

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

Ibarmia TI-C-54-04

Tilting system

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:

Redex reductor for X axis (electronic preload)

Y axis:

Z axis:

(2) FANUC α IS40/4000HV

(2) KRPX2-M.21.3.H

FANUC α IS30/4000HV

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: Rack
X axis Ø 50 - P= 30
Y axis Ø 50 - P= 30
Z axis

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

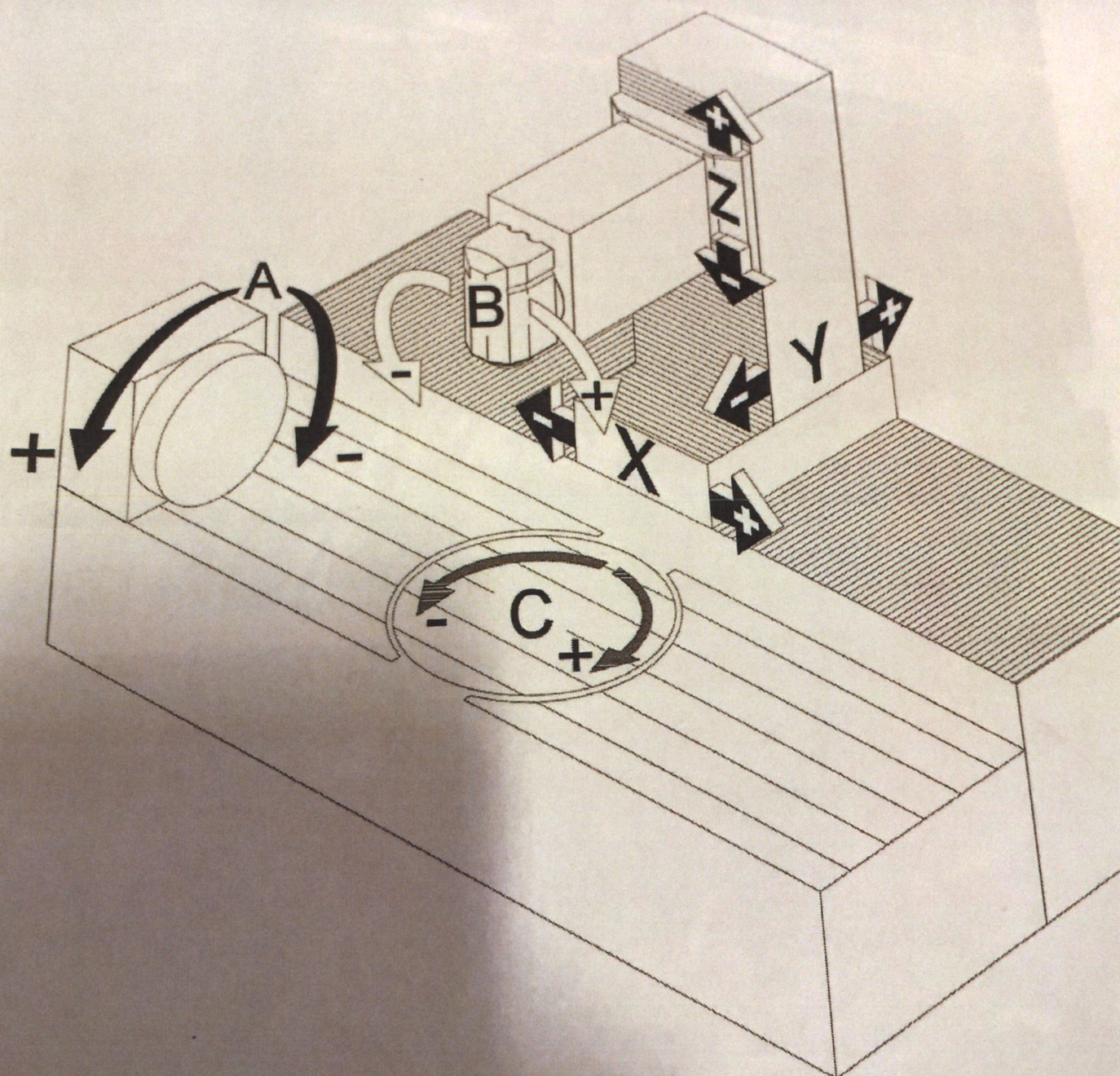
CNC Control
CNC Control Fanuc 31i/B5
Screen
Keyboard
Auxiliary control panel
Portable control

Cooling and filtering system
Filtering system with independent tank
Inlet filter of filtering cloth and magnetic separator
Inlet filter type "basket" of 113 µm
Outlet filter
Pump inner cooling
Theoretical maximum pressure pump inner cooling
Pump external cooling
Transfer pump coolant liquid
Inner cooling pressure manual adjusting valve

