

Machine Offer

Mazak HQR-250MSY

Ref no. 18579



Manufacturer: Mazak

Model: HQR-250MSY

Serial number: 305913

Year: 2019

KUKA Robot "Smart Zell" KR 60-3 - Payload 60 kg

Serial number: 706912

Year 11/2019

HQR-250MSY

SPECIFIKATIONER OG Udstyr UDOver STANDARDUDSTYr

MODEL

0850U HQR-250MSY
850 mm Bed (Universal)

GENERAL MACHINE OPTIONS

CO029 Chuck airblast (1st spindle)
CO110 Air blow for work transfer
Air blow during workpiece transfer
between chucks.

FACTORY AUTOMATION SYSTEMS

AS306 Automatic front door open/close (850U)

SECOND SPINDLE C AXIS

SI095 2nd spindle C axis 0.0001° increments

HEALTH & SAFETY

AS078 Overload detector (Head 1 & Head 2)

OPERATION CONDITION LIGHTS

PL083 Signal tower (3 colour lights)

COOLANT SYSTEMS

CI005 1 additional Coolant Tank incl. 1 x 30 bar Grundfos pump for Coolant through Turret 1 and Turret 2, and 1 x 15 bar Grundfos pumps for Coolant through for SP2 *

CHUCKING SYSTEMS

CI006 Main spindle/Sp.1 : Self centring 3 jaw quick change chuck SMW-AUTOBLOK type Ø225-66 KNCS-2G ASA2-6". Complete with master jaws (GBK-2G) + hard step top jaws (GUA) (28296.4) *

CI007 Sp.1: Hydraulic open cylinder SMW-AUTOBLOK type 150-67 VNK-T2 (28296.4) *

CI008 Sp.1: Cylinderflange VNK150 with a maximum diameter of Ø 197 mm (28296.4) *

CI009 Sp.1: Draw tube with nominal ø66mm through hole external max ø75mm (28296.4) *

CI010 Sp.1: Chuck adapter (size 2) for connecting the draw tube or draw bar to the chuck (28296.4) *

CI012 Sp.1: Mounting parts with anti rotation bracket, mounting drawing, warning/safety shield (28296.4) *

CI015 2 x Sp.1: Master jaw GBK-2G 200 (28296.4) *

CI016 2 x Sp.1: Hard gripper jaws GGK 2001 for 590-1191-001 (28296.4) *

CI017 Sp.1: Hard gripper jaws GGK 2002 for 590-1192-001 (28296.4) *

CI018 Sub spindle/Sp.2: Self centring 3 jaw quick change chuck SMW-AUTOBLOK type Ø225-66 KNCS-2G ASA2-6". Complete with master jaws (GBK-2G) + hard step top jaws (GUA) (28296.4) *

CI019 Sp.2: Closed cylinder SMW-AUTOBLOK typ SIN-S 150 (28296.4) *

CI020 Sp.2: Cylinderflange SIN-S 150 with a maximum diameter of Ø 192 mm (28296.4) *

CI021 Sp.2: Cylinderadaptor SIN-S 150, for partial open draw tube with coolant flush circuit and seals (28296.4) *

CI022 Sp.2: Draw tube with nominal Ø66 mm. through hole external max Ø75 mm. In balanced execution (max. length = 750 mm) (28296.4) *

CI023 Sp.2: Coolant supply tube for placing in the partial open drawtube diam Ø43 max Ø66. 2 support bushes with O-ring included (28296.4) *

CI024 Sp.2: Mounting beker long execution for KNCS-N 225-66 chuck. (Spray cap not included) (28296.4) *

CI025 Sp.2: Spray cap to be placed in to the spraycap mounting beker from size KNCS-N 170 up to KNCS-N 1000. (28296.4) *

CI026 Sp.2: Rotation distributor typ RU-1-16 (28296.4) *

CI027	Sp.2: Mounting parts with anti rotation bracket for cylinder and rotating manifold, mounting drawing, warning/safety shield (28296.4) *
CI028	2 x Sp.2: Master jaw GBK-2G 200 (28296.4) *
CI029	2 x Sp.2: Special jaws in a hard execution to grip Ø138.9 mm. for part 1192 (28296.4) *
CI030	Sp.2: Special jaws in hard execution for part 590-1191-001 gripping on Ø59 mm (28296.4) *

