



Machinelijst

Hierbij bieden wij u een overzicht van de beschikbare machines aan. Alle machines alsmede alle meetmiddelen worden overeenkomstig het ISO 9001 systeem periodiek gekalibreerd. Alle lijsten zijn opgesteld in de Engelse taal, een vertaling van de gebruikte termen vindt u op de laatste pagina's.



Machinelist

Herewith we like to inform you about our machinery. All machines as well as all measuring-instruments, are periodically calibrated according to the ISO 9001 system.



Maschinenübersicht

Anbei finden Sie unsere Maschinenübersicht. Alle Maschinen sowie alle Messgeräte werden nach ISO 9001 System periodisch kalibriert. Eine Übersetzung der gebrauchten Ausdrücke finden Sie auf den letzten Seiten.

CNC Machining Center

Manufacturer	Heller (productioncentre)	Hitachi Seiki	Matsuura
Model	MC25	HG 400 III	3A III F
Number	3 Machiningcentres	2	1
Range x-axis	800 mm	560 mm	760 mm
Range y-axis	800 mm	580 mm	440 mm
Range z-axis	800 mm	510 mm	485 mm
Clamping surface	500x630 mm	400x400 mm	800x400 mm
Flatness	0,005	0,005	0,01
Positioning accuracy	0,003	0,003	0,005
Power	30 kW	26 kW	7,5 kW
Rotational speed	45-16000 r.p.m.	60-12000 r.p.m.	40-8000 r.p.m.
Number of tools	160	60	40
Number of pallets	2	2	2
Positioning accuracy pallets	0,003	0,003	0,005
4th-axis	Heller	Hitachi Seiki	None
	CNC	CNC (2x)	
Cooland thru spindle	60 bar	20 bar	20 bar
Clamping tools	HSK63A	BT40	BT40
Control system	Siemens 840 D	Fanuc 15 MB	Yasnac I80
Remarks	Multipallet production centre Automatized by robot, 120 pallet locations		

CNC Machining Center

Manufacturer	Matsuura	Hermle	Brother	Brother
Model	MC-760 VX	C40	TNC 321 N	TC 324
Number	1	1	1	1
Range x-axis	760 mm	850 mm	700 mm	420 mm
Range y-axis	440 mm	700 mm	300 mm	300 mm
Range z-axis	485 mm	500 mm	250 mm	250 mm
Clamping surface	1150x410 mm	1070x700 mm	800x300 mm	500x300 mm
Flatness	0,02	0,02	0,005	0,005
Positioning accuracy	0,005	0,005	0,003	0,003
Power	7,5 kW	15 Kw	4,1 kW	4,9 kW
Rotational speed	30-6000 r.p.m.	20-18000 r.p.m.	6-6000 r.p.m.	10-10000 r.p.m.
Number of tools	20	38	10	10
Number of pallets	none	None	2	2
Positioning accuracy pallets	d.n.a.	d.n.a.	0,005	0,005
4th-axis	Tsudakoma Ø300 mm	Hermle Ø315 mm	none	none
	(1x) CNC	(1x) CNC		
Coolant thru spindle	none	80 bar	None	none
Clamping tools	BT40	HSKA63	BT30	BT30
Control system	Fanuc OMB	Siemens 840D	TNC 321	TC 324
Remarks				

