EDM SERVICE

DIVISEURS

POUR

ELECTROEROSION

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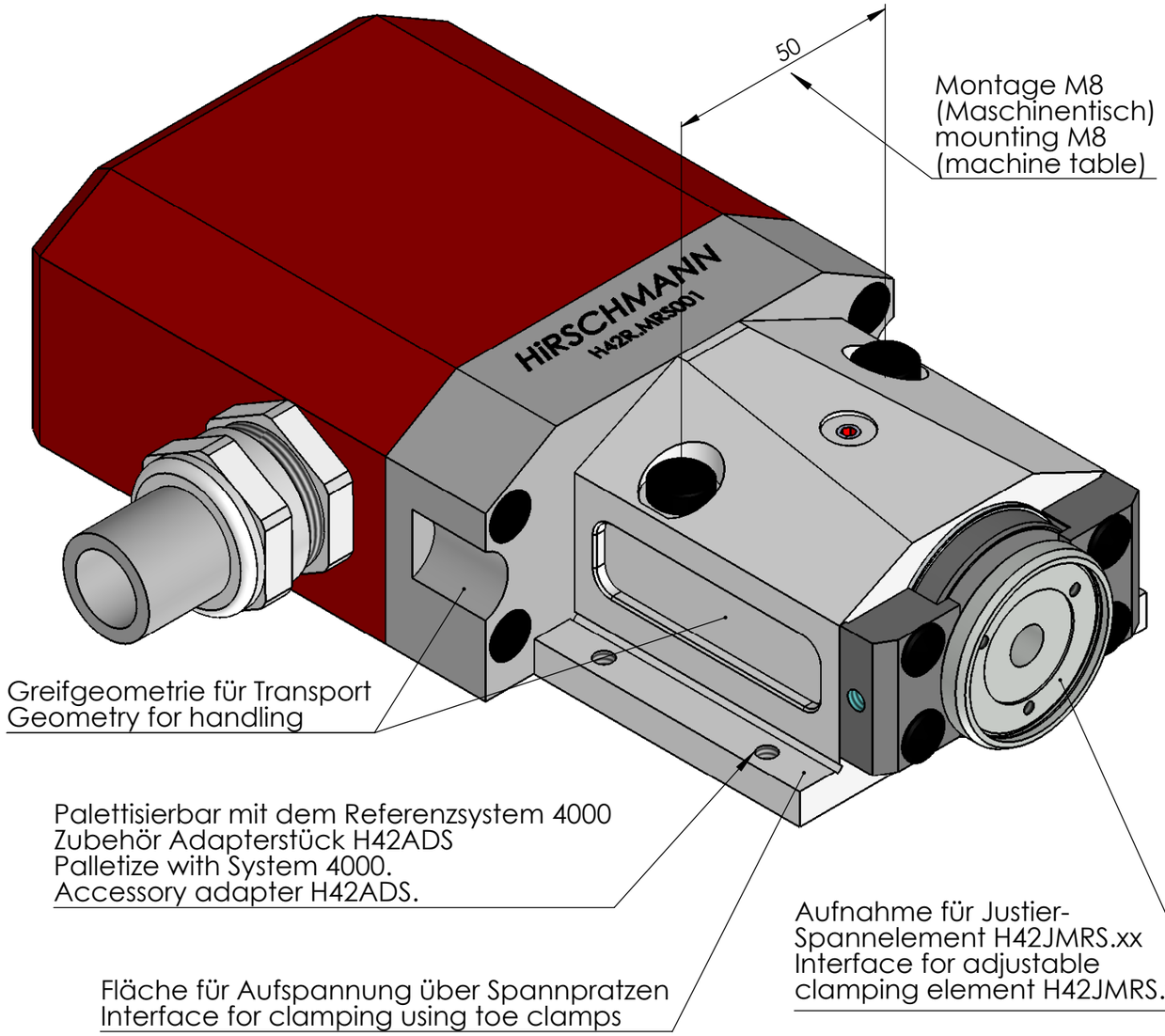
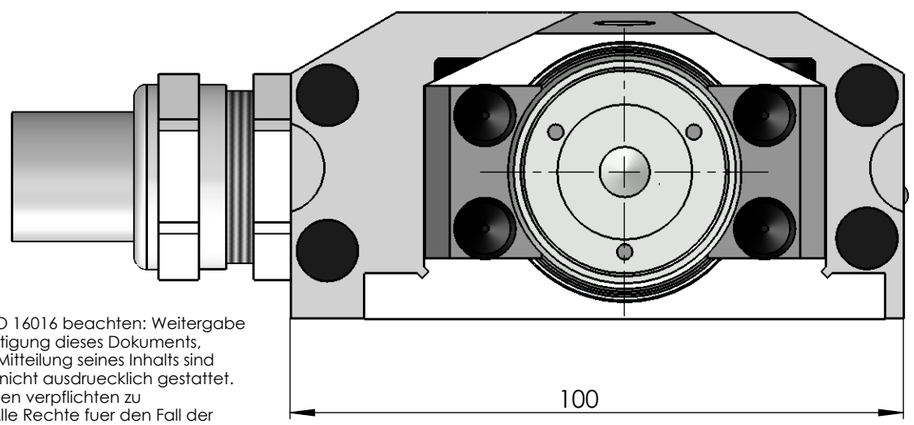
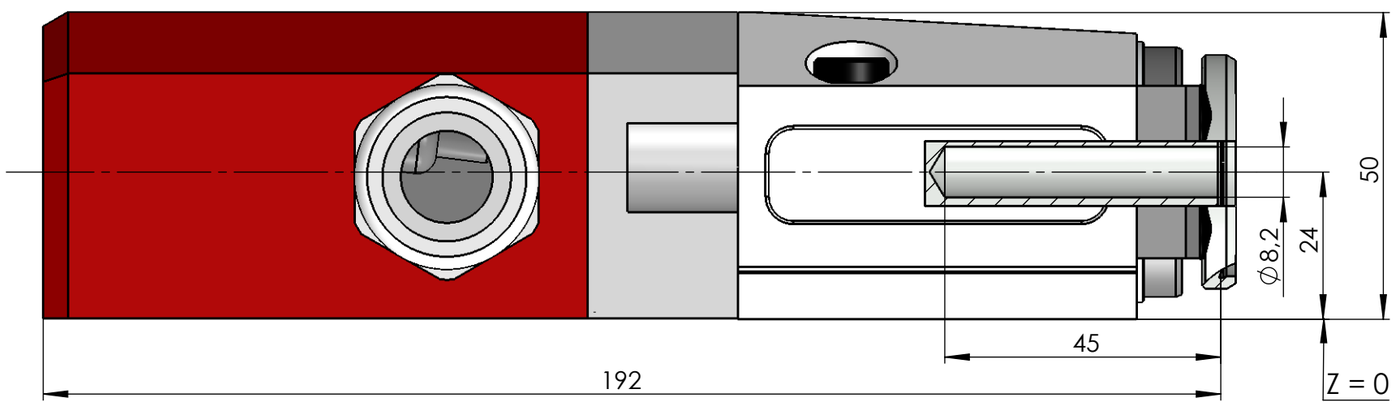
HIRSCHMANN GMBH · D-78737 FLUORN-WINZELN
TELEFON +49 (0)7402 183-0 · FAX +49 (0)7402 18310
info@hirschmanngmbh.com · www.hirschmanngmbh.com

Mini-Rotierspindel H42R.MRS001
Mini-Rotating spindle



- ***Montage mit Spannpratzen oder über Raster 50mm direkt auf den Maschinentisch.***
  mounting with toe clamps or using 8mm SHCS at 50mm pitch directly on the machine table.
- ***Palettisierbar / justierbar mit dem System 4000***
  Palletizing / adjusting possible with System 4000
- ***Spitzenhöhe 24mm ; center height 0,946"***
- ***Bis zu 4000U/min. ; up to 4000rpm***
- ***Gewicht ~3kg ; weight ~ 6,6lbs***
- ***Hohlwelle Ø8,2x45mm ; hollow shaft Ø0,323"x1,77"***
- ***Max. Werkstück Ø 10mm ; workpiece Ø 0,4"***
-
- ***Steuerung ; control unit H1625.AC4***





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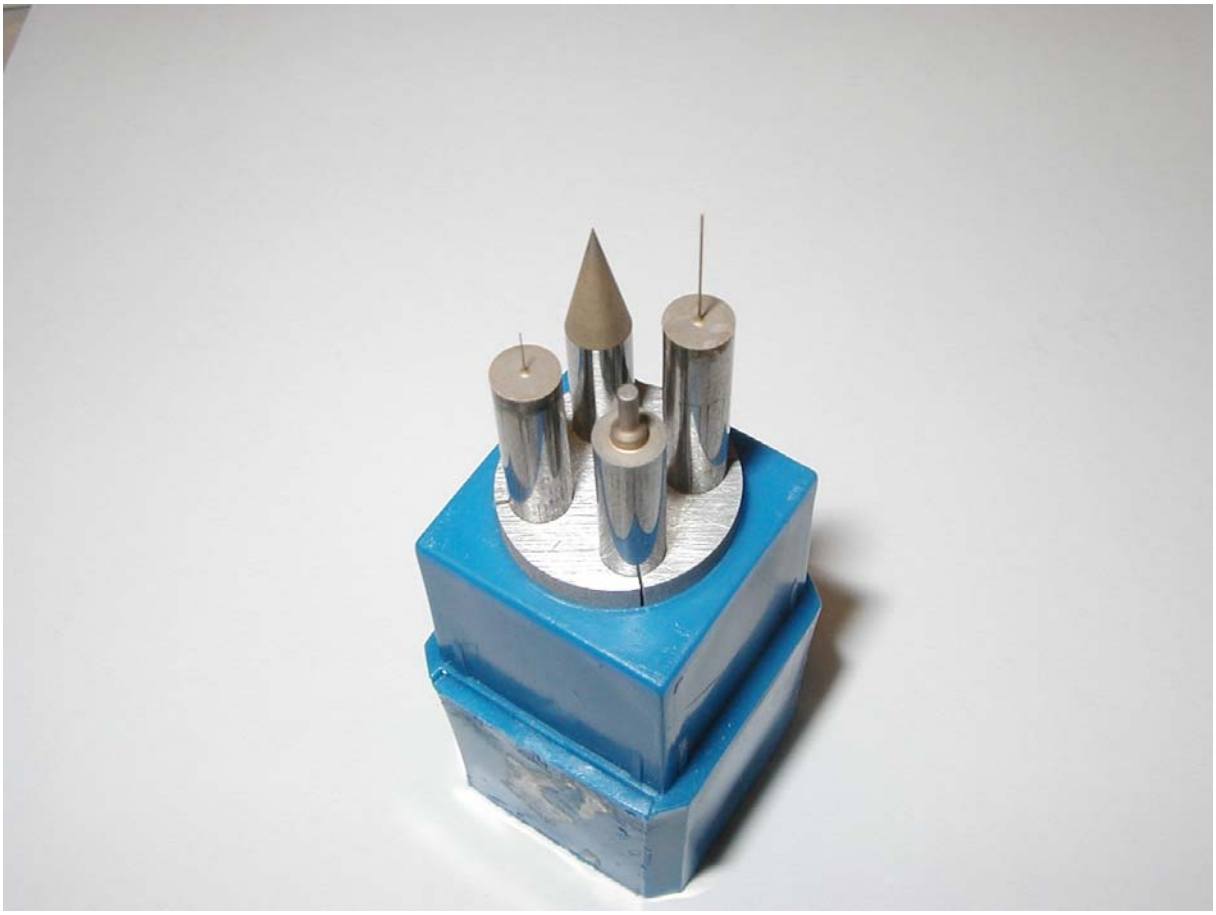
30.08.2012 N.Weisser 05.8637.00
Plot: 14.09.2012 weisser

BROCHE HIRSCHMANN H80R.MAC ETANCHE INOX VITESSE DE ROTATION 1500tr/mn

PIECES EN CARBURE REALISEES AVEC UNE BROCHE HIRSCHMANN H80R.MAC SUR MACHINE SODICK.

DIAMETRE DU BRUT : 5mm

DIAMETRES REALISES: Ø 0,09 x 5mm et Ø 0,2 x 10mm



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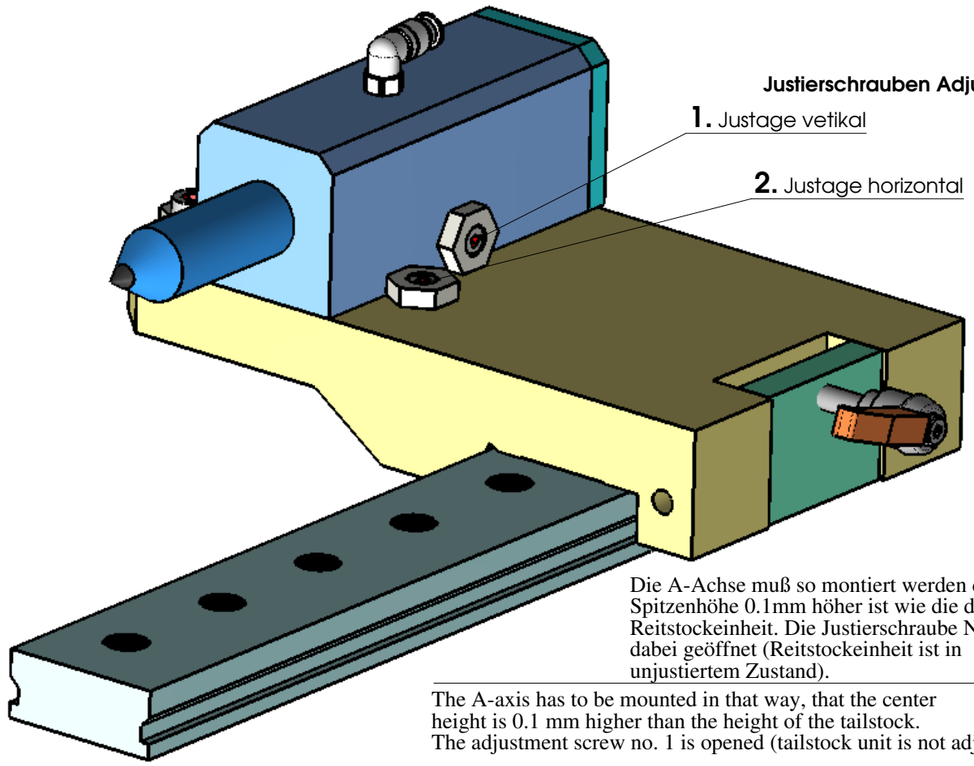
System 4000