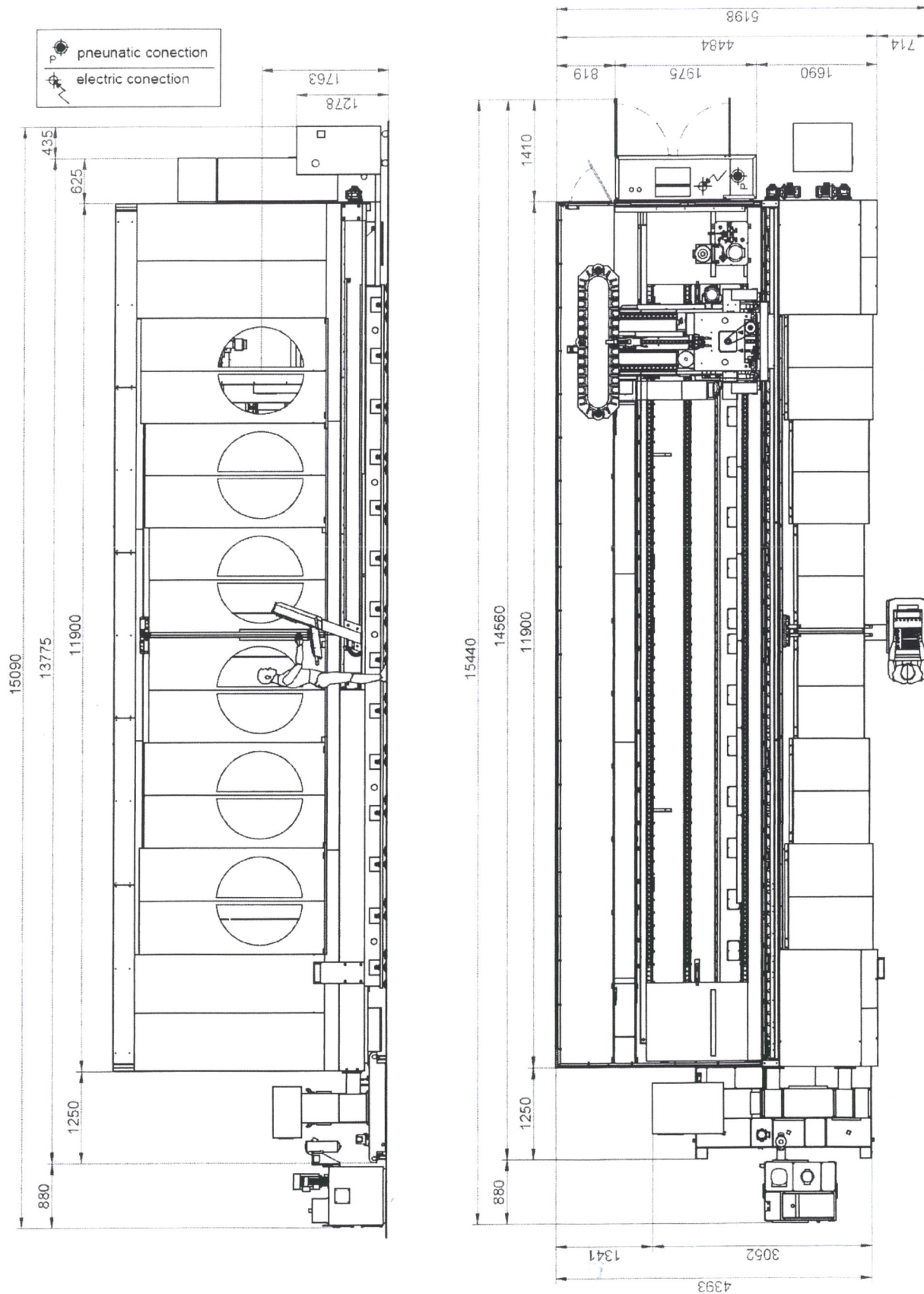
Yes
Fairey Arlon GA-230 40 µm
Grundfos MTR 3-33/33
22 bar
Grundfos MTR 3-22/9, 5 bar
Grundfos MTA 60-180
No

