



Machinefabriek Gebrs. Frencken B.V.
Hurksestraat 16 - 5652 AJ - Eindhoven - The Netherlands
P.O. Box 7082 - 5605 JB - Eindhoven - The Netherlands
Tel.No.:+31(0)40 2507507 Fax.No.:+31(0)40 2507520
Internet: www.frencken.nl - C.O.C. Eindhoven Reg. No.: 17047541



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.



Machine list

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 Ausdrücken finden Sie auf den letzten Seiten.

CNC Machining Center (5-axis)

Manufacturer	Mikron	Hermle	Fehlmann
Model	UCP 710	C1200U	Picomax 60-M
Number	1	1	1
Range x-axis	710mm	1200mm	500 mm
Range y-axis	550 mm	800mm	350 mm
Range z-axis	500 mm	500mm	610 mm
Clamping surface	Diam. 630 mm	800x600mm	920x380mm
Flatness	0,01	0,01	0,005
Positioning accuracy	0,005	0,005	0,003
Power	16 KW	15 KW	9 KW
Rotational speed	100-18000 r.p.m.	20-16000 r.p.m.	50-18000 r.p.m.
Number of tools	30	100	74 (Cellro Robot)(Soflex Control system)
Number of pallets	1	1	35 + 15 (Cellro Robot)(Soflex Control system)
Positioning accuracy pallets	0,01	0,01	0,005
5th-axis	Complete integrated 5th-axis	Complete integrated 5th-axis	Complete integrated 5th-axis
Coolant	18 bar	40 bar	20 bar
Clamping tools	HSK-A63	HSK-A63	SK-30
Control system	Heidenhain TNC426	Heidenhain TNC430	HeidenhainTNC430
Remarks	-	-	-

CNC Machining Center (5-axis)

Hermle	Manufacturer
C40 UP	Model
1	Number
850 mm	Range x-axis
700 mm	Range y-axis
500 mm	Range z-axis
630x630	Clamping surface
0.01	Flatness
0.005	Positioning accuracy
32 Kw	Power
20-16000 r.p.m	Rotational speed
195	Number of tools
15	Number of pallets
0.01	Positioning accuracy pallets
Complete integrated 5th-axis	Complete integrated 5th-axis
80 Bar	Coolant
HSK-A63	Clamping tools
Heidenhain TNC530	Control system
Fastems automation	Remarks

CNC Machining Center

Manufacturer	Matsuura	Matsuura	Matsuura	Heller
Model	MC 600-V	MAM-700HF PC-2	MC 510-V	H 4000
Number	1	1	1	2
Range x-axis	600 mm	750 mm	510 MM	800 mm
Range y-axis	410 mm	600 mm	360 MM	800 mm
Range z-axis	470 mm	625 mm	460 MM	800 mm
Clamping surface	400x880 mm	500x500 mm	380x760 MM	630 x 500 mm
Flatness	0,02	0,01	0.02	0,02
Positioning accuracy	0,008	0,005	0.008	0,005
Power	7.5 kW	11 kW	5.5 KW	40 kW
Rotational speed	30-7000 r.p.m.	30-8000 r.p.m.	30-6000 r.p.m.	5-16000 r.p.m.
Number of tools	30	60	20	408
Number of pallets	None	2	None	35
Positioning accuracy pallets	None	0,01	none	0,01
4th-axis	Integrated	Table 360°	Additional	Table 360°
Internal Cooling	None	20 bar	None	70 bar
Clamping tools	BT40	BT40	BT 40	HSK 63
Control system	Yasnac MK-3	Yasnac i80M	Yasnac MK-3	Fanuc-31 I
Remarks	-	-	-	-

CNC Turning

Manufacturer	Schaublin	Schaublin	Schaublin	Schaublin
Model	110 CNC	125 CCN	180 CCN	140 R
Number	1	1	1	1
Max. clamping diameter	100 mm	150 mm	170 mm	140 mm
Max. diameter	200 mm	270 mm	280 mm	300 mm
Distance between centers	300 mm	500 mm	650 mm	366 mm
Power	5,5 kW	7,5 kW	18,5 kW	11/3.7 kW
Rotational speed	30-6000 r.p.m.	0-5000 r.p.m.	30-5000 r.p.m.	6000 r.p.m.
Accuracy	0,002	0,001	0,001	0,001
Range x-axis	220 mm	180 mm	220 mm	220 mm
Range z-axis	300 mm	400 mm	650 mm	370 mm
Number of tools	8	4	8	12
Number of driven tools	8	none	None	12
Repeatability	0,001	0,001	0,001	0,001
Control system	Fanuc 0T	Fanuc 20T	Fanuc 20T	Fanuc 18i

