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High Precision Spindle

Specialized in Spindle Manufacturing.

Dedicated to Higher Technology Level.

VYU CHENG

High Precision Spindle



Specialized in Spindle Manufacturing.
Dedicated to Higher Technology Level.

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HIGH PRECISION SPINDLES

Designed with precision, stability and dependability in mind.

VYU CHENG

Constantly Pursuing the Company Growth

Vyu Cheng Industrial Co., Ltd. was founded in 1978 with the initial company name as Lien Chen Ironworks. As with the company growth, the company was renamed as Vyu Cheng Industrial Co., Ltd. in 1978, specialized in machining service of spindles and quills for various CNC lathes, milling machines and other machinery. In 2014, with the new factory completed, located at Wuguang Rd. Wurih Dist. Taichung, Vyu Cheng was able to combine all machining processes including turning, milling and grinding, etc. in one plant. This allows Vyu Cheng to achieve an integrated machining system. In the same time, Vyu Cheng transformed its business type into a specialized spindle manufacturer.



Vyu Cheng's Affiliated Enterprises :

- > J-G Accurate Technique Industrial Co., Ltd.
- > Lien Jeng Industrial Co., Ltd.
- > Guan Jing Grinding Industrial Co., Ltd.

VYU CHENG

High Precision Spindle



COMPANY PHILOSOPHY :

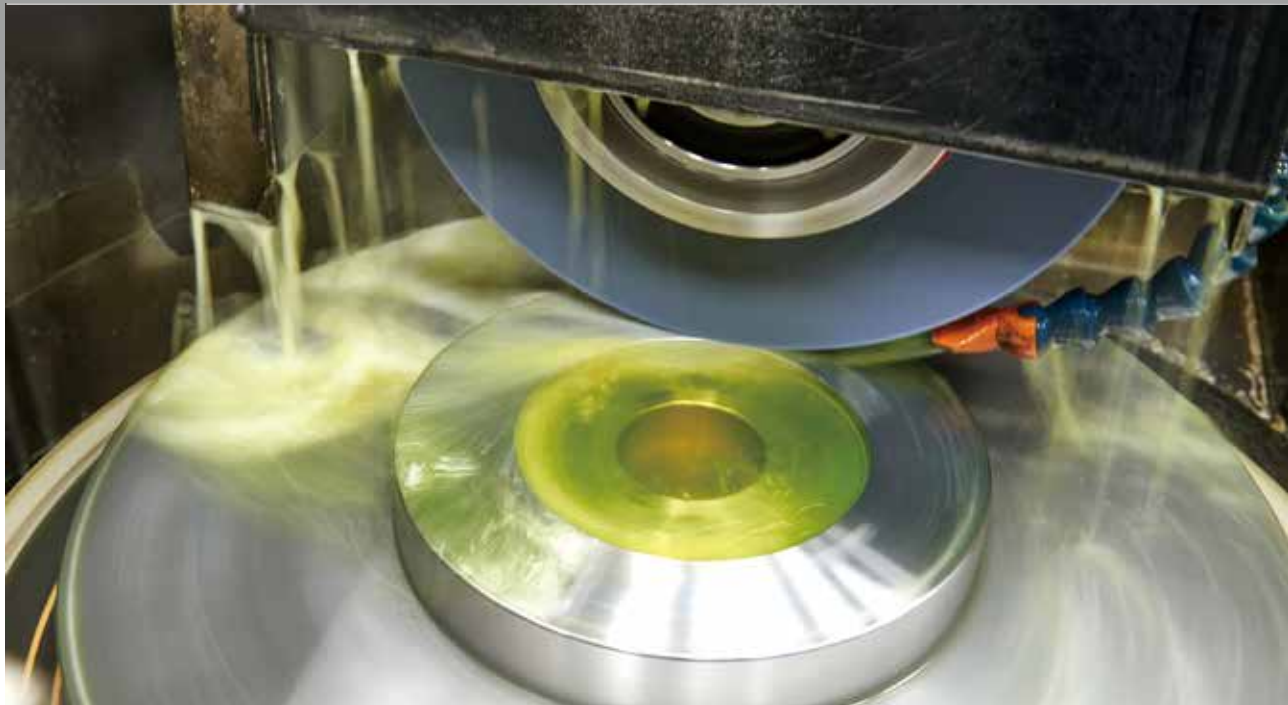
Dedicated to compny operation. Quality priourity.



High Efficiency Company Operation Management

Vyu Cheng's company operation has been recognized by customers for its high efficiency and comprehensive services. Such reputation is backed by our outstanding management team. Every management personnel has been well trained, so as to provide quick response to customers' inquiries and requirements. The entire processes form order treatment, procurement, production to delivery, etc. are conducted in good order, while reducing operational mistake and delay to a minimum.

SPINDLE MANUFACTURING PROCESS



Technical Research And Development

Vyu Cheng's technical research and development department is composed of a team of spindle professionals, who also have a considerable knowledge in various precision machine tools. In addition to the design of general standard spindles, our design staffs also offer custom design of spindle to fully meet customers' requirements. Our technical R&D department not only establishes the spindle manufacturing process according to the drawings provided by customers, but also can help customers to make drawings depending on the semi-finished products supplied by customers.



Spindle Assembly

Each spindle is carefully assembled by our highly skilled technicians with the most meticulous attitude.



Spindle Running Test

After a spindle is well assembled, it is then subject to running tests to inspect its dynamic running performance and thermal growth condition.



Integrated Manufacturing Process. 90% Production Rate In-House.

In an increasingly competitive business environment, upgrading efficiency and insisting on quality are the only ways for any enterprise who wants to become a winner. As such, over years Vyu Cheng has constantly invested in various precision machining equipment to achieve an integrated spindle production line. The spindle manufacturing processes from design, turning, milling, grinding, tempering to sand blasting, etc. are completely implemented in-house. The integrated production system enables us to dramatically increase production efficiency, shorten delivery time, lower production costs and total control of spindle quality.

QUALITY CONTROL SYSTEM

Quality Policy

- Incoming Inspection
- In-Process Inspection
- Finished Product Inspection
- Self-Inspection
- Running Test



Dynamic Balance Calibration For Spindle

With the dynamic balance calibration, extremely smooth running performance on the spindle can be ensured. Our dynamic balance calibration reaches G1 grade.



Total Quality Control

Providing customers with the highest quality of spindle has been Vyu Cheng's unwavering commitment.

To meet this commitment, Vyu Cheng has set up a total quality control system. Besides, we also enhance the quality concept to each personnel. Our objective is to allow quality to be fully monitored at each stage during the spindle manufacturing process, and hence ensuring high quality, high accuracy and minimum trouble of each spindle from Vyu Cheng.

GERMANY ZEISS Three Dimensional Coordinate Measuring Machine

Vyu Cheng utilizes the world-famous Germany ZEISS 3D coordinate measuring machine to inspect the geometric accuracy of parts, thus high spindle accuracy can be achieved.



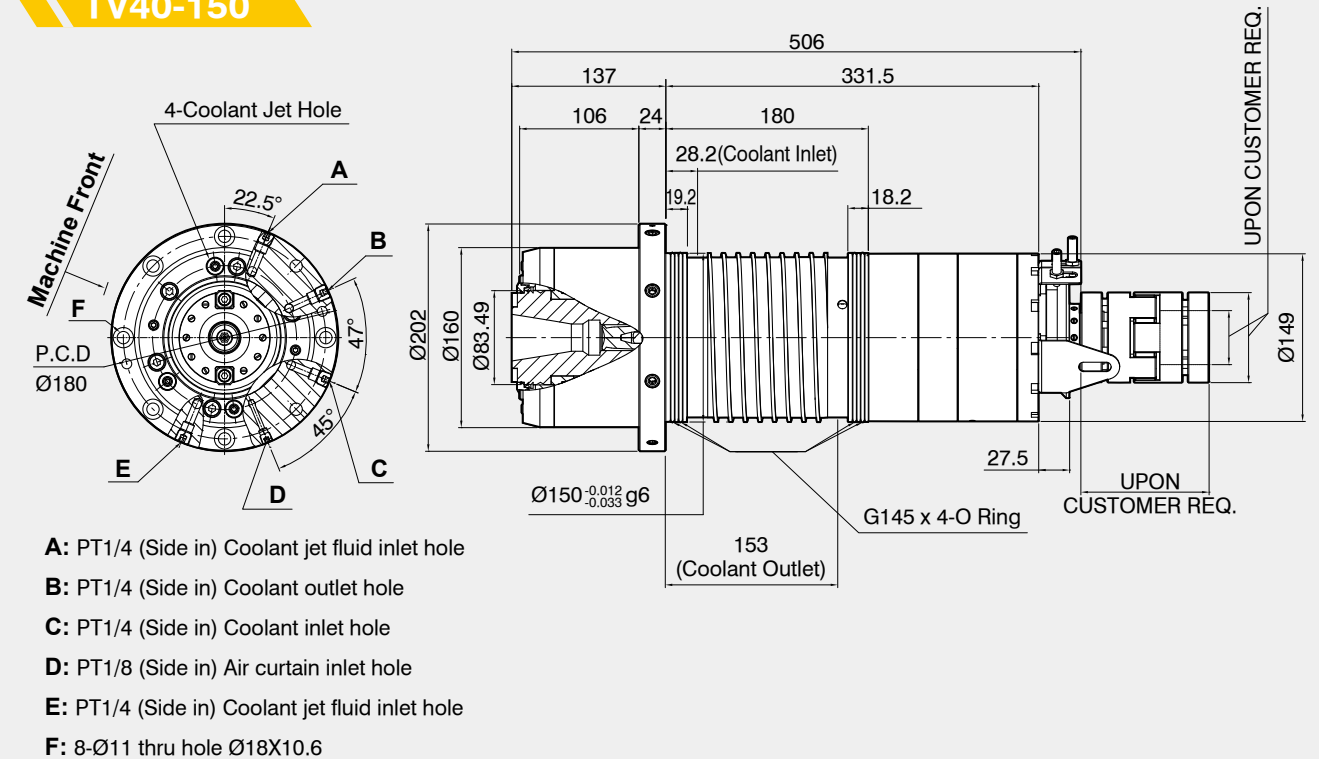
Direct-Drive Spindle > TV series

Features of Spindle:

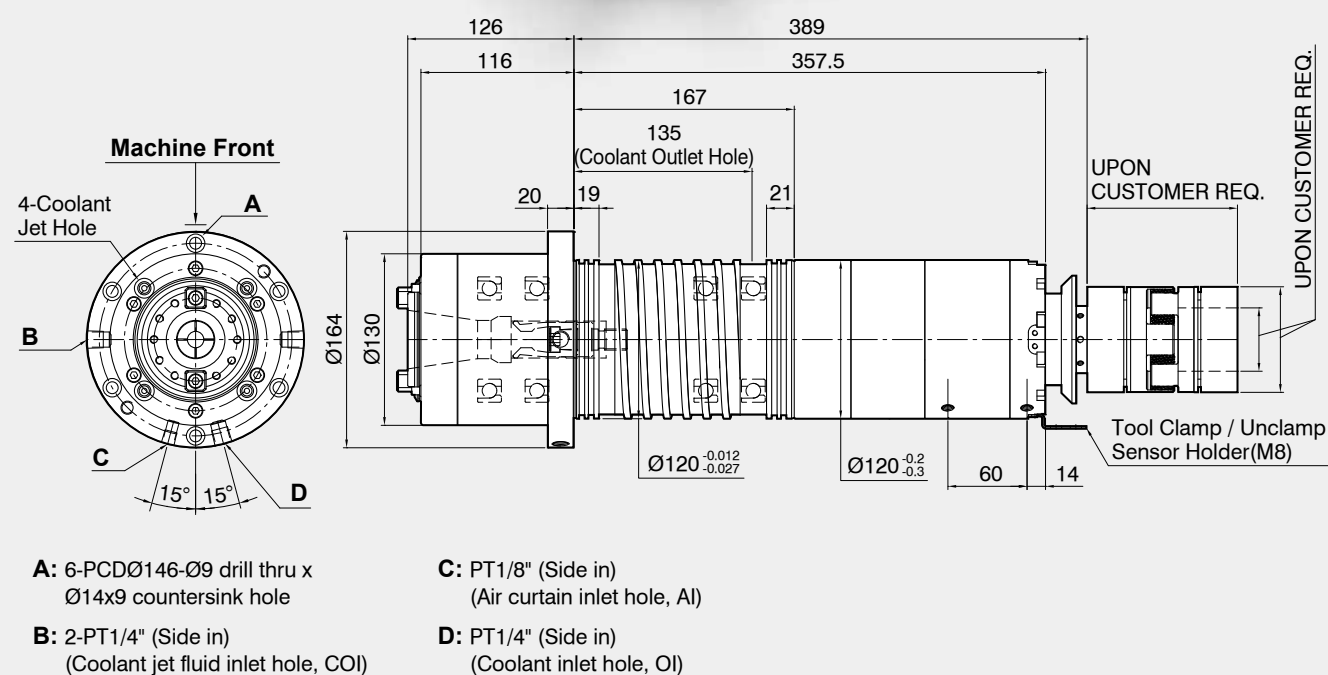
1. All rotating parts are precision ground completely to avoid imbalance problem due to poor concentricity between inside and outside diameter.
2. Patented labyrinth design at the front end of the spindle where an air seal is equipped in combination with internal labyrinth. In addition, after the spindle is assembled, an external labyrinth is hot-fitted that fully prevents cutting fluid from permeating into the spindle bearings.
3. The end key-seat is a non-through design. Although it requires a higher production cost, the benefit is that no intermittent grinding occurs when performing taper grinding. As a result, an optimal taper fitting can be ensured, while dramatically reducing thermal expansion of spindle at high speed running.
4. The pull stud, tool-knocking ring and spindle are all designed with rigid support. This combined with clearance of within 10um and concentricity within 5um to assure that the pull stud is concentric with the spindle when it runs at a high speed, while avoiding variation on dynamic balance.



