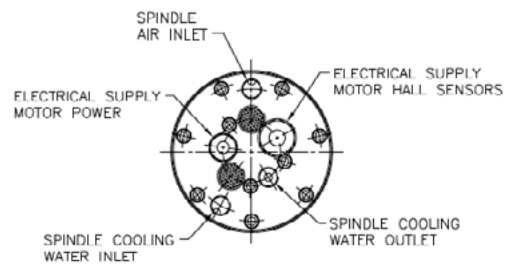
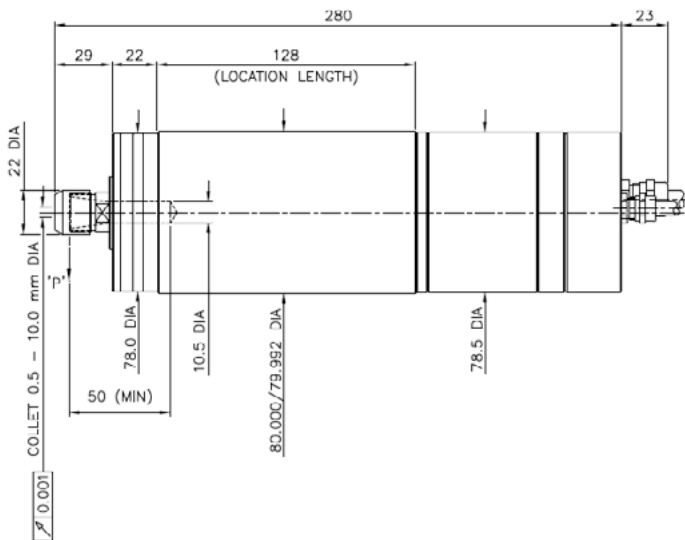
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	62.3 L/Min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	140 N
Radial Stiffness	ラジアル剛性	7 N/um
Axial Failure Load	破壊アキシャル荷重	100 N
Axial Stiffness	アキシャル剛性	11 N/um
Maximum Speed	最高回転数	60,000 min-1
Cooling Water Flow	冷却水流量	68 L/Hr
Electrical Supply	電源供給	Brushless DC - DCブラシレス

D09654

MICROMACHINING, GRINDING AND MILLING SPINDLE (LOW INERTIA)

- + Grinding, Milling Spindle
- + 90,000 min-1, optional 100,000 min-1, DC Motor
- + Collet runout <1 micron
- + Dynamic runout <30nM
- + Motor power 1.8kW



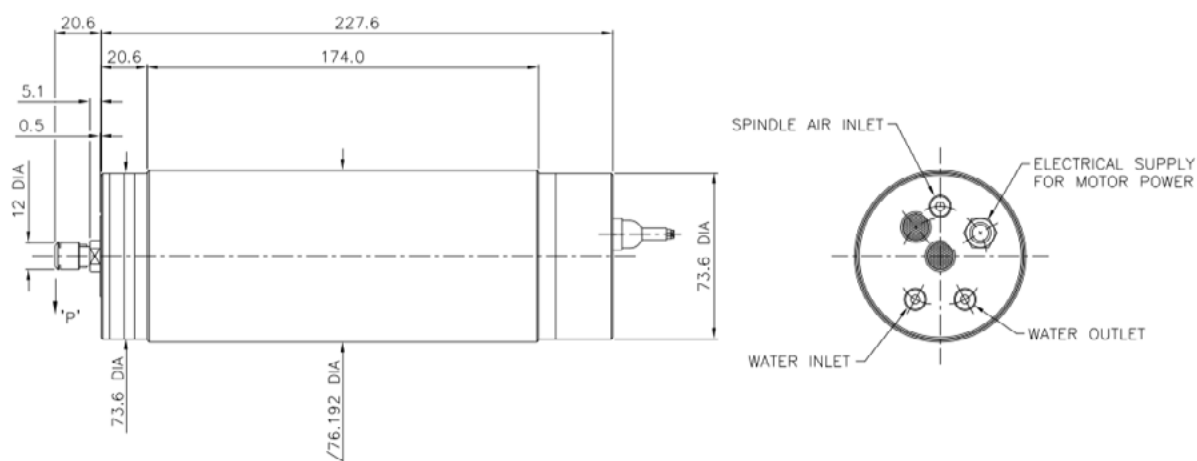
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	62.3 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	12 Kgs
Radial Stiffness	ラジアル剛性	0.65 Kg/um
Axial Failure Load	破壊アキシャル荷重	18 Kgs
Axial Stiffness	アキシャル剛性	2.0 Kg/um
Maximum Speed	最高回転数	90,000 min-1
Cooling Water Flow	冷却水流量	60 L/hr (Optional)
Motor	モーター	Brushless DC - DCブラシレス