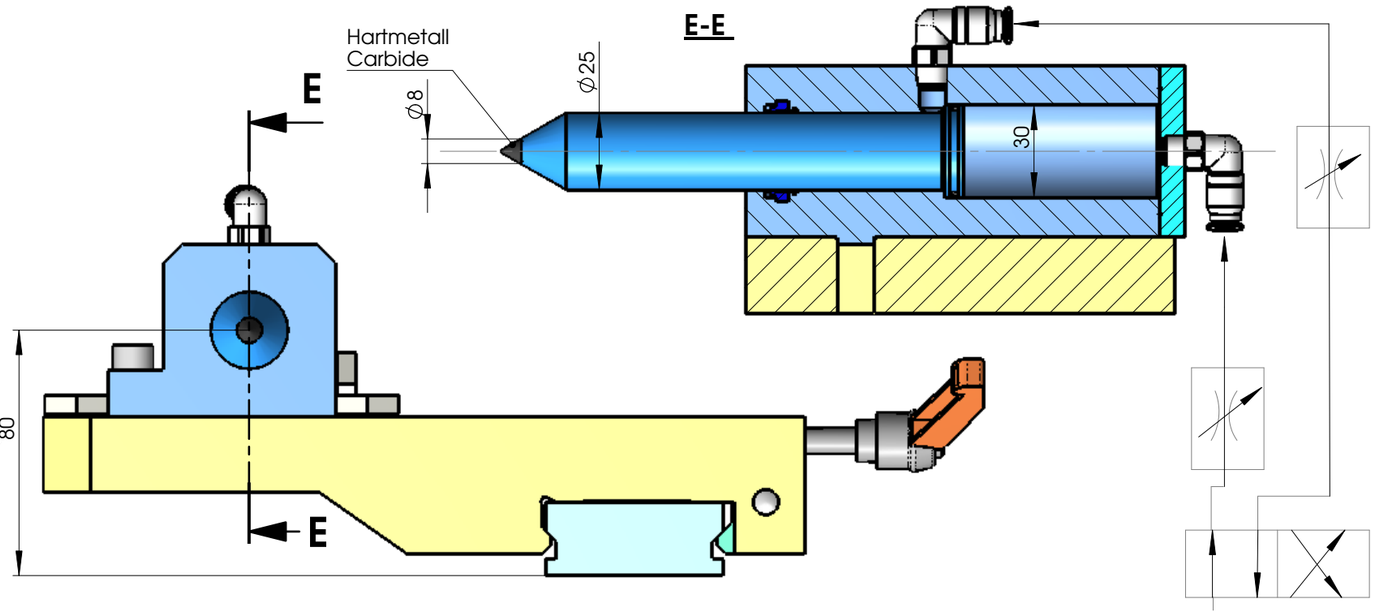
Reitstockeinheit FH4.7424

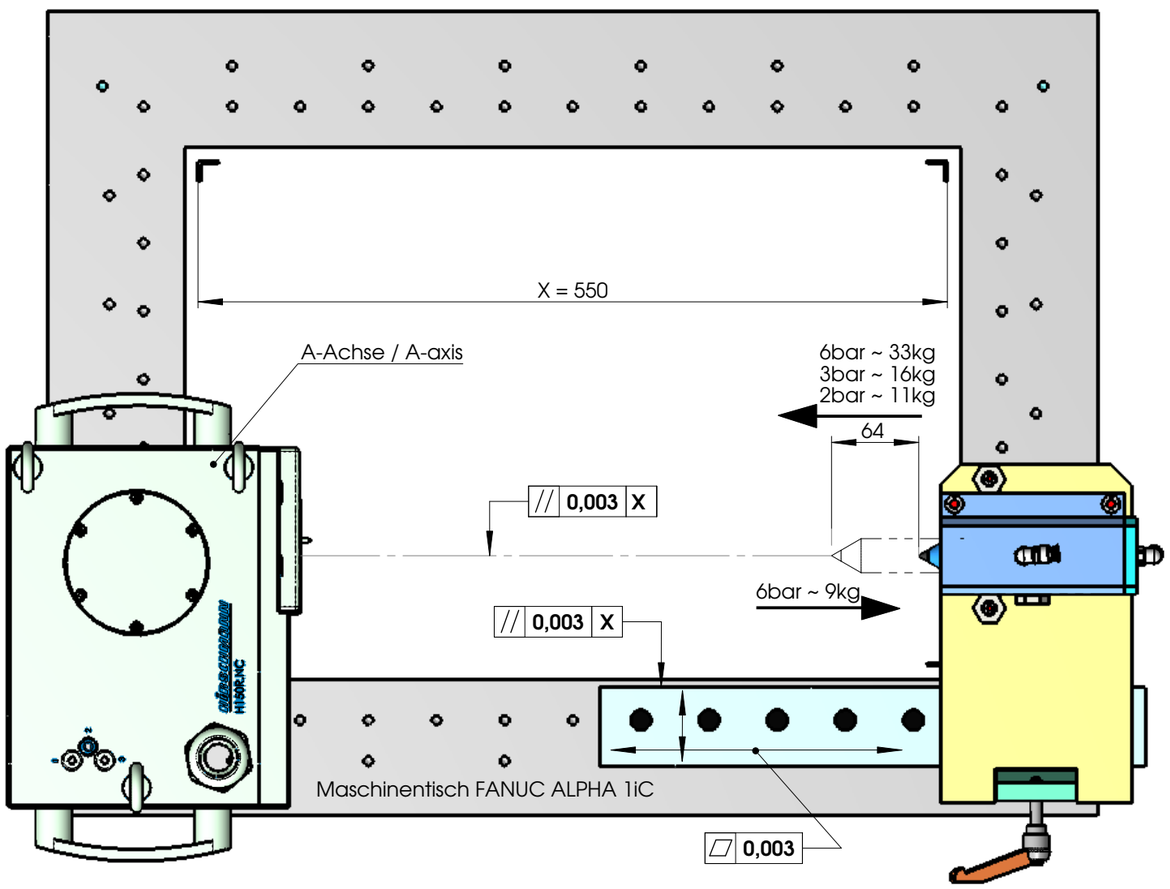
Auf Maschine FANUC ALPHA 1iA

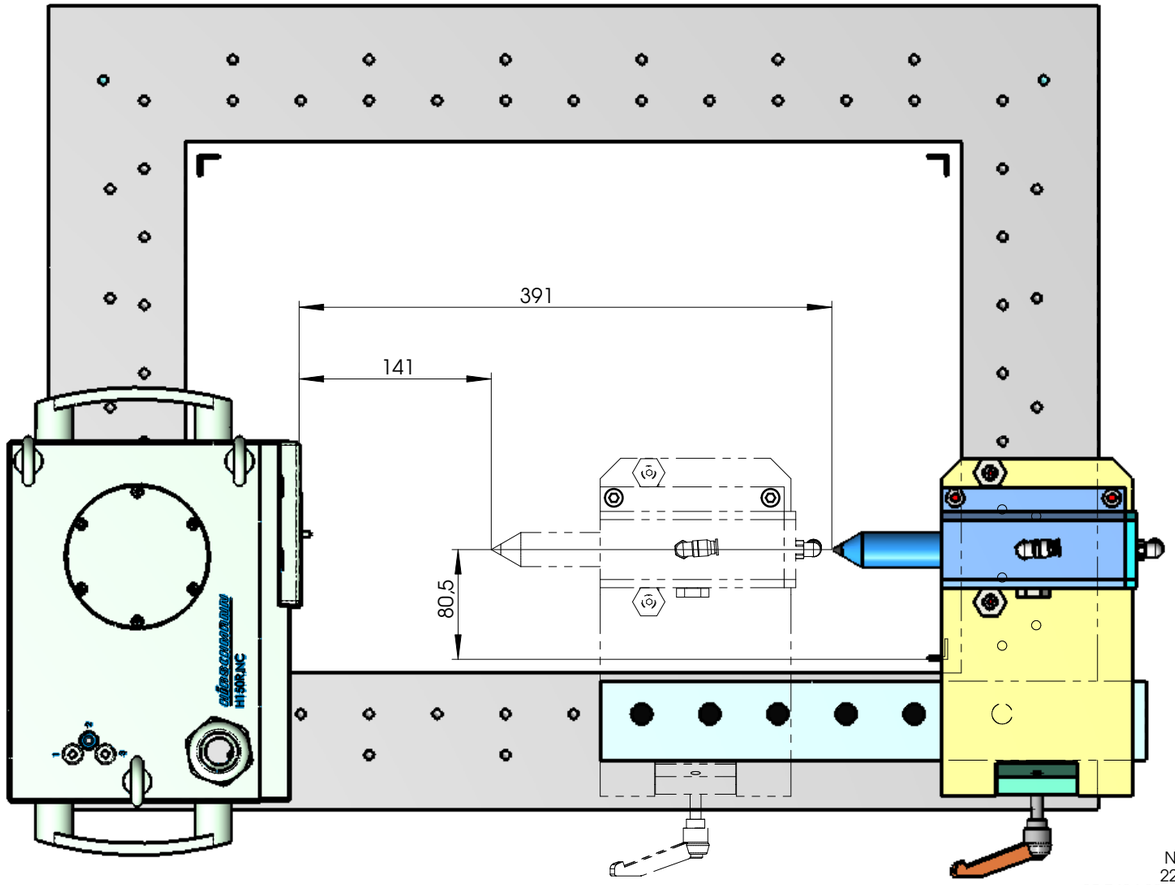


Die A-Achse muß so montiert werden das die Spitzenhöhe 0.1mm höher ist wie die der Reitstockeinheit. Die Justierschraube Nr. 1 ist dabei geöffnet (Reitstockeinheit ist in unjustiertem Zustand).

The A-axis has to be mounted in that way, that the center height is 0.1 mm higher than the height of the tailstock. The adjustment screw no. 1 is opened (tailstock unit is not adjusted).







N.Weisser
22.12.2006
05.7424.00_Angebot

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TELEFON +49 (0)7402 183-0 · FAX +49 (0)7402 18310
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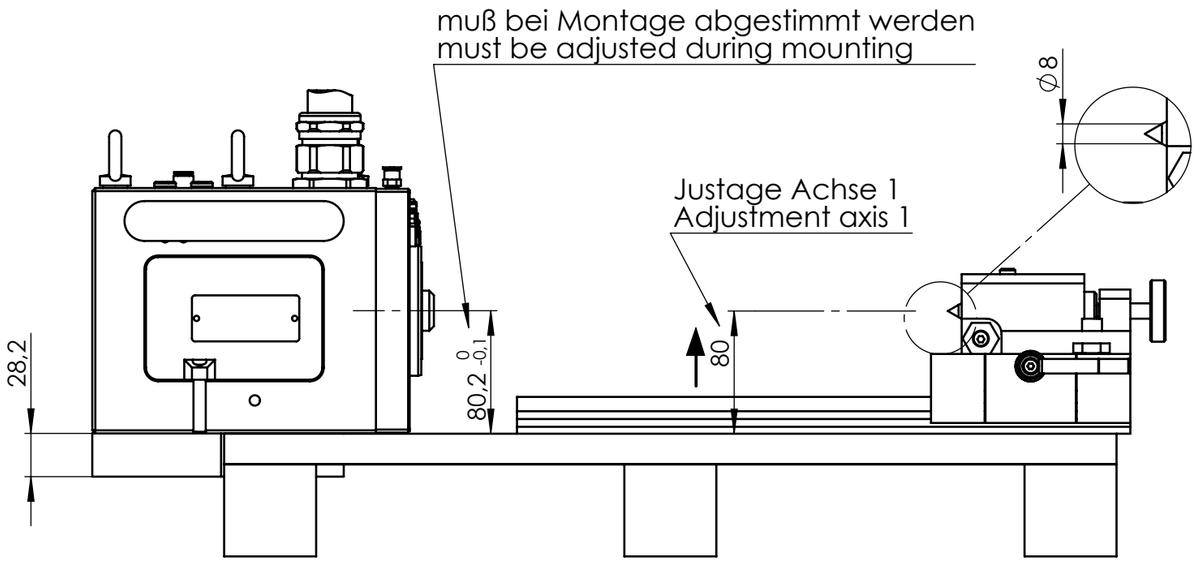
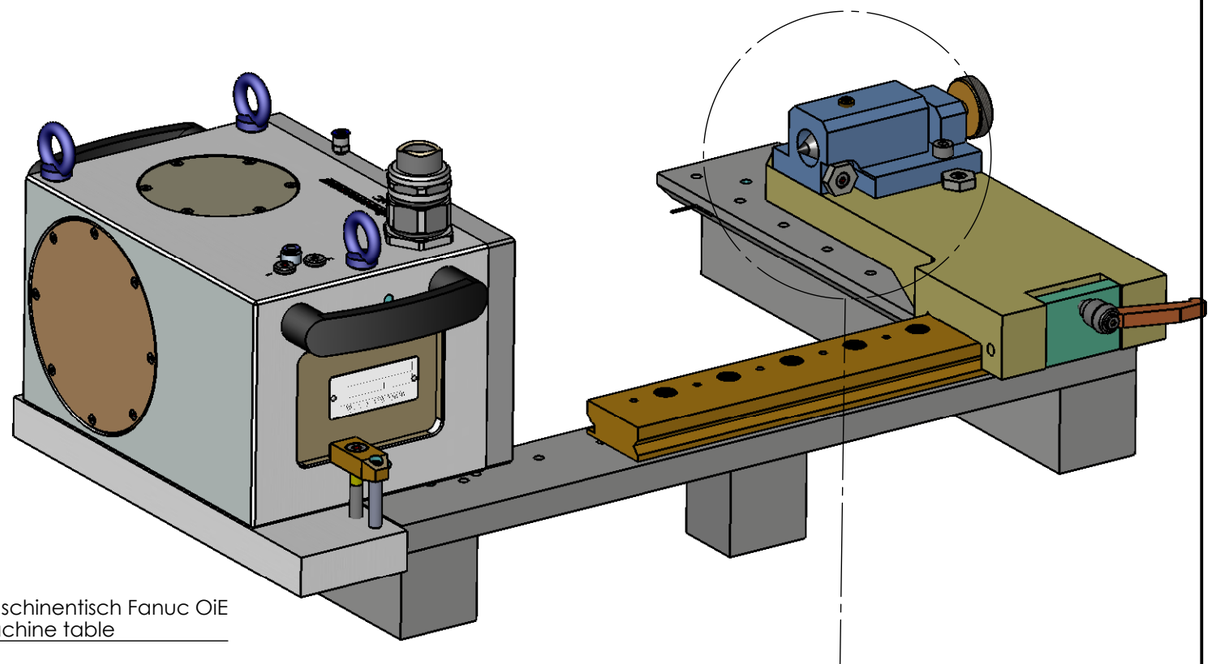
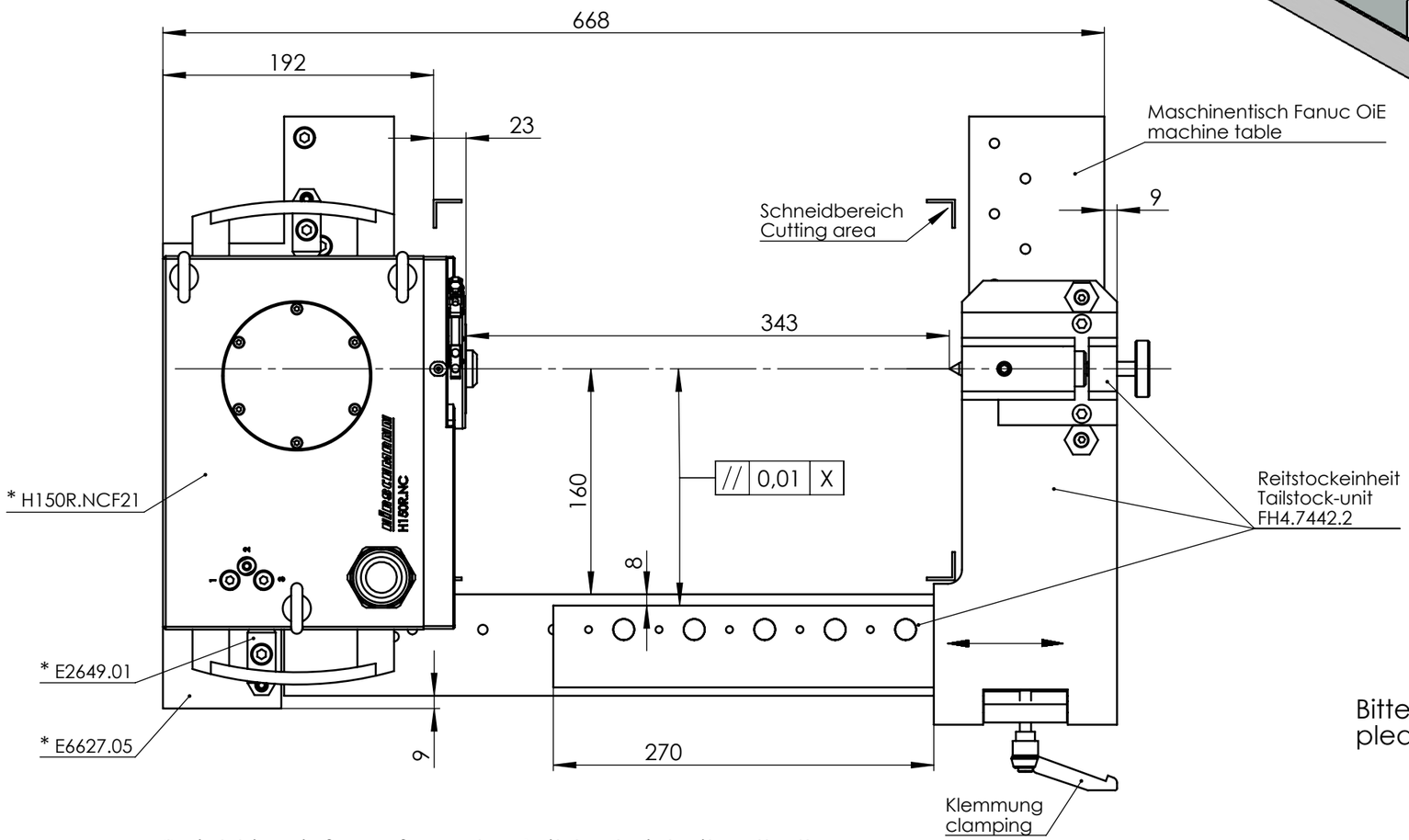
System 4000

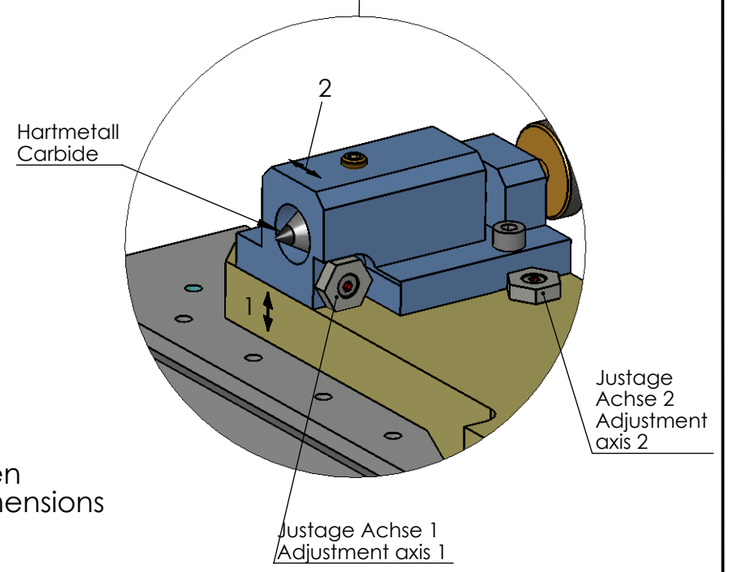
Reitstockeinheit_FH4.7442.2
Tailstock-unit

für Fanuc Alpha OiD OiE









Bitte alle Maße prüfen
please check all dimensions

* nicht im Lieferumfang der Reitstockeinheit enthalten
not included in delivery of the tailstock-unit