HIGH PRECISION OPTIONS

SF151	Scale feedback X1 axis
SF152	Scale feedback X2 axis

ROBOT HANDLING SYSTEMS

GL011	Robot interface (basic)
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SWARF MANAGEMENT SYSTEMS

CV084	Chip conveyor (side disposal) hinge (850U)
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NC CONTROLLER

NO056	Mazak API
NO127	Engraving function
NO391	Additional M-code one set (2 M-codes)

MISCELLANEOUS

CI002	Freight, crane and set in
CI003	Installation
CI004	7 x Training days and help to run in of drawing 590-1191 and 590-1192. Tooling is not included *

APPENDIX 1

HQR-250MSY

STANDARDUDSTYR

GENERAL MACHINE OPTIONS

CO032	Chuck airblast (2nd spindle) BY NC command
EL110	Power transformer for European Market
MO575	Roller guide
NO823	USB interface (1 port)
SD120	One set of adjusting tools
SD130	Foundation kit (plates)
TD023	12 position drum turret (VDI upper)
TD024	12 position drum turret (VDI lower)
YI031	Y axis control (upper & lower turret)

PROCESS SUPPORT SOFTWARE

NO539	Fonction Smooth Restart
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MANUALS

SD073	One set of manuals (CD)
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ROTARY TOOL SPINDLE SPEED

TR070	Rotary tool spindle speed 6,000rpm
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SPINDLE SPEED

SR191	Spindle speed 4,000rpm (1st spindle)
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SPINDLE SPEED (2ND SPINDLE)

OP254	Second spindle speed 5000rpm
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SPINDLE BORE (1ST SPINDLE)

SB803	Spindle bore D=91mm (1st spindle)
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SPINDLE MOTOR (1ST SPINDLE)

SP101	Spindle motor AC26KW(35HP) (1st spindle)
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SPINDLE MOTOR (2ND SPINDLE)

OR066	Spindle motor AC22KW (30HP) (2nd spindle)
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MAIN SPINDLE C AXIS

SI044	C axis 0.0001° increments (1st spindle)
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SECOND SPINDLE C AXIS

SI091	2nd spindle position 0.001° without C axis
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MACHINE COLOUR

SD728	Mazak standard colour (flat white/silky black)
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HEALTH & SAFETY

AS028	Operator door interlock with lock-switch
SD030	Work light

	Located on the top of the machine to assist operators in the safe and effective setting up and use of the machine
SD755	The safety measures on worldwide level
SD020	Full coverage chip and coolant guard To prevent unauthorised access to the cutting envelope as well as the containment of all swarf and coolant
MO110	Hydraulic pressure interlock This interlock is a safety unit for detecting an oil pressure alarm through a pressure switch and stopping the machine

COOLANT SYSTEMS

SD010	Complete coolant system Includes pumps, valves, piping and nozzles
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FACTORY AUTOMATION SYSTEMS

AS092	Automatic power on/off and warm up
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CHUCKING SYSTEMS

CO011	Automatic chuck jaw open/close (1&2 spindle)
CO021	Chuck open/close confirmation (1&2 spindle)

MEASURING SYSTEMS

SF077	Absolute Positioning System
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TOOL EYE

MT047	Automatic tool eye (1st & 2nd spindles)
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TOOLING

SD777	Standard tooling package
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NC CONTROLLER

FT245	Main & secondary spindle synchronisation To facilitate workpiece transfer without need to stop spindles
MO300	Milling spindle synchronous tapping Fast and highly accurate machining becomes possible with tapping that fully synchronises with the revolutions of the milling spindle
MZ200	Relocation detector
NC202	Mazatrol SmoothG CNC
NC322	19" colour LCD (touch screen)
NO097	EIA/ISO package NO098 EIA/ISO code input function (standard) NO139 Additional EIA/ISO functions (requires EIA/ISO) NO483 Thread cutting function NO142 Inverse time feed NO136 G37 auto tool length measurement NO509 Polar coordinates input (EIA) NO144 Sequence number comparison stop function NO481 Additional workpiece coordinate system 300 pairs NO051 User macro (common variables:600 pairs) NO075 Mazak tapping/boring tornado (EIA/ISO) NO516 EIA pattern cycle (grid, arc) NO149 Tilted working plane
NO375	Background tool path check The tool path that has been set in a machining program not being used during automatic operation can be checked
NO512	Direct entry of drawing dimensions
NO827	LAN port
NO838	SD memory card interface (1 port) and USB interface (1 port)
NP327	Smooth standard software for lathe (mill) NO443 Shape compensation