D04202/2

MICROMACHINING, GRINDING AND MILLING SPINDLE

- + 110,000 min⁻¹ AC Motor
- + Manual Collet ER-8 0.5-5.0 mm
- + Runout <5 micron, optional <1 micron



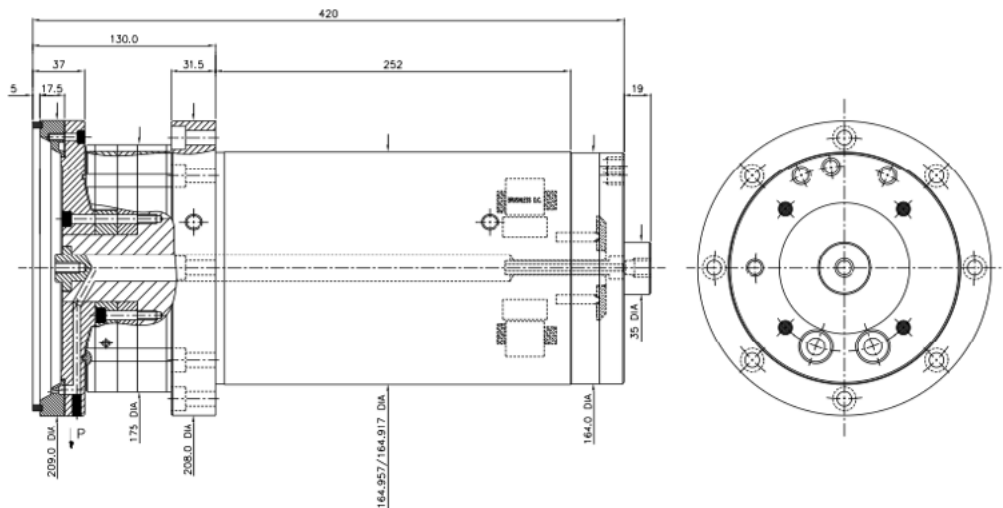
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	50 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	7 Kgs
Radial Stiffness	ラジアル剛性	0.55 Kg/um
Axial Failure Load	破壊アキシャル荷重	5.6 Kgs
Axial Stiffness	アキシャル剛性	1.3 Kg/um
Maximum Speed	最高回転数	110,000 min ⁻¹
Cooling Water Flow	冷却水流量	60 L/hr
Motor Power		1.25 kW at 110,000 min ⁻¹
Electrical Supply		3 Phase, 0-180 Volts, 0-1833 Hz

D09461

CUP WHEEL GRINDING

- + 200 mm Cup Wheel Grinding Spindle
- + For Grinding Semiconductor and Optical Materials
- + Through Shaft Coolant
- + Bi-directional Rotation



