

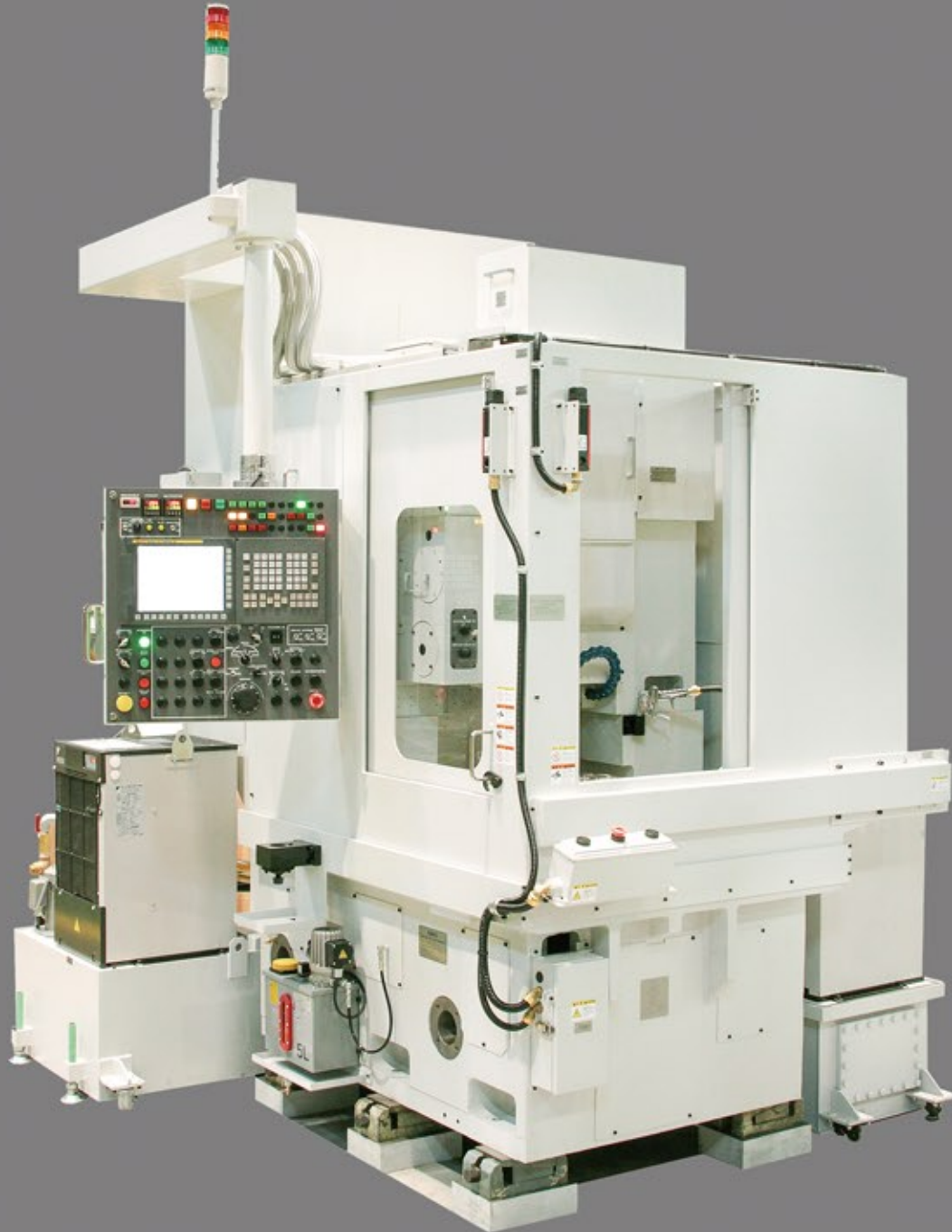
GEAR SHAPER GSM-12N



GSM-12N

Reliability
Operation Friendly
High Precision

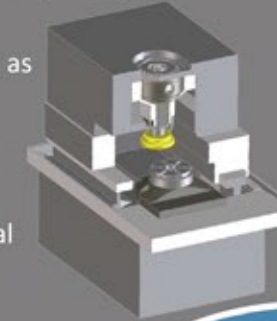
Design concept is high performance with less foot prints.
Delivery record of approx. 400 units is full of knowledge to satisfy variety of customer needs.



History of Karats gear technology started from production of a turbine pinion hobbing machine in 1921. For 100 years Karats Precision has succeeded to produce many models and large numbers of gear processing machines. This model is one of the master pieces.