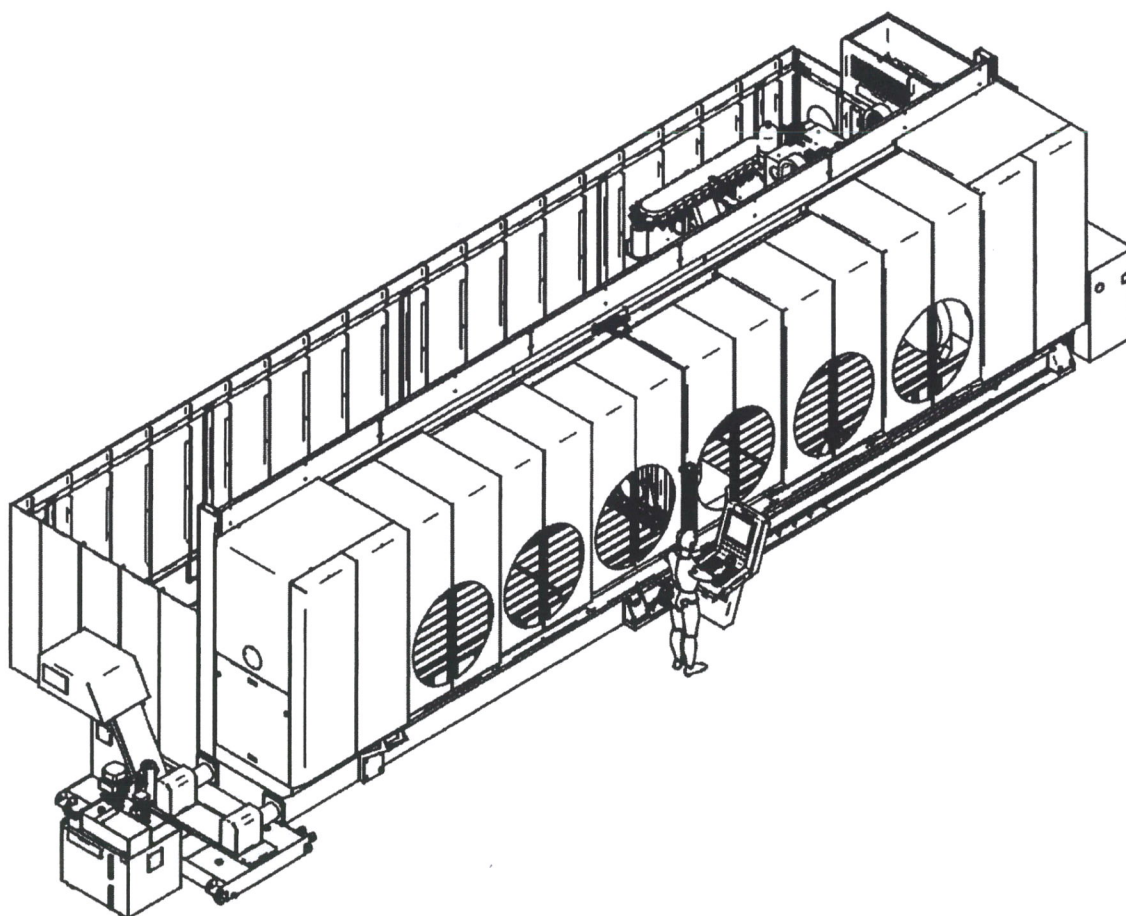
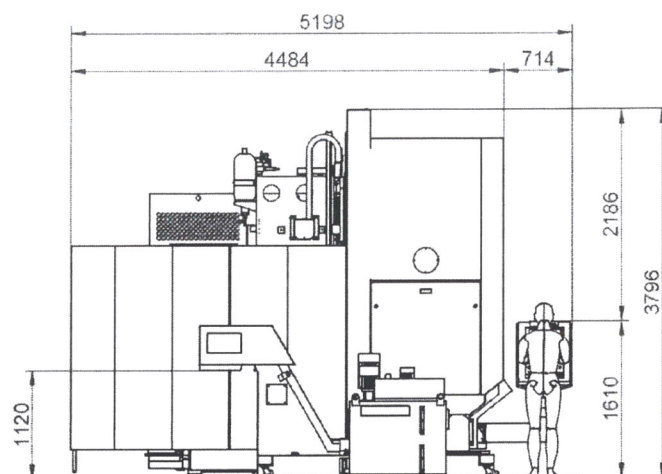
4.15