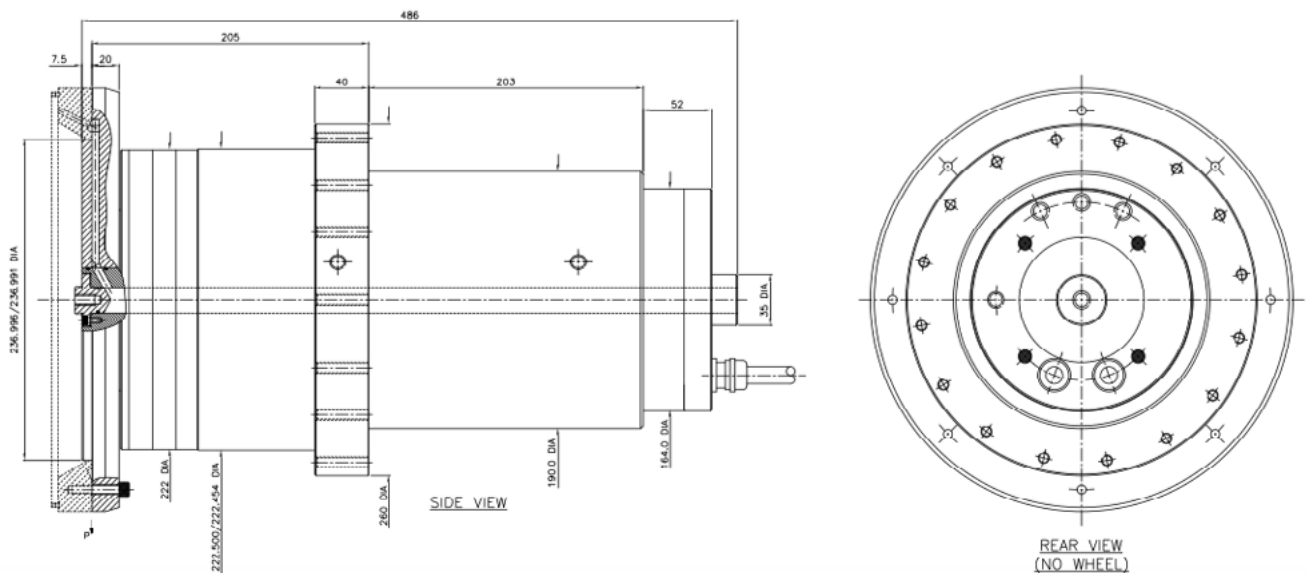
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	79 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	35 Kgs
Radial Stiffness	ラジアル剛性	8.0 Kg/um
Axial Failure Load	破壊アキシャル荷重	115 Kgs
Axial Stiffness	アキシャル剛性	20 Kg/um
Maximum Speed	最高回転数	6,000 min-1
Motor Power	モーターパワー	4.5 kW
Motor	モーター	Brushless DC

D09661

CUP WHEEL GRINDING

- + 300 mm Cup Wheel Grinding Spindle
- + For Grinding Semiconductor and Optical Materials
- + Through Shaft Coolant
- + Bi-directional Rotation



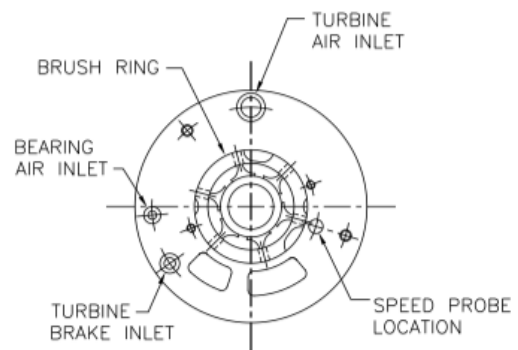
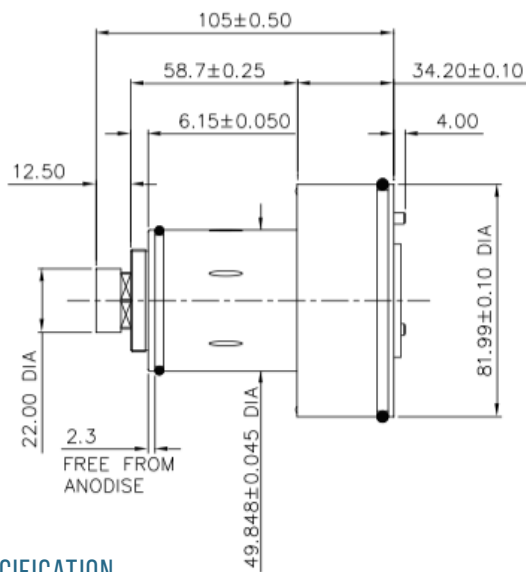
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	113 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	50 Kgs
Radial Stiffness	ラジアル剛性	10.0 Kg/um
Axial Failure Load	破壊アキシャル荷重	150 Kgs
Axial Stiffness	アキシャル剛性	35 Kg/um
Maximum Speed	最高回転数	4,000 min-1
Motor Power	モーターパワー	4.5 kW
Motor	モーター	Brushless DC

