

MILLING



XR-Series
High-Performance
5-Axis Vertical Machining Centers



www.bpt.com

BRIDGEPORT
EXPECT MORE™

XR-Series High-Performance 5-Axis Vertical Machining Centers

An investment in Bridgeport's latest generation of XR-Series 5-Axis vertical machining centers will bring instant and positive results. Our unrivalled technology coupled with an unwavering commitment to improving our customers' productivity and business performance have contributed to a large, and loyal, customer base. Our 5-Axis VMCs are ideally suited for a diverse range of applications within the aerospace, automotive, motor sport, medical, mold, and tool and die sectors. They provide cost-effective manufacturing solutions for the machining of complex, one-off parts... right through to small batch and high-volume production. The High-Precision models are known for holding extremely tight tolerances over long production runs. Additionally, the bridge-style structure on the larger model further enhances high-performance precision machining.



XR 300 5AX

- Travels
X-axis - 410mm (16.14")
Y-axis - 610mm (24.02")
Z-axis - 500mm (19.69")



XR 600 5AX

- Travels
X-axis - 885mm (34.84")
Y-axis - 800mm (31.50")
Z-axis - 500mm (19.69")

Grease lubrication “on-the-fly”—the latest in spindle technology

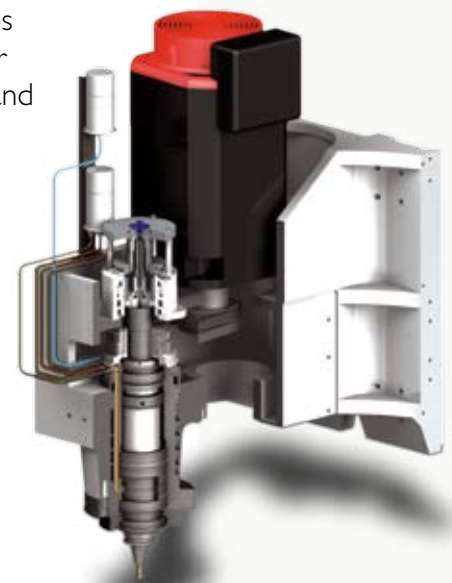
Longer grease life leads to longer spindle service life. Bridgeport XR-Series spindles offer 2-to-3 times longer life due to our grease replenishment technology that keeps the grease quality at a consistently high level. The benefit to this technology is higher permissible bearing preloads, resulting in higher rigidity, higher metal removal rates and the ability to run at higher spindle speeds for longer periods of time.

Revolutionary WEISS spindle

The design of the WEISS directly-coupled, 15,000-rpm spindle option on the XR 600 5AX machine eliminates belts and gear boxes to reduce spindle inertia and increase accel/decel times for increased productivity. Main features include low vibration and high power density—giving even greater rigidity and radial stiffness. The absence of drive traverse forces permits extremely high accuracy on the workpiece due to smooth, accurate spindle motion even at very low speeds.

BIG-PLUS dual contact spindle system

The BIG-PLUS spindle system assures higher rigidity, stiffness and accuracy of toolholders in high-speed and difficult machining applications. The dual contact precisely positions the toolholder within 1 micron following a tool change.





Heidenhain iTNC 530 control

- 384mm (15.1") color TFT display
- User-friendly layout and configuration
- Heidenhain conversational programming
- Heidenhain software Option 2

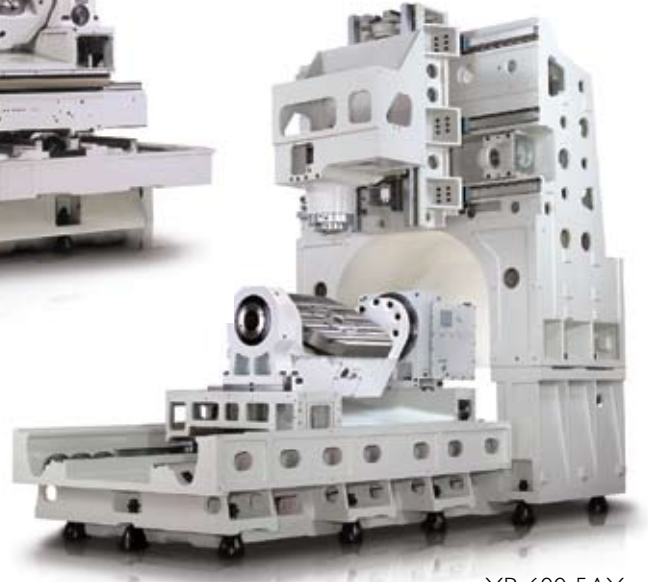


XR 300 5AX

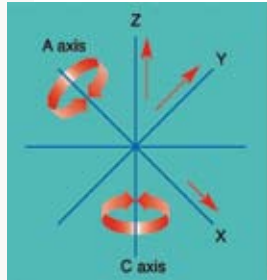


48-Tool ATC

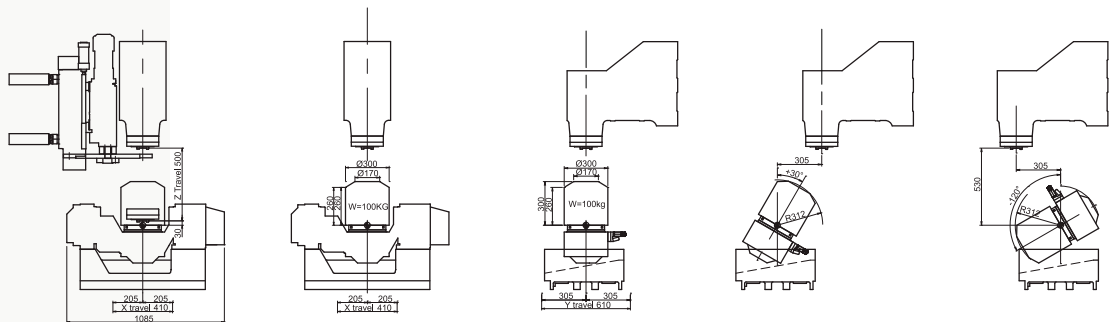
The strategically located automatic tool changer features random access, bi-directional indexing with a fast 4.6 second chip-to-chip change time (60-tool ATC optional).