CNC Turning

Manufacturer	Weiler	Gildemeister
Model	E70/80	CTX 500
Number	1	1
Max. clamping diameter	400 mm	250 mm
Max. diameter	800 mm	420 mm
Distance between centers	2000 mm	1065 mm
Power	38 kW	9,2 kW
Rotational speed	1800 r.p.m.	5000 r.p.m.
Accuracy	0,005	0,002
Range x-axis	510 mm	250 mm
Range z-axis	2000 mm	1000 mm
Number of tools	4	12
Number of driven tools	None	None
Repeatability	0,01	0,01
Control system	Siemens 810D Dailoog1	Grundig Pilot 1190

CNC Milling

Manufacturer	Fehlman	Matec	Maho	Maho
Model	Picomax 54	HV 2000	MH 600-E	MH 800-C
Number	2	1	1	1
Range x-axis	500 mm	2000	600 mm	800 mm
Range y-axis	250 mm	600	450 mm	450 mm
Range z-axis	160 mm	800	450 mm	600 mm
Clamping surface	885x320 mm	635x2500	900x490 mm	1100x600 mm
Flatness	0,02	0.02	0,02	0,02
Positioning accuracy	0,002	0.005	0,005	0,005
Power	5 kW	16 KW	5 kW	5 kW
Rotational speed	100-8000 r.p.m.	30-18000	20-6000 r.p.m.	20-5000 r.p.m.
4th-axis	none	Yes	none	none
Clamping tools	SK-30	HSK-A63	BT40	BT40
-	-	-	-	-
Control system	Heidenhain TNC310	Heidenhain TNC530	Philips CNC-432	Philips CNC-432

Sheet-metal

Machine type:	Laser cutter	Max. thickness:	22 mm (Stainless-steel: 10 mm)
Manufacturer:	Mazak	Accuracy:	0,01
Model:	STX MKII 48		
Number:	1		
Clamping surface:	2500x1250 mm		
Height:	100 mm		
Remarks:	Pallet changer		

Machine type:	Punching machine	Control system:	Amadan 04-PA
Manufacturer:	Amada	Free space:	1000 mm
Model:	Aries 245	Max. pressure:	40 ton
Number:	1	Number of tools:	20
Max. size:	1270x1000 mm	Accuracy:	0,1 mm
Max. thickness:	4,5 mm		
Remarks:	-		

Machine type:	Folding machine	Max. pressure:	50 ton
Manufacturer:	Amada	Repeatability:	x=0,1 mm; y=0,1
Control system:	Promecan Da58		
Model:	Promecan		
Number:	1		
Length:	2000 mm		
Range:	100 mm		
Remarks:			

Machine type:	Folding machine	Max. pressure:	80 Ton
Manufacturer:	Safan	Repeatability:	0,05 mm
Control system:	TS control		
Model:	E Break		
Number:	1		
Length:	2500 mm		
Range:	300 mm		

Machine type:	Sheet metal shears	Accuracy:	0,1 mm
Manufacturer:	Safan		
Model:	VS 255-4		
Number:	1		
Max. size:	2500x1000 mm		
Max. thickness:	4 mm		
Remarks:	-		

Sheet-metal

Machine type:	Rivetting machine	Max. pressure:	10 bar
Manufacturer:	Bräcker	Number of tools:	6
Model:	KNE 080		
Number:	1		
Height:	200 mm		
Free space:	80 mm		
Remarks:	-		

Machine type:	HF grinding machine
Manufacturer:	Bosch
Model:	-
Number:	2
Power:	0,9 kW
Rotational speed:	6150 r.p.m.
Remarks:	-

Machine type:	HF sanding machine
Manufacturer:	Bosch
Model:	-
Number:	1
Power:	1,3 kW
Rotational speed:	5400 r.p.m.
Remarks:	-

Machine type:	Rivetting machine	Max. pressure:	1700 daN
Manufacturer:	Baltec	Number of tools:	10
Model:	-		
Number:	1		
Height:	300 mm		
Free space:	600 mm		
Remarks:	-		