Axis of the machine



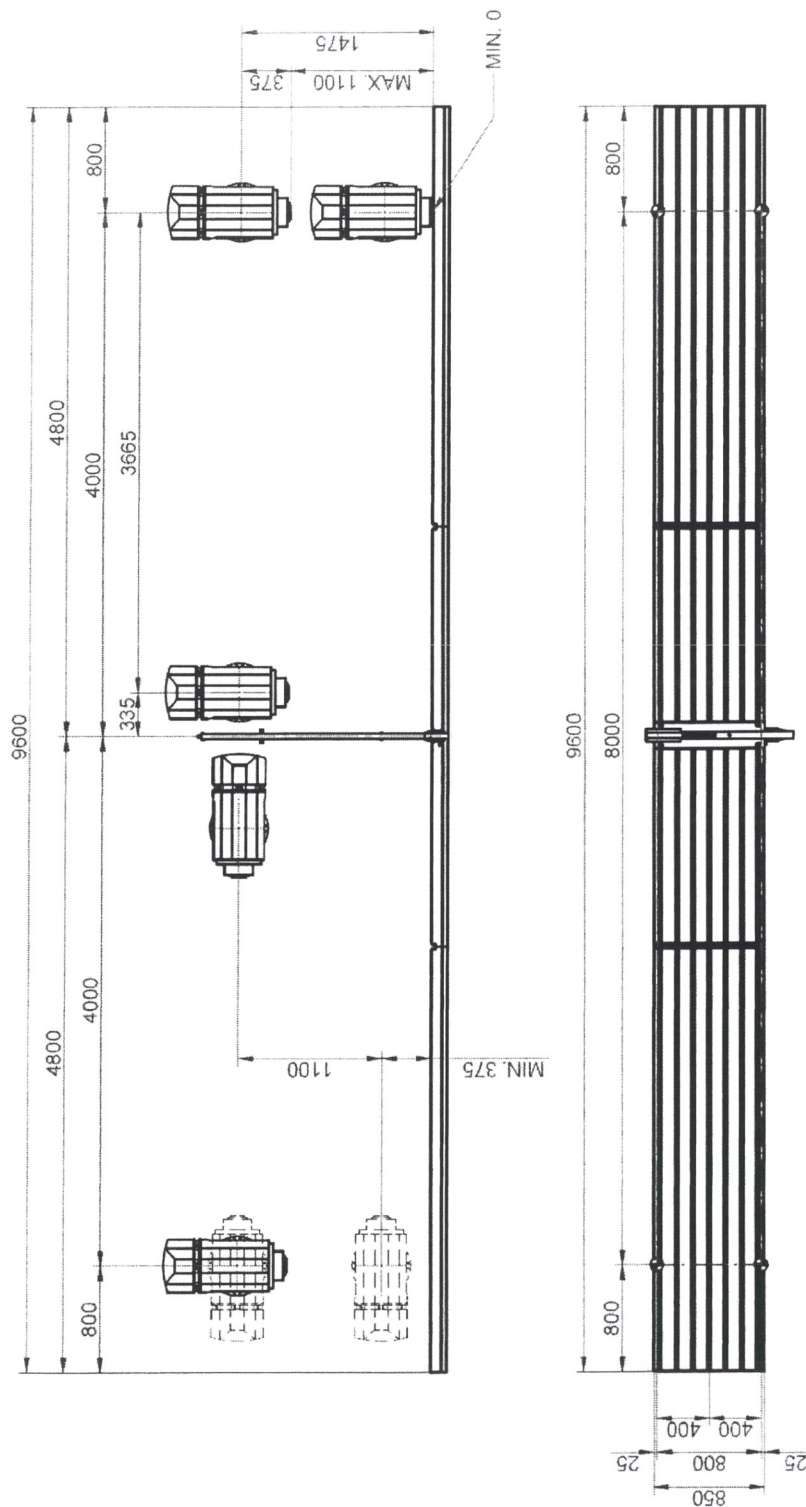
3.2 Lay out of the machine

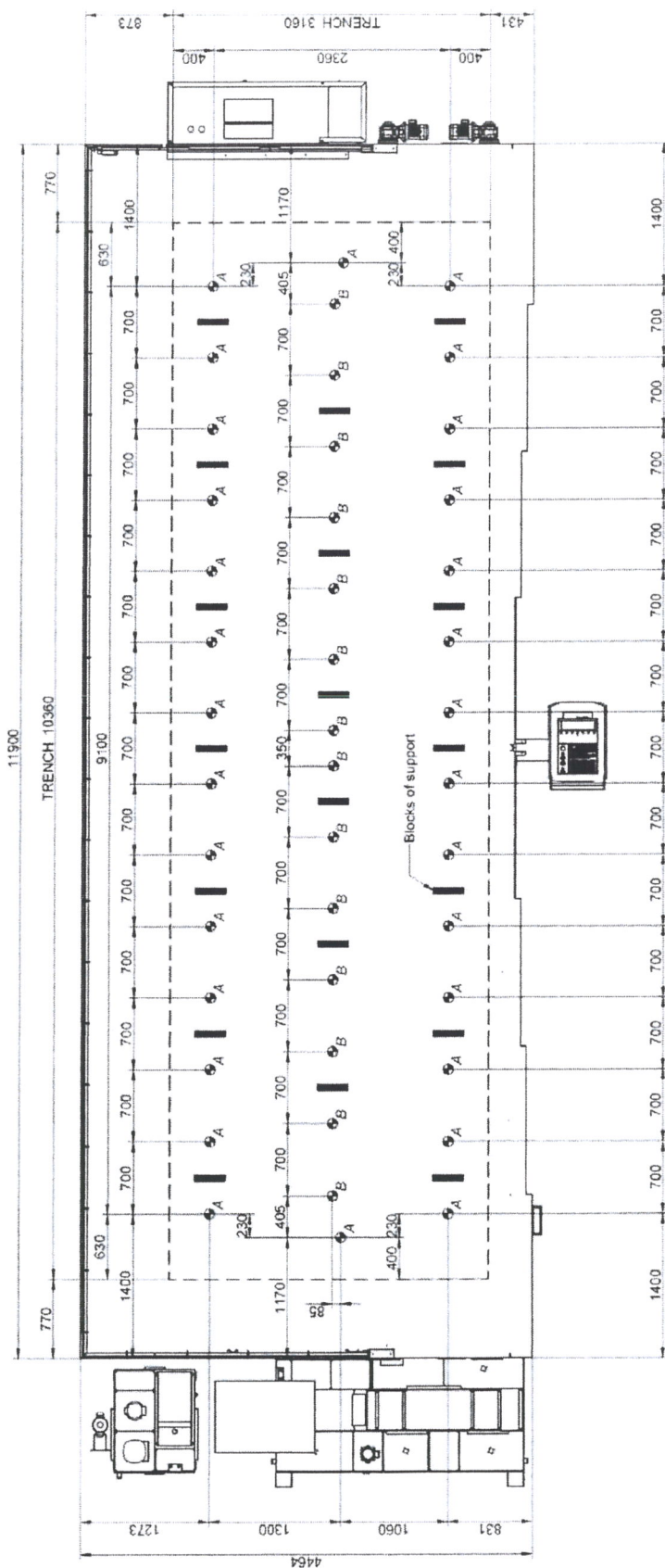