TV40-150



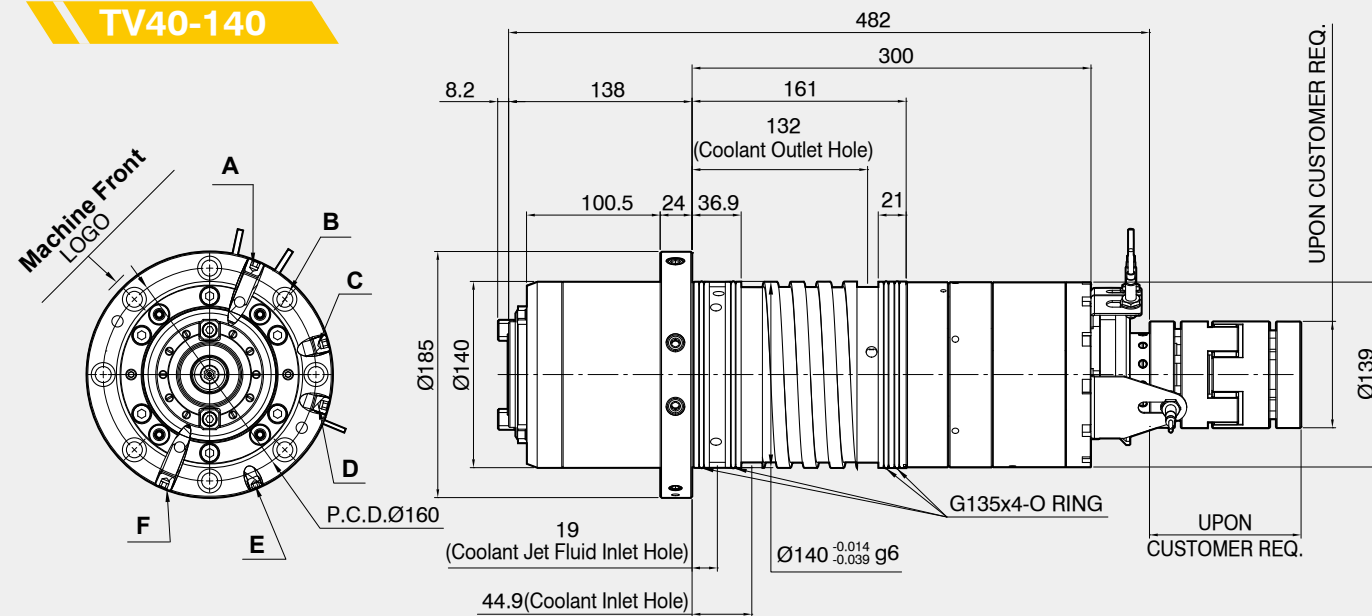
TV40-120



TV40		TV40
SPECIFICATIONS	Ø120	Ø150
Max. speed	15000 rpm	15000 rpm
Tool shank type	BT40	BT40
Bearing type	Front bearing	7012 x 2
	Rear bearing	7012 x 2
Bearing lubrication	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature +18°C	Within room temperature +18°C
Drive type	Direct drive	Direct drive
Tool pulling force	700 ±10%kgf	1000 ±10%kgf
Tool pulling method	4-jaw	4-jaw
Tool knocking cylinder	Standard	Standard
Air curtain at spindle nose	Standard	Standard
Cooling method	Oil cooling	Oil cooling
Spindle cooling required	1000 kca/h	1500 kca/h
No. of coolant jets	4 holes (Standard)	4 holes (Standard)
Spindle taper runout	0.002 mm	0.002 mm
Spindle nose runout with test bar	0.003 mm	0.003 mm
Test bar runout (300mm)	0.008 mm	0.008 mm
Dynamic balance	G1	G1
Installation type	Vertical	Vertical

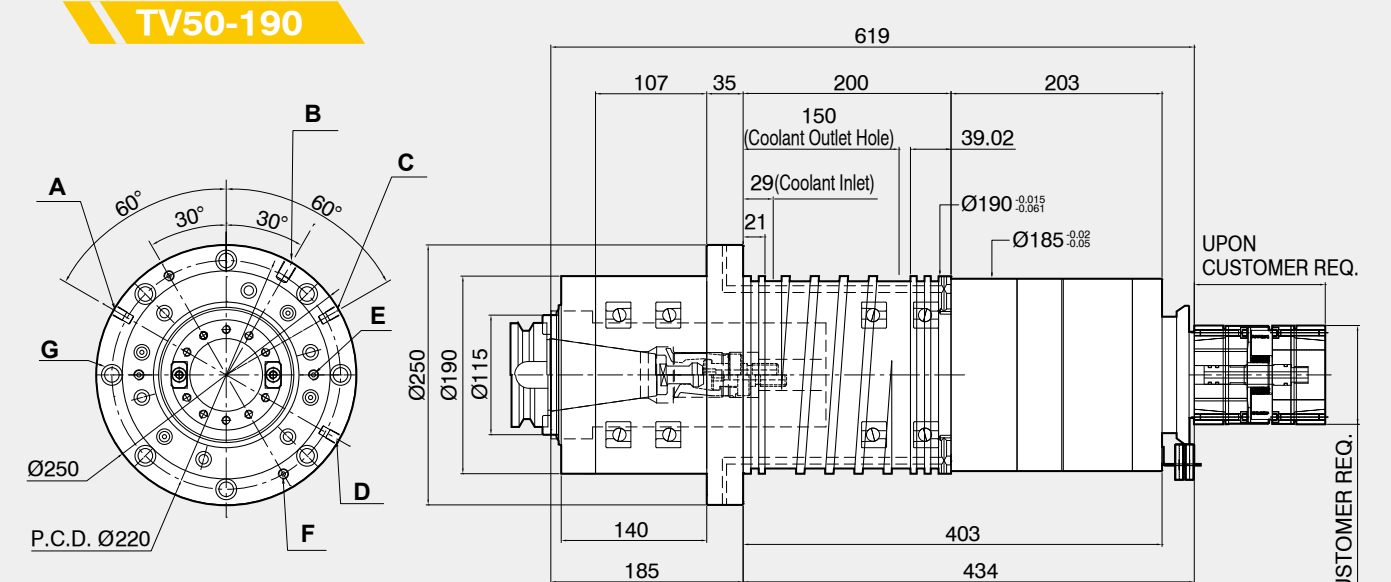
Direct-Drive Spindle > TV series

TV40-140



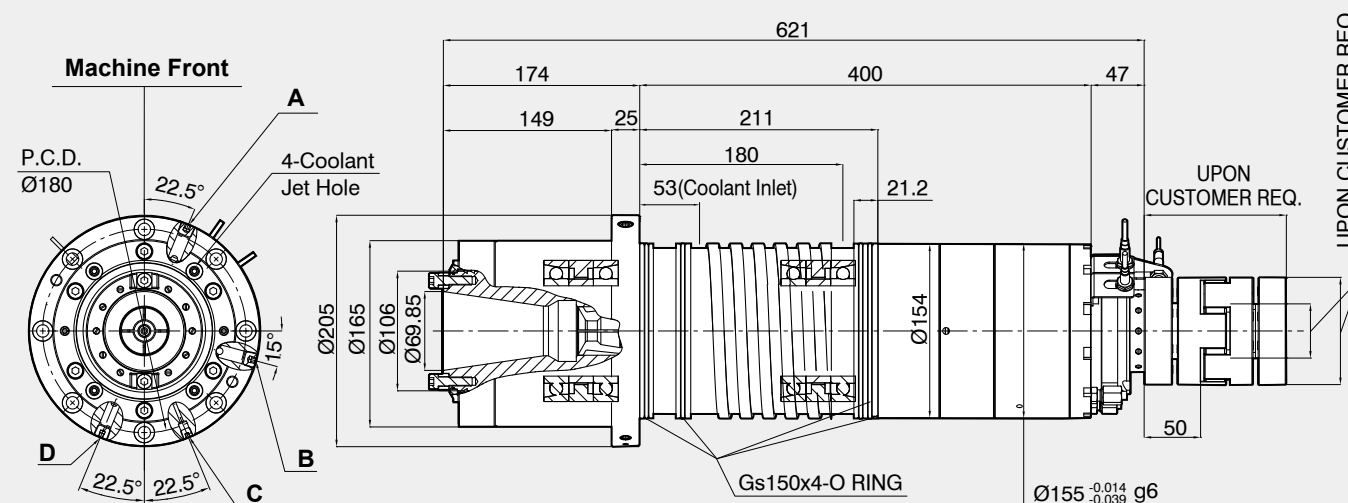
- A:** PT1/4 (Side in) Coolant jet fluid inlet hole
B: 8xØ12 thru hole Ø18x83
C: PT1/4 (Side in) Coolant outlet hole
D: PT1/4 (Side in) Coolant inlet hole
E: PT1/8 (Side in) Air curtain inlet hole
F: PT1/4 (Side in) Coolant jet fluid inlet hole

TV50-190



- A:** PT1/4" (Side in) (Coolant jet fluid inlet hole, COI)
B: PT1/4" (Side in) (Coolant inlet hole, OI)
C: PT1/8" (Side in) (Air curtain inlet hole, AI)
D: PT1/4" (Side in) (Coolant jet fluid inlet hole, COI)
E: 2-PCDØ220-Ø8.5 drill thru, tap M10xP1.5
F: 2-PCDØ220-Ø8.5 drill thru, tap M12xP1.75
G: 8-PCDØ220-Ø13 drill thru x Ø20x13 countersink hole

TV50-155



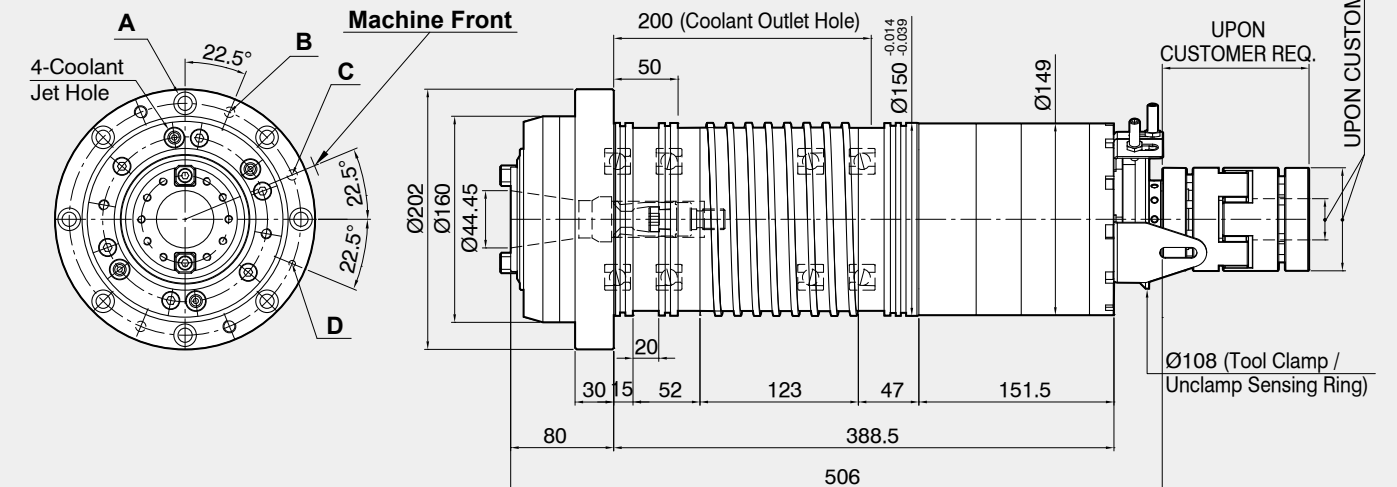
- A:** PT1/4 (Side in) Coolant jet fluid inlet hole
B: PT1/4 (Side in) Coolant inlet hole
C: PT1/8 (Side in) Air curtain inlet hole
D: PT1/4 (Side in) Coolant jet fluid inlet hole

	TV40	TV50	TV50
SPECIFICATIONS	Ø140	Ø155	Ø190
Max. speed	15000 rpm	10000 rpm	10000 rpm
Tool shank type	BT40	BT50	BT50
Bearing type	Front bearing	7013 x 2	7016 x 2
	Rear bearing	7013 x 2	7016 x 2
Bearing lubrication	Grease	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature +18°C	Within room temperature +18°C	Within room temperature +18°C
Drive type	Direct drive	Direct drive	Direct drive
Tool pulling force	1000 ± 10 kgf	1500 ± 10%kgf	1800 ± 10%kgf
Tool pulling method	4-jaw	4-jaw	4-jaw
Tool knocking cylinder	Standard	Standard	Standard
Air curtain at spindle nose	Standard	Standard	Standard
Cooling method	Oil cooling	Oil cooling	Oil cooling
Spindle cooling required	1500 kca/h	1500 kca/h	1500 kca/h
No. of coolant jets	4 holes (Standard)	4 holes (Standard)	6 holes (Standard)
Spindle taper runout	0.002 mm	0.002 mm	0.002 mm
Spindle nose runout with test bar	0.003 mm	0.003 mm	0.003 mm
Test bar runout (300mm)	0.008 mm	0.008 mm	0.008 mm
Dynamic balance	G1	G1	G1
Installation type	Vertical	Vertical	Vertical

Direct-Drive Spindle > SV series

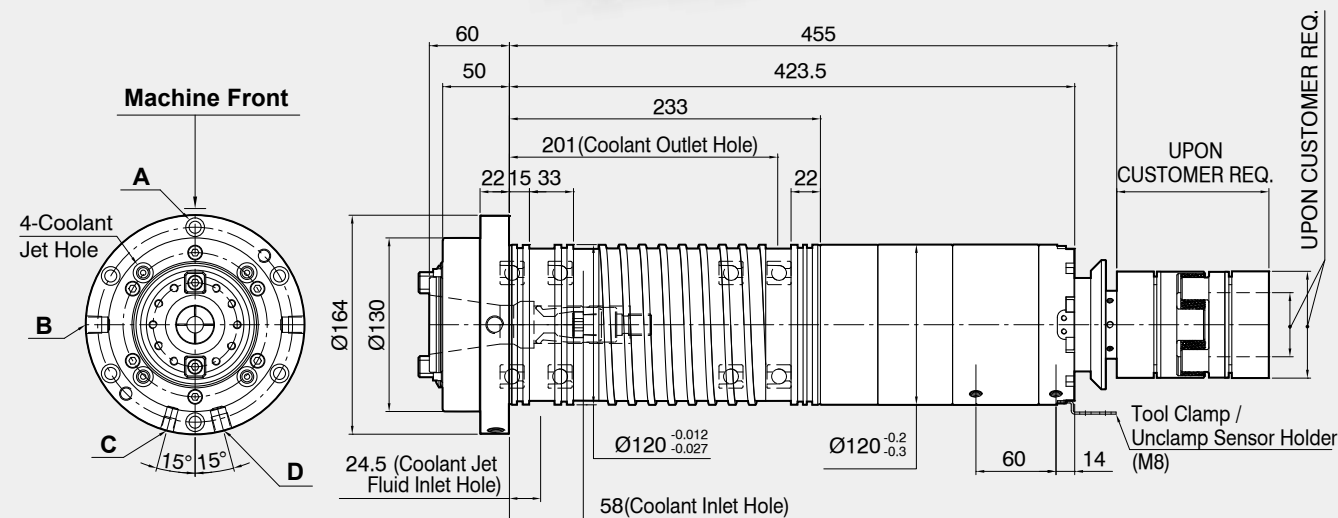


SV40-150



- A:** 8-PCDØ180-Ø11 drill thru x Ø17.5x11 countersink hole
B: 2-Ø8, R90 (Vertical in)(Coolant jet fluid inlet hole, COI)
C: Ø8,R90 (Vertical in)(Coolant inlet hole, OI)
D: Ø5,R90 (Vertical in)(Air curtain inlet hole, AI)