Machine type:	Grinding master	Depth:	200 mm
Manufacturer:	Time masters	Height:	75 mm
Model:	Serie 600 WW		
Number:	1		
width:	600 mm		

Workshop

Machine type: Welding equipment
Manufacturer: Migatronik
Model: Dyna Mig 405
Number: 1
Remarks: mig/mag welding

Machine type: Welding equipment
Manufacturer: Migatronik
Model: BDH-400
Number: 1
Remarks: tig/mig welding

Machine type: Welding equipment
Manufacturer: Migatronik
Model: MTE-220
Number: 1
Remarks: tig welding

Machine type: Welding equipment
Manufacturer: Migatronik
Model: Flex 3000
Number: 2R
Remarks: mig/mag welding

Machine type: Welding equipment
Manufacturer: Dynamig
Model: 335
Number: 1
Remarks: mig/mag welding

Machine type: Welding equipment
Manufacturer: Migatronik
Model: AD/DC 3000
Number: 1
Remarks: Tig welding

Machine type: Welding equipment
Manufacturer: Migatronik
Model: PI250
Number: 1
Remarks: Tig welding

Workshop

Machine type: Welding equipment
 Manufacturer: Migatronnic
 Model: 400 AC/DC
 Number: 1
 Remarks: tig welding

Machine type: Welding equipment
 Manufacturer: Migatronnic
 Model: Pilot 2400H
 Number: 3
 Remarks: tig welding

Machine type: Welding equipment
 Manufacturer: Migatronnic
 Model: Pilot 2400 H Water Cooled
 Number: 1
 Remarks: tig welding

Machine type: Spot welding machine
 Manufacturer: Tecina
 Model: 4620
 Number: 1
 Free space: 500 mm
 Remarks: -

Power: 75 KVA
 Max. thickness: 2 x 3 mm

Machine type: Rolling barrel
 Manufacturer: Röster
 Model: DL PK
 Number: 1
 Capacity: 7,5 l/h
 Remarks: -

Power: 3 kW

Machine type: Grit blaster
 Manufacturer: Prochim
 Model: SRL
 Number: 1
 width: 800 mm

Depth: 500 mm
 Height: 600 mm

Machine type: Rinsing machine
 Manufacturer: Carberto
 Model: International
 Number: 1
 Pump capacity: 4 kW

Heater: 12 kW
 Height: 675 mm
 Depth: 1030 mm
 Doorway: 1100 mm

Machine type: Engraving
 Manufacturer: Fly marker Combi
 Model: XL
 Number: 1

Note: Measuring room is temperature and humidity controlled.

Measuring Room

Machine type:	3D-measuring machine		
Manufacturer:	Mitutoyo		
Model:	Crysta Apec	Electronic feeler:	Sp-25
Number:	1	Accuracy:	0,0016 mm
Range x-axis:	2000 mm	Computer:	Dell/cosmos
Range y-axis:	900 mm		
Range z-axis:	800 mm		
Remarks:	CNC		

Machine type:	3D-measuring machine		
Manufacturer:	Mitutoyo	Range z-axis:	300 mm
Model:	BHN-506	Electronic feeler:	TP20
Number:	1	Accuracy:	0,0023 mm
Range x-axis:	500 mm	Computer:	Dell/cosmos
Range y-axis:	600 mm		
Range z-axis:	300 mm		
Remarks:	CNC		

Machine type:	3D-measuring machine		
Manufacturer:	Mitutoyo	Range z-axis:	250 mm
Model:	BHN 305	Electronic feeler:	TP20
Number:	1	Accuracy:	0,0023 mm
Range x-axis:	300 mm	Computer:	Dell/cosmos
Range y-axis:	500 mm		
Range z-axis:	250 mm		
Remarks:	CNC		

Machine type:	Profile projector		
Manufacturer:	Mitutoyo		
Model:	PJ300		
Number:	1		
Range x-axis:	150 mm		
Range y-axis:	50 mm		
Remarks:	-		

Machine type:	Profile projector		
Manufacturer:	Vision		
Model:	Dynascope Ultra		
Number:	1		
Range x-axis:	200 mm		
Range y-axis:	150 mm		
Remarks:	-		