NO498 Rapid overlap
 Seamless corner control
 Variable acc control
 SD108 Intelligent safety shield (manual operation)

APPENDIX 2

HQR-250MSY

STANDARD SPECIFIKATIONER

CAPACITY

Chuck size	10 "
<i>10" spindle 1, 8" spindle 2</i>	
Maximum swing	370 mm
Maximum swing (lower turret)	320 mm
Standard machining diameter	260 mm
Maximum machining diameter (upper turret)	344 mm
Maximum machining diameter (lower turret)	210 mm
Maximum support weight (1st spindle)	400 kg

Center of gravity of a supported workpiece shall be 200mm or under from the spindle end.

Rigidity and holding power of a workpiece holder are not taken into account. This indicates the weight supported safely in a static condition for calculation purpose and may influence the bearing life depending on rotation balance, machining conditions, etc.

Maximum support weight (2nd spindle)	300 kg
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Center of gravity of a supported workpiece shall be 200mm or under from the spindle end.

Rigidity and holding power of a workpiece holder are not taken into account. This indicates the weight supported safely in a static condition for calculation purpose and may influence the bearing life depending on rotation balance, machining conditions, etc.

SPINDLE

Rotating speed maximum	4.000 min ⁻¹
<i>Depends upon the type of the chuck used.</i>	
Rotating speed maximum (2nd spindle)	5.000 min ⁻¹
<i>Depends on type of chuck used</i>	
Rotating speed minimum	35 min ⁻¹
<i>Depends upon the type of the chuck used.</i>	
Rotating speed minimum (2nd spindle)	35 min ⁻¹
Acceleration (1st spindle)	2,70 s
<i>For an assembly of BB208 + S2091, the acceleration time is to reach 85% of the rotational frequency 4000min⁻¹ from 0 min⁻¹ and the deceleration time is to reach 0 min⁻¹ from 4000 min⁻¹. (The deceleration time varies depending of load inertia.)</i>	
Acceleration (2nd spindle)	3,40 s
Spindle nose	JIS A2-8"
Spindle nose (2nd spindle)	JIS A2-6"
Spindle through hole diameter	91 mm
Spindle through hole diameter (2nd spindle)	76 mm

Motor output (30 minute rating)	26,0 kW
Motor output (30 minute rating)	22,0 kW
Motor output (continuous rating) 1st spindle	22,0 kW
Motor output (continuous rating)	15,0 kW

UPPER & LOWER TURRETS

Number of tools	12
Tool size (OD turning)	25 mm
Tool size (ID turning)	40 mm
Tool size (drilling)	20 mm
Tool size (end mill)	20 mm
Tool size (tapping)	Max.M20x2.5
Indexing time (single step)	0,21 s
Indexing time (full turn)	0,6 s
Mill spindle rotating speed maximum	6.000 min ⁻¹
Mill spindle output (10 minute rating)	5,5 kW

LOWER TURRET

Number of tools	12
Tool size (OD turning)	25 mm
Tool size (ID turning)	40 mm
Indexing time (single step)	0,21 s
Indexing time (full turn)	0,56 s
Mill spindle rotating speed maximum	6.000 min ⁻¹
Mill spindle output (10 minute rating)	5,5 kW

FEED AXES

Travel X1 axis	207 mm
Travel X axis (lower)	141 mm
Travel Y axis (upper)	100 mm
Travel Y axis (lower)	70 mm
Travel Z1 axis	760 mm
Travel Z2 axis	815 mm
Rapid traverse (upper) X	30 m/min
Rapid traverse (upper) Y	26 m/min
Rapid traverse (upper) Z	36 m/min
Rapid traverse (lower) X	24 m/min
Rapid traverse (lower) Y	20 m/min
Rapid traverse (lower) Z	36 m/min
Rapid traverse C	555 min ⁻¹

OTHERS

Coolant tank capacity (total)	260 L
Power requirement (30 minute rating)	85,3 kVA
Power requirement (continuous)	69,6 kVA

MACHINE DIMENSIONS

Length	3.625 mm
Width	2.885 mm
Height	2.502 mm
Weight	12.900 kg