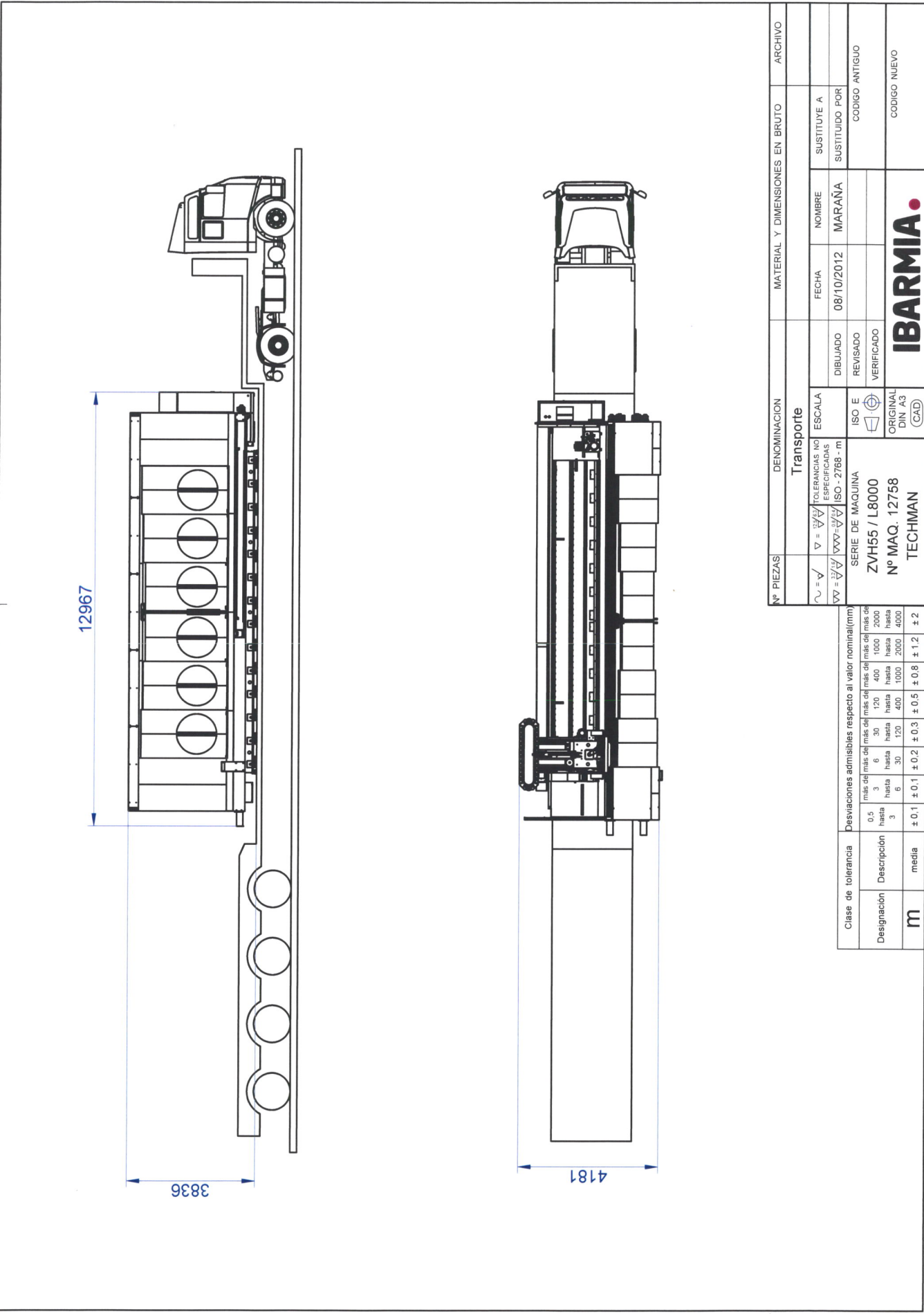


4.3 Dimensions and strokes of the machining area

Strokes for machine ZVH 55/L8000 s/n: 12758

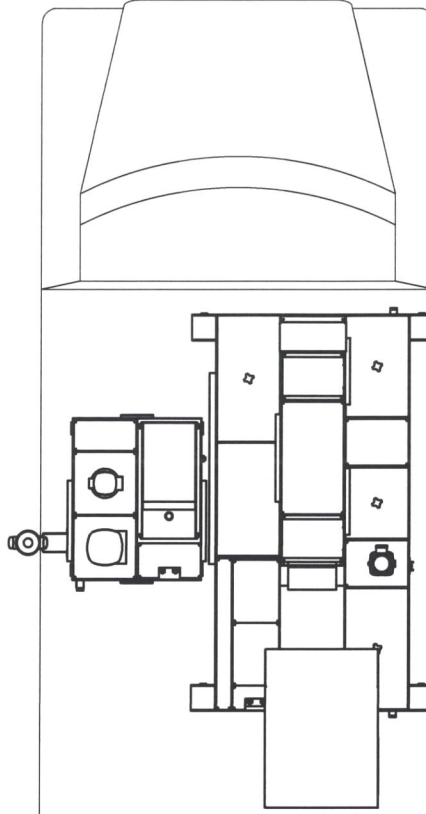