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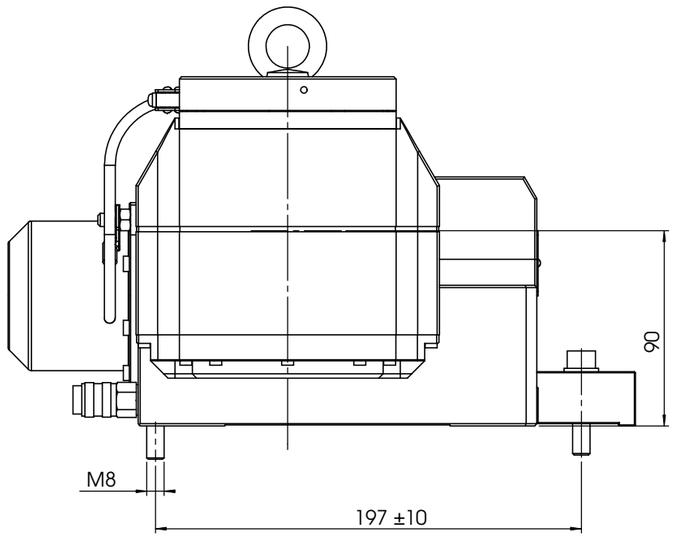
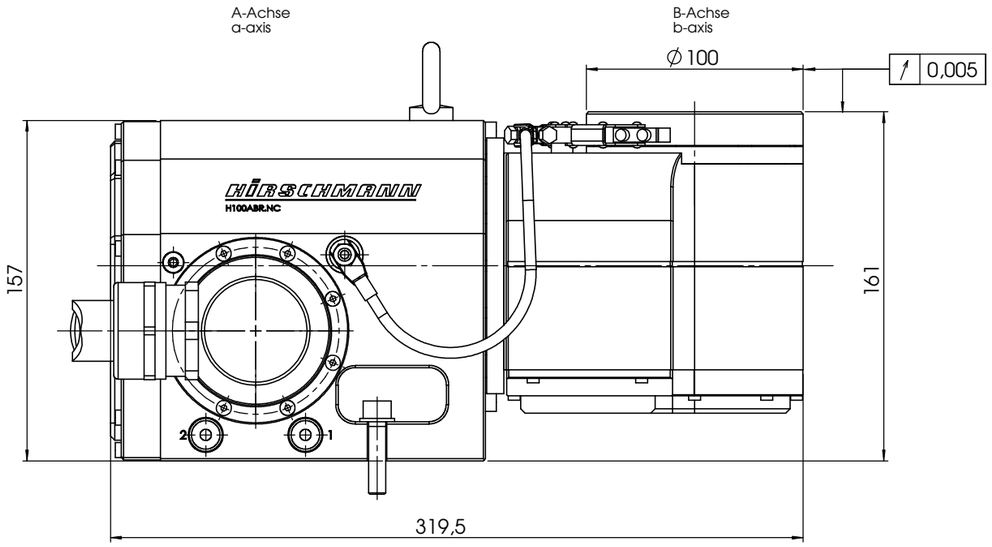
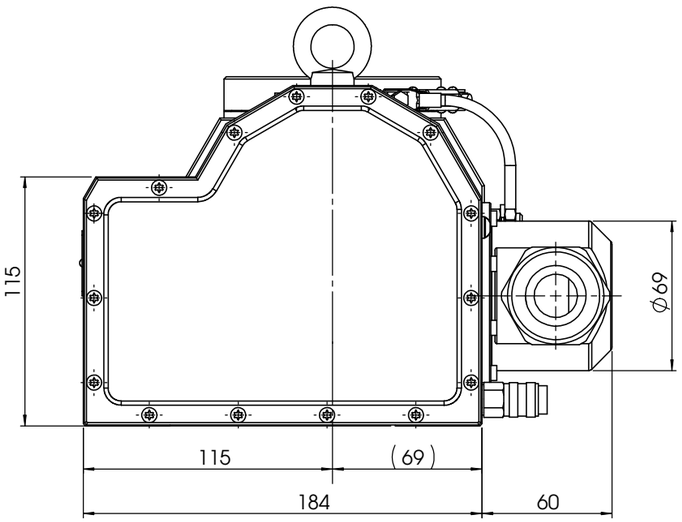
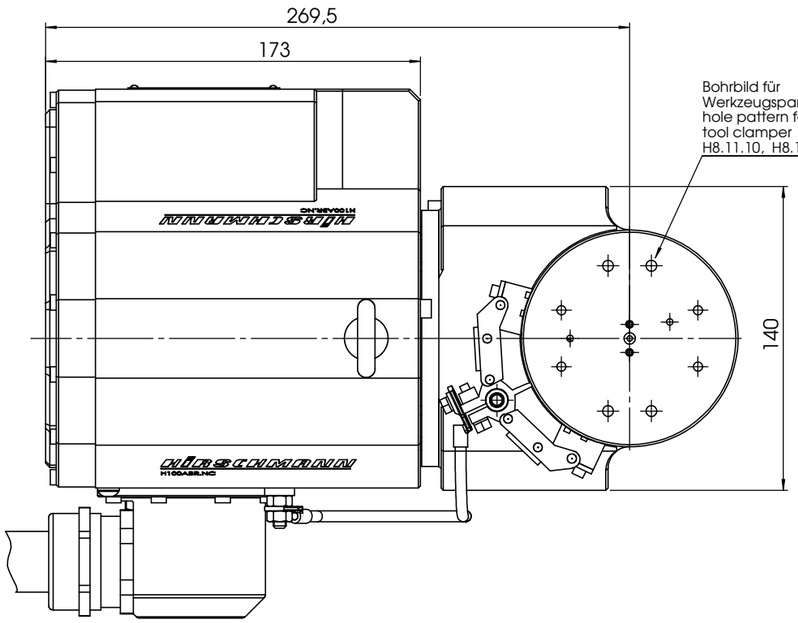
12.07.2012 N.Weisser
05.8666.00_Ang

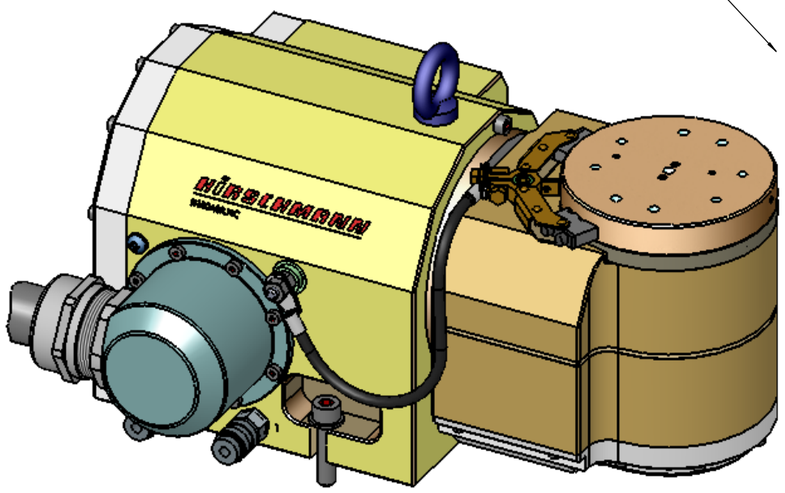
Plot: 12.07.2012 weisser











Technische Daten :

Die AB-Achse ist gegen Flüssigkeit völlig abgedichtet und kann im Dielektrikum der Funkenerosionsmaschine horizontal oder vertikal eingesetzt werden.

Das Meßsystem (Heidenhain ERO6000) sitzt auf der Drehtellerachse; somit Direktmessung.

Technical Datas :

The ab-axis is completely sealed against liquid and can be used horizontally or vertical in the dielectric of electrical discharge machines.

The measuring system (Heidenhain ERO6000) is situated on the rotary table axis; consequently direct measurement.

		A-Achse	B-Achse			a-axis	b-axis
Teilgenauigkeit		± 10 "	± 10 "	Indexing accuracy		± 10 "	± 10 "
kleinster Teilschritt		0,001° =3,6"	0,001° =3,6"	minimum partial stage		0,001° =3,6"	0,001° =3,6"
Wiederholgenauigkeit		10"	10"	repeatbility		10"	10"
Rund.- / Planlaufgenauigkeit			0,005 mm	radial / axial runout			0,005 mm
bürstenloser DC-Motor		200W / 48V / 0,12Nm	200W / 48V / 0,12Nm	brushless dc-motor		200W / 48V / 0,12Nm	200W / 48V / 0,12Nm
Untersetzungsverhältnis		787,5:1	450:1	total gear ratio		787,5:1	450:1
Schwenkbereich		+90°/ -45°		swiveling range		+90°/ -45°	
Haltemoment der Bremse		22 Nm		stop break holding torque		22 Nm	
max. Radialbelastung			150N	max. permissible radial load			150N
max. Werkstück Ø			270 mm	max. Workpiece Ø			270 mm
Schutzklasse	IP68			protection class	IP68		
Eigengewicht	ca. 35kg			Weight a-axis	ca. 35kg		

Index	kommt vor	Aenderung	Datum	Name
a			21.9.2009	Hettich

Werkstueckkanten nach DIN 6784

Vorbehaltung aller Rechte nach DIN 34

Ober-flaechen-angaben nach DIN ISO 1302-R3: ▽ = ▽ Rz63 = ▽ Rz16 = ▽ Rz10 geschliffen = ▽ Rz4

Allgemeintoleranzen nach DIN ISO 2768-mK

Nennmassbereiche	bis 6	6-30	30-120	120-400	400-1000
	±0,1	±0,2	±0,3	±0,5	±0,8

Halbzeug/Werkstoff:

Gewicht:

Erstellt:	21.9.2009	Hettich
Geprueft:		
Frei.		

CAD Solid Works

Identnummer

Ers. fuer

Ers. durch

Masstab 1:5 1:3

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HIRSCHMANN GMBH · D-78737 FLUORN-WINZELN
TELEFON +49 (0)7402 183-0 · FAX +49 (0)7402 18310
info@hirschmanngmbh.com · www.hirschmanngmbh.com

Benennung: 2-Achsen Rundteiltisch H100ABR.NC001

Zeichnungsnummer: 05.8060.00_Maßblatt_001

Original-Format: A2

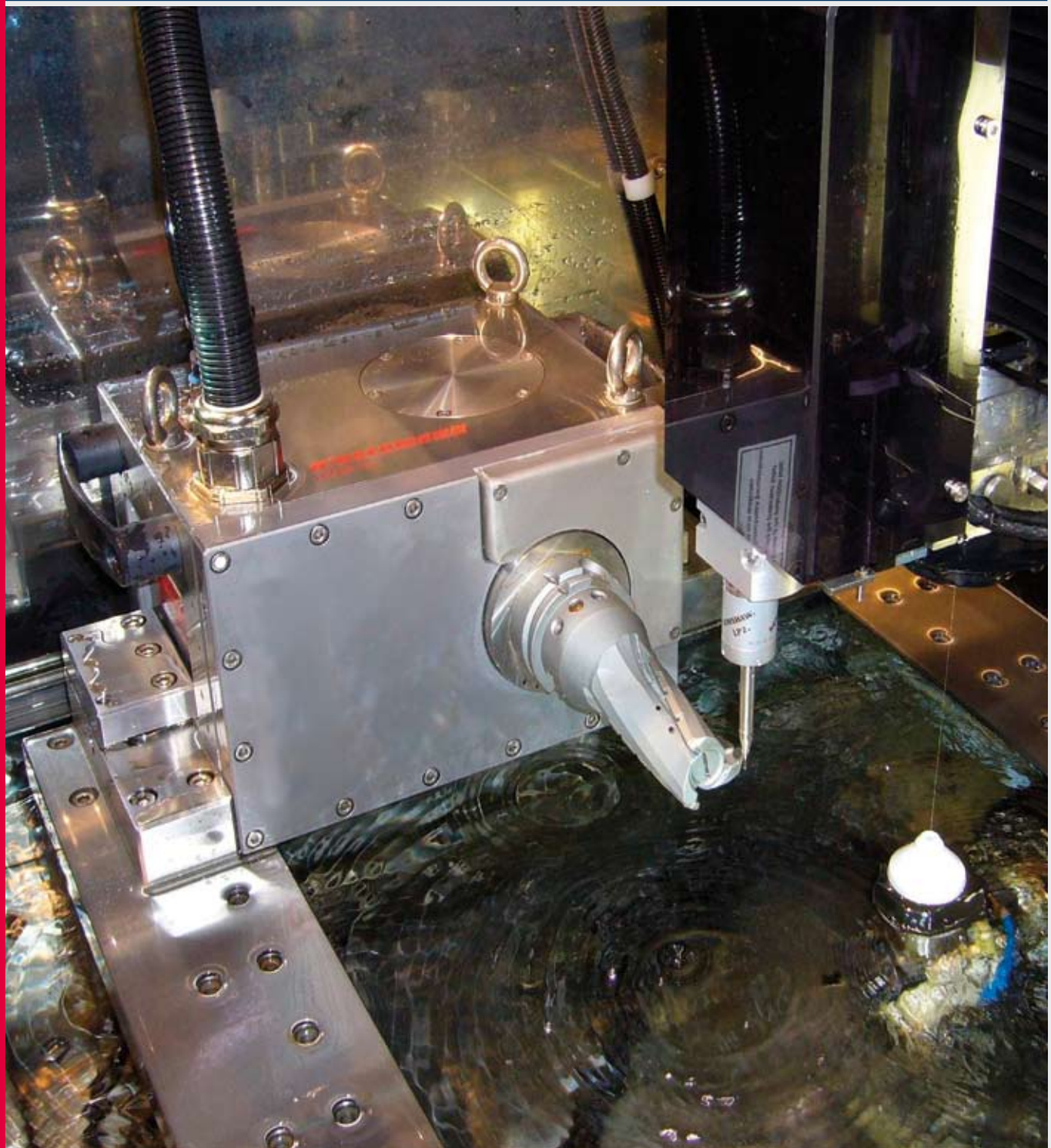
Blatt 1 / 1 Bl.

Plot: 16.12.2009 Schaffhäuser

HIRSCHMANN

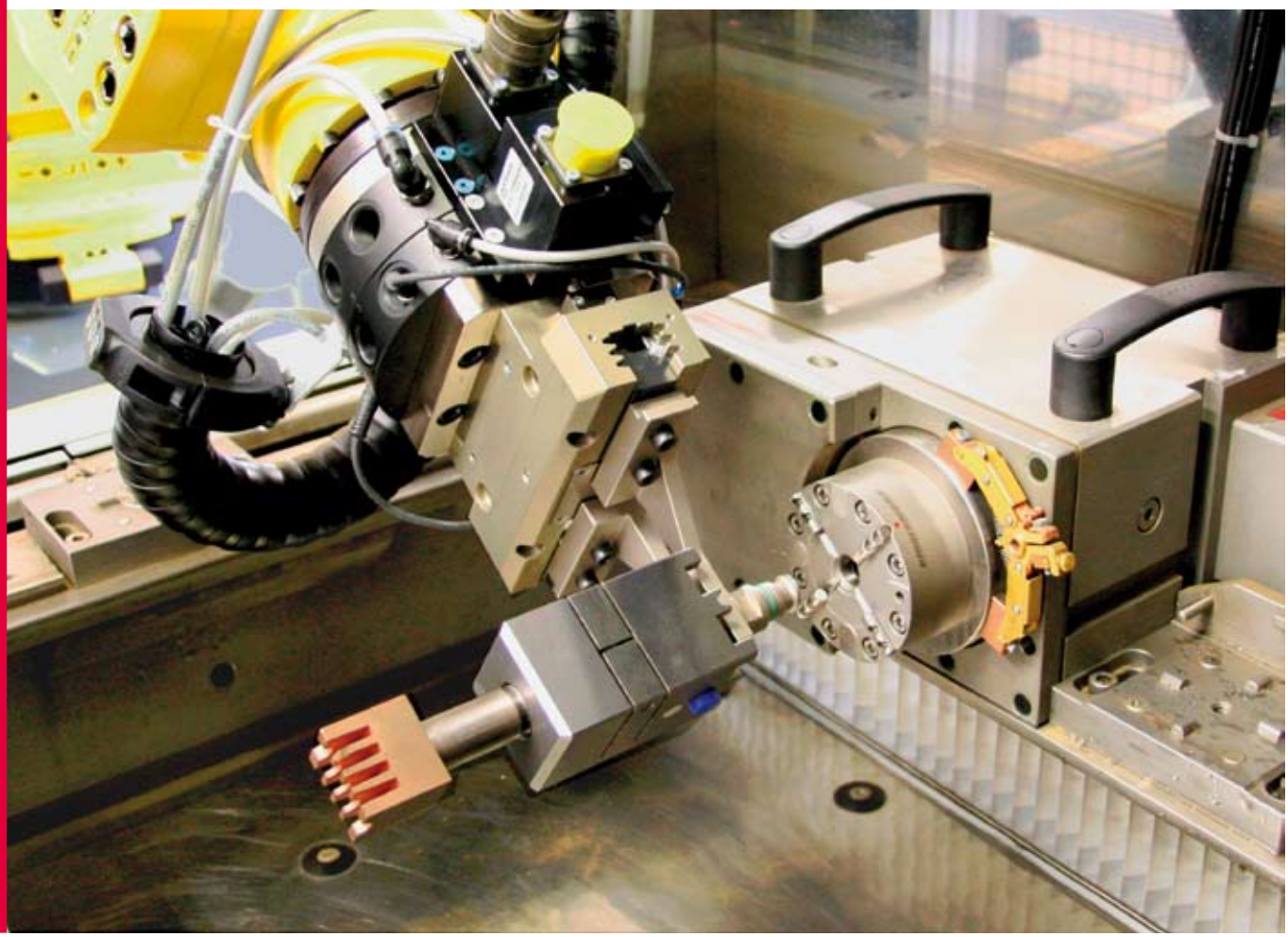
Catalogue RE 2008

ROTARY INDEXING TABLES, A-AXES and ROTATING SPINDLES for Wire and Sinking EDM



Pin point accuracy
Controlled dynamic power
Consistent performance.

- Positioning accuracy up to ± 2,5 sec.
- Repeat accuracy up to ± 1 sec.



Automatic loading of workpieces with robot

Operation, Maintenance, Cleaning

Operation

All Rotary Indexing Tables and A-Axes are supplied with operating and mounting manuals. Interface information is also included. Observe operation instructions of machine manufacturer, especially when Rotary Indexing Tables, A-Axes and Rotating Spindles are connected with machine control systems and are controlled by them. Correct operation cannot be ensured and danger to personnel and machine cannot be excluded unless these operating instructions or information given in this catalogue are observed.

Service and Maintenance

Since Rotary Indexing Tables and A-Axes are subject to chemical and physical influences, maintenance and service has to be performed with special care.
EDM current flow requires a good conductive connection (contact) to machine table. The conductivity of water (Wire EDM) and chlorides normally contained in water can influence the rust-resistant properties. Residues (varnishes, eroded particles etc.) from the electrical discharge process should be removed on a daily basis. Contact your local HIRSCHMANN dealer for recommended products to use.

Technical Modifications

All products shown in this catalogue are subject to ongoing improvements and developments; we reserve the right for technical modifications without notice

Quality according to EN9100

All HIRSCHMANN products are produced using state of the art production methods. They are subject to quality management system as per EN 9100 (aerospace industry standard) both during production and in the assembly stage.

Warranty

We provide a 12 month warranty for all Rotary Indexing Tables and A-Axes, starting from the invoice date, and assuming correct use and maintenance as specified.
The warranty is restricted to replacement or repair, free of charge, of any defective parts. Claims arising from improper use or handling shall not be considered. Warranty claims must be submitted in writing and without delay.