D09583

PAINT SPRAYER

- + Paint Spraying Spindle
- + 70,000 min-1 Working Speed
- + Crashproof Bearing Design



SPECIFICATION

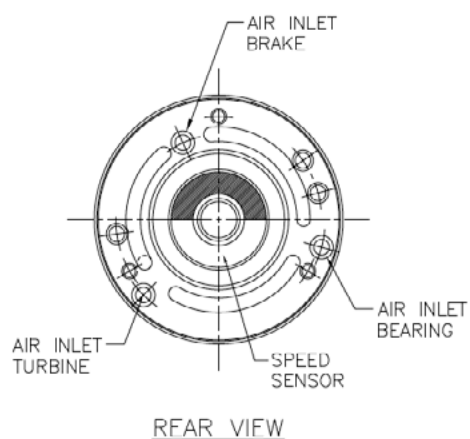
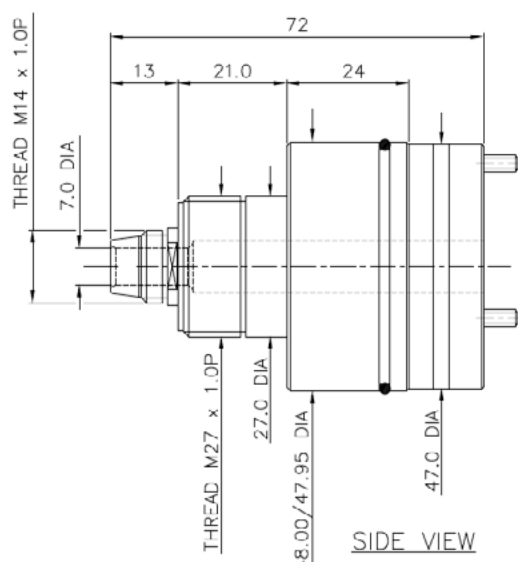
Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	85 Litres/min
Axial Failure Load	破壊アキシャル荷重	18.1 Kg
Maximum Speed	最高回転数	70,000 rpm

D06763

PAINT SPRAYING SPINDLE (MINI TYPE)