CNC Turning

	Manufacturer	Mori Seiki	Spinner	Mori Seiki	Hitachi-Seiki	Cazeneuve
	Model	SL-253MC	TS-46MC	ZL-200SMC Twinspindel	Hicell CA-20	HB-900
	Number	1	2	1	1	1
Main spindle	Max. clamping diameter	Ø260mm	Ø170mm	Ø210mm	Ø210mm	Ø860mm
Main spindle	Standard turning diameter	Ø250mm	Ø200mm	Ø210mm	Ø210mm	Ø600mm
Main spindle	Max. turning diameter	Ø390mm	Ø400mm	Ø390mm	Ø400mm	Ø860mm
Main spindle	Power spindle	15kW	14kW	11kW	11kW	22kW
Main spindle	Rotational speed spindle	3500	5000	4000	5000	2850
Sub spindle	Max. clamping diameter			Ø170mm		
Sub spindle	Standard turning diameter			Ø170mm		
Sub spindle	Max. turning diameter			Ø240mm		
Sub spindle	Power spindle			7.5kW		
Sub spindle	Rotational speed spindle			4000		
	Max. turning length	485mm	500mm	300mm	500mm	2700mm
	Tail stock	Ja	Ja		Ja	Ja
	Accuracy	0.001	0.001mm	0.001mm	0.001mm	0.003mm
	Repeatability	0.002	0.002mm	0.002mm	0.002mm	0.005mm
	Range X-as	235mm	240mm	235mm	215mm	400mm
	Range Z-as	495mm	640mm	500mm	530mm	2705mm
	Range Y-as				100mm(±50mm)	
	Number of Tools	12	12	22	22	4
	Number of driven tools	12	12	12	17	
	Power rotary tools	6.5kW	9kW	6.5kW	3.7kW	
	Rotational speed rotary tools	3000	4000	3000	3000	
	Automation		1x barfeeder max. Ø42mm	barfeeder max. Ø65mm		
	Controle system	Fanuc MSG-501 Mapps I	Fanuc 21iTB Manuel Guide i	Fanuc MSC-501	Seikos L Multi	Somab PL+S3

CNC Turning

	Manufacturer	Nakamura Tome	Mori Seiki	Mori Seiki	Mori Seiki	Mori Seiki	EMAG
	Model	TW-20 Twinspindel	ZL35A-750	NL-2500Y	NL-2000SY Twinspindel	ZT-2500Y Twinspindel	VSC-250
	Number	1	1	2	1	1	1
Main spindle	Max. clamping diameter	Ø210mm	Ø315mm	Ø260mm	Ø210mm	Ø310mm	Ø260mm
Main spindle	Standard turning diameter	Ø210mm	Ø260mm	Ø275mm	Ø220mm	Ø250mm	Ø260mm
Main spindle	Max. turning diameter	Ø270mm	Ø390mm	Ø356mm	Ø250mm	Ø320mm	Ø280mm
Main spindle	Power spindle	18.5kW	37kW	26kW	18.5kW	22kW	39kW
Main spindle	Rotational speed spindle	5000	3500	4000	5000	4000	6000
Sub spindle	Max. clamping diameter	Ø210mm			Ø170mm	Ø310mm	
Sub spindle	Standard turning diameter	Ø210mm			Ø170mm	Ø250mm	
Sub spindle	Max. turning diameter	Ø270mm			Ø200mm	Ø320mm	
Sub spindle	Power spindle	18.5kW			11kW	22kW	
Sub spindle	Rotational speed spindle	5000			6000	4000	
	Max. turning length	190mm	780mm	705mm	510mm	350mm	150mm
	Tail stock		Ja	Ja			
	Accuracy	0.001mm	0.002mm	0.001mm	0.001mm	0.001mm	0.001mm
	Repeatability	0.002mm	0.002mm	0.002mm	0.002mm	0.002mm	0.002mm
	Range X-as	375mm	225mm	260mm	260mm	280mm	685mm
	Range Z-as	190mm	855mm	795mm	590mm	960mm	200mm
	Range Y-as			100mm (±50mm)	100m (±50mm)	140mm (±70mm)	
	Number of Tools	24	22	12	16(32)	24(48)	12
	Number of driven tools	24		12	16(32)	24(48)	12
	Power rotary tools	3.7kW		5.5kW	5.5kW	4.7kW	9kW
	Rotational speed rotary tools	3000		6000	6000	4000	6000
	Automation		Promot Linier pick and place unit		Barfeeder Max.Ø65mm		Pick and place unit, parts Ø40- Ø205mm with max. length of 150mm
	Controle system	Luck Bei	Fanuc 15 TT-F	Fanuc MSX- 850III MappsIII	Fanuc MSX- 850 MappsII	Fanuc MSG- 501 MAPPSIII	Siemens 840D Shop turn