SV40-120

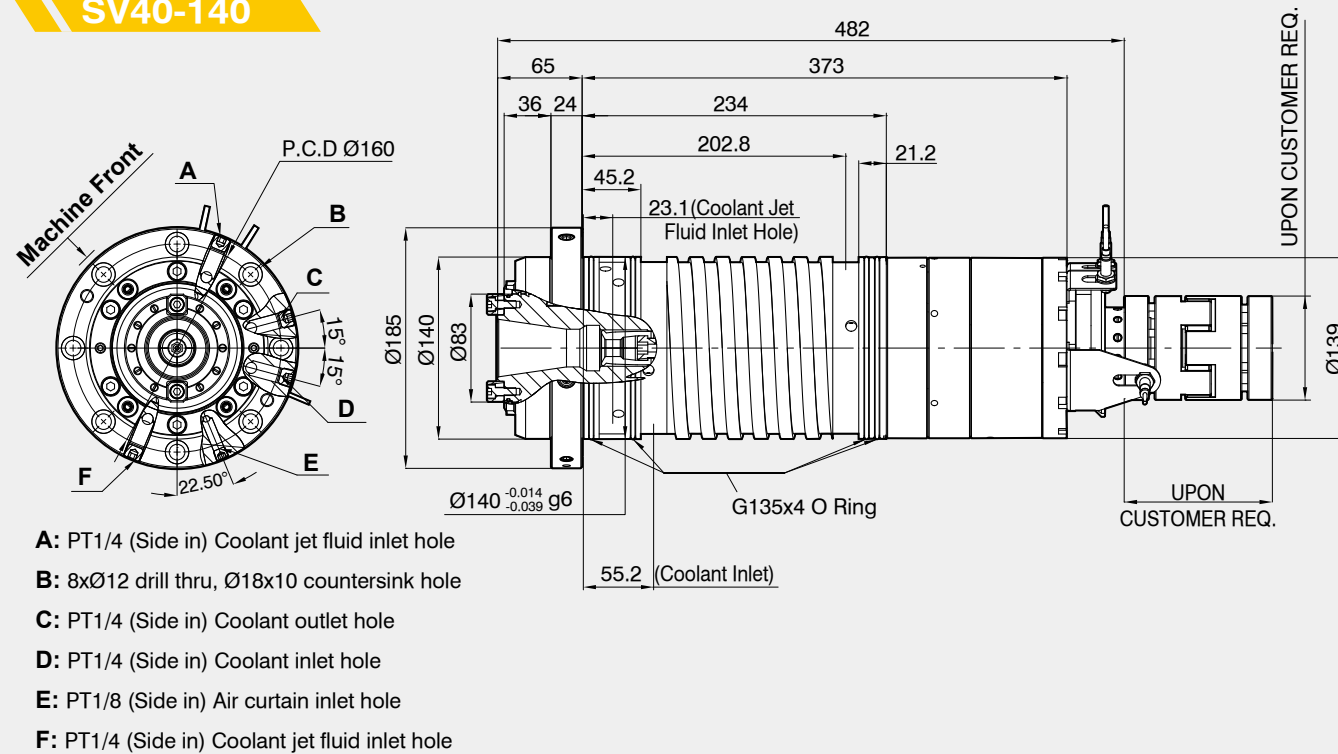


- A:** 6-PCDØ146-Ø9 drill thru x Ø14x9 countersink hole
B: 2-PT1/4" (Side in)(Coolant jet fluid inlet hole, COI)
C: PT1/8" (Side in)(Air curtain inlet hole, AI)
D: PT1/4" (Side in)(Coolant inlet hole, OI)

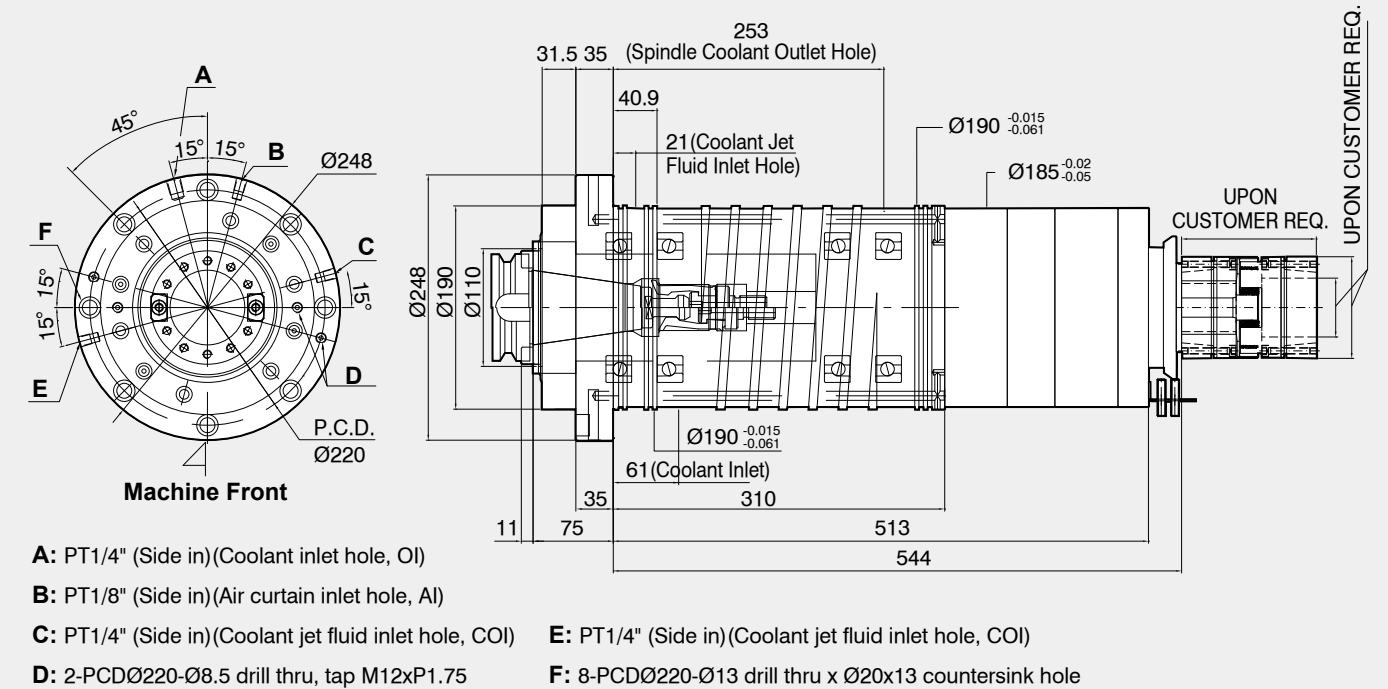
	SV40	SV40
SPECIFICATIONS	Ø120	Ø150
Max. speed	15000 rpm	15000 rpm
Tool shank type	BT40	BT40
Bearing type	Front bearing Rear bearing	7012 x 2 7012 x 2
Bearing lubrication	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature +18°C	Within room temperature +18°C
Drive type	Direct drive	Direct drive
Tool pulling force	700 ±10%kgf	1000 ±10%kgf
Tool pulling method	4-jaw	4-jaw
Coolant through spindle	Optional	Optional
Tool knocking cylinder	Standard	Standard
Air curtain at spindle nose	Standard	Standard
Cooling method	Oil cooling	Oil cooling
Spindle cooling required	1000 kca/h	1500 kca/h
No. of coolant jets	4 holes (Standard)	4 holes (Standard)
Spindle taper runout	0.002 mm	0.002 mm
Spindle nose runout with test bar	0.003 mm	0.003 mm
Test bar runout (300mm)	0.008 mm	0.008 mm
Dynamic balance	G1	G1
Installation type	Vertical	Vertical

Direct-Drive Spindle > SV series

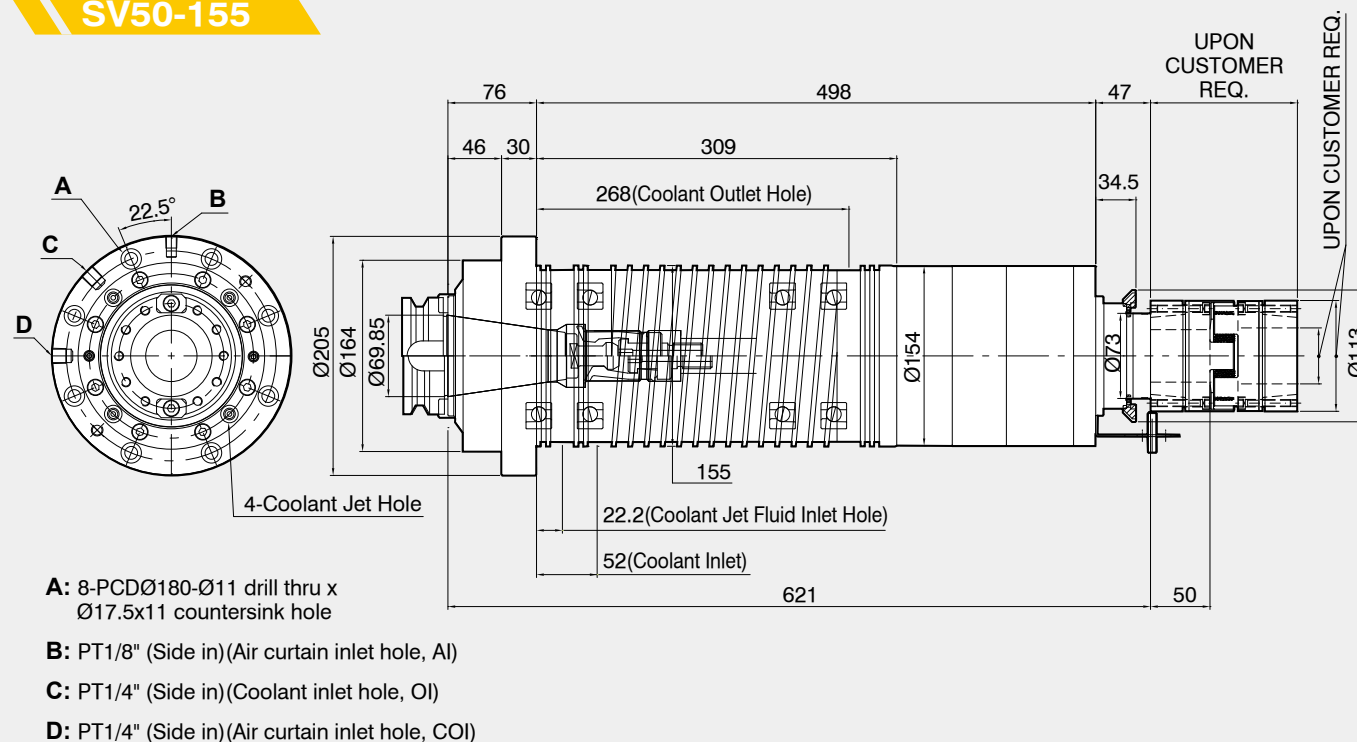
SV40-140



SV50-190



SV50-155



	SV40	SV50	SV50
SPECIFICATIONS	Ø140	Ø155	Ø190
Max. speed	15000 rpm	10000 rpm	10000 rpm
Tool shank type	BT40	BT50	BT50
Bearing type	Front bearing	7013 x 2	7016 x 2
	Rear bearing	7013 x 2	7016 x 2
Bearing lubrication	Grease	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature +18°C	Within room temperature +18°C	Within room temperature +18°C
Drive type	Direct drive	Direct drive	Direct drive
Tool pulling force	1000 ± 10 kgf	1500 ± 10%kgf	1800 ± 10%kgf
Tool pulling method	4-jaw	4-jaw	4-jaw
Coolant through spindle	Optional	Optional	Optional
Tool knocking cylinder	Standard	Standard	Standard
Air curtain at spindle nose	Standard	Standard	Standard
Cooling method	Oil cooling	Oil cooling	Oil cooling
Spindle cooling required	1000 kca/h	1500 kca/h	1500 kca/h
No. of coolant jets	4 holes (Standard)	4 holes (Standard)	6 holes (Standard)
Spindle taper runout	0.002 mm	0.002 mm	0.002 mm
Spindle nose runout with test bar	0.003 mm	0.003 mm	0.003 mm
Test bar runout (300mm)	0.008 mm	0.008 mm	0.008 mm
Dynamic balance	G1	G1	G1
Installation type	Vertical	Vertical	Vertical

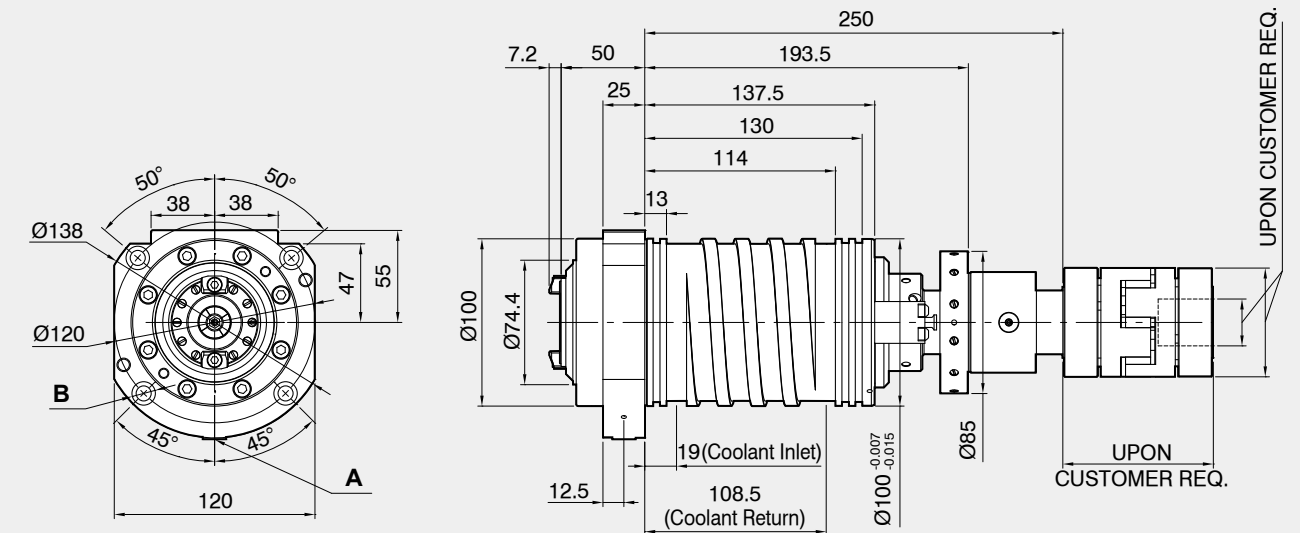
Tapping Center Spindle > FD / SD series

Features of Spindle:

1. Simple construction. Easy to install on a machine.
2. High precision and low vibration.
3. Same mounting interface sizes for high interchangeability and easy use.
4. Suitable for high speed machining.
5. High accuracy of dynamic rotation.