Contents

Quality, Warranty	3
Introduction, Application	4
Precision, Control	5
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Selection criteria	7
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A-Axes H100R.NC.. series	10
A-Axes H150R.NC.. series	11
Rotating Spindle	12
Rotating /Positioning Spindle	13
Adjustable Clamping Element /Accessory	14

HIRSCHMANN GmbH

Rotary Indexing Tables, A-Axes and Rotating Spindles for Wire- and Sinking EDM

Rotary Indexing Tables, A-Axes

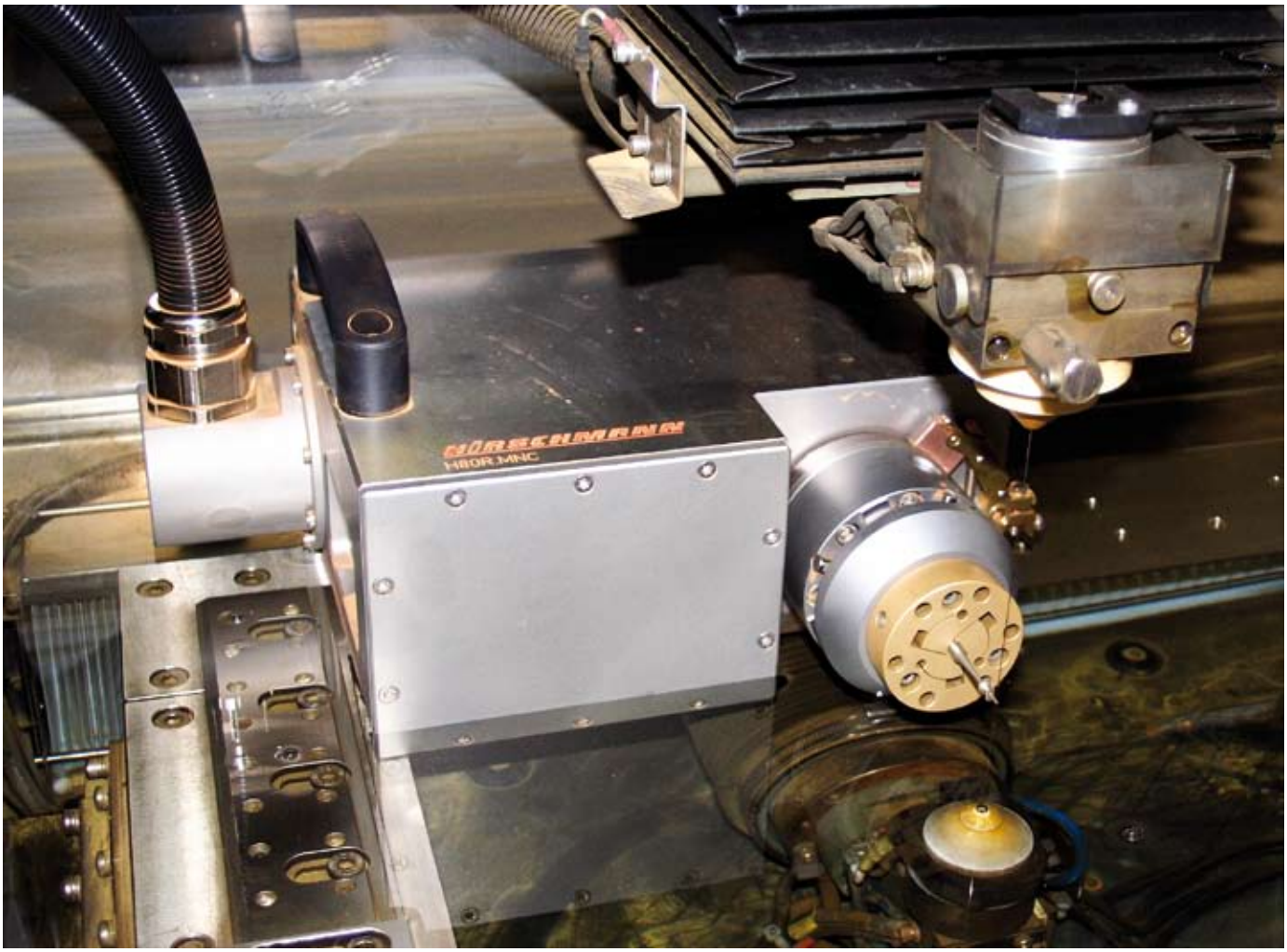
Many erosion tasks cannot be solved efficiently without using a Rotary Indexing Table or an A-Axis, as for example wire cutting of carbide tipped tools. HIRSCHMANN Rotary Indexing Tables and A-Axes are especially designed for the field of erosion. They are completely sealed (IP68) and can therefore be used in the dielectric of sinking and wire EDM. The high-precision HIRSCHMANN Rotary Indexing Tables and A-Axes are based on many decades of experience and knowledge of the erosion problems.

High Speed Rotating Spindles

The High Speed Rotating Spindles open new grounds in the spark erosive production. They enable an erosive “turning” of smallest dynamically balanced parts with highest surface quality and without lateral processing force. A further step is the controlled High Speed Rotating and Positioning Spindle. Additionally to rotative work, it can also be used for cutting surfaces as well as simultaneous processing with several axes (turn & burn).

Application

- **Medical technology (systems, instruments, implants)**
- **Aerospace (sensor measuring systems, micro-pumps and micro-valves)**
- **Automotive (electric plug connections (injection moulding))**
- **PCD/CBN processing**
- **Tool making (production of electrodes, direct structuring of workpieces, building of ejector pins**
- **Machine building in general**



Controlled High Speed Rotating Spindle H80R.MNCM..

General

Precision

HIRSCHMANN Rotary Indexing Tables and A-Axes are high-precision products. They are subject to strict quality inspections. A measurement report with the measured values is enclosed to every Rotary Indexing Table and A-Axis.

HIRSCHMANN Rotary Indexing Tables and A-Axes are equipped with the precise Heidenhain direct measuring systems (encoders) and high-grade, low backlash drives. They offer the conditions for highest positioning accuracy and a high dynamic control.

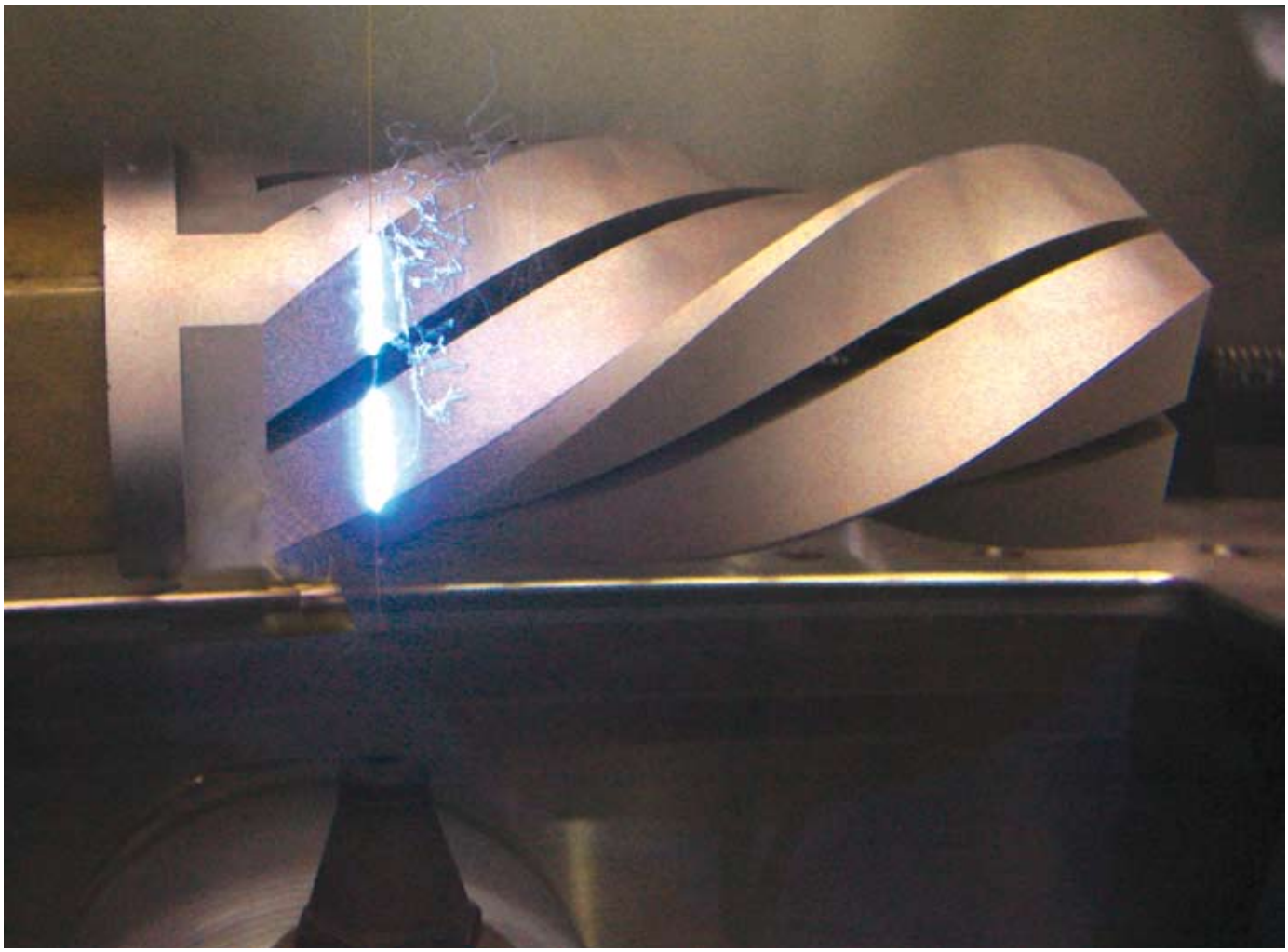
The dividing accuracy depends on the quality of the measuring system (encoder). As standard we use measuring systems with a system accuracy of ±5” (alternatively ±10” or ±2,5”). For a precise control a stiff and low backlash drive is essential.

Control

HIRSCHMANN Rotary Indexing Tables and A-Axes can be controlled directly through the machine control. If this is not possible, they can be controlled by the HIRSCHMANN Control H1625xx.

For the easy and quick integration into the machine control, the Rotary Indexing Tables and A-Axes are equipped with drive components, measuring systems and plug connections which are adapted and adjusted to the machine control. The advantages of the integration are the possibility of simultaneous processing as well as programming in the machine control.

HIRSCHMANN Rotary Indexing Tables and A-Axes are compatible to the following EDMs:
ACCUTEX, AGIE, BES, CHARMILLES, ELECTRONICA, EXERON, FANUC, JOEMARS, MAKINO, MITSUBISHI, OPS-INGERSOLL, SODICK etc.



Simultaneous processing

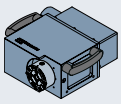
Survey

Common features

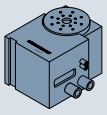
- Precise direct measuring system for highest positioning accuracy (system accuracy optional ±10“, **±5“**, ±2.5“)
- Stiff and low backlash drive for best dynamic behaviour during simultaneous processing (turn & burn)
- Compact, stainless design
- Low maintenance
- Completely sealed (IP68) – for the use in wire and sinking EDM
- Size from ∅ 80 mm until ∅ 800 mm face-plate diameter

Rotary Indexing tables

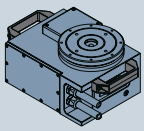
H 80R.NC
25 kg loading weight
Manual clamper



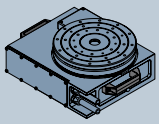
H 100R.NC
50 kg loading weight
Face plate ∅ 100 mm



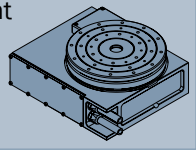
H 160R.NC
100 kg loading weight
Face plate ∅ 160 mm



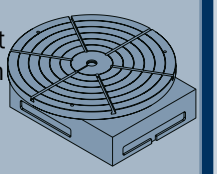
H 250R.NC
250 kg loading weight
Face plate ∅ 250 mm



H 400R.NC
450 kg loading weight
Face plate ∅ 400 mm



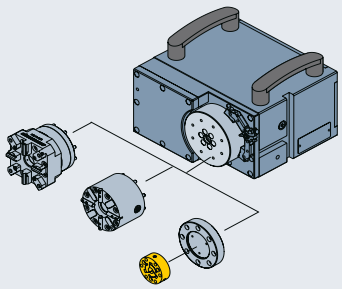
H 800R.NC
2000 kg loading weight
Face plate ∅ 800 mm



A-Axes

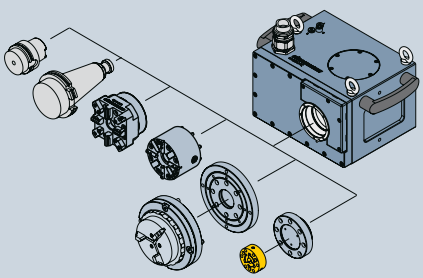
H 100R.NC,,, series
Face plate ∅ 100 mm
25 kg loading weight

Options:
- manual clamper
- pneumatic clamper
- clamper of other manufacturers
- adjustable clamping element
- customised devices



H 150R.NC,,, series
50 kg loading weight

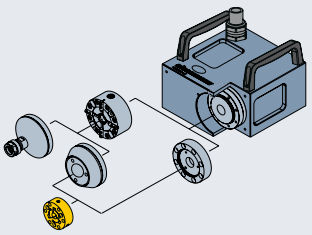
Designs:
- SK, HSK machine taper mounting
- face-plate ∅ 150 mm
- manual clamper
- pneumatic clamper
- adjustable clamping element
- clamper of other manufacturers



High Speed Rotating Spindles

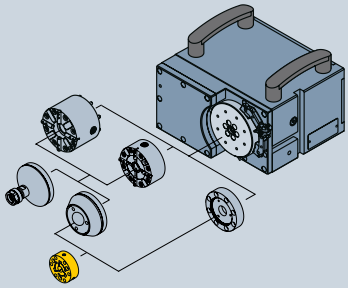
H 80R.MAC
Rotary speed 0 - 1500 min^{-1}

Designs:
- adjustable clamping element
- manual clamper
- clamper of other manufacturers



H 80R.MNC.. (positionable)
Rotary speed max. 1000 min^{-1}
Indexing accuracy ± 5“

Designs:
- face-plate
- adjustable clamping element
- manual clamper
- pneumatic clamper
- clamper of other manufacturers



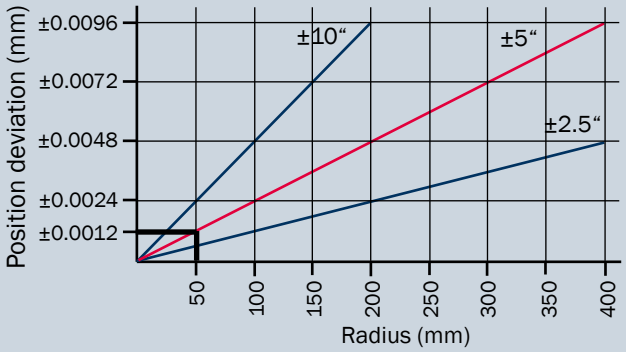
Further designs on inquiry

Selection criteria

System accuracy

The positioning- rsp. indexing accuracy mainly depends on the accuracy of the measuring system (encoder), on the precision of the mechanic assembly and on the control. The influence of the encoder system accuracy is shown in the chart aside.

Example: In case of an encoder system accuracy of ±5" and a radius of 50 mm the position deviation (straight line) is max. ± 0.0012 mm.



Selection criteria

1. **Size of workpiece** (weight, diameter, length)
2. **Workpiece mounting** (face-plate, jaw chuck, taper shank, clamping system)
3. **Positioning accuracy** (alternatively ±10", ±5", ±2.5")
4. **High rotary speed** (for the production of dynamically balanced parts in rotation)
5. **Available space** (size of machine table, travel, mounting possibility)
6. **Electrical control** (through machine control or HIRSCHMANN control)

For detailed information please contact our indoor or external staff.

Application form

☐ Rotary Indexing Table

☐ H 80R.NC
☐ H 100R.NC
☐ H 160R.NC
☐ H 250R.NC
☐ H 400R.NC
☐ H 800R.NC

☐ Special design

Encoder system accuracy
☐ ±2.5"
☐ **±5" (standard)**
☐ ±10"
☐ Other: .....

Controlled by:
☐ HIRSCHMANN control
☐ Machine control
Manufacturer: .....
Type: .....

☐ A-Axis

☐ **Series H 100R.NC..**
☐ Face plate ∅ 100 mm
☐ Manual clamper
☐ Pneumatic clamper
☐ Adjustable clamping element
☐ Other Type: .....

☐ **Series H 150R.NC..**
☐ SK50 taper shaft collet
☐ HSK taper shaft collet (A,F): ....
☐ Face plate ∅ 150 mm
☐ Manual clamper
☐ Pneumatic clamper
☐ Adjustable clamping element
☐ Jaw chuck
☐ Other Type: .....

Encoder system accuracy
☐ ±2.5"
☐ **±5" (standard)**
☐ ±10"
☐ Other: .....

Controlled by:
☐ HIRSCHMANN control
☐ Machine control
Manufacturer: .....
Type: .....

☐ Rotating spindle

☐ **Series H 80R.MAC..**
☐ Manual clamper H **6**.16R
☐ Manual clamper H **8**.16R
☐ Adjustable clamping element
☐ Other Type:.....

Controlled by:
☐ HIRSCHMANN-Steuerung
☐ Other .....

☐ **Serie H 80R.MNC..**
☐ Face plate ∅ 80 mm
☐ Manual clamper H **6**.16R
☐ Manual clamper H **8**.16R
☐ Pneumatic clamper
☐ Adjustable clamping element
☐ Other Type:.....

Encoder system accuracy
☐ ±2.5"
☐ **±5" (Standard)**
☐ ±10"
☐ Other: .....

Controlled by:
☐ HIRSCHMANN control
☐ Machine control
Manufacturer: .....
Type: .....

Rotary Indexing Tables

All HIRSCHMANN Rotary Indexing Tables are equipped as standard with a direct measuring system with a system accuracy of ±5 (exceptelly the H100R.NC) and an electromagnetic rsp. pneumatic clamping of the rotary axis. As standard a DC-drive is provided, alternatively an AC-drive can also be installed.

Common characteristics

- Direct measuring system
- Low-backlash free drive
- For horizontal and vertical use (except H80R.NC)
- DC drive, (available also with AC drive)
- Stainless steel
- IP68

H 80R.NC Rotary Indexing Axis (stainless steel)

with manual clamper H 6.16R or H 8.16R for pallets and holders of the HIRSCHMANN Fixturing System 5000 (other systems on request). Horizontal use only.