Note: Measuring room is temperature and humidity controlled

Measuring Room

Machine type:	Hardness gauge
Manufacturer:	GNEHM
Model:	G100A
Number:	1
Remarks:	-
Machine type:	Electronic height gauge
Manufacturer:	Trimos
Model:	Vertical
Number:	3
Range:	500 mm
Accuracy:	0,001
Remarks:	-
Machine type:	Electronic roughness meter
Manufacturer:	Mitutoyo
Model:	SJ 500
Number:	1
Range:	0,02-12 Ra
Clamping surface:	-
Remarks:	-
Machine type:	Layer thickness meter
Manufacturer:	Fisher
Model:	D 211 D
Number:	1
Remarks:	Ferro- nonferromaterial
Machine type:	Endoscope
Manufacturer:	Kappa
Model:	CF11
Number:	1
Enlargement:	50 x
Remarks:	-
Machine type:	Microscope
Manufacturer:	Olympus
Model:	SZ 61
Number:	2
Enlargement:	45 X
Remarks:	External TFT screen
Machine type:	Microscope
Manufacturer:	Olympus
Model:	SZ 60
Number:	1
Enlargement:	63 X
Remarks:	-

Work preparation

Machine type: Programming
Manufacturer: TopSolid
Model: Advanced 3-D Machining (Milling)
Number: 7
Remarks: Generates tool path and CNC code

Machine type: Programming
Manufacturer: Radan / Radbend
Model: Advanced Fabrication (Sheet-metal)
Number: 1/1
Remarks: Generates advanced tool path and CNC code Lasering, Nibbeling, Bending, 3D Modelling, Nestings & Foldings

Machine type: Programming
Manufacturer: Boxnet
Model: DNC-system
Number: 1

Machine type: Programming
Manufacturer: SomaDNC
Model: DNC-system
Number: 1
Remarks: All CNC-machines can be programmed On-Line

Machine type: Toolsetting
Manufacturer: Zoller
Model: Saturn 1
Number: 1
Remarks: Pre setting of tools

Range x-axis:	400 mm
Range y-axis:	500 mm

Machine type: Shrinking
Manufacturer: Haimer
Model:
Number: 1
Remarks: Tool types: SK30, BT40 & HSK63

Machine type: Easy lock
Manufacturer: Iscar
Model:
Number: 1
Remarks: Torque presetting

Machine type: Tool management
Manufacturer: Adcos
Model: Tooltech
Number: 10
Remarks: Stocklevel controlsystem



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



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



Überetzung

Allgemein

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

CNC Bearbeitungszentrum

Spanfläche
Flachheit
Positionsgenauigkeit
Anzahl Werkzeuge
Anzahl Paletten
Positionsgenauigkeit Paletten
4^e-Achse
Spindelkühlung
Werkzeugaufnahme
Steuerung

CNC Drehen

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

Konventioneller Fräsen

Spanfläche
Flachheit
Positionsgenauigkeit
Werkzeugaufnahme
Digital auslesen

Bohren

Spanfläche
Spindelschlag
Positionsgenauigkeit
Werkzeugaufnahme
Ständerbohrmaschine

Bereik hoogte

Range vertical

Bereich Höhe

CNC Frezen

Spanvlak
Vlakheid
Positioneernauwkeurigheid
4^e-as
Opname gereedschappen

CNC Milling

Clamping surface
Flatness
Positioning accuracy
4th-axis
Clamping tools

CNC Fräsen

Spannfläche
Flachheit
Positionsgenauigkeit
4^e-Achse
Werkzeugaufname

Conventioneel Draaien

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

Conventional Turning

Max. clamping diameter
Max. diameter
Distance between centers
Repeatability

Konventionelles Drehen

Max. Spanndurchmesser
Max. Durchmesser
Länge zwischen Spitzen
Genauigkeit

Slijpen

Magneet
Centerafstand
Max. slijplengte
Max. slijpdiameter
Vlakslijpmachine
Rondslijpmachine
Gereedschapsslijpmachine

Grinding

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

Schleifen

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

NC Tappen

Spanvlak
Slag

NC Tapping

Clamping surface
Spindle travel

NC Gewindeschneiden

Spannfläche
Spindelschlag

Zagen

Zaagbereik rond
Zaagbereik vierkant
Aanvoerlengte enkelvoudig
Aanvoerlengte meervoudig
Aantal meervoudig
Afkortzaag

Sawing

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

Sägen

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

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

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

Prototyp Schlosserei

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

Plaatwerk

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

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

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

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

Blechbearbeitung

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

Schlosserei

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

Meßraum

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

Arbeitsvorbereitung

Programmierung
Werkzeugmagazin