Precision CNC Turning

	Manufacturer	Hembrug	Hembrug	Schaublin	Schaublin
	Model	Slantbed Microturn 100 CNC	Slantbed Microturn 100 CNC	180-CNC	125-CNC
	Number	1	1	1	1
Main spindle	Max. clamping diameter	Ø130mm	Ø130mm	Ø250mm	Ø100mm
Main spindle	Standard turning diameter	Ø150mm	Ø150mm	Ø250mm	Ø100mm
Main spindle	Max. turning diameter	Ø310mm	Ø310mm(Ø110mm)	Ø320mm	Ø150mm
Main spindle	Power spindle	7.5kW	7.5kW	18.5kW	7.5kW
Main spindle	Rotational speed spindle	6000	6000	5000	5000
	Max. turning length	350mm	350mm	650mm	400mm
	Tail stock		Ja	Ja	Ja
	Accuracy	0.0001mm	0.0001mm	0.001mm	0.001mm
	Repeatability	0.0001mm	0.0001mm	0.002mm	0.001mm
	Range X-as	200mm	200mm	240mm	180mm
	Range Z-as	350mm	350mm	650mm	400mm
	Range Y-as				
	Number of Tools	8	12	8	8
	Number of driven tools	8	6		
	Power rotary tools	2.5kW	2.5kW		
	Rotational speed rotary tools	6000	6000		
	Automation				
	Controle system	Siemens 840D Shop Turn	Siemens 840D Shop Turn	Fanuc 18iT	Fanuc 20T

Conventional Turning

Manufacturer	Weiler	Amutio
Model	Primus VC	725 F
Number	1	1
Maximum clamping diameter	140 mm	350 mm
Max. diameter	280 mm	670 mm
Distance between centers	500 mm	1500 mm
Power	4 kW	18 kW
Rotational speed	30- 4000r.p.m.	16-1250 r.p.m.
Range x-axis	120 mm	250 mm
Range z-axis	500 mm	1500 mm
Repeatability	0,005	0,01
Remarks	-	-

CNC Milling

Manufacturer	Hermle	Hermle	Bridgeport
Model	UWF 902 S	C 800V	Interact 4
Number	1	1	1
Range x-axis	600 mm	800 mm	760 mm
Range y-axis	450 mm	600 mm	370 mm
Range z-axis	500 mm	500 mm	335 mm
Clamping surface	650x395 mm	1000x560 mm	965x381 mm
Flatness	0,01	0,01	0,02
Positioning accuracy	0,01	0,008	0,01
Power	8,5 kW	15 kW	7,5 kW
Rotational speed	20-6300 r.p.m.	20-8000 r.p.m.	40-4000 r.p.m.
4th-axis	Table 30°/45°/360°	None	Jones & Shipman Ø 200 mm (1x)
Clamping tools	BT40	SK40	BT40
Remarks	Control system Heidenhain TNC 426	Control system Heidenhain TNC 430	Control system Heidenhain TNC 2500

Grinding

Manufacturer	Okamoto	Farman	Hahn & Kolb	Cincinnati
Model	ACC 63 DX	FC32A	WS 54	Monoset
Number	1	1	1	1
Range x-axis	750	d.n.a.	d.n.a.	d.n.a.
Range y-axis	340	d.n.a.	d.n.a.	d.n.a.
Range z-axis	320	d.n.a.	d.n.a.	d.n.a.
Magnet	600x300 mm	d.n.a.	d.n.a.	d.n.a.
Distance between centers	d.n.a.	d.n.a.	280 mm	152 mm
Maximum grinding length	d.n.a.	d.n.a.	110 mm	146 mm
Maximum grinding diameter	355 mm	32 mm	150 mm	32 mm
Power	3,7 kW	0,375 kW	0,75 kW	2,5 kW
Rotational speed	1500 r.p.m.	2880 r.p.m.	7100 r.p.m.	6000 + 8000 r.p.m.
Remarks	Surface grinder machine	Cylindrical grinding machine	Cylindrical grinding machine	Cylindrical grinding machine