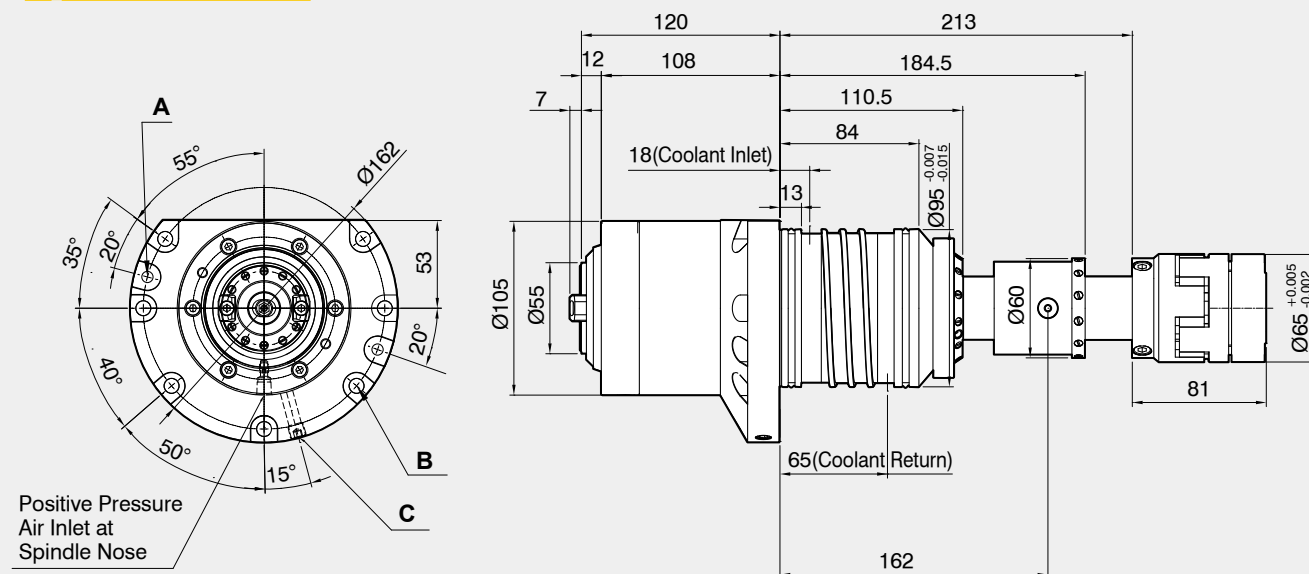
SD30-100



A: PT1/8 Spindle nose (Positive pressure air inlet hole)

B: 4-Ø9 drill thru x Ø14x8.5 countersink hole

FD31-095



A: 2-Ø6.8 drill thru, tap M8xP1.25x6 deep (extract hole) PCDØ146

B: 7-Ø9.05 drill thru x Ø16x18 countersink hole (PCDØ146)

C: PT1/8 (Coolant inlet)

FD31		SD30
SPECIFICATIONS		
Ø95		Ø100
Max. speed		24000 rpm
Tool shank type		BT30
Bearing type	Front bearing	7008 x 2
	Rear bearing	7008 x 2
Bearing lubrication		Grease
Bearing preload		Fixed position preload
Bearing temperature control		Within room temperature +18°C
Drive type		Direct drive
Tool pulling force		280 ±10%kgf
Tool pulling method		4-jaw
Air curtain at spindle nose		Standard
Cooling method		Oil cooling
Spindle cooling required		1000 kca/h
No. of coolant jets		Without
Spindle taper runout		0.002 mm
Spindle nose runout with test bar		0.003 mm
Test bar runout (300mm)		0.008 mm
Dynamic balance		G 1
Installation type		Vertical

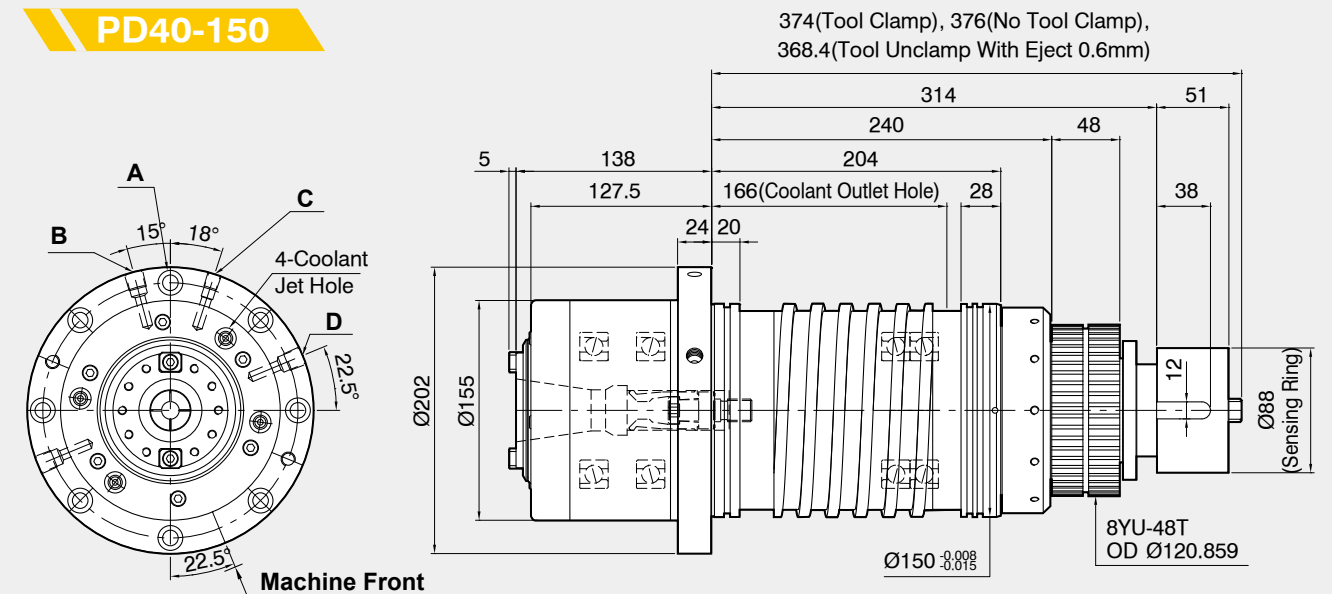
Belt-Drive Spindle > PD series

Features of Spindle:

1. Simple construction with minimum trouble.
2. Lower production cost.
3. Easy to maintain.
4. Complete taper hole with high accuracy and high rigidity.

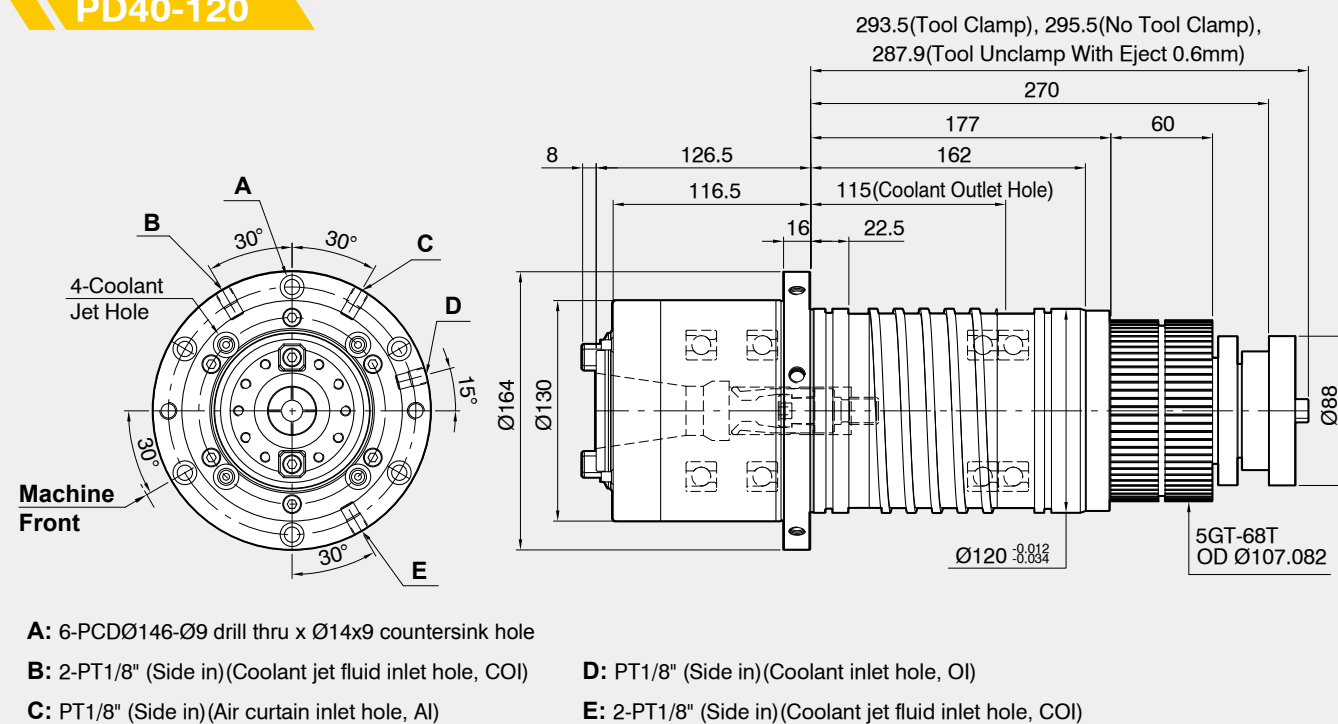


PD40-150



- A:** 8-PCDØ180-Ø11 drill thru x Ø17.5x11 countersink hole
B: PT1/4" (Side in) (Coolant inlet hole, OI)
C: PT1/8" (Side in) (Air curtain inlet hole, AI)
D: 2-PT1/4" (Side in) (Coolant jet fluid inlet hole, COI)

PD40-120

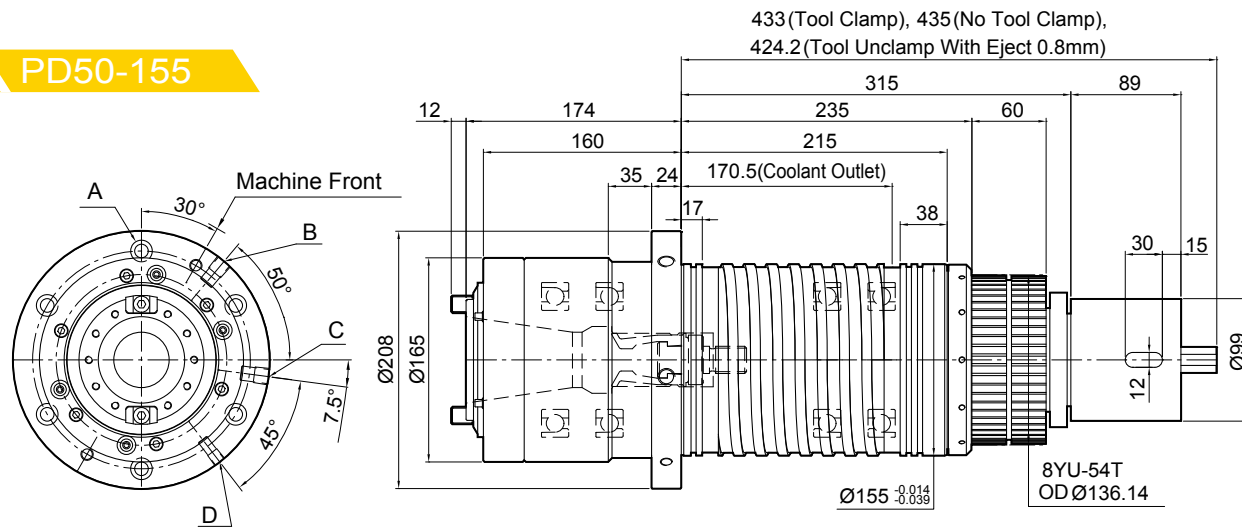


- A:** 6-PCDØ146-Ø9 drill thru x Ø14x9 countersink hole
B: 2-PT1/8" (Side in) (Coolant jet fluid inlet hole, COI)
C: PT1/8" (Side in) (Air curtain inlet hole, AI)
D: PT1/8" (Side in) (Coolant inlet hole, OI)
E: 2-PT1/8" (Side in) (Coolant jet fluid inlet hole, COI)

	PD40	PD40
SPECIFICATIONS	Ø120	Ø150
Max. speed	12000 rpm	12000 rpm
Tool shank type	BT40	BT40
Bearing type	Front bearing Rear bearing	7012 x 2 7014 x 2
Bearing lubrication	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature +18°C	Within room temperature +18°C
Drive type	Belt drive	Belt drive
Positioning method	Concave sensing	Concave sensing
Tool pulling force	700 ±10%kgf	1000 ±10%kgf
Tool pulling method	4-jaw	4-jaw
Air curtain at spindle nose	Standard	Standard
Cooling method	Oil cooling	Oil cooling
Spindle cooling required	1000 kca/h	1000 kca/h
No. of coolant jets	4 holes (Standard)	4 holes (Standard)
Spindle taper runout	0.002 mm	0.002 mm
Spindle nose runout with test bar	0.003 mm	0.003 mm
Test bar runout (300mm)	0.008 mm	0.008 mm
Dynamic balance	G1	G1
Installation type	Vertical	Vertical

Belt-Drive Spindle > PD series

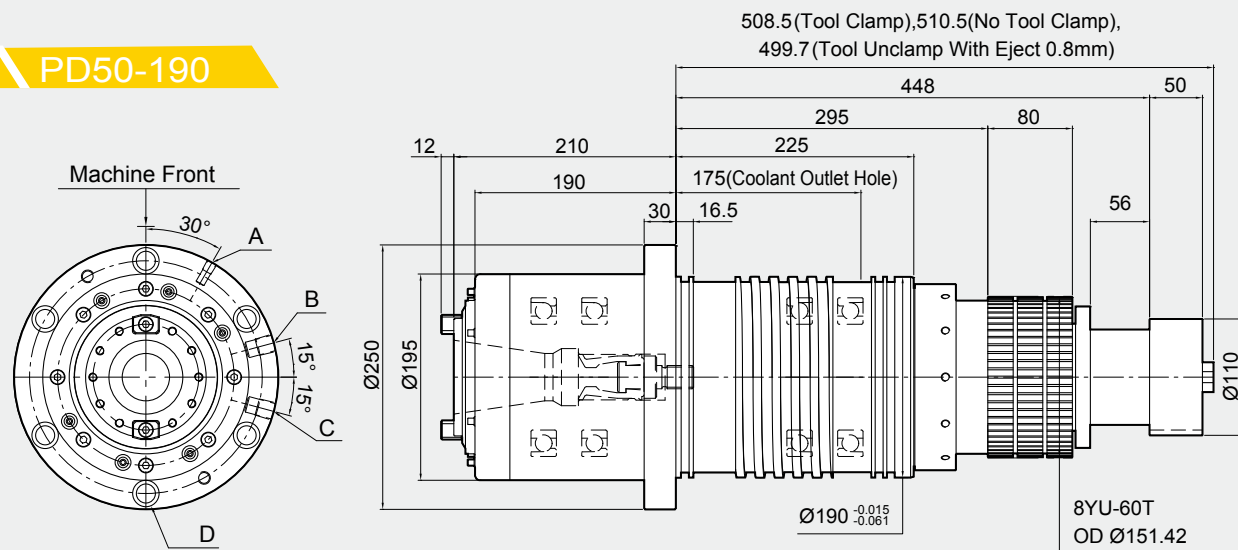
PD50-155



- A: 6-PCDØ176-Ø11 drill thru x Ø17.5x11 countersink hole
B: PT1/4" (Side in)(Coolant jet fluid inlet hole, COI)