+ Small Paint Spraying Spindle

+ 80,000 min-1 DC Motor



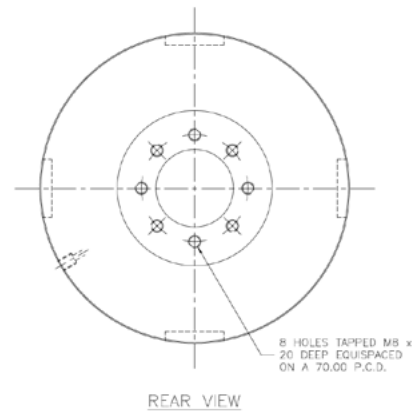
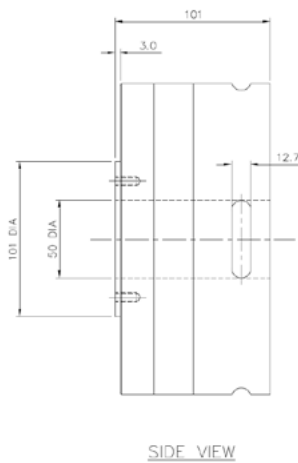
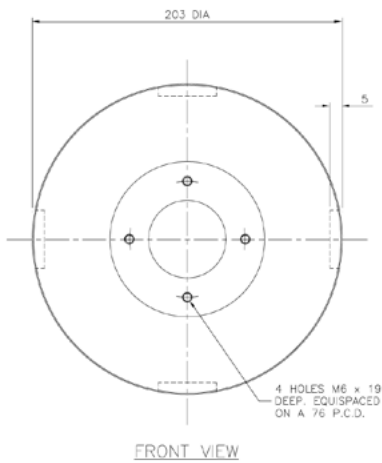
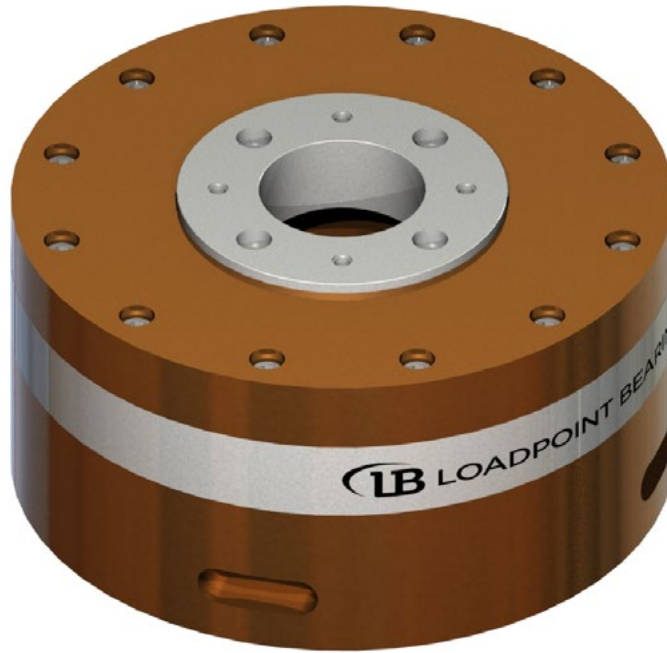
SPECIFICATION

Air supply Pressure	供給エア圧力	TBA
Maximum Speed	最高回転数	80,000 min-1
Paint Flow		500-600 cc/min

D03278

ROTARY TABLE

- + Rotary Table for Precision Machine Tools
- + 100 min-1 Max Speed
- + Static runout 1 Micron
- + Auto Collet
- + Dynamic Runout sub 20nM



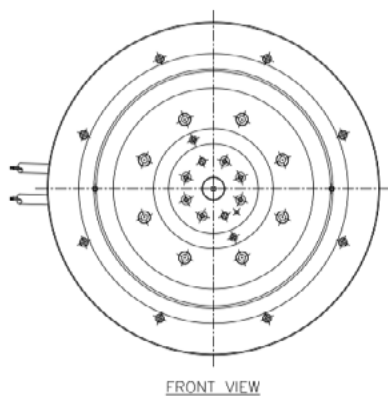
SPECIFICATION

Air supply Pressure	供給エア-圧力	5.5 Bar
Air Consumption	エア-消費量	99 L/Min
Axial Failure Load	破壊アキシャル荷重	60 Kgs
Axial Stiffness	ラジアル剛性	9.0 Kg/um
Radial Stiffness	破壊アキシャル荷重	1.0 Kg/um

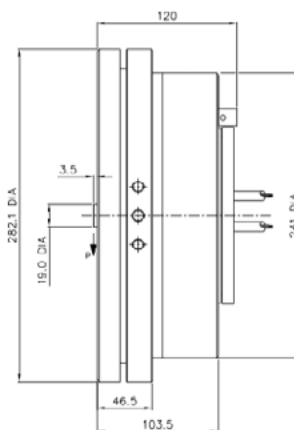
D04040

ROTARY TABLE

- + Rotary Table
- + Stainless steel parts, suitable for use in wet environment
- + Slimline design with motor and encoder
- + Vacuum through shaft
- + Flatness <3 micron, optional <1 micron