NC Tapping

Manufacturer	Kuhne	Kuhne	Microtap	Hayen & Goebel
Model	P111	G11	90	HG-6
Number	1	1	2	1
Rotational speed	200-2000 r.p.m.	200-1350 r.p.m.	30-2200 r.p.m.	355-1800 r.p.m.
Range	M1-M8	M1-M6	M2,5-M12	M1-M10
Clamping surface	200x200 mm	200x200 mm	200x200 mm	290x350 mm
Range height	160 mm	160 mm	400 mm	425 mm
Spindel travel	40 mm	40 mm	53 mm	32 mm
Remarks	-	-	-	-

Sawing

Manufacturer	Kasto	Kasto
Model	HBA 420 AU	SSB A2
Number	1	1
Saw range round	360 mm	260 mm
Saw range square	360x380 mm	260x260 mm
Single feed distance	600 mm	600 mm
Multiple feed distance	1800 mm	5400 mm
Multiple	3	9
Power	6 kW	6 kW
Remarks	Fully automatically	Fully automatically

Workshop

Machine type: Spark erosion machine
Manufacturer: Waldman Power: 0,5 kW
Model: ER-1500-TG
Number: 1
Range: Ø 2 - Ø10 mm
Remarks: -

Machine type: Grit blaster
Manufacturer: MHG Depth: 660 mm
Model: SMG 54 Height: 550-700 mm
Number: 1
Width: 1100 mm
Remarks: -

Machine type: Broaching machine
Manufacturer: Euma
Model: EHP-13 HE
Number: 1
Capacity: 13 ton
Remarks: Hydraulic

Machine type: Slotting machine
Manufacturer: URPE Height: 365-525 mm
Model: M200G Table size: 650x220 mm
Number: 1 Range x-axis: 435 mm
Range: 0-200 mm Range y-axis: 235 mm
Remarks: -

Machine type: Honing machine
Manufacturer: Sunnen Power: 0,37 kW
Model: MBB 1660 Accuracy: 0,001 mm
Number: 1
Range: 6-65 mm
Remarks: -

Workshop

Machine type: Welding equipment
Manufacturer: Lorch
Model: SH 250
Number: 1

Remarks: CO2

Machine type: Welding equipment
Manufacturer: Argon-Arc
Model: Miga Tronic MTE
Number: 1
Power: 12 kW

Remarks: TIG en Electrode

Machine type: Rolling barrel
Manufacturer: Cetema
Model: R185 EC
Number: 1
Capacity: 115 litre
Power: 3,2 kW

Remarks: -

Machine type: Rolling barrel
Manufacturer: Cetema
Model: SDD 185G
Number: 1
Capacity: 115 litre
Power: 3,2 kW

Remarks: -

Machine type: Rolling barrel
Manufacturer: Cetema
Model: Minigrinder 04
Number: 1
Power: 2,2 kW

Remarks: -

Workshop

Machine type:	Engraving machine	Height:	250 mm
Manufacturer:	Gravograph	Range x-axis:	150 mm
Model:	1S 200	Range y-axis:	150 mm
Number:	1		
Range:	Ø0,1 - Ø2 mm		

Remarks: -

Machine type:	Lepping & polishing machine
Manufacturer:	Kemet Europe
Model:	15E
Number:	1
Range:	Ø380 mm

Remarks: -

Machine type:	Lasapparatuur
Manufacturer:	Migatronica
Model:	
Number:	

Remarks:

Measuring Room

Machine type:	3D-measuring machine	Range z-axis:	605 mm
Manufacturer:	Mitutoyo	electronic feeler:	PH 10 mq
Model:	LEGEX	Accuracy:	0,00035
Number:	1	Computer:	Dell
Range x-axis:	910 mm	Software:	Mcosmos-2 versie 3 + startpak-win SPC
Range y-axis:	1010 mm		

Machine type:	3D-measuring machine	Range z-axis:	405 mm
Manufacturer:	Mitutoyo	electronic feeler:	PH 10m
Model:	Crysta-Apex C544	Accuracy:	0,0019
Number:	1	Computer:	Dell
Range x-axis:	505 mm	Software:	Mcosmos-2 versie 3 + startpak-Win SPC
Range y-axis:	405 mm		

