

4.1 Technical specifications of the machine

ZVH 55/L8000 Extreme

Strokes:

X axis, length:	mm	8.000
Y axis, cross:	mm	800
Z axis, spindle head in vertical position (min. – max.):	mm	0 – 1.100
Z axis, spindle head in horizontal position (min. – max.):	mm	375 – 1.475

Working table:

Table length:	mm	9.600
Table width:	mm	850
Number of T slots:		7
Central T slot size:		1 x 18 H8
Rest of T slots size:	mm	6 x 18 H12
Distance between T slots:	mm	125
Maximum table load capacity:	daN/m ²	1.500

Main spindle:

HSK A-100 DIN 69893

Taper of tool holder axis:

Pull stud of tool holder according to following norm

Motorspindle KESSLER:

DS/000-12954 000.669.519

Power in service S1 (100%):

Kw 35

Power in service S6 (40%):

Kw 48

Total power available from (r.p.m.):

rpm 1.000

Torque in service S1 (100%):

Nm 334

Torque in service S6 (40%):

Nm 458

Rotation maximum speed in continuous:

rpm 6.000

Tool clamping force

kN 45

Rotary joint

1K-GDV

Ready to work with inner cooling

Yes

Allows working with inner cooling by air during spindle rotation

Yes

Possible working dry

Yes

B axis

Tilting system		Ibarmia TI-C-54-04
B axis stroke	°	±105
Torque motor B axis SIEMENS		1FW6130-0PB15-1JC2
Rotation speed	° /min	3.000
Nominal power	kW	25,4
Maximum power	kW	
Nominal torque	Nm	610
Maximum torque	Nm	
Positioning encoder		Heidenh. RCN 2390 F (+/- 5")

Feeds X-Y-Z:

Servomotors and regulators: Fanuc

X axis:

(2) FANUC α iS40/4000HV

Redex reductor for X axis (electronic preload)

(2) KRPX2+M.21.3.H

Y axis:

FANUC α iS30/4000HV

Z axis:

FANUC α iS30/4000HV

Speed of rapid feed for positioning X-Y-Z: m/min 45/45/45

Guides and ball screws:

Size of rollers: mm 55
 Size of screwballs
 X axis Rack
 Y axis Ø 50 - P= 30
 Z axis Ø 50 - P= 30

Measure system:

Heidenhain X axis glass scale LB-32-C 8.040 mm
 Heidenhain Y axis glass scale LS-187-C 840 mm
 Heidenhain Z axis glass scale LS-187-C 1.140 mm
 Resolution: mm 0,001
 Positioning accuracy according to VDI 3441 : mm/m +/- 0,01

Magazine and automatic change of tools:

Tool management system Fanuc system
 Taper of magazine: HSK-A100 DIN 69893
 Pull stud of tool holder according to following norm -
 Manufacturer Aitek
 Number of tools: 30
 Maximum tool diameter:
 Previous and following position taken (magazine 30/40 posts): mm 125
 Previous and following position taken (magazine 60 posts): mm 100
 Previous and following position empty: mm 175
 Maximum tool length: mm 400
 Maximum tool weight: Kgr-f 20
 Tool changer manufacturer Ibarmia
 Tool changer moving motor Fanuc βiS4/4000
 Reductor α SK+060-MF1-4-2C1 (i:4)

Greasing:

Automatic greasing central of guides and ball screws: Intza GE02/B-1-0423

CNC Control

Fanuc 31i/B5

CNC Control
 Screen
 Keyboard
 Auxiliary control panel
 Portable control

Cooling and filtering system

Filtering system with independent tank Yes
 Inlet filter of filtering cloth and magnetic separator
 Inlet filter type "basket" of 113 µm Fairey Arlon GA-230 40 µm
 Outlet filter Grundfos MTR 3-33/33
 Pump inner cooling 22 bar
 Theoretical maximum pressure pump inner cooling Grundfos MTR 3-22/9, 5 bar
 Pump external cooling Grundfos MTA 60-180
 Transfer pump coolant liquid
 Inner cooling pressure manual adjusting valve No