

April 17, 2024

AXILE G6 5-AXIS MACHINING CENTRE + AXILE G6 MT 5-AXIS MACHINING/TURNING CENTRE

Dear customer,

Thank you for the opportunity to quote the **AXILE G6 5-AXIS MACHINING CENTRE AND THE AXILE G6 MT 5-AXIS MACHINING/TURNING CENTRE.**



With a rotary table diameter of 600 mm the G6 is a compact vertical machining center designed for agile, smart machining of smaller workpieces requiring complex geometries and intricate features. This highly versatile VMC delivers full 5-axis CNC machining with the built-in spindle moving along the X/Y/Z-axes and the table moving in the rotary C-axis and the swiveling A-axis.

The G6's perfect balance of speed and precision makes it the perfect option for job shops and production lines seeking an upgrade in machining capabilities delivering high removal rates, excellent surface finishes and maximum production efficiency.



In addition to the high-performance G6 model AXILE also offers the G6 MT which combines both milling and turning in one machine and greatly increasing operational flexibility. By reducing set-up times and potential clamping errors the G6 MT can efficiently machine a wider variety of parts including cylindrical components.

FEATURES

- high performance built-in spindle
- table moving by swiveling/rotary axes
- perfect U-shape closed gantry design
- linear scales on all guideways
- for G6 MT: mechanical and laser-type tool measurement system
- for G6 MT: integrated balancing system with additional screen monitor (option)

MACHINE SPECIFICATIONS

LINEAR TRAVEL

	<u>AXILE G6</u>	<u>AXILE G6 MT (IF DIFFERENT)</u>
X-axis (carriage left and right)	650mm (25.6")	
Y-axis (gantry back and forth)	850mm (33.5")	
Z-axis (headstock up and down)	500mm (19.7")	
maximum feed rate in X/Y/Z-axis	36m/minute (1417" per minute)	
guideways type	roller	
guideways size in X/Y/Z-axis	45mm (1.7")	
distance between X/Y-axis guides	500/1110mm (19.7"/43.7")	
ball screw diameter/pitch	400/12mm (1.6"/0.5")	
X-axis motor power/torque	5kW/17.7Nm (6.7 hp/13 ft-lbs.)	
Y-axis motor power/torque x 2	5.7kW/21.6Nm x 2 (7.6 hp/15.9 ft-lbs. x 2)	
Z-axis motor power/torque	6kW/26.1Nm (8 hp/19.3 ft-lbs.)	

MACHINE SPECIFICATIONS

ROTARY TRAVEL

A-axis (table swiveling)
 A-axis drive system
 A-axis brake type
 C-axis (table rotation)
 C-axis drive system
 C-axis brake type
 maximum swiveling speed
 maximum rotary speed

AXILE G6

±120 degrees
 dual torque motor
 hydraulic clamping
 360 degrees
 torque motor
 hydraulic clamping
 100 rpm
 200 rpm

AXILE G6 MT (IF DIFFERENT)

15 rpm turning / 100 rpm machining
 1500 rpm turning / 100 rpm machining

MEASURING FEED BACK

linear axes
 linear axes resolution
 rotary axes
 rotary axes accuracy

linear scale
 0.1µm
 rotary scale
 ±5"

G6 ROTARY TABLE FOR AXILE G6 WITH MPC

table diameter
 maximum table load

 t-slot width/pitch/number
 threaded hole
 number of hydraulic ports
 hydraulic ports working pressure
 number of pneumatic ports
 pneumatic port working pressure

500 x 500mm (19.7" x 19.7")
 400kg (882 lbs.)

 14 x 100 x 5mm (0.5" x 3.9" x 0.2")
 M12 x 100mm (M0.4" x 3.9")
 3
 80bar (1160.3 psi)
 1
 6bar (87 psi)

Ø500mm (Ø19.7")
 350kg turning / 500 kg machining
 (771 lbs. turning / 1102 lbs. machining)
 14 x 30 x 12mm (0.5" x 1.2" x 0.5")

MACHINE SPECIFICATIONS

SPINDLE

spindle taper	HSK-A63	HSK-T63
maximum spindle speed	20000 rpm	
type	built-in	
maximum spindle power	25/32kW (33/53 hp)	
maximum spindle torque	86/111Nm (64.2/99.6 ft-lbs.)	
bearing type front/rear	angular ball	
bearing cooling / lubrication	oil / air	
spindle nose to rotary table clamping surface	from 130 to 630mm (from 5.12" to 24.8")	

SPINDLE THROUGH COOLANT SUPPLY WITH SEPARATE TANK

high pressure pump	70bar (1015 psi)
filter type	cartridge + paper band
additional	coolant chiller + oil skimmer

AUTOMATIC TOOL CHANGER

change type	chain
carousel drive system	servo motor
magazine positions	120
maximum tool length	300mm (11.8")
maximum tool diameter with all full pockets	75mm (3")
maximum tool diameter with adjacent empty pockets	125mm (4.9")
maximum tool weight	8kg (17.6 lbs.)
maximum loading weight	800kg (1763 lbs.)

ACCURACY

positioning	±0.005mm (±0.0002")
repeatability	0.0025mm (0.0001")
linear measuring feedback type/resolution	scale/0.001µm
rotary measuring feedback type/accuracy	rotary scale/±5"



EXTERNAL COOLANT SUPPLY

external coolant nozzles/pressure	4 x 3bar (4 x 43.5 psi)
external air nozzles/pressure	2 x 6bar (2 x 87 psi)
coolant tank capacity	1500l (396.2 US Gallon)

SUPPLIES

installed power	60 kVa
voltage without transformer	400V
frequency	50/60Hz

MACHINE DIMENSIONS + WEIGHT

length with chip conveyor	3990mm (13')
width	4750mm (15.6')
height	2970mm (9.7')
weight	16000kg (35275 lbs.)
floor space	3150 x 4750mm (10.3' x 15.6')

STANDARD + INCLUDED EQUIPMENT

- Heidenhain TNC7 control
- 20,000 rpm built-in transmission spindle with coolant through system
- 120 station automatic tool changer
- air conditioner for electrical cabinet
- water chiller for table and spindle
- coolant through spindle with 70bar high pressure coolant pump and paper filter system
- coolant gun
- chain type chip conveyor
- oil skimmer
- smart tool panel
- auto roof for overhead crane loading/unloading
- linear scales
- rotary scales
- automatic laser tool measurement system
- automatic radio controlled work piece probing system
- automatic spin window
- MPC-2 automatic 2-pallet changer

PRICING

AXILE G6 5-AXIS MACHINING CENTRE PACKAGE	\$
AXILE G6 MT 5-AXIS MACHINING/TURNING CENTRE PACKAGE	\$
OPTIONAL MPC-6 AUTOMATIC 6-PALLET CHANGER	\$

We look forward to working with you and your team on this project. Any questions? Just ask.

Sincerely,

MASTEEL AMERICA CORPORATION

Ron Nater

Manager, Eastern Canada

647.270.4434 / ron@masteels.com / www.ronnater.ca