FRONT VIEW



SIDE VIEW

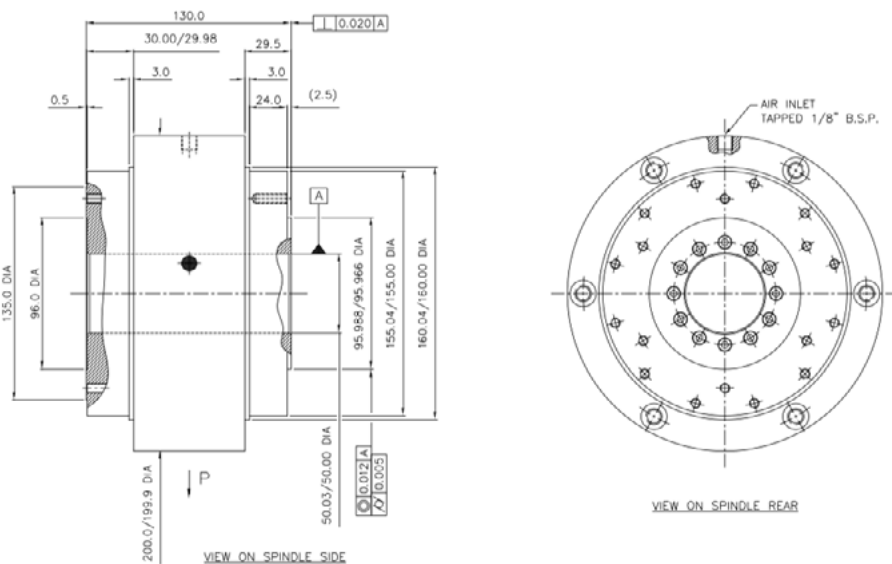
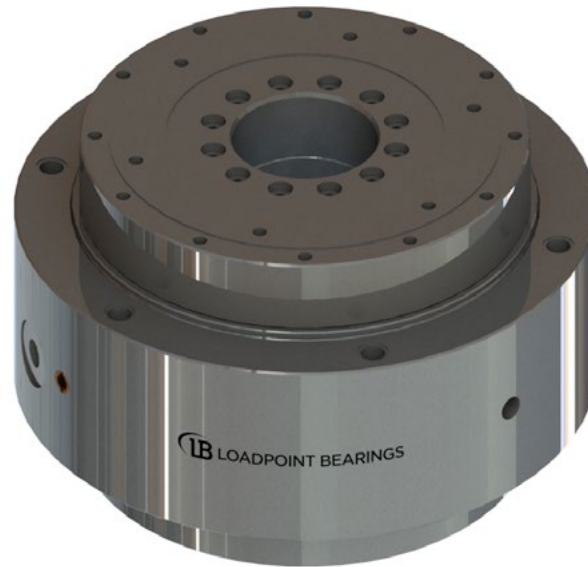
SPECIFICATION

Air supply Pressure	供給エア圧力	5.5 Bar
Air Consumption	エア消費量	56 L/Min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	61 kgs
Axial Failure Load	破壊アキシャル荷重	136 Kgs
Axial Stiffness	ラジアル剛性	20.0 Kg/um
Motor	モーター	Brushless DC - DCブラシレス
Encoder	エンコーダー	23,580 Lines, .0.1 Arc Seconds

D07925

ROTARY TABLE

- + Workhead Spindle
- + 1,000 min-1 DC Motor
- + 250 mm and 300 mm Diameter Options Available
- + Flatness <3 microns, optional <1 micron