Machine type:	3D-measuring machine	Range z-axis:	400 mm
Manufacturer:	Mitutoyo	electronic feeler:	R-007
Model:	Euro-C 544	Accuracy:	0,003
Number:	1	Computer:	Compaq DeskPro
Range x-axis:	500 mm	Software:	Mcosmos-2 versie 3 + startpak-Win SPC
Range y-axis:	400 mm		

Machine type:	3D-measuring machine	Range z-axis:	600 mm
Manufacturer:	Mitutoyo	electronic feeler:	PH 9/TP200
Model:	C9106	Accuracy:	0,003
Number:	1	Computer:	Compaq DeskPro
Range x-axis:	900 mm	Software:	Mcosmos-2 versie 3 + startpak-Win SPC
Range y-axis:	1000 mm		

Machine-type:	Roundness gauge	Max diameter	Ø300mm
Manufacturer:	Mitutoyo	Accuracy	0.0004
Model:	RA426	Parallelism	3 µm/200 mm
Number:	1	Straightness	1 µm/200 mm

Note: Measuring room is temperature and humidity controlled.

Measuring Room

Machine type: Profile projector
Manufacturer: Mitutoyo
Model: PJ 300
Number: 1

Machine type: Profile projector
Manufacturer: Baty
Model: R14
Number: 1

Machine type: Contracer
Manufacturer: Mahr
Model: Perthen CV200
Number: 1

Machine type: Endoskope
Manufacturer: Stors
Model: 81482
Number: 1

Machine type: Electronic height gauge
Manufacturer: Trimos
Model: TV500
Number: 2
Range: 600 mm
Accuracy: 0,001

Machine type: Electronic height gauge
Manufacturer: Trimos
Model: TVD800
Number: 1
Range: 800 mm
Accuracy: 0,001

Machine type: Electronic height gauge
Manufacturer: Trimos
Model: V600
Number: 1
Range: 600mm
Accuracy: 0,001

Machine type: Electronic roughness meter
Manufacturer: Mitutoyo
Model: Surftest SJ401
Number: 1

Machine type: Electronic roughness meter
Manufacturer: Hommel
Model: T500
Number: 1

Machine type: Contracer
Manufacturer: Mahr
Model: Perthen CV200
Number: 1

Note: Measuring room is temperature and humidity controlled.

Workpreparation

Machine type: Programming
Manufacturer: GoElan/Top Solid
Model: V4
Number: 1
Remarks: All CNC-machines can be programmed On-Line

Machine type: Toolsetting
Manufacturer: Zoller Range x-axis: 400 mm
Model: Venturion 500 Range y-axis: 500 mm
Number: 1
Remarks: Pre setting of tools

Machine type: Toolsetting
Manufacturer: Zoller Range x-axis: 400 mm
Model: Magix 425D Range y-axis: 500 mm
Number: 1
Remarks: Pre setting of tools

Machine type: Toolsetting
Manufacturer: Zoller Range x-axis: 400 mm
Model: Premium V/011 Range y-axis: 320 mm
Number: 1
Remarks:



Vertaling

Algemeen

Merk
Type
Aantal
Vermogen
Toerental
Bereik
Bereik x-as
Bereik y-as
Bereik z-as
Opmerkingen

CNC Bewerkingscentrum

Spanvlak
Vlakheid
Positioneernauwkeurigheid
Aantal gereedschappen
Aantal pallets
Positioneernauwk. Pallets
4^e-as
Spindelkoeling
Opname gereedschappen
Besturing

CNC Draaien

Maximale spandiameter
Max. diameter
Lengte tussen centers
Nauwkeurigheid
Aantal gereedschappen
Aantal gedreven gereedschappen
Repeteer nauwkeurigheid

Conventioneel Frezen

Spanvlak
Vlakheid
Positioneernauwkeurigheid
Opname gereedschappen
Digitale uitlezing

Boren

Spanvlak
Spindelslag
Positioneernauwkeurigheid
Opname gereedschappen
Kolomboormachine
Bereik hoogte