- C: PT1/4" (Side in)(Coolant inlet hole, OI)
D: PT1/8" (Side in)(Air curtain inlet hole, AI)

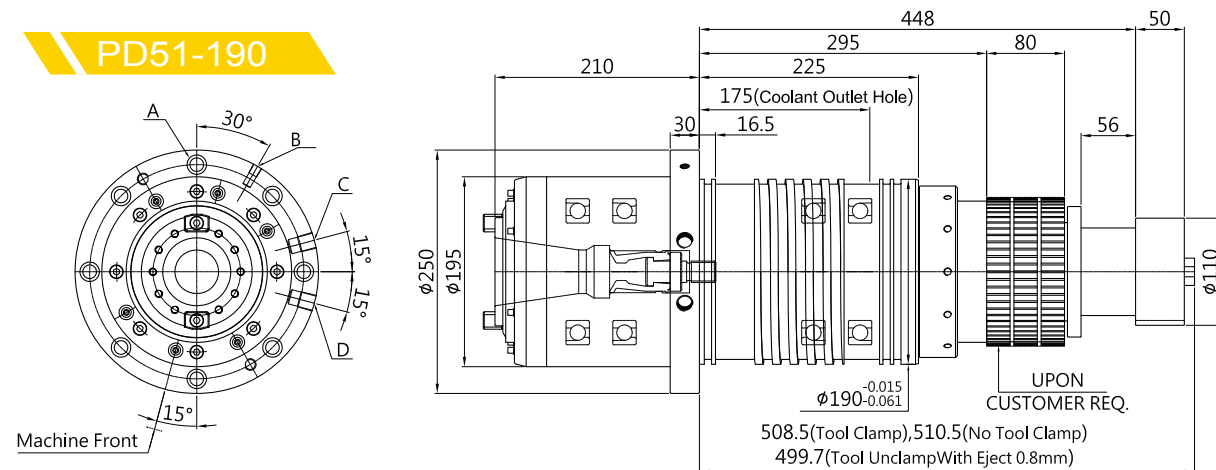
PD50-190



- A: PT1/8" (Side in)(Air curtain inlet hole, AI)
B: PT3/8" (Side in)(Coolant inlet hole, OI)

- C: PT3/8" (Side in)(Coolant jet fluid inlet hole, COI)
D: 6-PCDØ220-Ø18 drill thru x Ø25x17.5 countersink hole

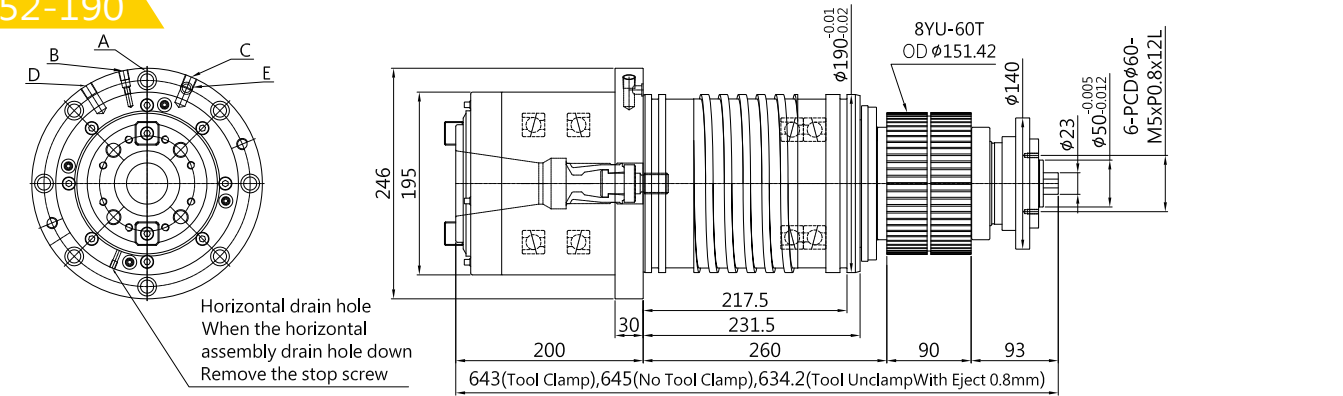
PD51-190



- A: 8-PCDØ220-Ø14 drill thru x Ø20x13 countersink hole
B: PT1/8" (Side in)(Air curtain inlet hole, AI)

- C: PT3/8" (Side in)(Coolant inlet hole, OI)
D: PT3/8" (Side in)(Coolant jet fluid inlet hole, COI)

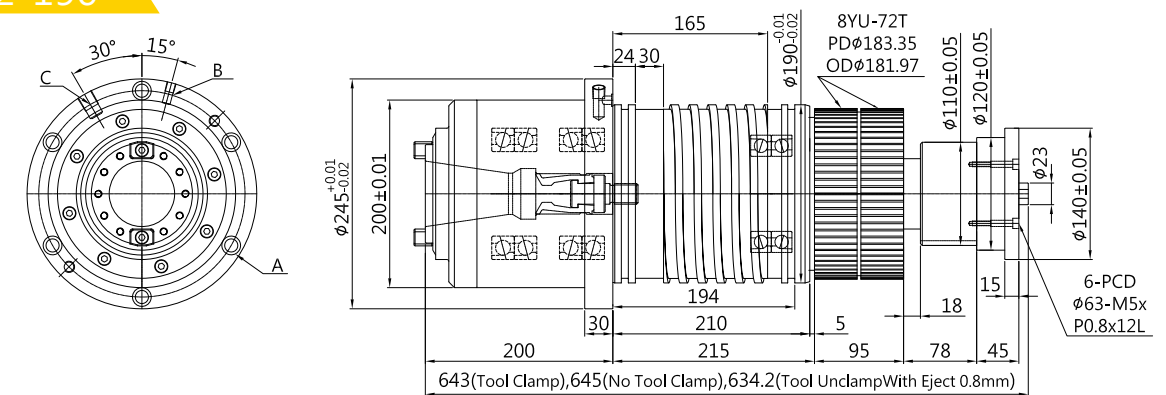
PD52-190



- A: 8-PCDØ220-Ø14 drill thru x Ø20x13 countersink hole
B: PT1/8" (Side in)(Air curtain inlet hole, AI)

- C: PT3/8" (Side in)(Coolant inlet hole, OI)
D: PT3/8" (Side in)(Coolant jet fluid inlet hole, COI)
E: Ø13xØ1.4 countersink hole (Vertical into)(Coolant inlet hole, OI2)

PD52-190



- A: 6-PCDØ220-Ø13 drill thru x Ø20x13 countersink hole
B: PT1/8" (Side in)(Air curtain inlet hole, AI)

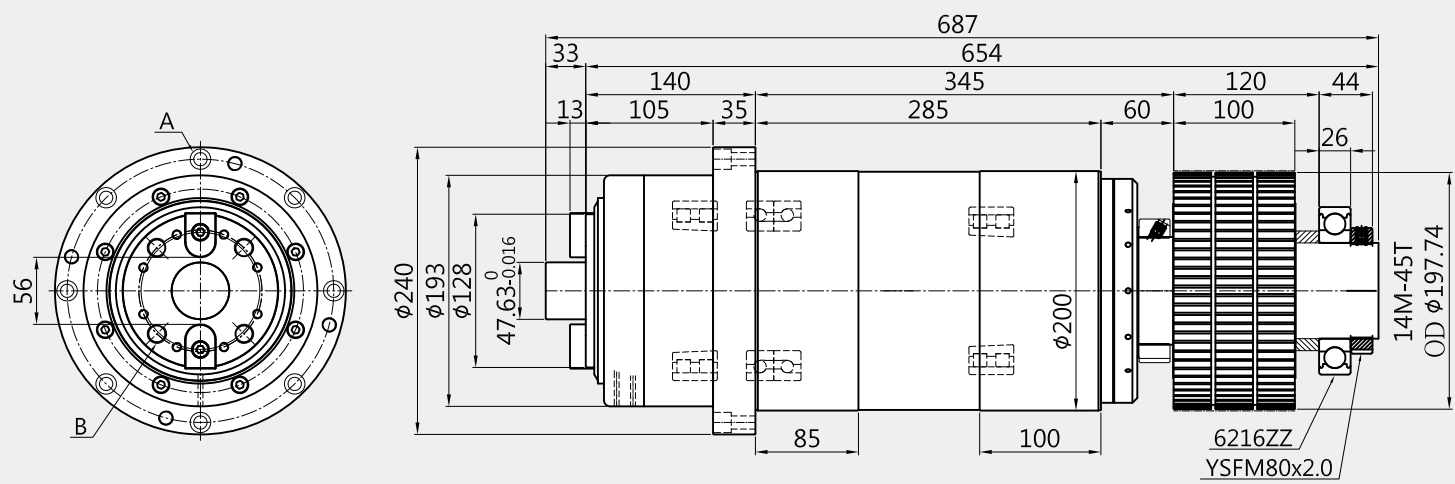
- C: PT1/4" (Side in)(Coolant inlet hole, OI)

	PD50	PD50	PD51	PD52	PD53
SPECIFICATIONS	Ø155	Ø190	Ø190	Ø190	Ø190
Max. speed	8000 rpm	8000 rpm	8000 rpm	8000 rpm	8000 rpm
Tool shank type	BT50	BT50	BT50	BT50	BT50
Bearing type	Front bearing Rear bearing	7016 x 2 7016 x 2	7020 x 2 7020 x 2	7020 x 2 7018 x 2	7018 x 4 7016 x 2
Bearing lubrication	Grease	Grease	Grease	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload	Fixed position preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature+18°C	Within room temperature+18°C	Within room temperature+18°C	Within room temperature+18°C	Within room temperature+18°C
Drive type	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive
Positioning method	Concave sensing	Concave sensing	Concave sensing	Concave sensing	Concave sensing
Tool pulling force	1500 ± 10%kgf	1800 ± 10%kgf	1800 ± 10%kgf	1800 ± 10%kgf	1800 ± 10%kgf
Tool pulling method	4-jaw	4-jaw	4-jaw	4-jaw	4-jaw
Air curtain at spindle nose	Standard	Standard	Standard	Standard	Standard
Cooling method	Oil cooling	Oil cooling	Oil cooling	Oil cooling	Oil cooling
Spindle cooling required	1000 kca/h	1000 kca/h	1000 kca/h	1000 kca/h	1000 kca/h
No. of coolant jets	4 holes (Standard)	6 holes (Standard)	6 holes (Standard)	4 holes (Standard)	-
Spindle taper runout	0.002 mm	0.002 mm	0.002 mm	0.002 mm	0.002 mm
Spindle nose runout with test bar	0.003 mm	0.003 mm	0.003 mm	0.003 mm	0.003 mm
Test bar runout (300mm)	0.008 mm	0.008 mm	0.008 mm	0.008 mm	0.008 mm
Dynamic balance	G1	G1	G1	G1	G1
Installation type	Vertical	Vertical	Vertical	Vertical	Vertical

