4 Technical machine data

4.1 General technical data

Technical data	Unit of measure	Value
CNC NUMERIC CONTROL		
CNC type	-	FANUC 310i
Operator panel	-	SlimLine
Screen	-	Color TFT 15"
Number of controlled axes (C axes)	-	2
Number of controlled axes (option)	-	10
Number of channels	-	4
MAIN SPINDLE DATA		
Maximum bar capacity	mm	65
Tie-rod inner hole	mm	75
Collet application diameter	mm	160
Chuck diameter	mm	175
Spindle nose	mm	140
Maximum rpm	min^{-1}	5.000
Nominal torque (S1)	Nm	191
Nominal power (S1)	kW	20

Technical data	Unit of measure	Value
COUNTER SPINDLE DATA		
Tie-rod inner hole	mm	45
Chuck diameter	mm	175
Spindle nose	mm	140
Maximum rpm	min^{-1}	5.000
Nominal torque (S1)	Nm	108
Nominal power (S1)	kW	17
W2 AXIS DATA (COUNTERSPINDLE AXIS)		
Stroke	mm	690
Maximum speed	m/min	30
Maximum acceleration	m/sec^2	5
Nominal thrust (S1)	N	5.000
X1 AXIS DATA		
Stroke	mm	165
Maximum speed	m/min	30
Maximum acceleration	m/sec^2	5
Nominal thrust (S1)	N	5.000

Technical data	Unit of measure	Value
Z1 AXIS DATA		
Stroke	mm	220
Maximum speed	m/min	30
Maximum acceleration	m/sec^2	5
Nominal thrust (S1)	N	5.000
X2 AXIS DATA		
Stroke	mm	165
Maximum speed	m/min	30
Maximum acceleration	m/sec^2	5
Nominal thrust (S1)	N	5.000
Z2 AXIS DATA		
Stroke	mm	150
Maximum speed	m/min	30
Maximum acceleration	m/sec^2	5
Nominal thrust (S1)	N	5.000
X3 AXIS DATA		
Stroke	mm	165
Maximum speed	m/min	40
Maximum acceleration	m/sec^2	10
Nominal thrust (S1)	N	2.400

Technical data	Unit of measure	Value
Z3 AXIS DATA		
Stroke	mm	678
Maximum speed	m/min	30
Maximum acceleration	m/sec^2	5
Nominal thrust (S1)	N	5.000
Y3 AXIS DATA		
Stroke	mm	80 (+50/-30)
Maximum speed	m/min	30
Maximum acceleration	m/sec^2	5
Nominal thrust (S1)	N	5.000
PIECE UNLOADING SYSTEM (UA-WA)		
Maximum loadable weight	daN	4
Maximum loadable diameter	mm	70
TOOL HOLDER DATA (REVOLVER 1,2,3)		
Total number of stations	-	12
Tool holder attachment diameter	mm	30
Driven stations	-	12
Maximum rpm (motorised)	min^{-1}	4.000
Nominal torque (S1 - n = 0 min-1)	Nm	12
Nominal power (S1 - n = 4000 min-1)	kW	2,5

Technical data	Unit of measure	Value
LUBRICATION SYSTEM DATA		
Unit capacity	L	1,8
Working pressure	bar	30
Stopping time	min	35
Working time	sec	15
Type of lubricant	-	Grease Zeller Lithogrease 00
HYDRAULIC SYSTEM DATA		
Working pressure	bar	50
Minimum pressure	bar	35
Tank capacity	L	80
Oil	-	ENI EXIDIA HG 32
Maximum clamp opening-closing pressure	bar	35
Minimum clamp opening-closing pressure	bar	15
PNEUMATIC SYSTEM DATA		
Minimum working pressure	bar	5
Maximum working pressure	bar	6
Consumption	NL/min	60

NOTE

1 - The pressure of clamping devices is adjustable.
The pressure must be set within the limits of clamping elements.
2 - If you need to set lower pressures, it is necessary to buy the differential pressure option.

Technical data	Unit of measure	Value
COLOLING SYSTEM DATA		
Tank capacity	L	650
Usable liquid	-	Water emulsified
Alternatively usable liquid	-	Entire mineral oil with viscosity max 32cSt 40°C
Flow rate of each pump	L/min	20
Liquid flow pressure	bar	7
ELECTRIC SYSTEM DATA		
Total installed power	kVA	91
Power wire	mm^2	5x70
Working voltage	V	400
Admitted working voltage variation	%	± 10
Frequency	Hz	50
Frequency (option)	Hz	60
Nominal frequency admitted variation	%	60
In-line fuses	A	160
Maximum load current	A	131
Control/lighting voltage	V	24 DC
ENVIRONMENTAL CONDITIONS		
Ambient temperature	°C	+10… +35
Maximum altitude	m s.l.m.	1.000
Maximum relative humidity	%	75

Technical data	Unit of measure	Value
BASIC MACHINE DIMENSIONS AND WEIGHTS (WITHOUT PERIPHERALS)		
Machine centre height	mm	1.200
Weight	kg	9.500
Dimensions (length x width x height)	mm mm mm	4.500 x 1.990 x 2.300
PERIPHERAL DIMENSIONS AND WEIGHTS		
Evacuator weight	kg	900
Evacuator dimensions (length x width x height)	mm mm mm	4.063 x 1.437 x 1.561
ACOUSTIC PRESSURE DATA		
Acoustic pressure level (measured according to standards ISO 230-5, ISO 3746 and ISO 11202)	dB_A	75

Tabella 4-1: Technical Data