Dimensions (W/D/H)	230/252/130 mm (9/9.9/5.12")
Min. indexing step	0.001°/3,6"
Indexing accuracy (standard encoder)	≤ ±5"
Repetitive accuracy	≤ ±3"
Loading weight	max. 25 kg (55.125 lbs)
Direct measuring system accuracy	±10, **±5** oder ±2,5"
Drive	DC motor
Holding force of plate (electromagnetic)	20 Nm
Speed max.	20 min^{-1}
Weight approx.	35 kg (77.175 lbs)

H 100R.NC Rotary Indexing Table (stainless steel)

Face plate (mounting surface) ∅ 100 mm, for horizontal and vertical use.

Dimensions (W/D/H)	188/125/135 mm (7.41/4.93/5.32")
Min. indexing step	0.001°/3,6"
Indexing accuracy	≤ ±25"
Repetitive accuracy	≤ ±10"
Loading weight	max. 50 kg (110.25 lbs)
Direct measuring system	ERN 480
Drive	DC motor
Brake holding force (pneumatic)	25 Nm
Speed	max. 10 min^{-1}
Weight approx.	15 kg (40 lbs) ∅

H 160R.NC Rotary Indexing Table (stainless steel)

with face plate (mounting surface) ∅ 160 mm, for horizontal and vertical use.

Dimensions (W/D/H)	265/203/148 mm (10.5/8/5.8")
Min. indexing step	0.001°/3.6"
Indexing accuracy (standard encoder)	≤ ±5"
Repetitive accuracy	≤ ±3"
Loading weight	max. 100 kg (220.5 lbs)
Direct measuring system accuracy	±10, **±5** oder ±2.5"
Drive	DC motor
Brake holding force (electromagnetic)	40 Nm
Speed	max. 7 min^{-1}
Weight approx.	40 kg (88.2 lbs)

Rotary Indexing Tables

H 250R.NC Rotary Indexing Table (stainless steel)

with face plate (mounting surface) ∅ 250 mm, for horizontal and vertical use.

Dimensions (W/D/H)	340/290/135 mm (13.4/11.4/5.3")
Indexing accuracy (standard encoder)	≤ ±5 "
Repetitive accuracy	≤ ±3 "
Loading weight	max. 250 kg (551 lbs)
Direct measuring system accuracy	±10, **±5** oder ±2,5"
Drive	DC motor
Brake holding force (electromagnetic)	40 Nm
Speed	max. 5 min^{-1}
Weight approx.	60 kg (130 lbs)

H 400.NC Rotary Indexing Table (steel)
H 400R.NC Rotary Indexing Table (stainless steel)

similar to H 250R,NC but with face plate ∅ 400 mm

Dimensions (W/D/H)	490/410/175 mm (19.3/16.2/6.9")
Loading weight	max. 450 kg (992 lbs)
Weight	approx. 200 kg (440 lbs)
Brake holding force (electromagnetic)	40 Nm

H 800.NC Rotary Indexing Table (steel)
H 800R.NC Rotary Indexing Table (stainless steel)

similar to H 250R,NC with face plate ∅ 800 mm

Dimensions (W/D/H)	820/800/250 mm (32.3/31.5/9.9")
Loading weight	max. 2000 kg (4410 lbs)
Weight	approx. 620 kg (1367 lbs)
Brake holding force (electromagnetic)	350 Nm

H 1625.DC CNC Control

Positioning control for H 80R.NC, H 160R.NC , H 250R.NC.

Dimensions (W/D/H)	approx. 520/420/230 mm (19.3/15.8/9")
Power supply	115/230 V 50/60 Hz
Weight	approx. 12 kg (25 lbs)

H 1625.DC1 CNC Control

similar to H 1625.DC, for H 400.NC, H 400R.NC

H 1625.DC3 CNC Control

similar to H 1625.DC, for H 100R.NC

H 1625.DC4 CNC Control

similar to H 1625.DC, for H 800.NC

A-Axis series H 100R.NC

General

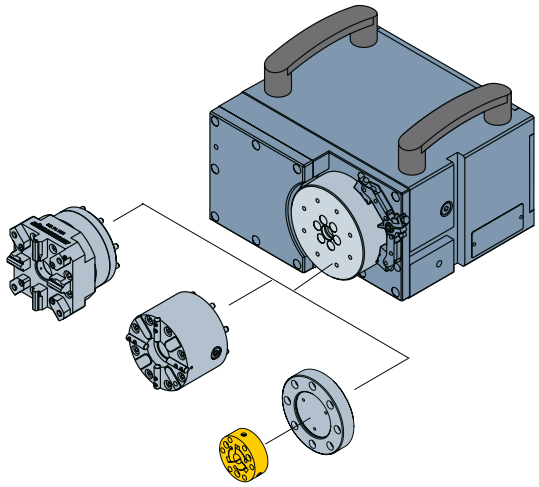
The stainless steel A-Axes of the series H100R.NCx are equipped with a face-plate diameter 100 mm. Optionally, the A-Axes can be equipped with a manual or pneumatic clamper, an adjustable clamping element or with customised devices. The encoder system accuracy is + 5 seconds as standard (see equipment possibilities). Optionally it can be delivered with an integrated air supply for pneumatic clampers or customised devices. The electrical control is effected either through the machine control or with the HIRSCHMANN CNC Control H1625.AC1.

H 100R.NCx000 with face-plate

H 100R.NC... A-Axis

with face-plate ∅ 100 mm, centering seat 15^{H7} and eight fastening screw threads M6, for horizontal and vertical use.

Dimensions (W/D/H)	230/215/130 mm (9.1/8.5/5.12")
Indexing accuracy (standard encoder)	≤ ±5"
Smallest indexing step (standard encoder)	0.0005° (1.8")
Radial run-out	≤ 0,005 mm
Axial run-out	≤ 0,005 mm
Moment of inertia of the workpieces	≤ 375 kgcm²
Weight	approx. 30 kg
Speed	max. 20 min^{-1}
Protection class	IP68
Max. weight of workpiece	horizontal use: 15 kg vertical use: 25 kg



Options

Workpiece mounting*

- manual HIRSCHMANN clamper H 6.16R, H 8.16R
- pneumatic HIRSCHMANN clamper H 6.11.10R, H 8.11.10R
- manual and pneumatic clampers of other manufacturers
- customised devices
- integrated air supply for pneumatic clampers and devices

Encoder system accuracy *

- ±10"
- **± 5" (standard)**
- ±2,5"

Electrical equipment*

For the adaption to the machine control the A-Axes can be equipped with different drives and connectors.

* Please specify when ordering

H 1625.AC1 CNC control

for A-Axis series H 100R.NC.. und H 150R.NC..

Dimensions (W/D/H)	approx. 520/420/230 mm
Power supply	115/230 V 50/60 Hz
Power input	max. 400VA
Weight	approx. 12 kg (25 lbs)

A-Axis series H 150R.NC...

General

The stainless steel A-Axes of the series H150R.NC are equipped as standard with a pneumatic SK50, CAT50 or HSK63 machine taper chuck. Optionally, the A-Axes can be equipped with a face-plate ∅150 mm, a manual or pneumatic clamper, an adjustable clamping element or with customised devices. For the adaption to the machine control different drives and electrical equipment are available. The indexing accuracy and the min. indexing step depend on the measuring system.

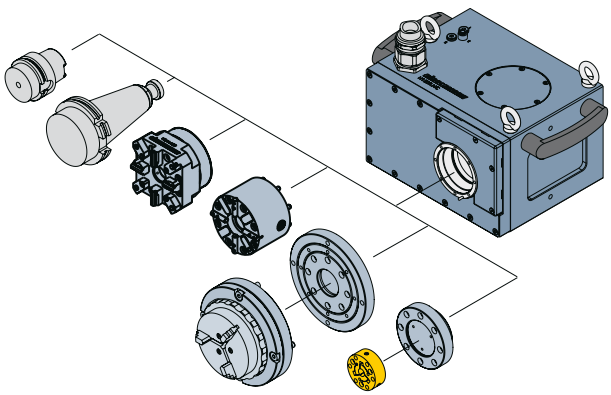
H 150R.NC with SK50 taper chuck

H 150R.NC with HSK63 taper chuck

H 150R.NC.. A-Axis

alternatively with SK50, CAT50 or HSK63 (form A or F) taper chuck. For horizontal and vertical use.

Dimensions (W/D/H)	approx. 265/215/160 mm (10.43/8.47/6.3")
Indexing accuracy (standard encoder)	≤ ±5"
Repetitive accuracy (standard encoder)	≤ ±3"
Smallest indexing step (standard encoder)	0.0005° (1.8")
Radial run-out	≤ 0,005 mm
Max. weight of workpiece	50 kg
Speed	max. 20 min^{-1}
Weight	approx. 45 kg
Erosion current	max. 50 A
Protection class	IP68



Options

Workpiece mounting*

- manual HIRSCHMANN clamper H 6.16R, H 8.16R
- pneumatic HIRSCHMANN clamper H 6.11.10R, H 8.11.10R
- manual and pneumatic clampers of other manufacturers
- face-plate ∅ 150 mm
- jaw chuck
- customised devices
- integrated air supply for pneumatic clampers and devices

Encoder system accuracy *

- ±10"
- **± 5" (standard)**
- ±2,5"

Electrical equipment*

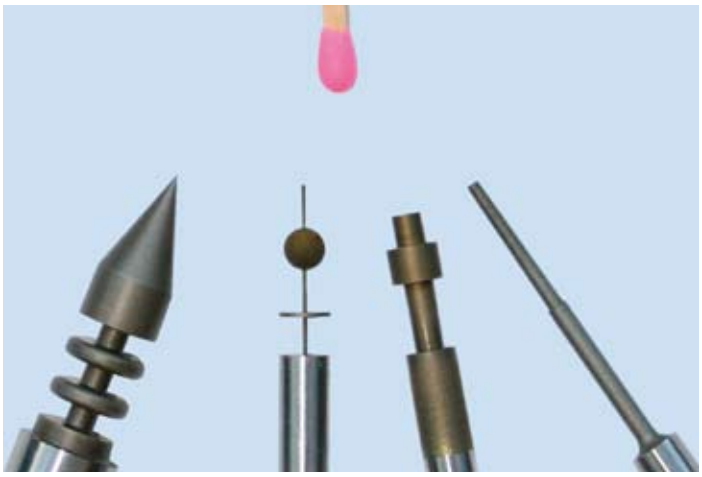
For the adaption to the machine control the A-Axes can be equipped with different drives and connectors.

* Please specify when ordering

High Speed Rotating Spindle H 80R.MAC

Start in new dimensions

The advance in regions of micro-mechanic requires new ideas in production strategy. Dynamically balanced parts, which can hardly or not be manufactured on conventional lathes and grinding machines, can be ground with highest surface quality (Ra 0,1 mm and better) by erosive turning rsp. grinding with HIRSCHMANN Rotary Spindles.



Characteristics:

- Alternative to hard turning or precision grinding of dynamically balanced parts with highest surface quality
- Economic production of parts with minimal structures, as well as micro electrodes made of stainless steel, hard metal or nonferrous metal and even conductive ceramics.

H 80R.MAC Rotating Spindle

with manual clamper H 8.16R (for clamping journal H **5**.611R).
Rust-proofed, maintenance free AC-Drive.

Dimensions (WxDxH)	190/191/98 mm (7.5/7.52/3.9")
Speed	0–1500 min^{-1}
Axial accuracy	≤ 0,003 mm (0.00012")
Weight	approx. 20 kg

H 80R.MAC.6 Rotating Spindle

similar to H 80R.MAC but with manual clamper H 6.16R (for clamping journal H **6**.611R).

H 80R.MAC.44 Rotating Spindle

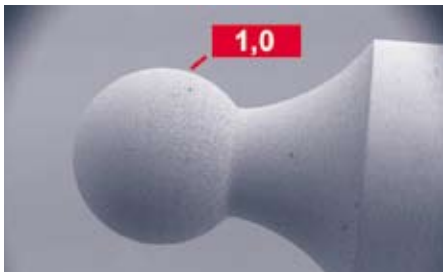
similar to H 80R.MAC but equipped with adapter disc to fix directly the Adjustable Clamping Elements H 5.83.46R-xx.
Integrated sleeve shaft ∅ 18 mm, 100 mm deep.

H 1680.AC4 Speed Control Unit

for speed control of the H 80R.MAC.. Rotating Spindles.

Dimensions (W/D/H)	270/330/320 mm
Mains voltage	230V / 50/60 Hz
Power input	max. 500 VA

Micro pin structure in hard metal, length 1 mm



Stainless steel piston for micro pump, accuracy of the ball profile 1 - 2 µm

Stainless steel needle for medical technics, Ra 0.2 - 0.25 µm

High Speed Rotating/Positioning Spindle H 80R.MAC H 80R.MNC

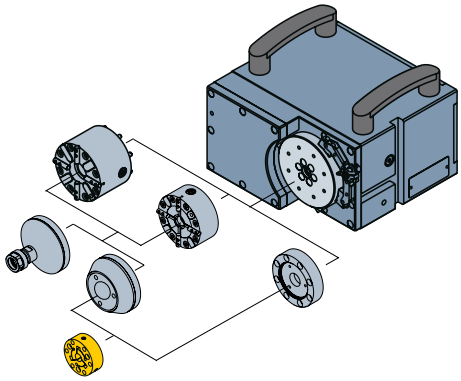
Additionally to the high speed rotation, the Rotating-Positioning Spindle H80R.MNC.. enables a precise positioning and simultaneous processing of the workpiece. This allows the production of complex parts. The control is effected preferably through the machine control or, if this is not possible, through the HIRSCHMANN Control H1625.AC3 which communicates through M-functions with the machine control.

Rotating/Positioning Spindle with clamper

H 80R.MNC.. Rotating/Positioning Spindle

Rust-proof, long-life AC drive

Dimensions (W/D/H)	approx. 265/212/120 mm (10.43/8.35/4.72”)
Speed	0-1000 min^{-1}
Positioning accuracy	± 5”
Axial accuracy	≤ 0,003 mm
Loading weight	max. 30 kg
Weight	approx. 31 kg



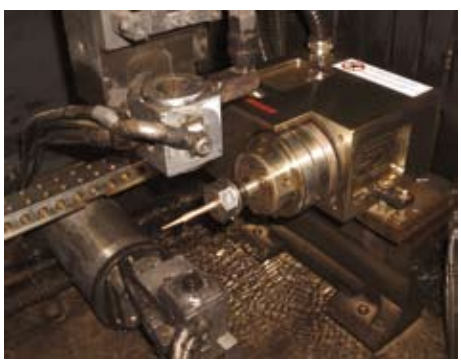
Design versions

- face-plate ∅ 80 mm
- manual clamper H 6.16R, H 8.16R
- pneumatic clamper H 6.11.10R, H 8.11.10R
- support for adjustable clamping element H 5.83.46R-xx
- clamper of other manufacturers

H 1625.AC3 Control

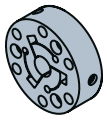
for Rotating/Positioning Spindle H 80R.MNC..

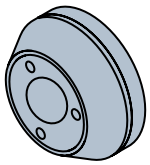
Dimensions (W/D/H)	520/420/230 mm (19.3/15.8/9”)
Power supply	230 V 50/60 Hz
Power input	max. 1000 VA
Weight	approx. 10 kg (22.05 lbs)

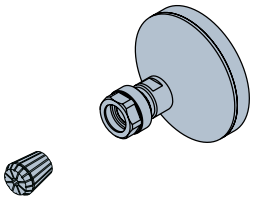


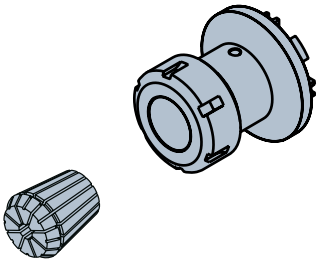
Adjustable Clamping Element – erosive grinding with high precision

A high definition requires a precise concentricity. With the HIRSCHMANN Adjustable Clamping Element the concentricity can quickly and easily be adjusted to ≤ 0,001 mm.









H 5.83.46R-xx Adjustable Clamping Element (Brass)

for the precise adjustment of the workpiece concentricity. The Adjustable Clamping Elements are mounted to the Clamping Element Holder H 5.83.45R or directly to the Rotating Spindles rsp. A-Axes equipped with Adjustable Clamping Elements.

Concentricity adjustable to < 0.001 mm
Clamping range (xx) from ∅ 1 mm until ∅ 18 mm

(When ordering, please state the exact clamping diameter (xx))

H 5.83.45R Clamping Element Holder (stainless)

for mounting the Adjustable Clamping Elements H 5.83.46R-xx in the Rotating Spindles, Axes and Presetting Spindles with HIRSCHMANN clampers.

Please order Clamping Journal H 5.611R rsp. H 6.611R separately!

H 5.83.40R.MAC Collet Holder (stainless)

Clamping nut nickel plated. For collet H 50.41.

Concentricity (without collet) 0,005 mm

Please order Clamping Journal H 5.611R rsp. H 6.611R separately!

H 50.41 Collet ER/ESX 16

Clamping range infinitely variable from ∅ 0.5 - ∅ 10 mm.
Collet size from ∅ 1 – ∅ 10 mm, in 1 mm increments.
Radial deviation until ∅ 5 mm = 0.01, from ∅ 6 mm = 0.02 mm
Stainless edition on request.

H 5.83.50R Collet Holder (stainless)

Clamping nut nickel plated. For collet H 5.50.51 (ER40).
Clamping range ∅ 3 - ∅ 26 mm.

Concentricity (without collet) 0,01 mm
Weight 1,1 kg

Please order Clamping Journal H 5.611R rsp. H 6.611R separately!

H 5.50.51 Collet ER/ESX 40

Clamping range infinitely variable from ∅ 3 - ∅ 26 mm.
Collet size from ∅ 4 – ∅ 26 mm, in 1 mm increments.
Radial deviation until ∅ 6 mm = 0.015, from ∅ 7 mm = 0.02 mm

H80R.MAC with Holder H 5.83.45R and Adjustable Clamping Element H 5.83.46R

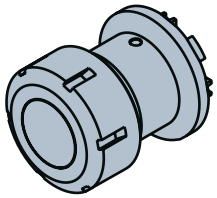
H 80R.MAC with Collet Holder H 5.83.40R

H 80R.MAC.44 with Adjustable Clamping Element H 5.83.46R

Accessory / Presetting Spindle

Presetting of the concentricity

With the Presetting Spindle the concentricity is adjusted beyond the machine parallel to the production time. Afterwards, the parts to be processed can be put manually or, if necessary, automatically with a robot into the Rotating Spindle rsp. A-Axis within seconds.