CNC Frezen

Spanvlak
Vlakheid
Positioneernauwkeurigheid
4^e-as
Opname gereedschappen



Translation

General

Manufacturer
Model
Number
Power
Rotational speed
Range
Range x-axis
Range y-axis
Range z-axis
Remarks

CNC Machining center

Clamping surface
Flatness
Positioning accuracy
Number of tools
Number of pallets
Positioning accuracy pallets
4th-axis
Spindle cooler
Clamping tools
Control system

CNC Turning

Max. clamping diameter
Max. diameter
Distance between centers
Accuracy
Number of tools
Number of driven tools
Repeatability

Conventional Milling

Clamping surface
Flatness
Positioning accuracy
Clamping tools
Digital read out

Drilling

Clamping surface
Spindle travel
Positioning accuracy
Clamping tools
Pillar drilling machine
Range vertical

CNC Milling

Clamping surface
Flatness
Positioning accuracy
4th-axis
Clamping tools



Übersetzung

Allgemein

Marke
Modell
Zahl
Motorleistung
Drehzahl
Bereich
Arbeitsbereich x
Arbeitsbereich y
Arbeitsbereich z
Bemerkungen

CNC Bearbeitungszentrum

Spannfläche
Flachheit
Positionsgenauigkeit
Anzahl Werkzeuge
Anzahl Paletten
Positionsgenauigkeit Paletten
4^e-Achse
Spindelkühlung
Werkzeugaufname
Steuerung

CNC Drehen

Max. Spanndurchmesser
Max. Durchmesser
Länge zwischen Spitzen
Genauigkeit
Anzahl Werkzeuge
Anzahl angetriebene Werkzeuge
Genauigkeit

Konventioneller Fräsen

Spannfläche
Flachheit
Positionsgenauigkeit
Werkzeugaufname
Digital auslesen

Bohren

Spannfläche
Spindelschlag
Positionsgenauigkeit
Werkzeugaufname
Ständerbohrmaschine
Bereich Höhe

CNC Fräsen

Spannfläche
Flachheit
Positionsgenauigkeit
4^e-Achse
Werkzeugaufname

Conventioneel Draaien

Max. spandiameter
 Max. diameter boven bed
 Lengte tussen centers
 Repeteer nauwkeurigheid

Slijpen

Magneet
 Centerafstand
 Max. slijplengte
 Max. slijpdiameter
 Vlakslijpmachine
 Rondslijpmachine
 Gereedschapsslijpmachine

NC Tappen

Spanvlak
 Slag

Zagen

Zaagbereik rond
 Zaagbereik vierkant
 Aanvoerlengte enkelvoudig
 Aanvoerlengte meervoudig
 Aantal meervoudig
 Afkortzaag

Prototype werkplaats

Spanvlak
 Max. spandiameter
 Max. diameter boven bed
 Max. slijpdiameter
 Lengte tussen centers
 Vlakheid
 Positioneernauwkeurigheid
 Aantal gereedschappen
 Aantal gedreven gereedschappen
 Opname gereedschappen
 Aantal pallets
 Positioneernauwk. Pallets
 4^e-as
 Slag
 Spindelkoeling
 Opname gereedschappen
 Besturing
 Vlakslijpmachine
 Gereedschapsslijpmachine

Plaatwerk

Besturing
 Maximale plaatgrootte
 Maximale plaatdikte
 Vrije ruimte
 Maximale drukkracht
 Aantal gereedschappen
 Nauwkeurigheid
 Lasersnijmachine
 Ponsnibbelmachine
 Kantbank
 Ponsbank
 Klinkmachine
 Roestvrijstaal
 Plaatschaar
 Schuurmachine

Conventional Turning

Max. clamping diameter
 Max. diameter
 Distance between centers
 Repeatability

Grinding

Magnet
 Distance between centers
 Max. grinding length
 Max. grinding diameter
 Surface grinder
 Cylindrical grinding machine
 Tool grinder

NC Tapping

Clamping surface
 Spindle travel

Sawing

Saw range round
 Saw range square
 Single feed distance
 Multiple feed distance
 Multiple
 Cross-cut saw