Belt-Drive Spindle

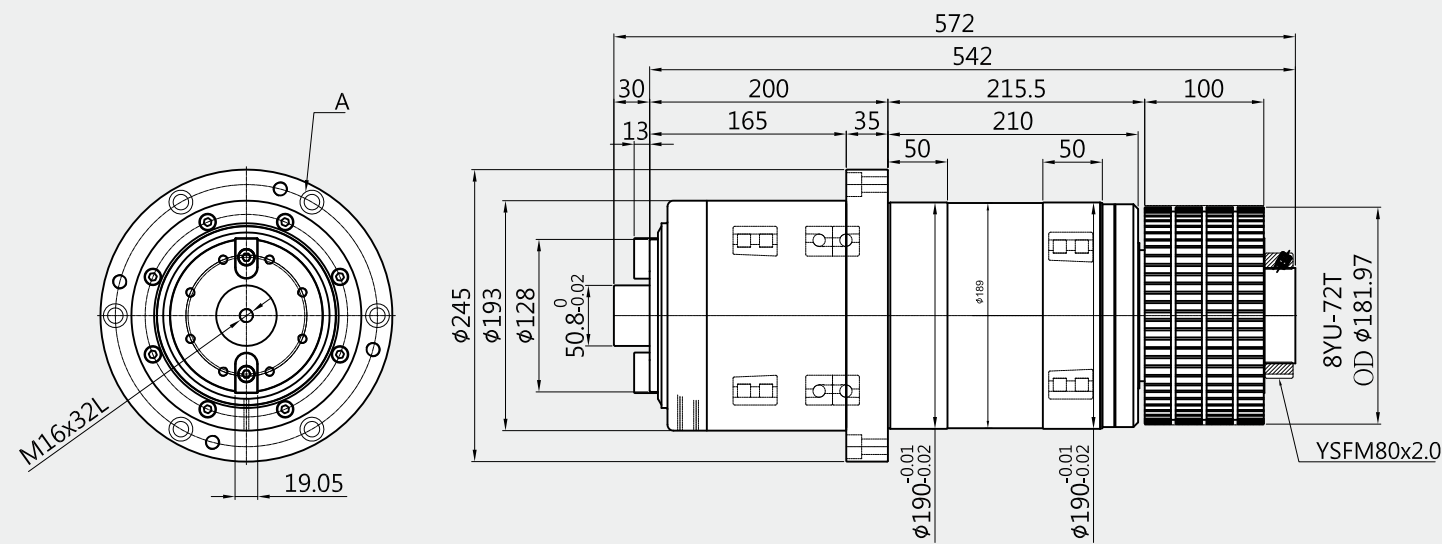
> PD series

PM50-200

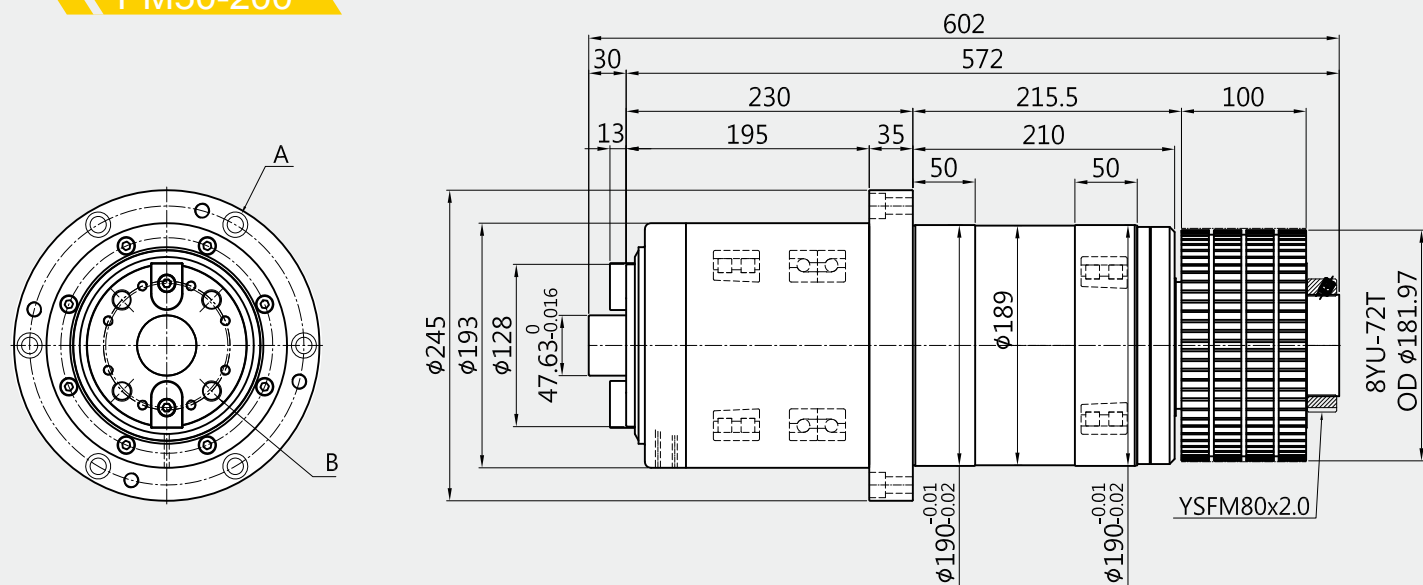


A: 8-PCDØ220-Ø11鑽穿xØ18x15深柱坑
B: 4-PCDØ101.6-M16xP2.0x32深

PM53-190



PM50-200

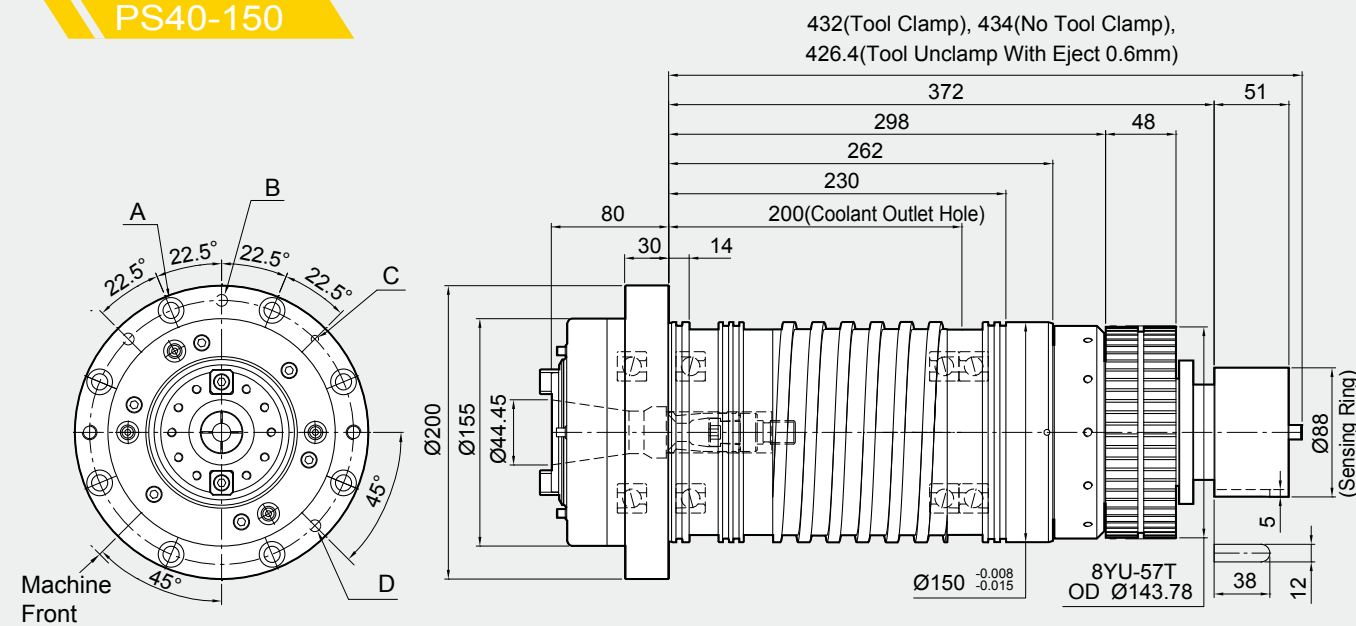


A: 6-PCDØ220-Ø13 drill thru x Ø20x13 countersink hole
B: 4-PCDØ101.6-M16xP2.0x32L

	PM50	PM52	PM53
規格	Ø200	Ø190	Ø190
Max. speed	1500 rpm	1000 rpm	1000 rpm
Tool shank type	BT50-FMA47.625-Ø200	BT50-FMA47.625-Ø190	BT50-FMA50.80-Ø190
Bearing type	Front bearing	NN3020K+100BTR10S	NN3020K+100BTR10S
	Rear bearing	NN3018K+6216ZZ	NN3018K
Bearing lubrication	Grease	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature+18°C	Within room temperature+18°C	Within room temperature+18°C
Drive type	Belt drive	Belt drive	Belt drive
Positioning method	-	-	-
Tool pulling force	-	-	-
Tool pulling method	End locking	End locking	End locking
Air curtain at spindle nose	-	-	-
Cooling method	Oil cooling	Oil cooling	Oil cooling
Spindle cooling required	-	-	-
No. of coolant jets	-	-	-
Spindle taper runout	-	-	-
Spindle nose runout with test bar	-	-	-
Test bar runout (300mm)	-	-	-
Dynamic balance	G1	G1	G1
Installation type	Horizontal	Horizontal	Horizontal

Belt-Drive Spindle > PD series

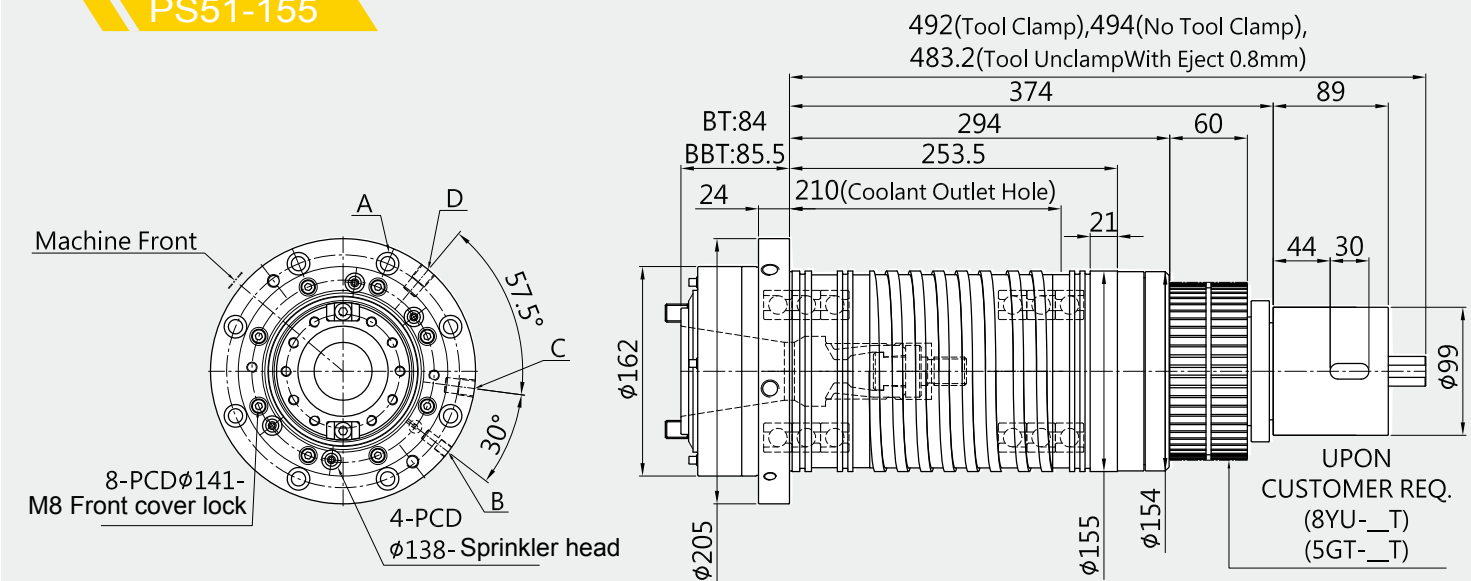
PS40-150



A: 8-PCDØ180-Ø11 drill thru x Ø17.5x11 countersink hole
B: Ø8,R90 (Vertical in)(Coolant inlet hole,OI)

C: Ø5,R90(Vetical in)(Air curtain inlet hole,AI)
D: 2-PCDØ180-Ø8 (Vertical in)(Coolant jet fluid inlet hole,COI)

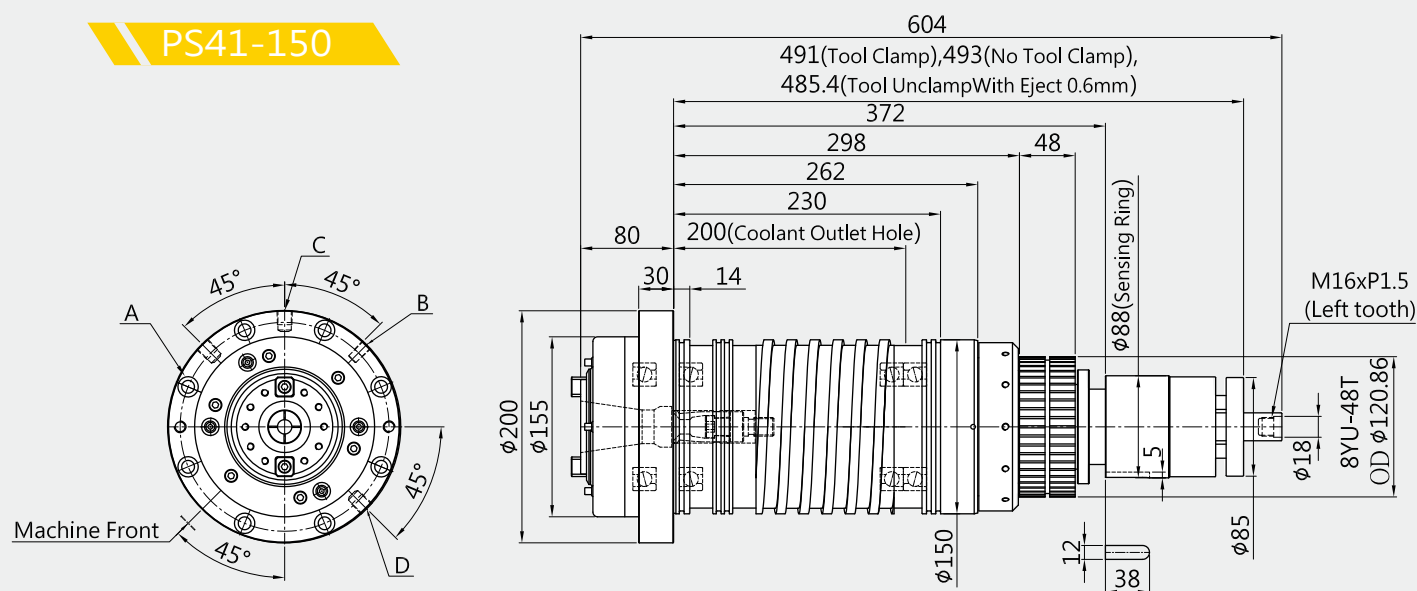
PS51-155



A: 8-PCDØ180-Ø11 drill thru x Ø17.5x11 countersink hole
B : PT1/8"(Side in)(Air curtain inlet hole,AI)

C : PT1/4"(Side in)(Coolant inlet hole,OI)
D : PT1/4"(Side in)(Coolant jet fluid inlet hole,COI)

PS41-150



A: 8-PCDØ180-Ø11 drill thru x Ø17.5x11 countersink hole
B : PT1/8"(Side in)(Air curtain inlet hole,AI)

C : PT1/4"(Side in)(Coolant inlet hole,OI)
D : 2-PT1/4"(Side in)(Coolant jet fluid inlet hole,COI)

	PS40	S41	PS51
規格	Ø150	Ø150	Ø155
Max. speed	12000 rpm	10000 rpm	8000 rpm
Tool shank type	BT40	BT40,Ø150	BT40
Bearing type	Front bearing	7014 x 2	7016 x 3
	Rear bearing	7014 x 2	7016 x 3
Bearing lubrication	Grease	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature+18°C	Within room temperature+18°C	Within room temperature+18°C
Drive type	Belt drive	Belt drive	Belt drive
Positioning method	Concave sensing	Concave sensing	Concave sensing
Tool pulling force	1000 ± 10%kgf	1000 ± 10%kgf	1500 ± 10%kgf
Tool pulling method	4-jaw	4-jaw	4-jaw
Air curtain at spindle nose	Standard	Standard	Standard
Cooling method	Oil cooling	Oil cooling	Oil cooling
Spindle cooling required	1000 kca/h	1000 kca/h	1000 kca/h
No. of coolant jets	4 holes (Standard)	4 holes (Standard)	4 holes (Standard)
Spindle taper runout	0.002 mm	0.002 mm	0.002 mm
Spindle nose runout with test bar	0.003 mm	0.003 mm	0.003 mm
Test bar runout (300mm)	0.008 mm	0.008 mm	0.008 mm
Dynamic balance	G1	G1	G1
Installation type	Vertical	Vertical	Vertical

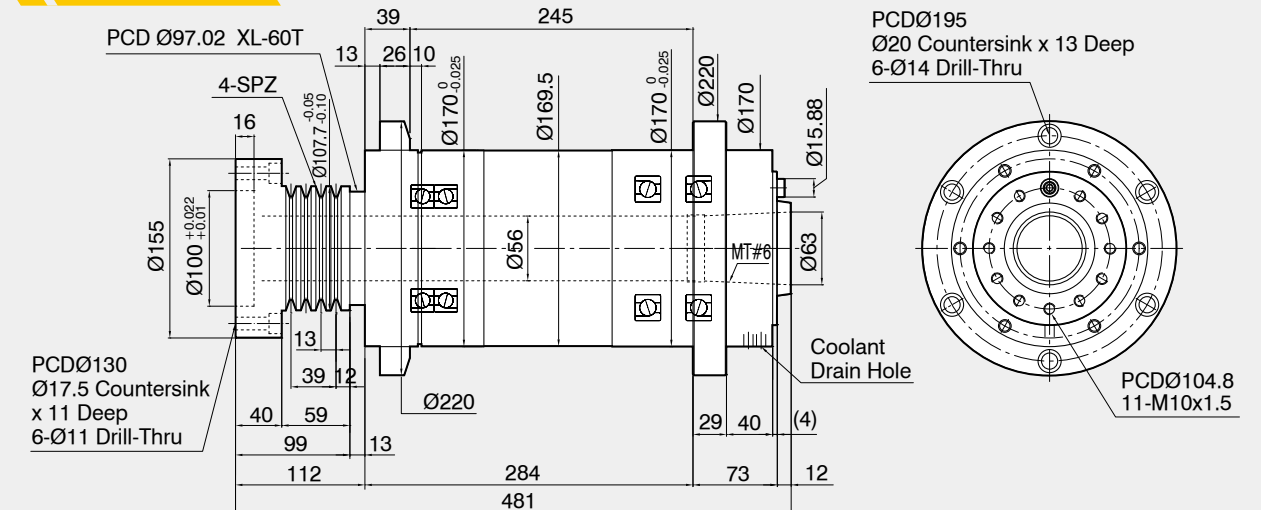
Spindle for Lathe > A2 series

Features of Spindle:

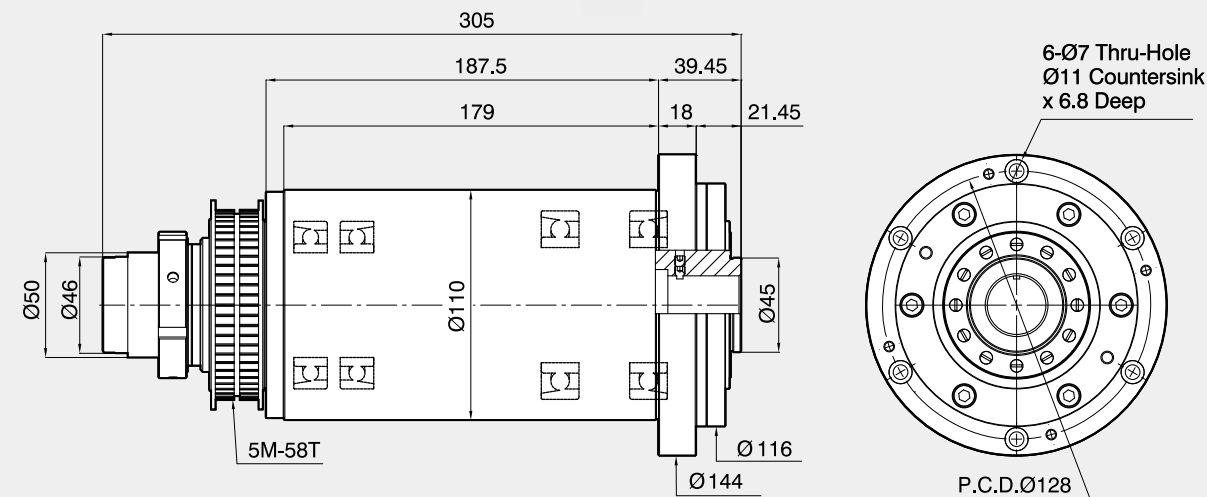
1. High rigidity in axial and radial directions.
2. Stable thermal growth on spindle.
3. High accuracy of dynamic rotation.
4. Applicable for turning and milling multitasking machines.



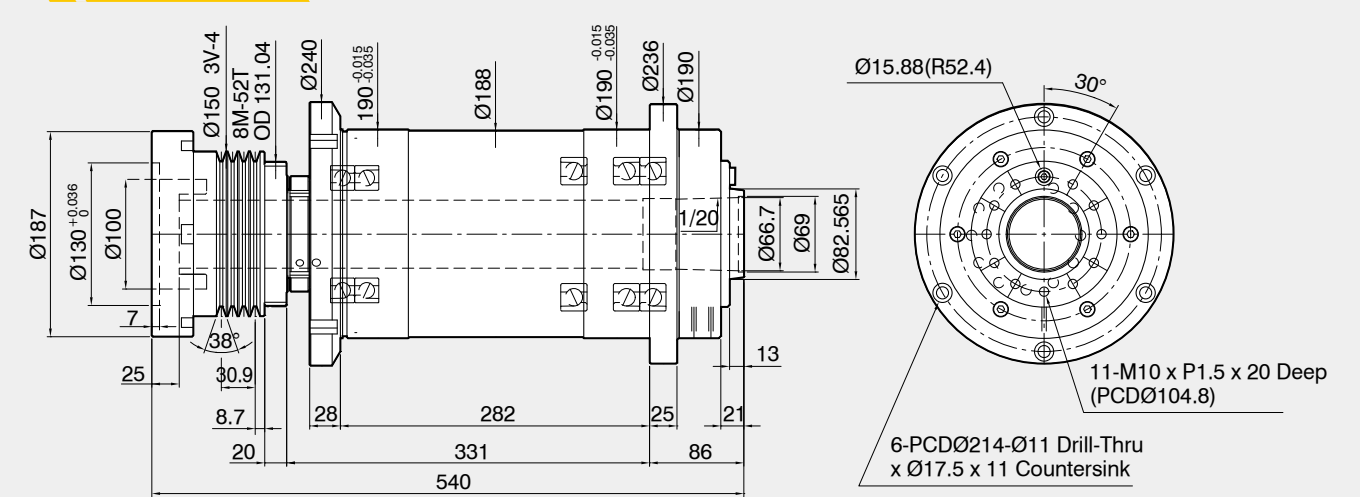
A2-5-170



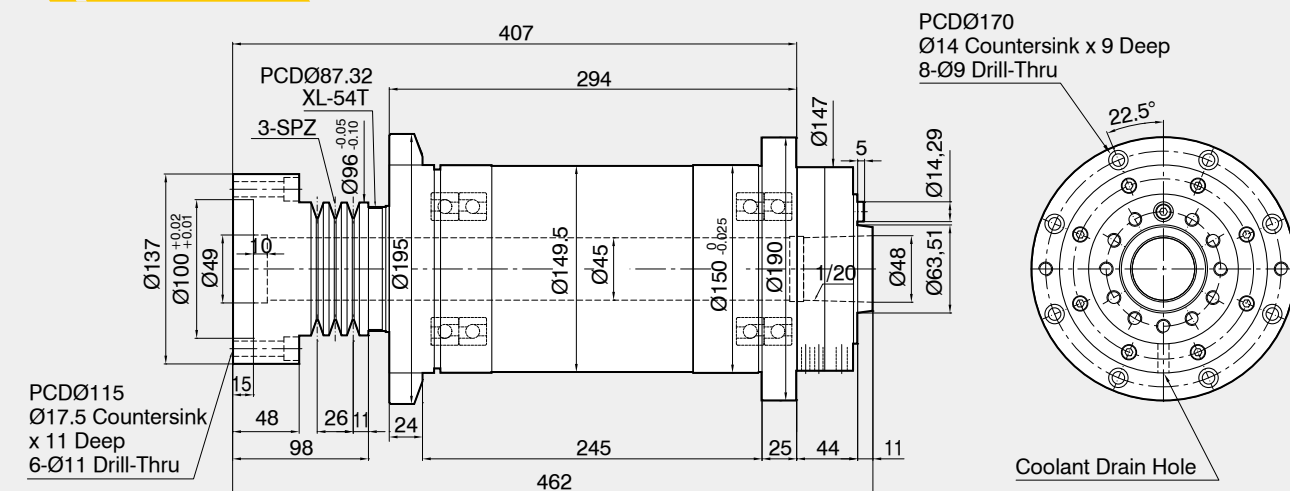
A2-4-110



A2-5-190



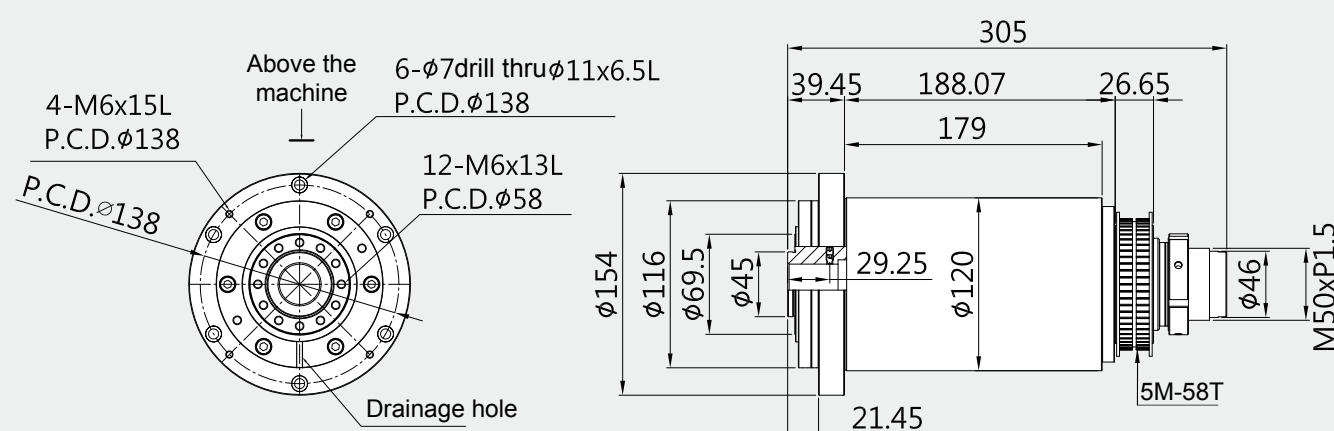
A2-4-150



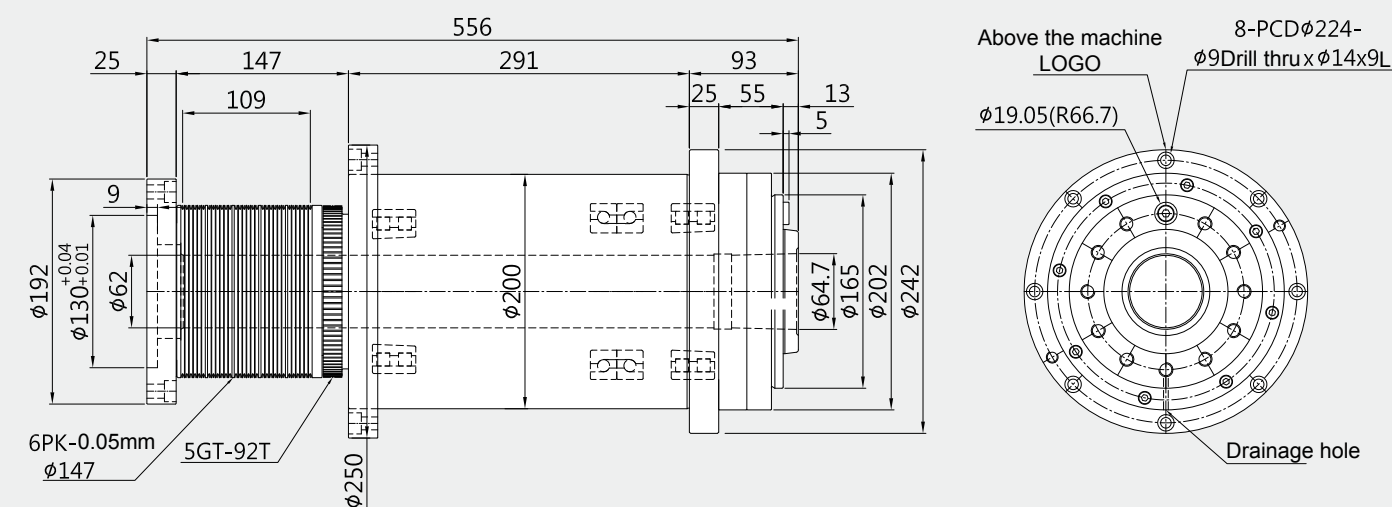
	A2-4		A2-5	
SPECIFICATIONS	Ø110	Ø150	Ø170	Ø190
Max. speed	8000 rpm	8000 rpm	6000 rpm	6000 rpm
Spindle nose	A2-4	A2-4	A2-5	A2-5
Hole through spindle	Ø34	Ø45	Ø56	Ø62
Bearing type	Front bearing	7011 x 2	7014 x 2	7016 x 2
	Rear bearing	7010 x 2	7014 x 2	7016 x 2
Bearing lubrication	Grease	Grease	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature +18°C	Within room temperature +18°C	Within room temperature +18°C	Within room temperature +18°C
Drive type	Belt drive	Belt drive	Belt drive	Belt drive
Positioning method	-	Encoder with wheel	Encoder with wheel	Encoder with wheel
Spindle taper	-	1/20	MT6	1/20
Spindle balance calibration	G1	G1	G1	G1
Installation type	Horizontal	Horizontal	Horizontal	Horizontal

Spindle of Lathe > A2 series

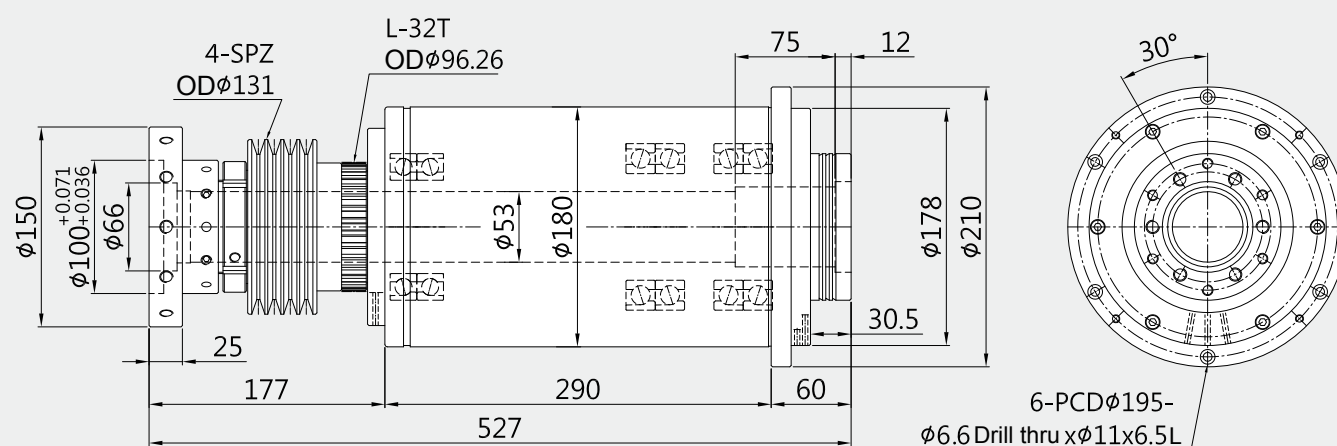
A2-4-120



A2-6-200



A2-5-180



	A2-4	A2-5	A2-6
SPECIFICATIONS	Ø120	Ø180	Ø200
Max. speed	6000 rpm	7000 rpm	4200 rpm
Spindle nose	A2-4	A2-4	A2-6
Hole through spindle	Ø120	Ø110, Ø180	Ø200
Bearing type	Front bearing	7011 x 3	7016 x 4
	Rear bearing	7010 x 2	7014 x 2
Bearing lubrication	Grease	Grease	Grease
Bearing preload	Fixed position preload	Fixed position preload	Fixed position preload
Bearing temperature control	Within room temperature +18°C	Within room temperature +18°C	Within room temperature +18°C
Drive type	Belt drive	Belt drive	Belt drive
Positioning method	-	Encoder with wheel	Encoder with wheel
Spindle taper	-	-	1/20
Spindle bore	-	Ø68H6 x Ø60H6	-
Spindle skew inner hole deflection	0.002 mm	0.002 mm	0.002 mm
Spindle nose deflection	-	0.002 mm	0.002 mm
Test rod deflection	0.008 mm	-	-
Spindle balance calibration	G1	G1	G1
Installation type	Horizontal	Horizontal	Horizontal