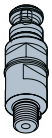


H 5.83.70R Collet Holder (stainless)
Clamping nut nickel plated. For collet ER50 (clamping range ∅ 3 - ∅ 34 mm).

Concentricity (without collet)	0,01 mm
Weight	1.6 kg

Please order Clamping Journal H 5.611R rsp. H 6.611R separately!

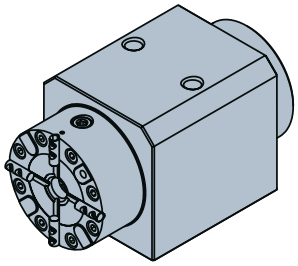
H 5.611R +
H 5.611.1R



H 6.611R

H 5.611R Clamping Journal and
H 5.611.1R Centering Bush (stainless)
to use the holders H 5.83.45R, H 5.83.40R.MAC, H 5.83.50R and H 5.83.70R in the clamper H **8**.16R.

H 6.611R Clamping Journal (stainless)
to use the holders H 5.83.45R, H 5.83.40R.MAC, H 5.83.50R and H 5.83.70R in the clamper H **6**.16R.



H 5.83.60R Presetting Spindle (Clamper H 8.16R)
to preset the concentricity of the parts which are mounted in the Adjustable Clamping Element H 5.83.46R by the Collet Holder H 5.83.45R.

Concentricity	≤ 0,002 mm

H 6.83.60R Presetting Spindle (Clamper H 6.16R)
similar to H 5.83.60R but with Clamper H 6.16R

Presetting Work Stations on request.

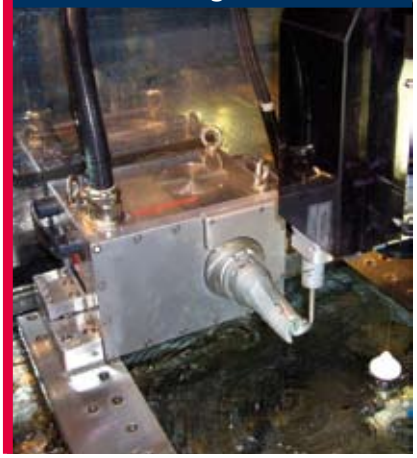
Presetting with Presetting Spindle and Adjustable Clamping Element

Adjustment of radial run-out with Adjustable Clamping Element H 5.83.46R..

Adjustment of axial run-out with Adjustable Clamping Element H 5.83.46R..

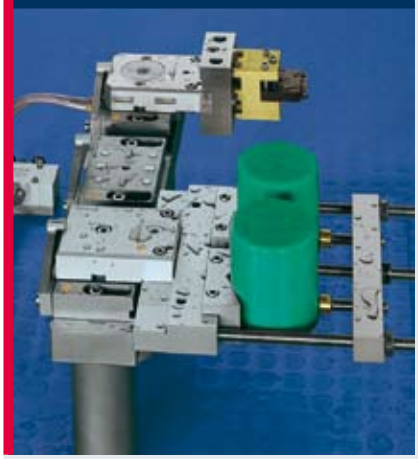
HIRSCHMANN

ROTARY TABLES and A-AXES for Wire and Sinking EDM



PRODUCT OVERVIEW

FIXTURING SYSTEM 4000 for Wire EDM



FIXTURING SYSTEM 5000 for Sinking EDM

PALLETIZING SYSTEM 8000 for Machine Tools

FIXTURING SYSTEM 9000 Modular Zero-Point Fixturing

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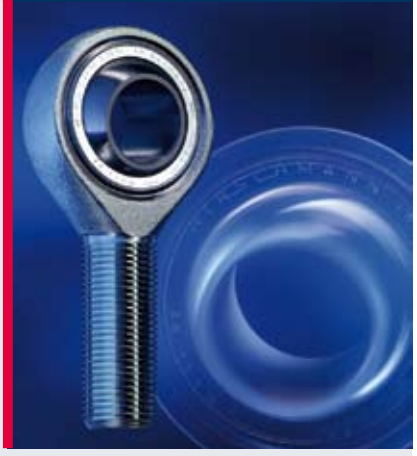
United States

HEAVY-DUTY ROD ENDS and SPHERICAL BEARINGS



Catalogues upon request

EDM SERVICE

P.A. des Forbœufs - 30, rue des Forbœufs - F-95280 Jouy-Le-Moutier
Adresse postale : B.P. 59 - Jouy-Le-Moutier - F-95008 Cergy-Pontoise Cedex
Tél. : 33 (0) 1 34 24 70 70 - Fax : 33 (0) 1 34 24 70 69
e-mail : edmservice@edmservice.com - web: www.edmservice.com

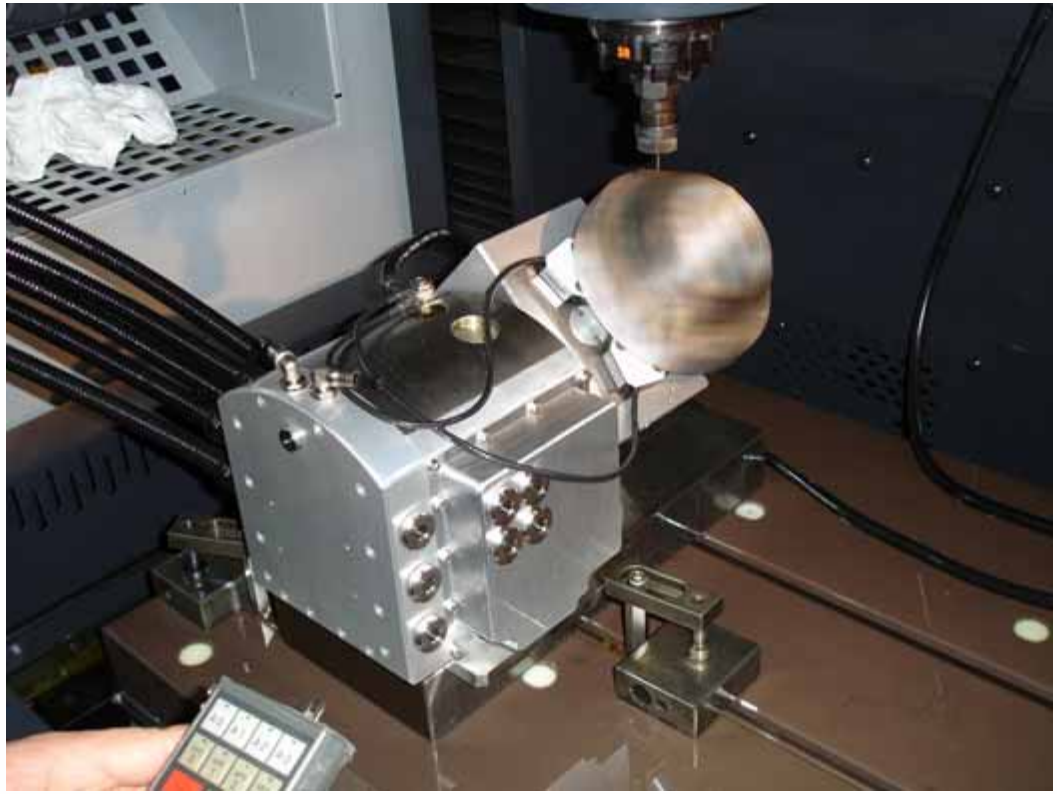
JS GmbH

objet: Le plus petit plateau diviseur deux axes JS

Petit plateau diviseur multi axes avec boitier en aluminium, anodisation dure, prévu pour différents systèmes de bridage.
80mm de hauteur, angle d'inclinaison max. +25°/-93°
Pour machines de perçage EDM ou laser
Poids de la pièce Max. 5kg

JS GmbH

objet: Plateau diviseur standard deux axes pour machine EDM par enfonçage



Forage d‘anneaux Inconel

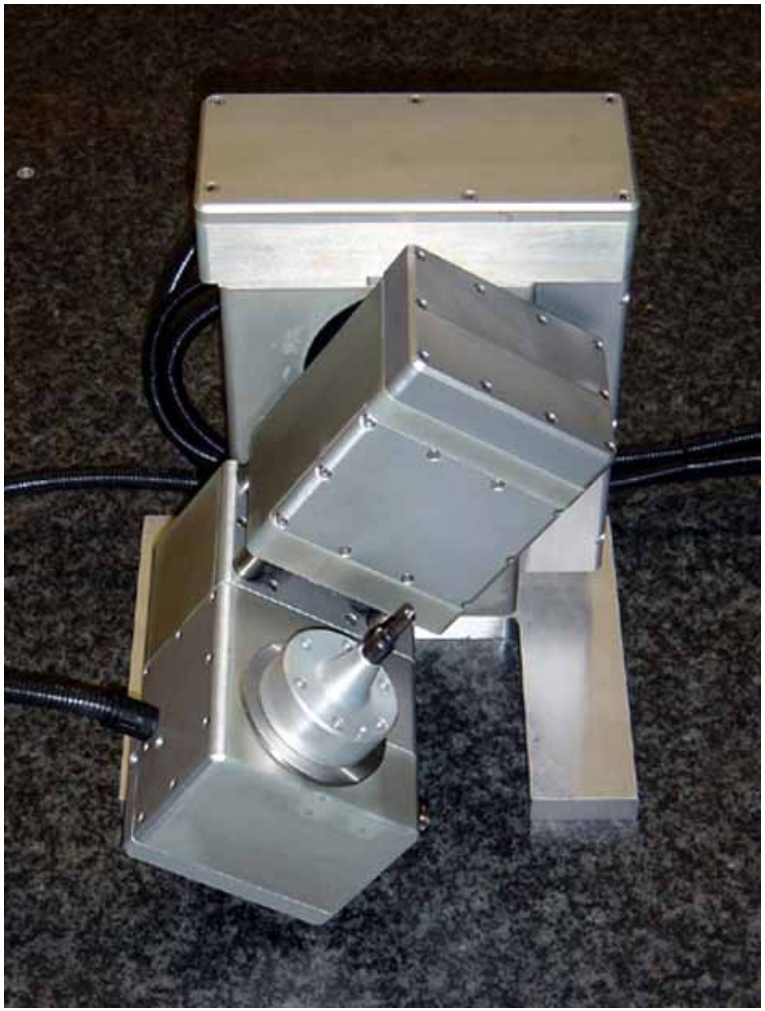
JS GmbH

objet: Plateau diviseur deux axes pour le perçage de pales de turbine

Perçage de pales sous différents angles

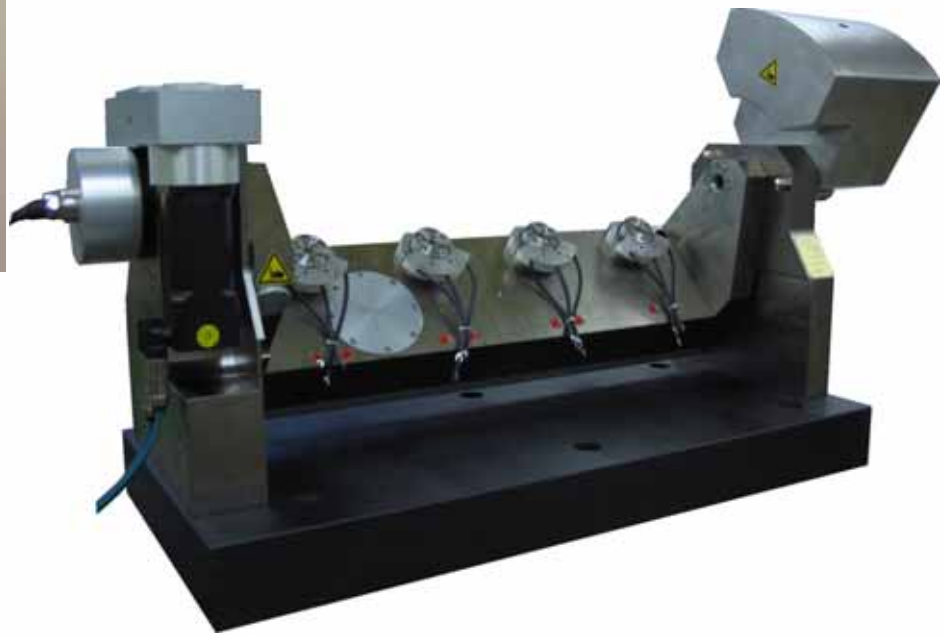
JS GmbH

Objet: Installation expérimentale pour le forage des buses d‘injection



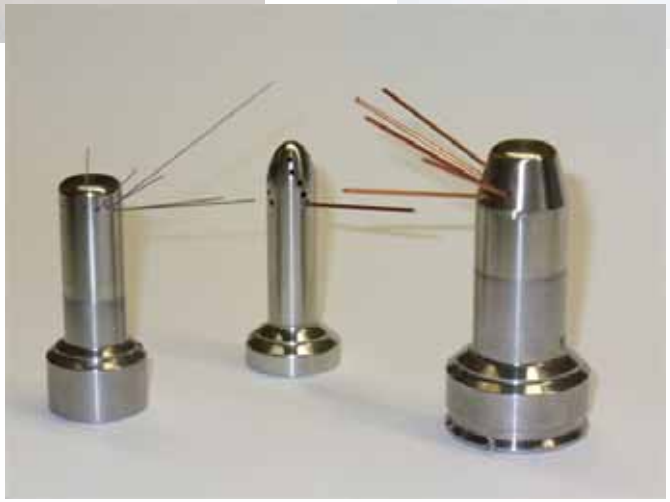
JS GmbH

Objet: 4 broches / 2 axes de rotation pour production haute cadence



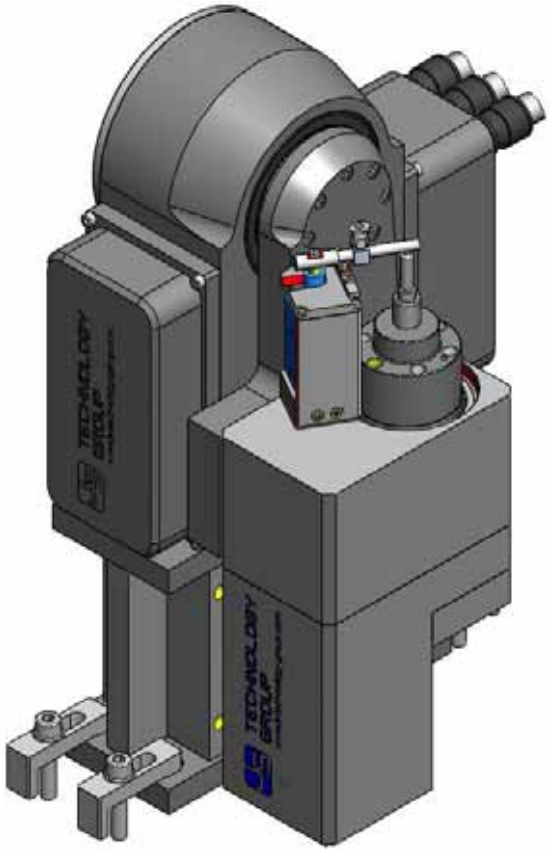
JS GmbH

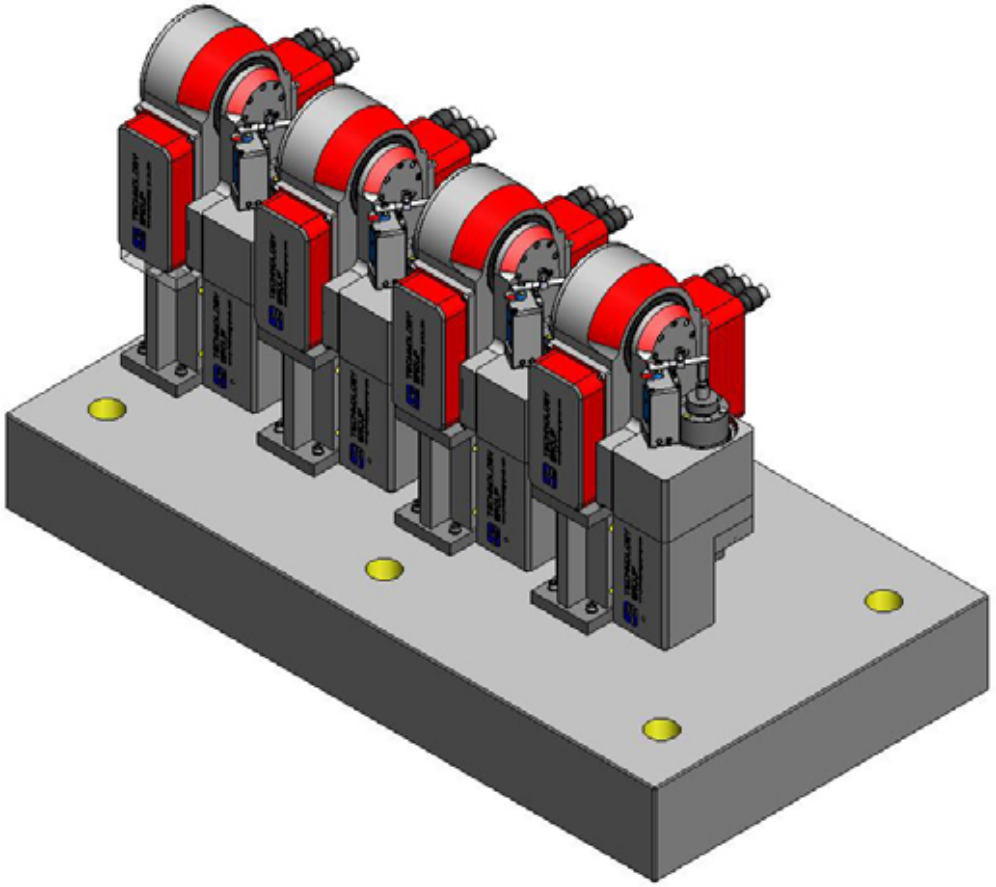
objet: Installation expérimentale pour forage des buses d‘injection