High Speed, High Rigidity, High durability

The cutter head supports the cutter spindle ass'y with hydrostatic bearings at its cutter spindle, Guide and stroke guide, assuring higher rigidity as well as vibration damping ability for the stable cutting strokes. The large-sized master worm wheel made of special material keeps its high precision for prolonged use.



Shaping program

Deep experience for more than 40 years and 400 units delivery has established an operation friendly man-machine interface.



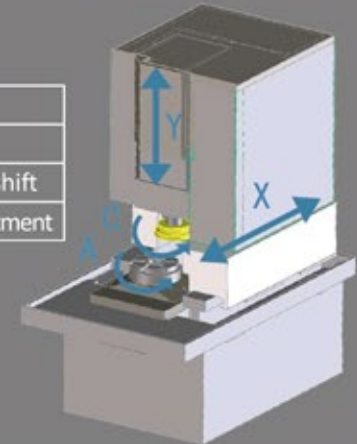
FEATURES



Most of the parts and components are made in-house. Legacy of high skill and sense of responsibility has established the base for quality machine building.

Reliability and High Precision

X	column infeed
A	table rotation
C	cutter rotation / shift
Y	stroke length adjustment



Operation friendliness on CNC

OPTION



Work Fixture

Fixtures are custom designed as per part drawings. They are reliable, run-out free and quickly changed over.



Swing loader

Automatic loading and unloading are available in quick motion. Work holders are custom designed.



Center support

Gear shaft is supported by a center at top hydraulically during gear cutting.

Samples

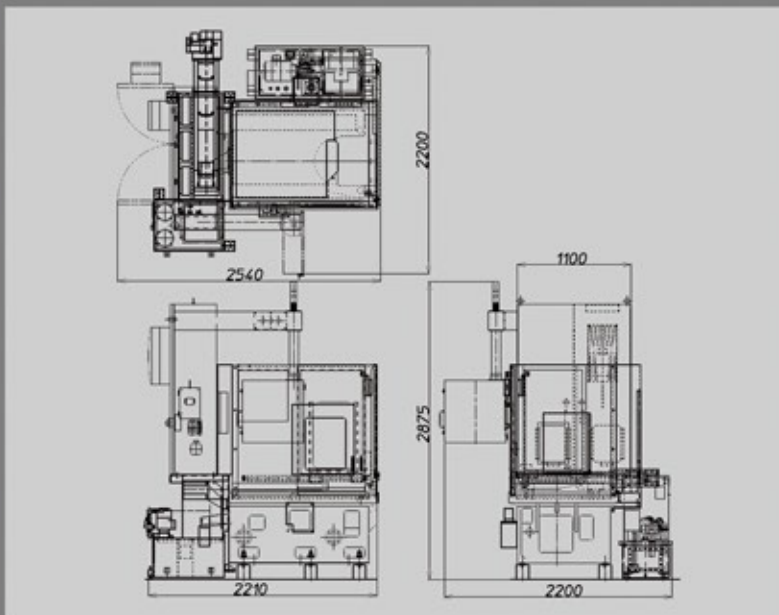


Specification

Diameter of work table	250mm
Max. module	m4
Max. width of gear face	40mm(50mm)※1
Diameter of hole through work table	70mm
Diameter of cutter spindle	90mm
Taper hole in cutter spindle	φ45(1/12Taper)
Number of cutter strokes	300 - 1500str/min
Rotary feed rate of cutter (φ100 cutter)	1.5 - 2250mm/min
Radial infeed rate (including rapid feed)	1 - 3000mm/min
Rated capacity	20kVA
Main drive motor (Continuous rating)	AC 5.5kW
Overall dimensions(L×W×H)	2200×2210×2875mm
Net weight	7000kg

※1: with conditions

Dimensions



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Standard equipment

- CNC system (FANUC 31i-B)
- Control panel and operation panel
- Automatic shifting of cutter location
- Automatic stroke halt (at up & down end)
- Straight guide
- Hydraulic oil unit (with temp. controller)
- Cutting coolant supply unit

Optional equipment

- Cutter arbor
- Swing loader
- Work fixture
- Work seating sensor
- Block up of column (max.300mm)
- Automatic slide door
- Machine full cover
- Quick change of cutter arbor
- Helical guide
- Work fixture cleaning coolant flush
- Automatic stroke length adjust (Y axis)
- Column shift (manual)
- Rotary cylinder
- Chip conveyor
- Chip bucket
- Coolant shower gun
- Orientating device
- Cutter carrier to spindle position
- Mist collector
- Cutting coolant temp. controller
- Work area lighting
- Signal light tower (3 color)
- Electric leak breaker
- Energy saving device
- Work air blow
- Air conditioner for control panel

※Contents in this brochure are subject to modify without notice in case of machine improvement.