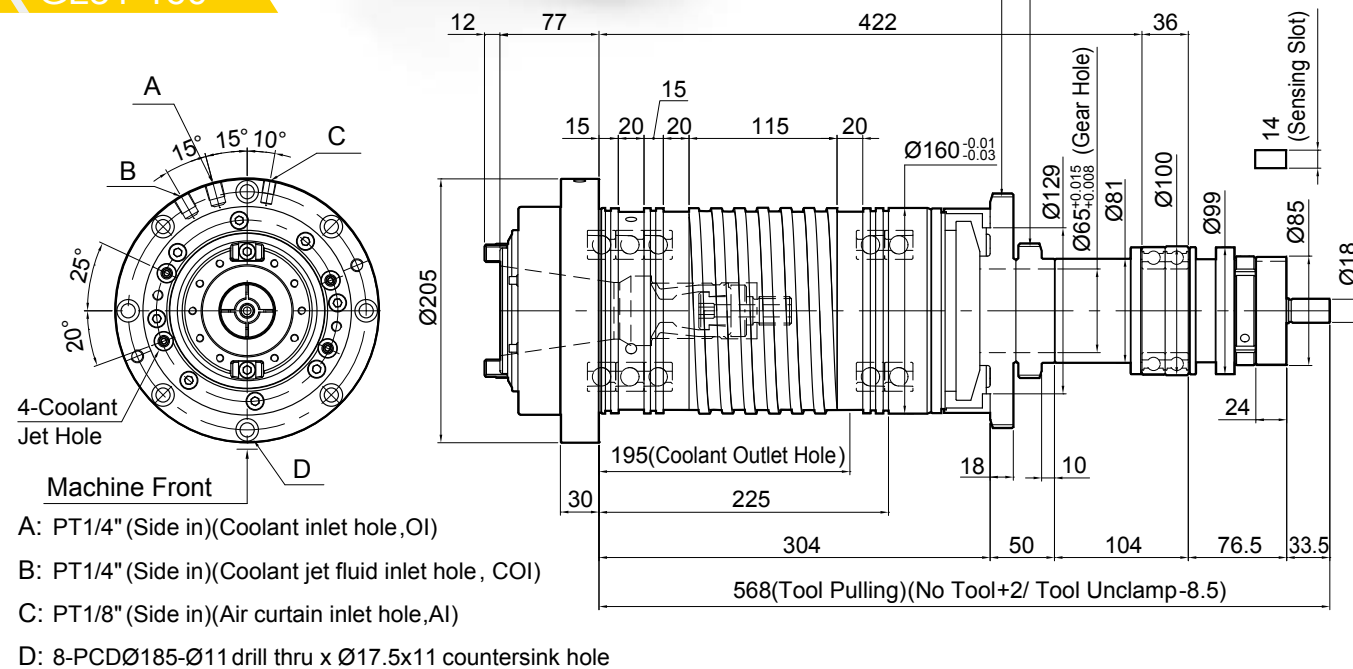
Gear Drive Spindle > GL / GW series

Features of Spindle:

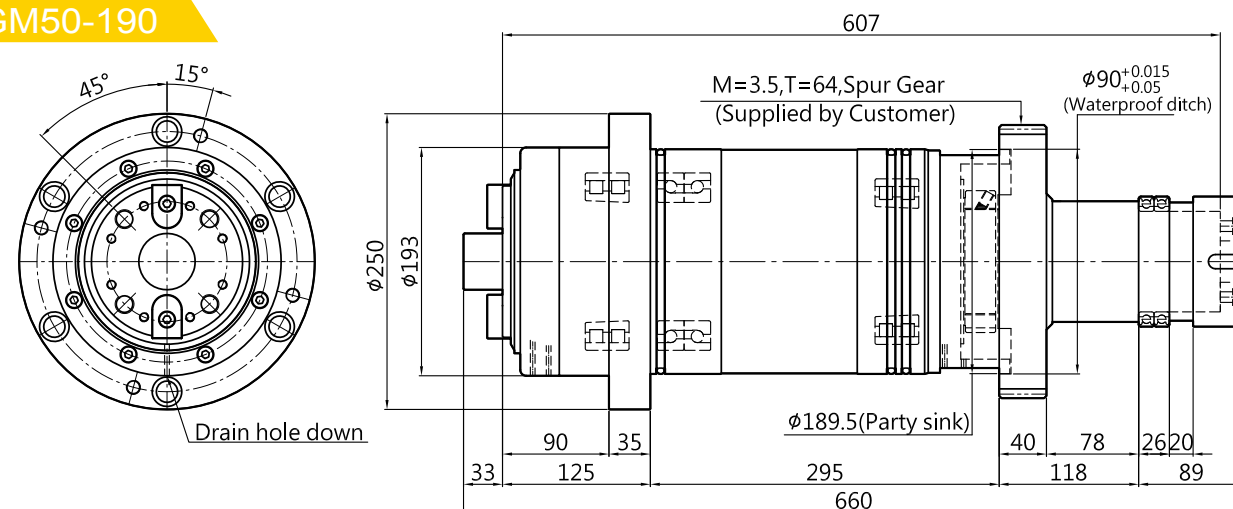
1. Low Production cost.
2. Easy to maintain.
3. High torque output.
Heavy cutting resistance.
4. Stable performance.
5. High cutting efficiency.



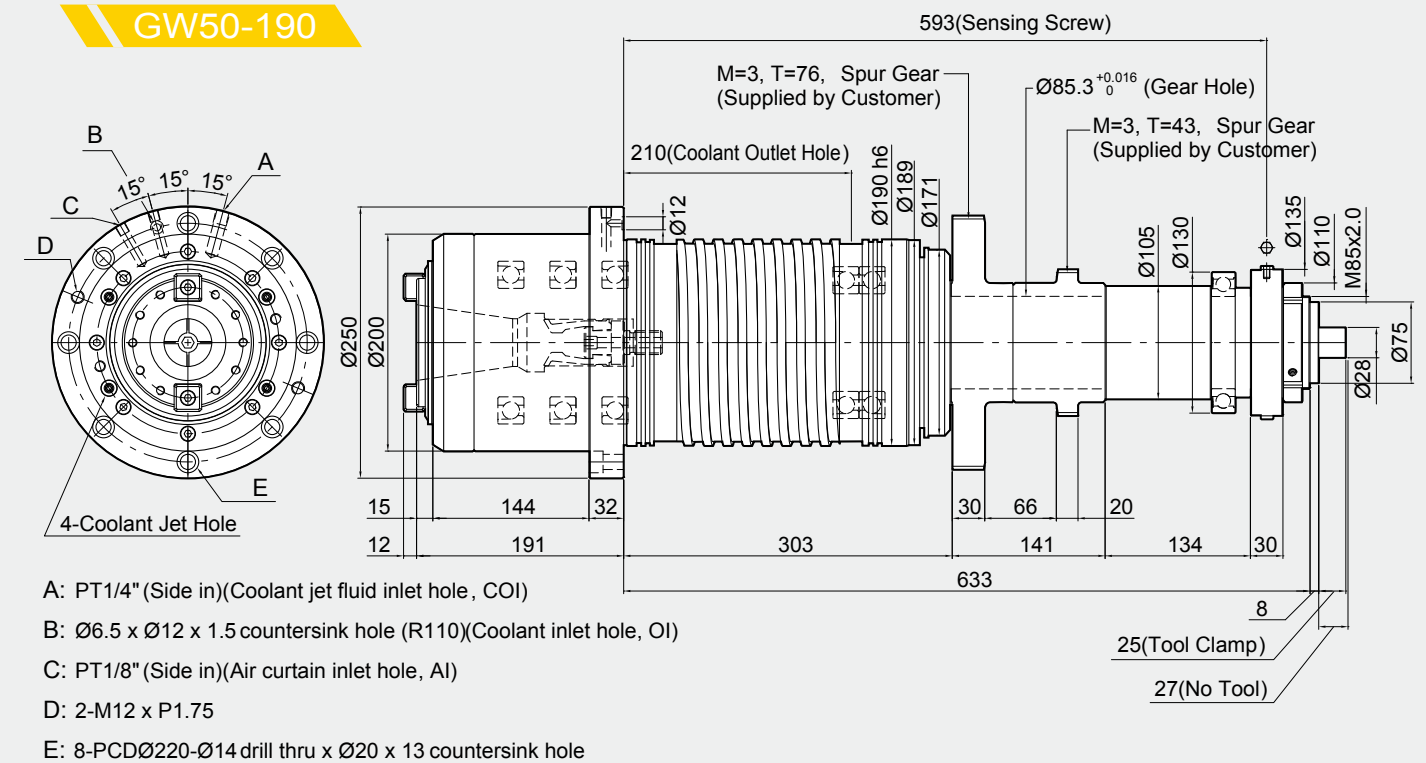
GL51-160



GM50-190



GW50-190

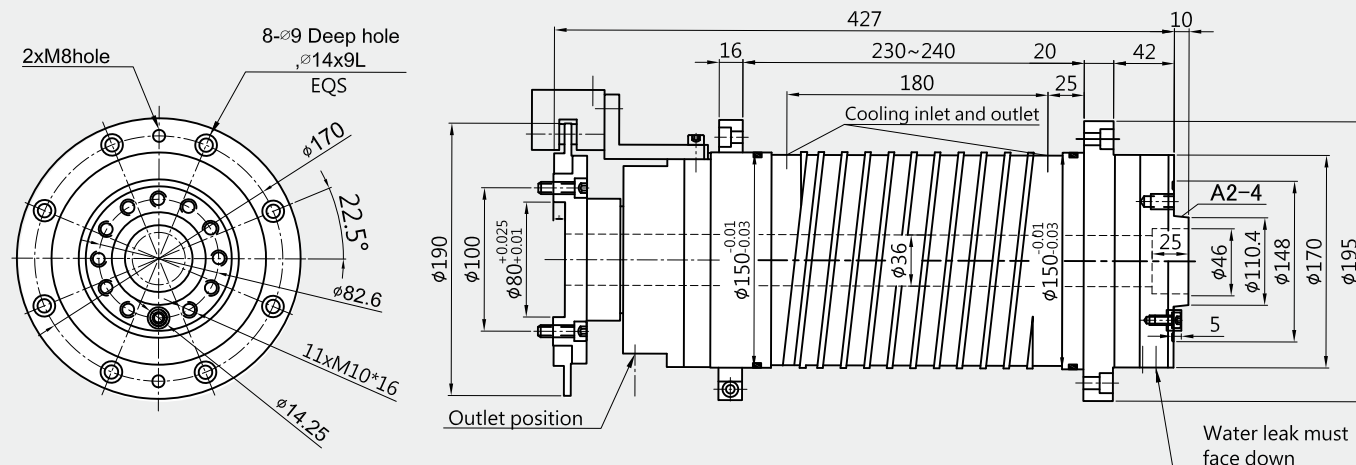
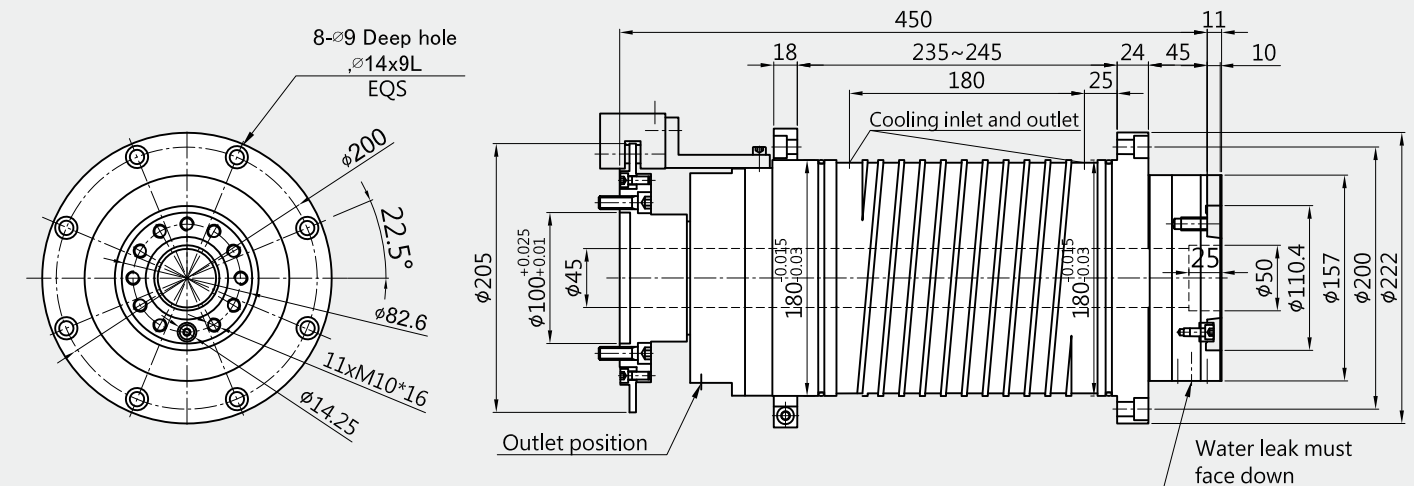


		GL51	GM50	GW50
SPECIFICATIONS		Ø160	Ø190	Ø190
Max. speed		8000 rpm	2000 rpm	6000 rpm
Tool shank type		BT50	BT50-FMA47.625	BT50
Bearing type	Front bearing	7016 x 2	NN3020K+100BAR	7020 x 3
	Rear bearing	7016 x 2	NN3018K	7018 x 2
Bearing lubrication		Grease	Grease	Grease
Bearing preload		Fixed position preload	-	Fixed position preload
Bearing temperature control		Within room temperature + 18℃	Within room temperature + 18℃	Within room temperature + 18℃
Drive type		Gear drive	Gear drive	Gear drive
Positioning method		Concave sensing	Convex sensing	Convex sensing
Tool pulling force		1200 ± 10%kgf	-	1800 ± 10%kgf
Tool pulling method		4-jaw	-	4-jaw
Air curtain at spindle nose		Standard	Standard	Standard
Cooling method		Oil cooling	Oil cooling	Oil cooling
Spindle cooling required		1000 kca/h	1000 kca/h	1000 kca/h
Spindle taper runout		0.002 mm	0.002 mm	0.002 mm
Spindle nose runout with test bar		0.003 mm	0.003 mm	0.003 mm
Test bar runout (300mm)		0.008 mm	0.008 mm	0.008 mm
No. of coolant jets		4 holes (Standard)	-	4 holes (Standard)
Dynamic balance		G1	G1	G1
Installation type		Vertical	Horizontal	Horizontal

Built-in spindle



YCD180



YCD150		YCD180	
Specifications		Ø150 , A2-4	Ø180 , A2-4
Maximum speed		8000 r / min	6000 r / min
series		Level 8	Level 8
Bearing type	Front bearing	7012C x 3	7014C x 3
	Rear bearing	7010C x 2	7012C x 2
Cooling method		Oil cooling	Oil cooling
Braking method		Hydraulic disc brake	Hydraulic disc brake
Spindle end taper		≤0.002	≤0.002
Balance level		G0.4(GB / T9239)	G0.4(GB / T9239)
Targeting		Encoder(S08-MR60-124-02)	Encoder(S08-MR82-162-02)