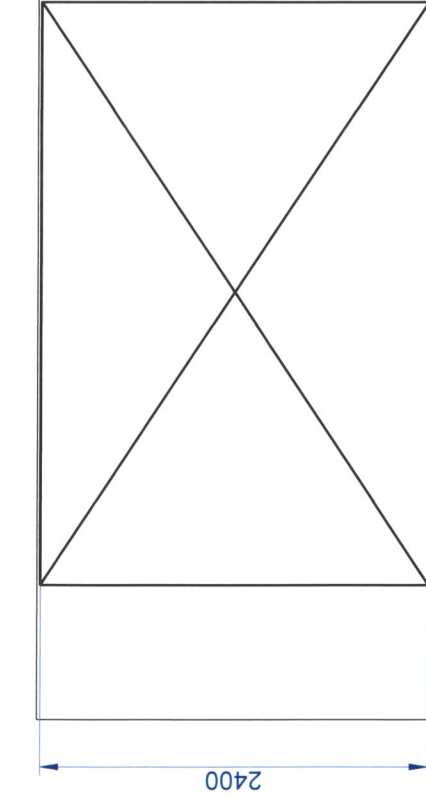
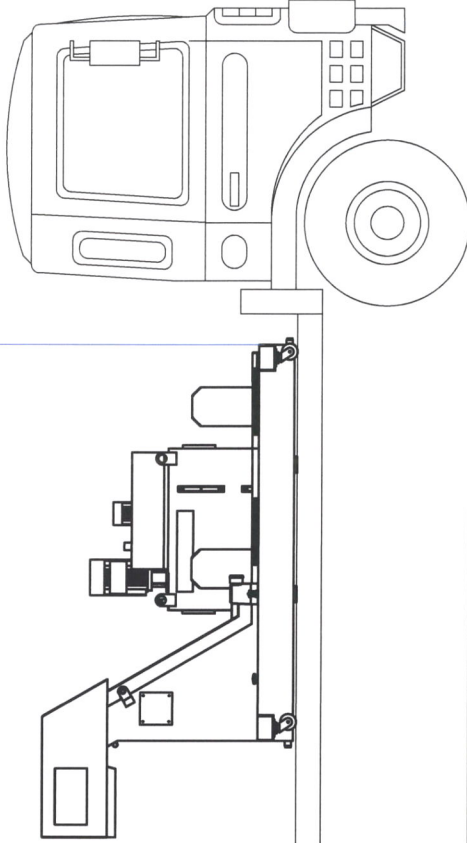
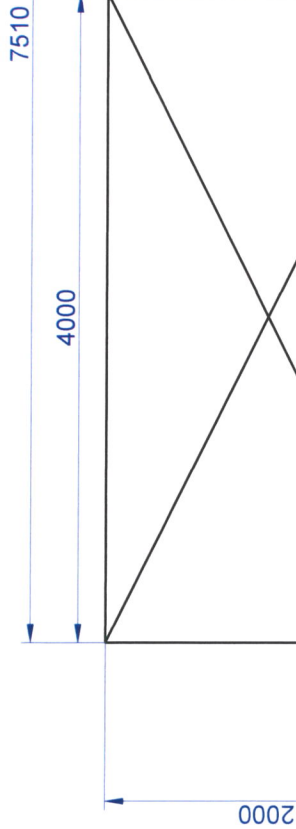