JS GmbH

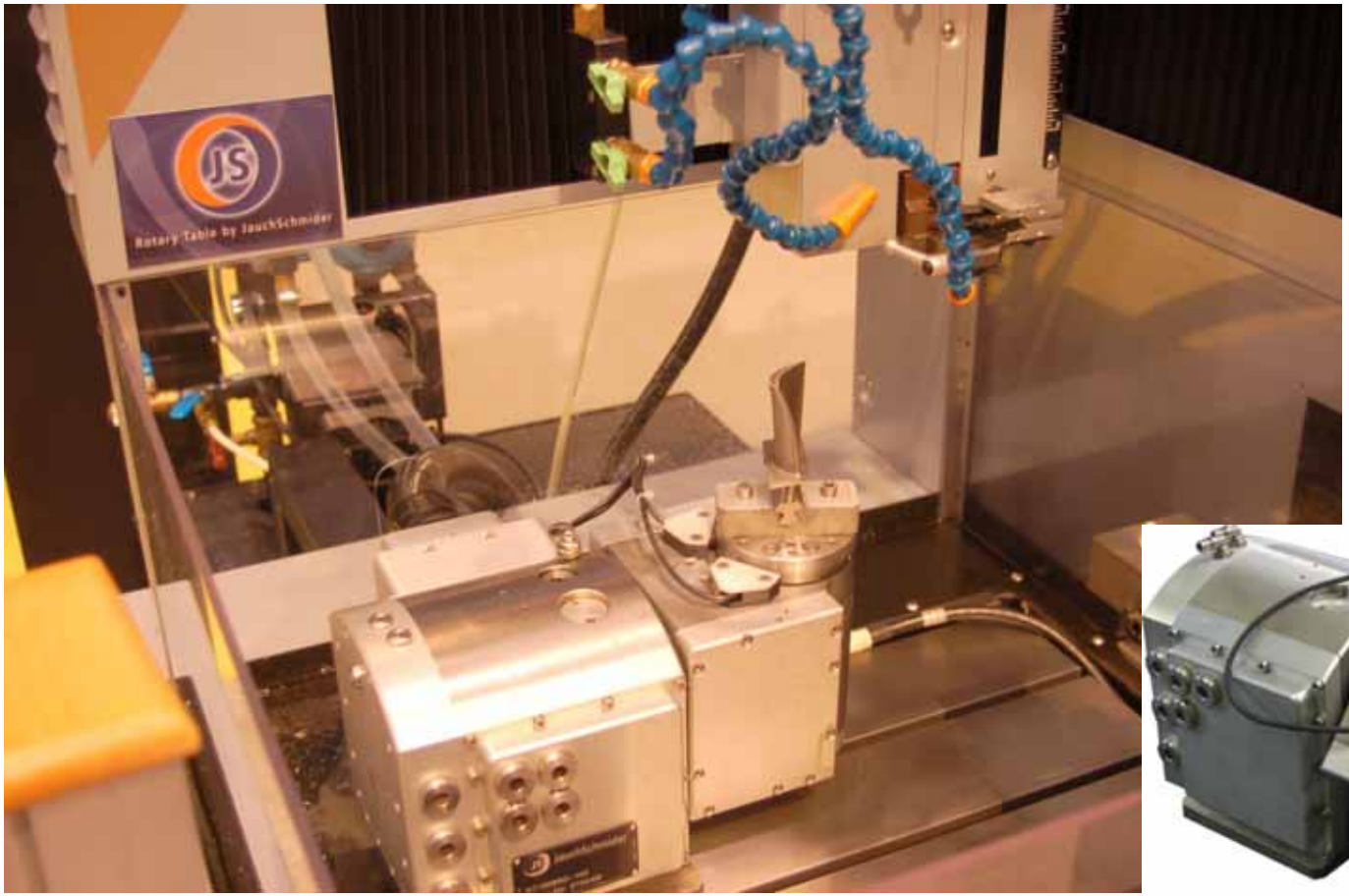
objet: Plateau deux axes pour production en série





JS GmbH

objet: Plateau diviseur deux axes pour le perçage EDM de pale



JS GmbH

objet: Plateau diviseur deux axes pour usinage sans démontage

Anneau en carbure monobloc: Usinage sans démontage sur plateau diviseur intégré

JS GmbH

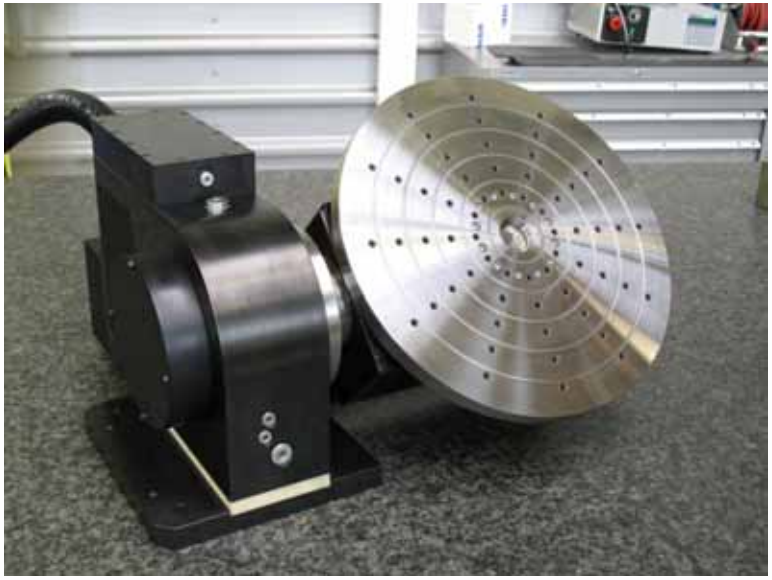
objet: Plateau diviseur deux axes pour le fraisage dans l'industrie manufacturière

Fraisage avec unités échangeables de serrage du corps de base.

JS GmbH

Objet: Plateau diviseur deux axes pour la production d'hélices

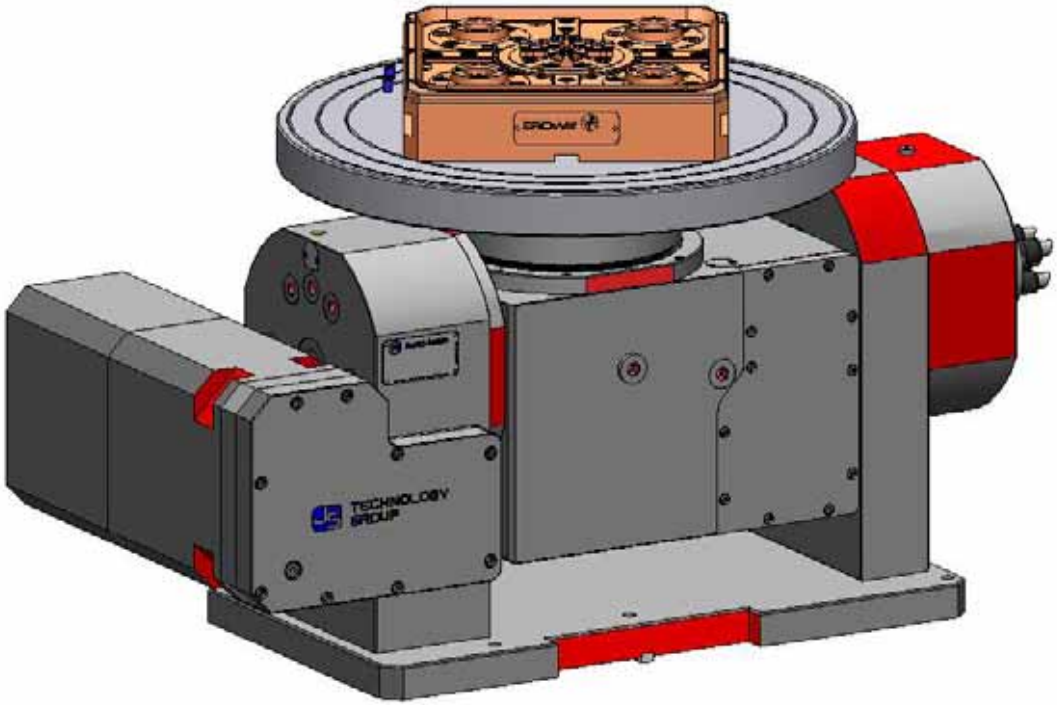
Quelle: SMWeber



Fabrication de roues compresseurs pour la production de turbine vapeur

JS GmbH

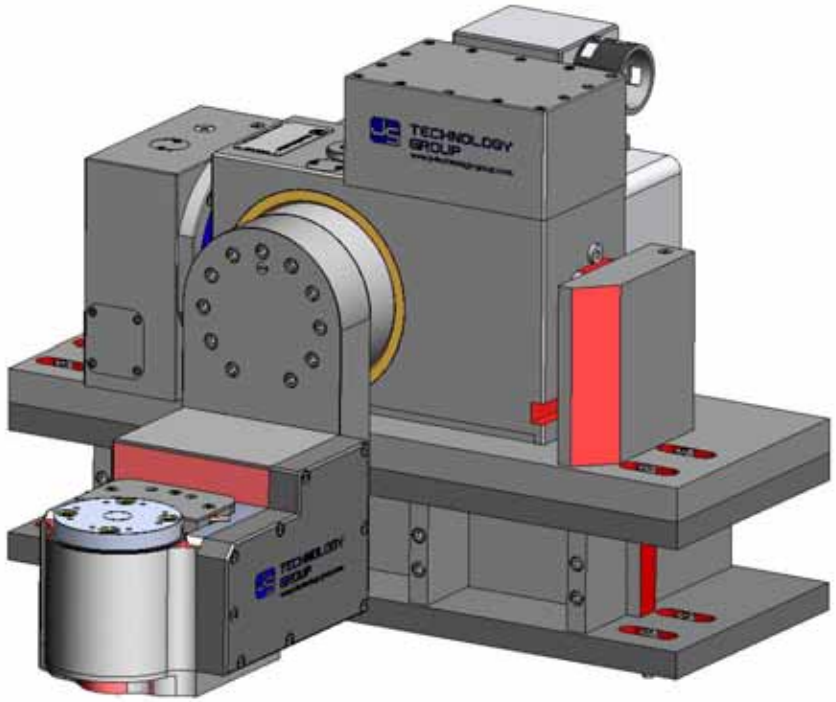
objet: Plateau diviseur deux axes pour pièces aéronautiques

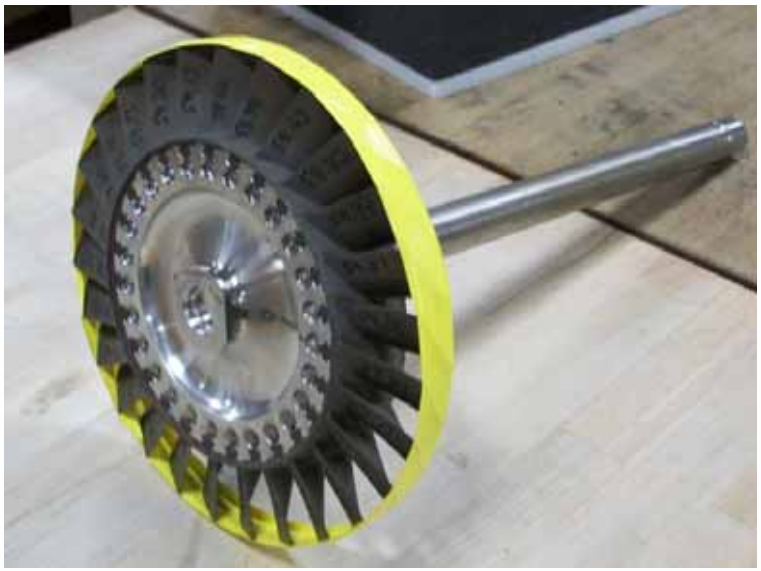


Solution avec diviseur deux axes, plateau équipé d'un système de palettisation pour des pièces jusqu'à 250kg, entièrement piloté par la commande de la machine.

JS GmbH

objet: Plateau diviseur trois axes pour fabrication de turbines





Usinage des formes en “sapins“ dans un anneau de turbine

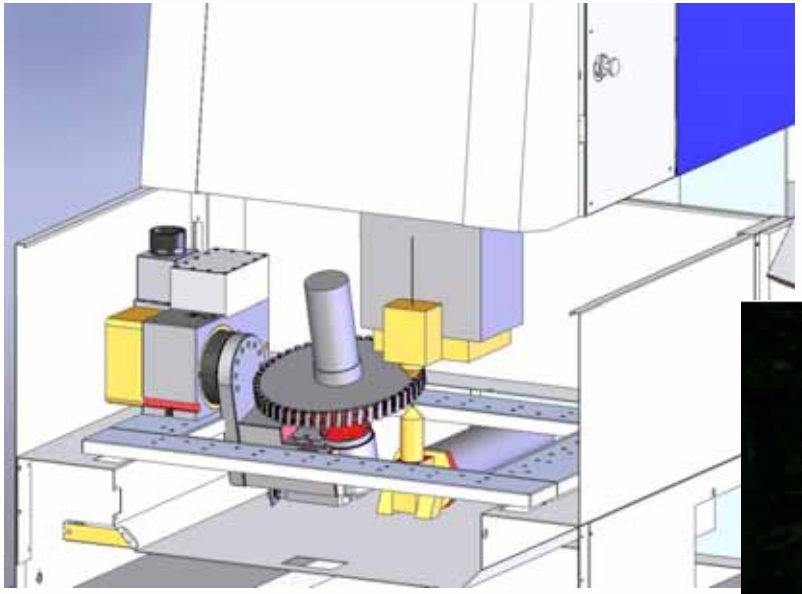
JS GmbH

objet: Profil en “sapin“ sur un anneau de turbine

Roue de turbine en inconel

JS GmbH

objet: Exemple d‘une roue de turbine avec forme en sapin



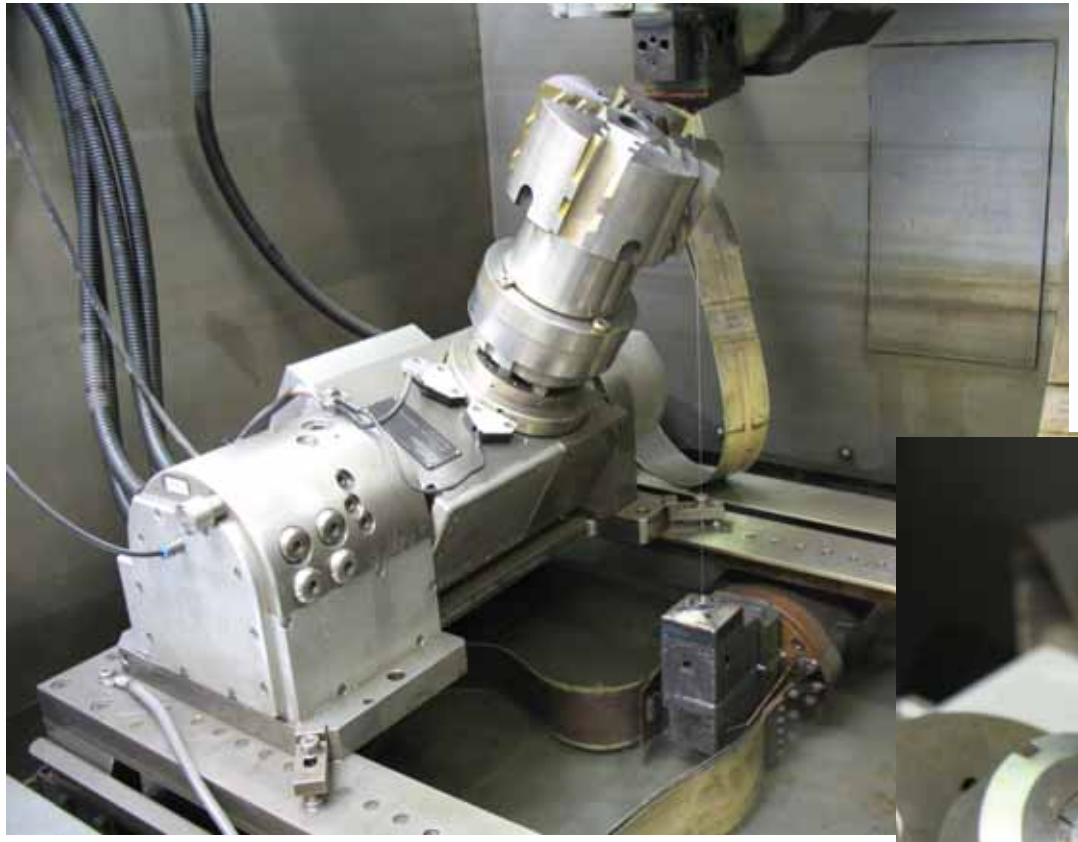
Fabrication de plaques pour l‘industrie des turbines
Machinerie lourde de plaques
Utilisation multiple grâce au plateau diviseur

JS GmbH

objet: Production de pièces sur plan

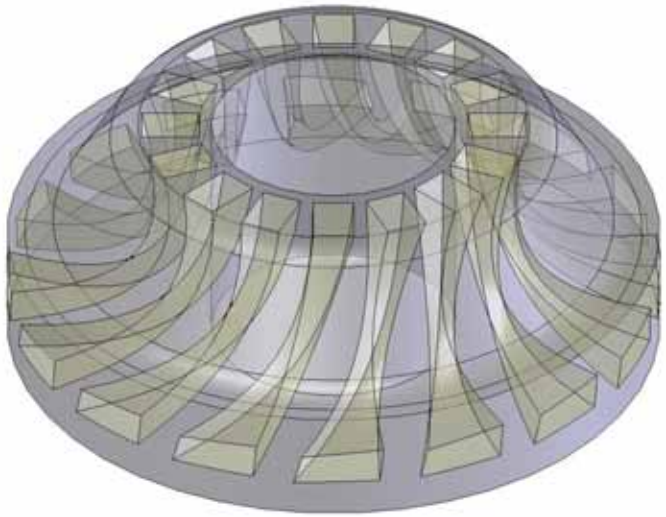
JS GmbH

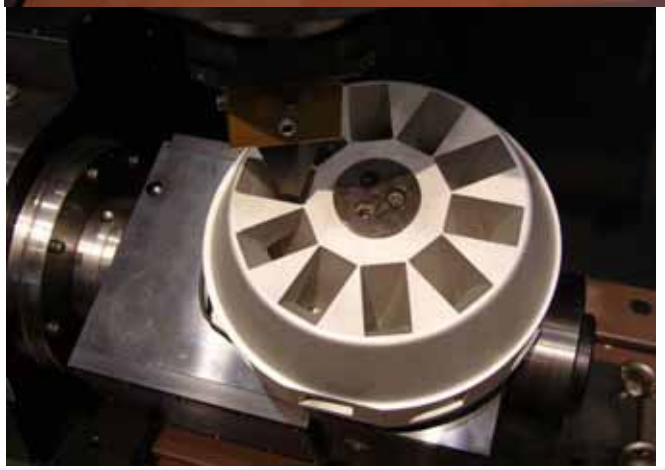
objet: Fabrication avec plateau diviseur deux axes sur machine à fil