Prototyping

Clamping surface
 Max. clamping diameter
 Max. diameter
 Max. grinding diameter
 Distance between centers
 Flatness
 Positioning accuracy
 Number of tools
 Number of driven tools
 Clamping tools
 Number of pallets
 Positioning accuracy pallets
 4th-axis
 Spindle travel
 Spindle cooler
 Clamping tools
 Control system
 Surface grinder
 Tool grinder

Sheet-metal

Control system
 Max. size
 Max. thickness
 Free space
 Max. pressure
 Number of tools
 Accuracy
 Laser cutter
 Punching machine
 Folding machine
 Punching machine
 Rivetting machine
 Stainless-steel
 Sheet metal shears
 Sanding machine

Konventionelles Drehen

Max. Spanndurchmesser
 Max. Durchmesser
 Länge zwischen Spitzen
 Genauigkeit

Schleifen

Magnet
 Abstand zwischen den Spitzen
 Max. Länge
 Max. Durchmesser
 Flächenschleifer
 Rundschleifmaschine
 Werkzeugschleifmaschine

NC Gewindeschneiden

Spanfläche
 Spindelschlag

Sägen

Bereich rund
 Bereich viereckig
 Länge in der Einzahl
 Länge in der Mehrzahl
 Mehrzahl
 Quersäge

Prototyp Schlosserei

Spanfläche
 Max. Spanndurchmesser
 Max. Durchmesser
 Max. Durchmesser
 Länge zwischen Spitzen
 Flachheit
 Positionsgenauigkeit
 Anzahl Werkzeuge
 Anzahl angetriebene Werkzeuge
 Werkzeugaufnahme
 Anzahl Paletten
 Positionsgenauigkeit Paletten
 4^e-Achse
 Spindelschlag
 Spindelkühlung
 Werkzeugaufnahme
 Steuerung
 Flächenschleifer
 Werkzeugschleifmaschine

Blechbearbeitung

Steuerung
 Max. Größe
 Max. Dicke
 Freie Räume
 Max. Druckkraft
 Anzahl Werkzeuge
 Genauigkeit
 Laserschneider
 Lochnippel machine
 Biegebank
 Lochstanzte
 Nietbank
 Rostfreiem Stahl
 Blechschere
 Sandpapiermaschine

Werkplaats

Breedte
Diepte
Hoogte
Capaciteit
Nauwkeurigheid
Straalcabine
Trommelmachine
Lasapparaat
Puntlasmachine
Hoonmachine
Spoelmachine
Pompvermogen
Verwarming
Deuropening

Meetkamer

Elektronische taster
Nauwkeurigheid
Luchtvochtigheid
3D-meetmachine
Profiel projector
Elektronische hoogtemeter
Elektronische ruwheidsmeter
Hardheidsmeter
Laagdiktemeter
Vergroting
Lengte meetbank

Werkvoorbereiding

Programmeer afdeling
Gereedschappen beheer

Workshop

Width
Depth
Height
Capacity
Accuracy
Grit blaster
Rolling barrel
Welding equipment
Spot welding machine
Honing machine
Rinsing machine
Pump capacity
Heater
Doorway

Measuring room

Electronic feeler
Accuracy
Humidity
3D-measuring machine
Profile projector
Electronic height gauge
Electronic roughness meter
Hardness gauge
Layer thickness meter
Enlargement
Linear measuring apparatus

Workpreparation

Programming
Toolsetting

Schlosserei

Breite
Tiefe
Höhe
Leistungsvermögen
Genauigkeit
Sandstrahler
Putztrommel
Schweißgerät
Punktschweißmaschine
Honmaschine
Spülmaschine
Pumpenleistung
Heizanlage
Türöffnung

Meßraum

Elektronische Abtaster
Genauigkeit
Humidität
3D-Meßmaschine
Profil Projektor
Elektronisches Höhenmeßgerät
Elektronisches Rauheitsmeßgerät
Härtemesser
Schichtdickemesser
Vergrößerung
Längenmeßgerät

Arbeitsvorbereitung

Programmierung
Werkzeugmagazin