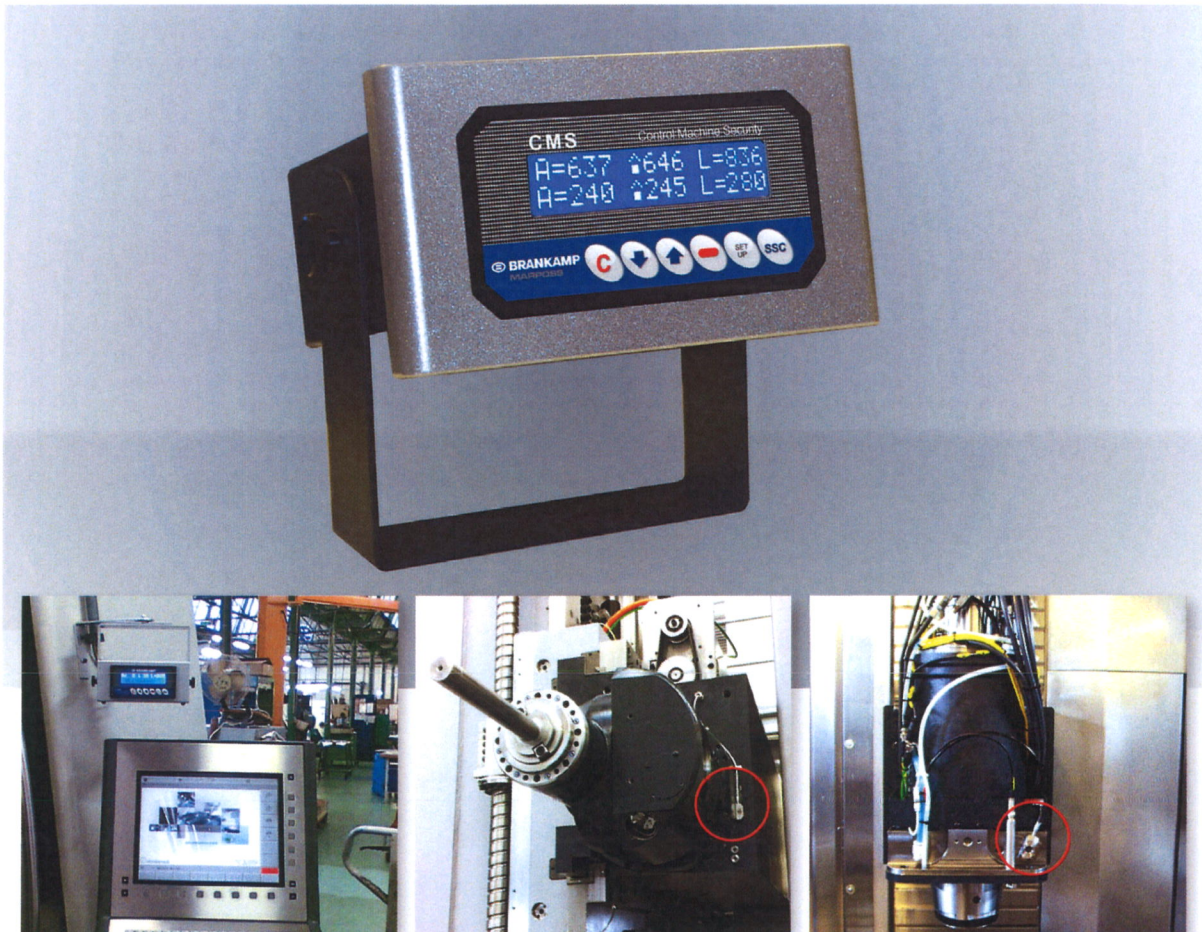
Nº PIEZAS		DENOMINACION		MATERIAL Y DIMENSIONES EN BRUTO		ARCHIVO
		Transporte				
		ESCALA		FECHA	NOMBRE	SUSTITUYE A
				08/10/2012	MARANA	SUSTITUIDO POR
		DIBUJADO	REVISADO	CODIGO ANTIGUO		
		VERIFICADO		CODIGO NUEVO		
		ISO E				
		ORIGINAL				
		DIN A3				
		(CAD)				
		SERIE DE MAQUINA		IBARMIA.		
		ZVH55 / L8000				
		Nº MAQ. 12758				
		TECHMAN				

Clase de tolerancia		Desviaciones admisibles respecto al valor nominal (mm)									
Designación	Descripción	0,5		3		6		30		120	
		hasta	más de	hasta	más de	hasta	más de	hasta	más de	hasta	más de
m	media	± 0,1	± 0,1	± 0,2	± 0,3	± 0,5	± 0,8	± 1,2	± 2		



Clase de tolerancia		Desviaciones admisibles respecto al valor nominal(mm)									
Designación	Descripción	0.5 hasta 3	más de 3 hasta 6	más de 6 hasta 30	más de 30 hasta 120	más de 120 hasta 400	más de 400 hasta 1000	más de 1000 hasta 2000	más de 2000 hasta 4000	más de 4000	
m	media	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2		