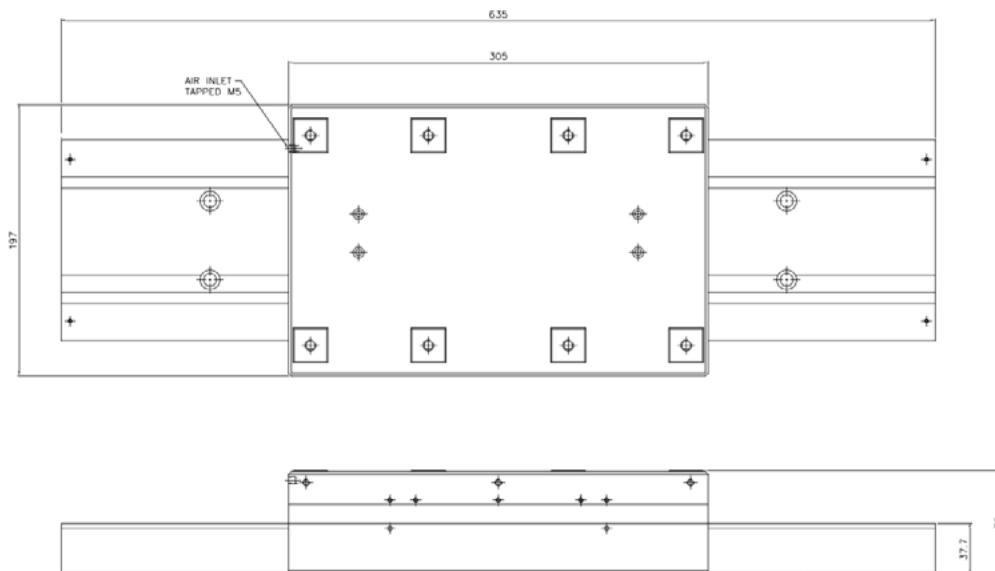
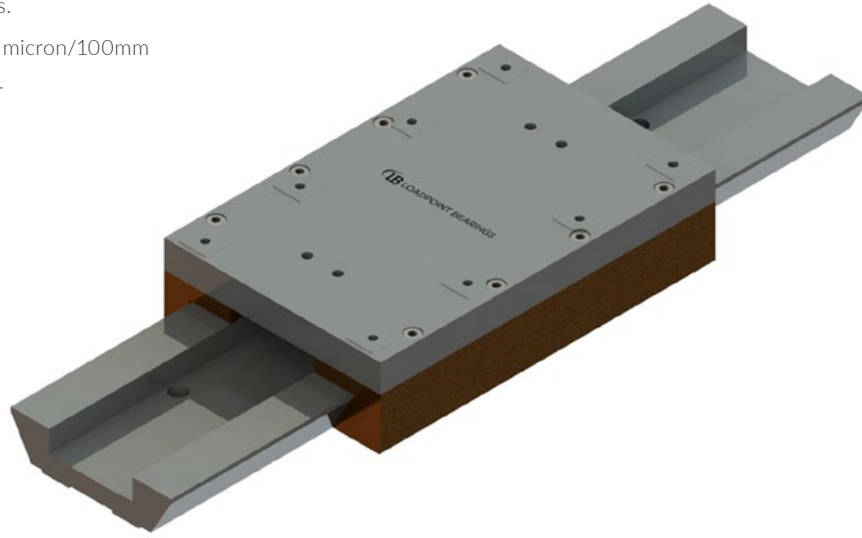
SPECIFICATION

Air supply Pressure	供給エア圧力	6.0 Bar
Air Consumption	エア消費量	50 L/min
Radial Failure Load at 'P' Static	破壊ラジアル荷重(エア圧力"P" 0min-1時)	2.5 Kgs
Radial Stiffness	ラジアル剛性	0.75 Kg/um
Axial Failure Load	破壊アキシャル荷重	12.5 Kgs
Axial Stiffness	アキシャル剛性	3.0 Kg/um
Maximum Speed	最高回転数	1,000 min-1

D04719

AIR SLIDE

- + Linear Slide for Precision Machine Tools.
- + Rigid Stainless Steel Parts.
- + Flatness/Straightness <1 micron/100mm
- + Optional Encoder/ Motor
- + Lengthens up to 1 metre



SPECIFICATION

Available on request

NOTES