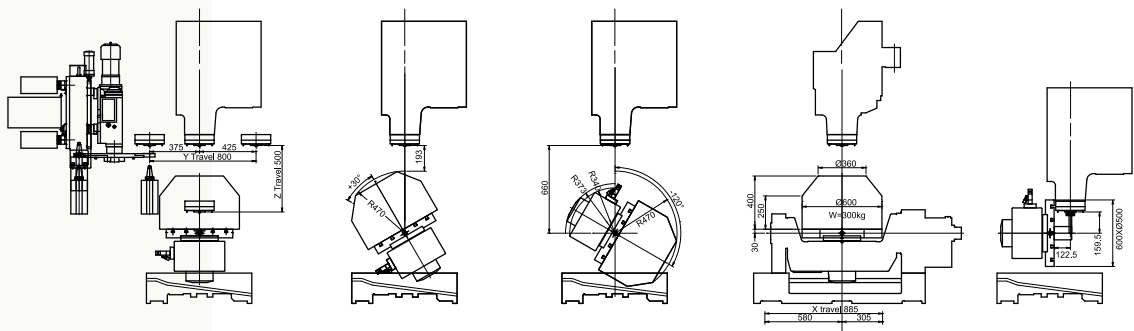
XR 600 5AX



XR 300 5AX



XR 600 5AX



Specifications

	XR 300 5AX	XR 600 5AX
TRAVEL		
X Axis	410mm [-205 +205] (16.14") [-8.07 +8.07]	885mm [-580 + 305] (34.84") [-22.83 +12.01]
Y Axis	610mm [-305 ~ +305] (24.02") [-12.01 ~ +12.01]	800mm [-375 ~ +425] (31.50") [-14.76 ~ +16.73]
Z Axis	500mm (19.69")	500mm (19.69")
A Axis	-30 ~ +120°	-30 ~ +120°
C Axis	360°	360°
Swing Diameter (max.)	300mm (11.81")	600mm (23.62")
Spindle Nose to Table @ 0° (min. - max.)	30 - 530mm (1.18" - 20.87")	130 - 630mm (5.12" - 24.80")
Spindle Nose to Table @ 90° (min. - max.)	30 - 530mm (1.18" - 20.87")	160 - 660mm (6.30" - 25.68")
POSITIONING		
X/Y Axis Rapid Traverse Rate	36m/min (1417ipm)	36m/min (1417ipm)
Z Axis Rapid Traverse Rate	32m/min (1260ipm)	36m/min (1260ipm)
A Axis	25rpm	25rpm
C Axis	25rpm	33.3rpm
X/Y/Z Axis Acceleration	5.5m/sec ² (217in/sec ²)	5.5m/sec ² (217in/sec ²)
Cooled Ball Screw Diameter x Pitch	45 x 12mm (1.77 x .47")	45 x 12mm (1.77 x .47")
WORKTABLE		
Workpiece Size (max.)—diameter x height	300 x 300mm (11.81 x 11.81")	600 x 450mm (23.62 x 17.72")
Table Load Capacity	100kg (220lb)	300kg (661lb)
Clamp Torque (Rotary C)	686Nm (506ft-lb)	1666Nm (1229ft-lb)
(Tilt A Axis)	1372Nm (1012ft-lb)	2156Nm (1590ft-lb)
CNC CONTROL		
Heidenhain	iTNC 530	iTNC 530
SPINDLE		
Maximum Spindle Speed—standard	12,000rpm (belt-driven)	12,000rpm (belt-driven)
Maximum Spindle Speed—option	9,000/15,000rpm (belt-driven)	9,000/15,000rpm (belt-driven)
Maximum Spindle Speed—option	—	15,000rpm (directly-coupled)
Spindle Power (S6-40%)	25kw (33.5hp)	25kw (33.5hp)
Torque (S6-40%)	159Nm (117 ft-lb)	159Nm (117 ft-lb)
ATC (CAROUSEL)		
Type of Tool Shank	No. 40	No. 40
Side-mount Swing Arm Capacity	48 Tools standard; 60 Tool opt.	48 Tools standard; 60 Tool opt.
Shank Type – Size 40	CT or BT	CT or BT
Tool Diameter (max.)	75mm (2.95")	75mm (2.95")
Tool Weight (max.)	7kg (15.4lb)	7kg (15.4lb)
Tool Length (max.)	280mm (11.02")	280mm (11.02")
Tool Change Time (chip-to-chip)	4.6 Seconds	4.9 Seconds
ACCURACY ISO 230-2		
X/Y/Z Positioning accuracy—A	0.010mm (.0004")	0.010mm (.0004")
A & C Axes	5 and 15 arc sec.	5 and 15 arc sec.
High-Precision model X/Y/Z accuracy—A	0.008mm (.0003")	0.008mm (.0003")
A & C Axes	5 and 5 arc sec.	5 and 5 arc sec.
Repeatability of positioning—R	TBA	TBA
MACHINE SIZE		
Machine Dimensions (WxD)	2990 x 2880mm (117.72 x 113.39")	3950 x 3670mm (155.51 x 144.49")
Height	2990mm (117.72")	3030mm (119.29")
Mass of machine	7600kg (16,755lb)	12100kg (26,676lb)

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