Nº PIEZAS	DENOMINACION	MATERIAL Y DIMENSIONES EN BRUTO				ARCHIVO	
	Transporte						
$\sim = \nabla$	$\nabla = \frac{VV}{V}$	TOLERANCIAS NO ESPECIFICADAS	ESCALA	FECHA	NOMBRE	SUSTITUYE A	
$VV = \frac{VV}{V}$	$VV = \frac{VV}{V}$	ISO - 2768 - m		08/10/2012	MARAÑA	SUSTITUIDO POR	
SERIE DE MAQUINA		ISO E	DIBUJADO	REVISADO			CODIGO ANTIGUO
ZVH55 / L8000				VERIFICADO			
Nº MAQ. 12758		ORIGINAL					
TECHMAN		DIN A3					
		CAD					
		IBARMIA.					CODIGO NUEVO



Machine protection for machine tools, robotic and handling systems

Collisions between different moving parts of a machine generally lead to high repair costs and long downtimes.

Protect your machine with the Brankamp CMS system. It detects dynamically increasing forces with damage potential within a millisecond and sends a stop signal to the machine drives. Depending on moving speed, the damage can be reduced or even prevented.

Rely on the experience of more than 10,000 installations on machines, handling systems and robots.

Your benefits

- Protection from the very first part. No teach cut required.
- Immediate detection of rapid force changes.
- Minimizing of subsequent damage caused by programming, setup and operating errors.
- Extends the machine lifetime.
- Increases the machine availability
- Allows multiple machine operation and running machines unattended.
- Easy retrofit possible – regardless of machine type and control.
- Log book storing last 100 events with time and date.

CMS

Machine protection for machine tools, robotic and handling systems

Why machine protection?

Collisions between the moving axis and the collision object can cause substantial property damage. A large portion of machine downtime is caused by collisions.

Risks

- Careless manual movement of axes
- Input failures
- Tool clamping failure
- Oversized or mislocated parts
- Tool position
- Clamping error of fixtures
- Zero-Offset mistakes
- Tool overload (for example, chip congestion)
- Fixture dimensions not respected

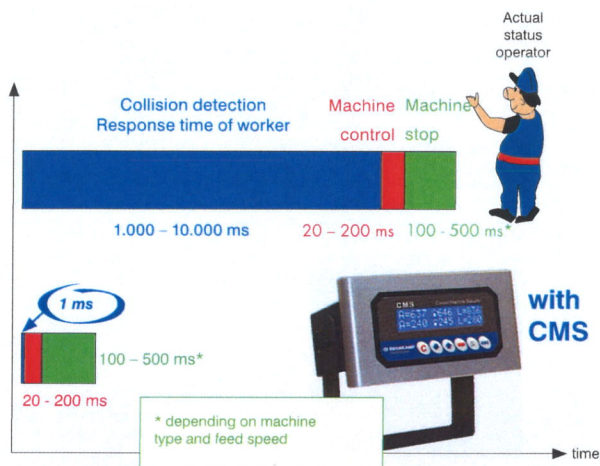
Damaged components

- Toolholder
- Spindle bearings, spindle shaft
- Guiding rails
- Axis motors
- Ball screw
- Fixtures
- Parts

Possible consequential damages

- Excessive bearing wear due to vibration
- General machine accuracy

Limiting damage by shorter response-times



Why is machine protection with CMS so effective?

Sensors on the machine detect an abnormal state of operation and submit a stop signal to the control allowing to stop the machine at the fastest possible way. The below diagram illustrates the possible improvement. At the top you see the actual status: The machine operator senses a sound or vibration. Depending on the time and possibility of a response (multi-machine operation) 1-10 seconds will pass, until the emergency stop is actuated. This signal is processed by the control and the machine is subsequently stopped. The stop time depends on machine type, currently processed set of commands and feedrate.

CMS reduces the response time to 1/1000 of this time. Gaining valuable time, stop commands are executed much quicker and, last but not least, the damage is reduced.

Scope of performance

Collision monitoring, machine protection
LC-Display, Simple to adjust limits
Plain text display showing machine shut-down
Isolated output to shut down the machine
No interface to machine control (PLC) required
Utilization counter
Stop Code Memory (log book with date and time stamp)

Technical data

Voltage supply: 24 VDC
Housing: Sturdy housing for control panel installation
Dimensions: 182x144x72 mm / 7.16x5.66x2.83 in (WxHxD)
Dimensions housing: 187x200x72 mm / 7.36x7.87x2.83 in (WxHxD)
Inside dimensions: 138x67 mm / 5.43x2.63 in (WxH)
Weight: 1 kg (3 kg incl. housing)
Sensor: BRANKAMP Special Sensor



www.marposs.com

ODN6B06EN00 Edition 1/2016 – Specifications are subject to modifications.

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