JS GmbH

subject: Solution deux axes pour la production d'hélices

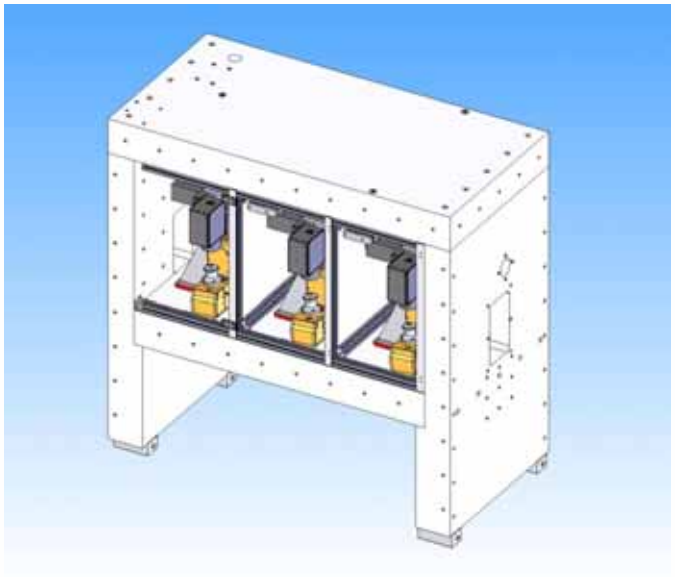


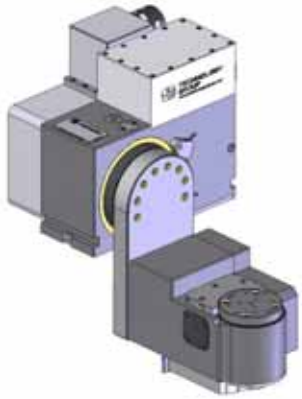


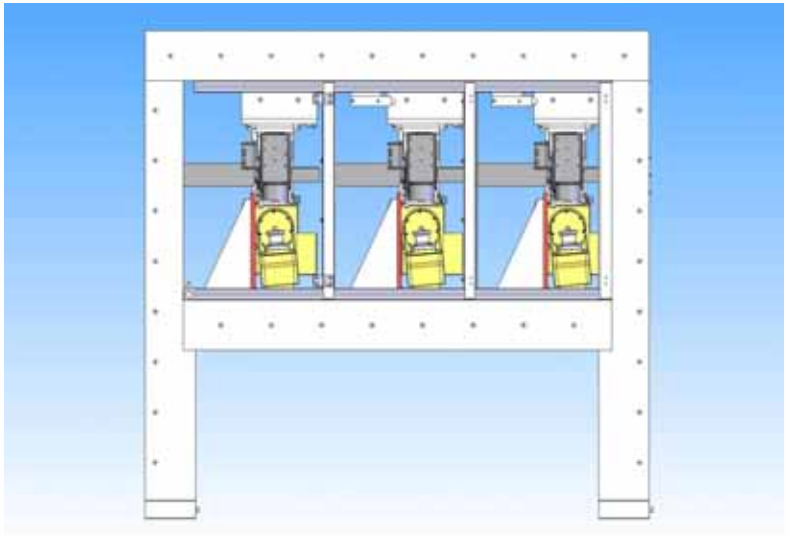
La fabrication d'hélices avec déplacement axial et radial demande la conception d'électrodes spéciales

JS GmbH

subject: Solution deux axes pour application laser ou EDM



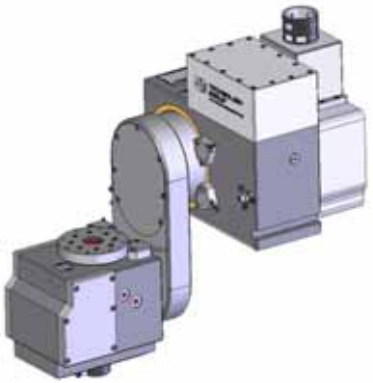




JS GmbH

objet: Solution deux axes pour des applications EDM ou laser

Version spéciale pour le perçage de pièces suivant plan

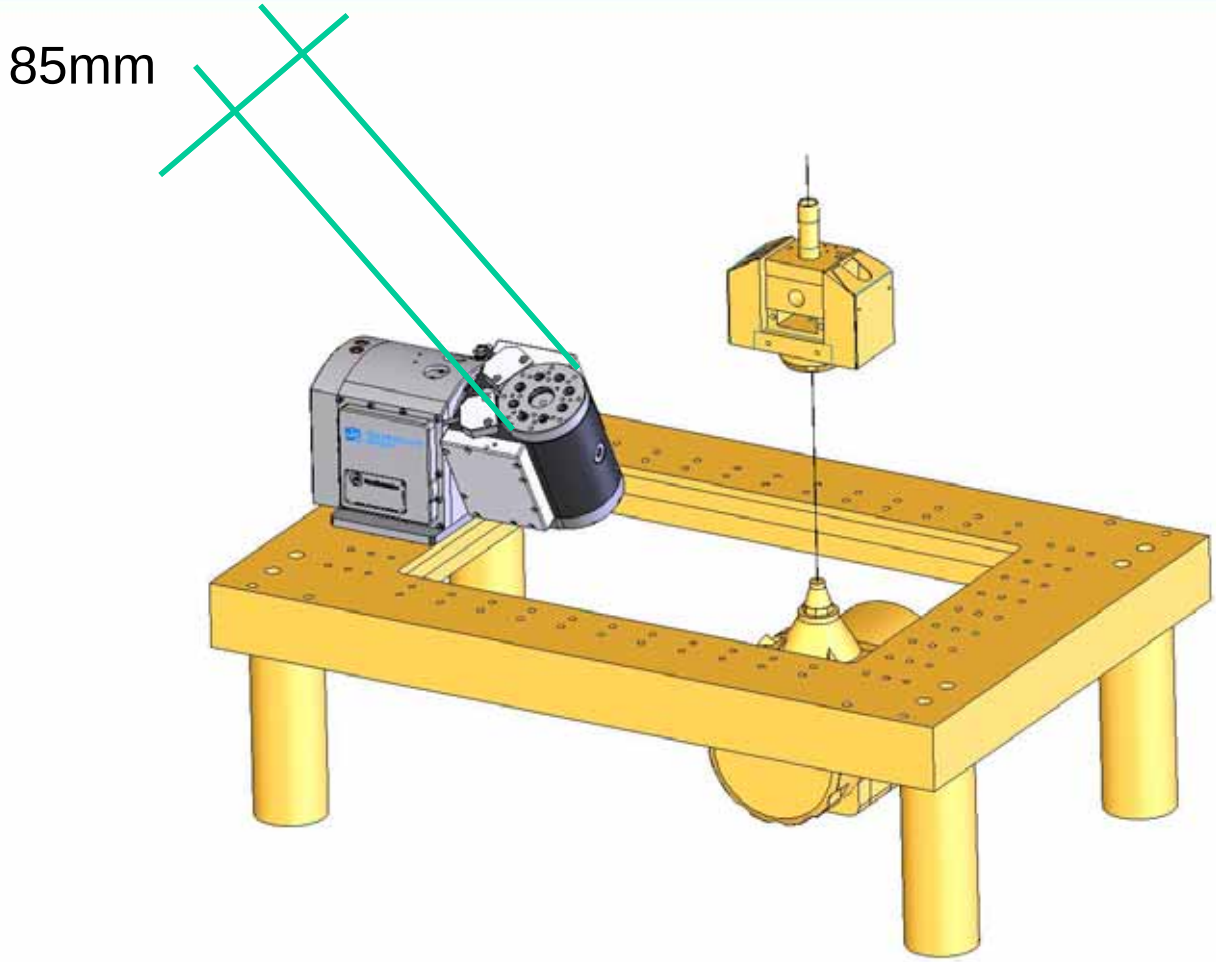


objet: TABLE DES MATIERES

1. Présentation générale, Gammes, Technologies
2. Exemples de Plateau diviseur axe unique
3. Exemples de Plateau diviseur multi axes
4. Exemples de pièces médicales
5. Applications sur mesure
6. **Plateau Diviseur sans centre**
7. Solutions de broches rotatives
8. Technologies de rectification / Applications de contrôle

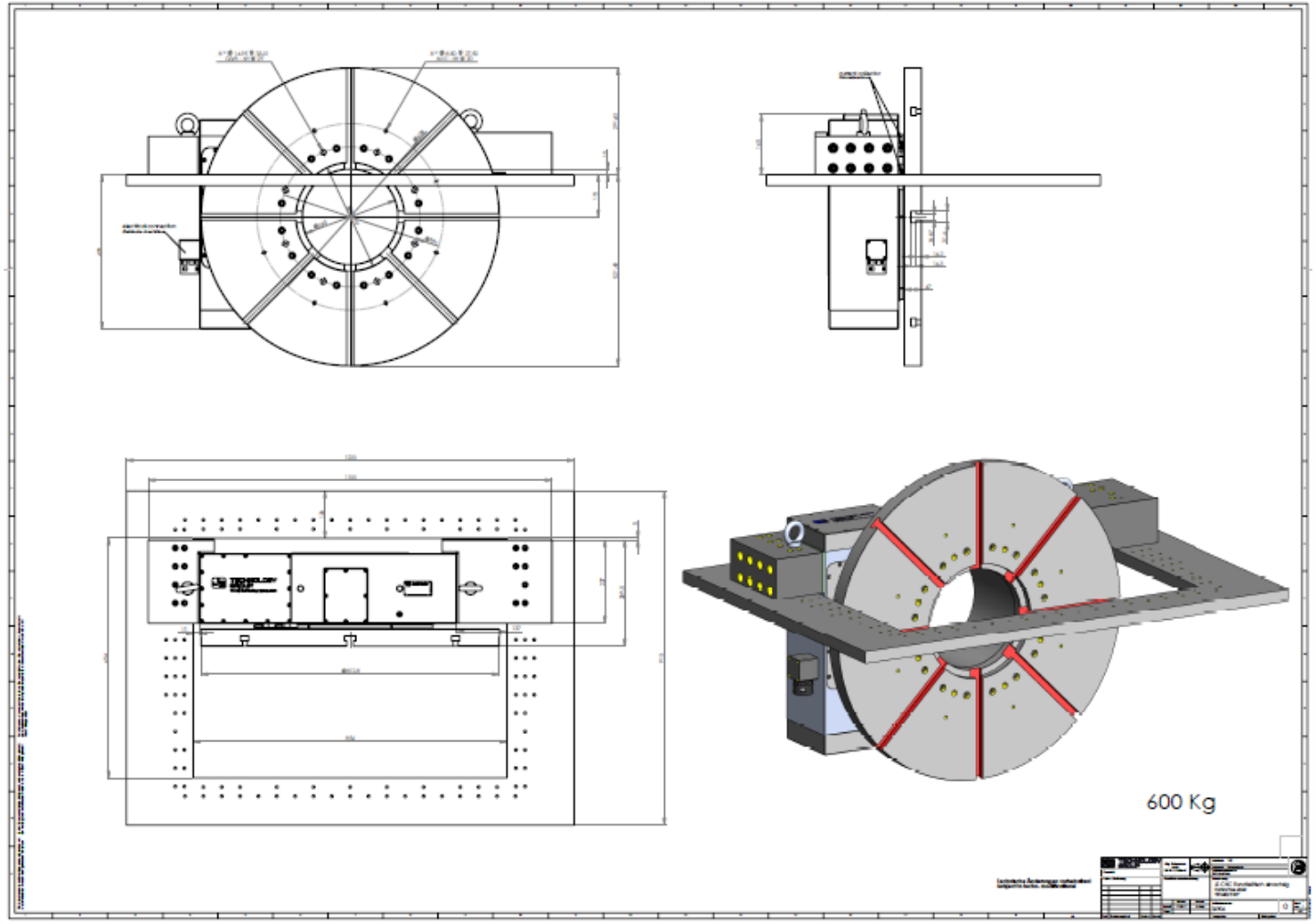
JS GmbH

objet: Plateau diviseur avec plaque frontale de 85mm



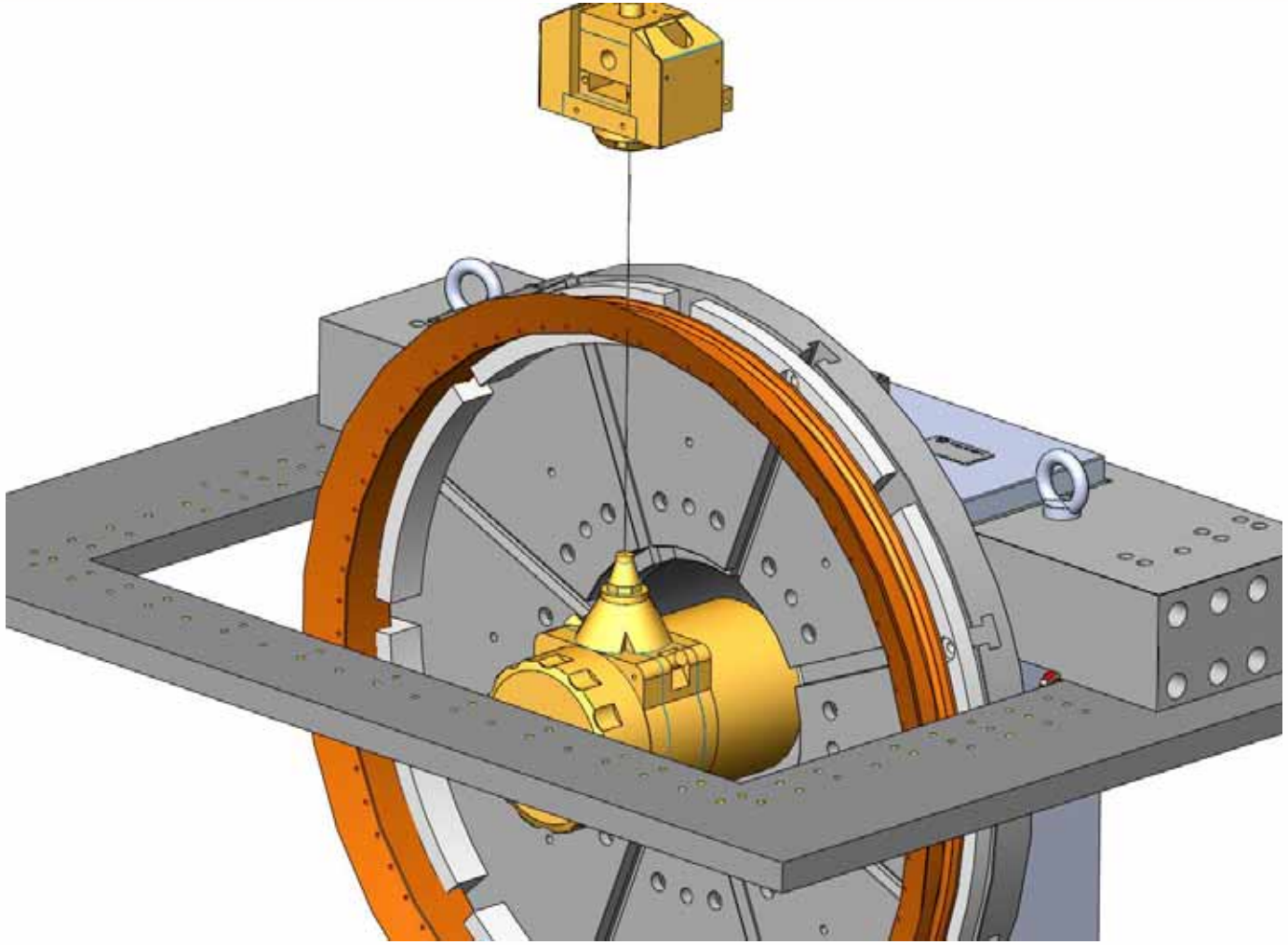
JS GmbH

objet: Premier plateau diviseur sans centre pour anneaux de turbines



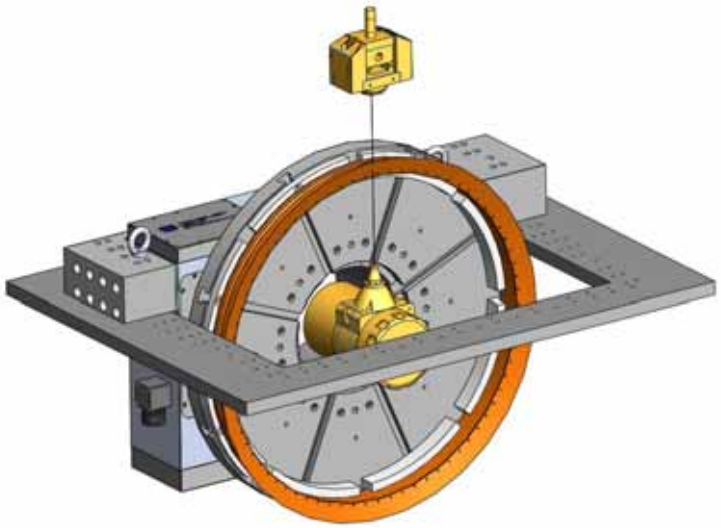
JS GmbH

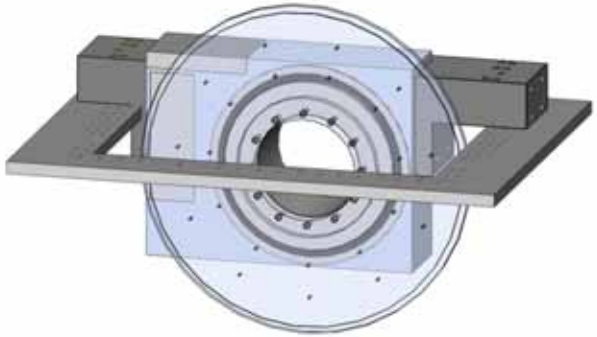
objet: Plateau sans centre avec machine adaptée

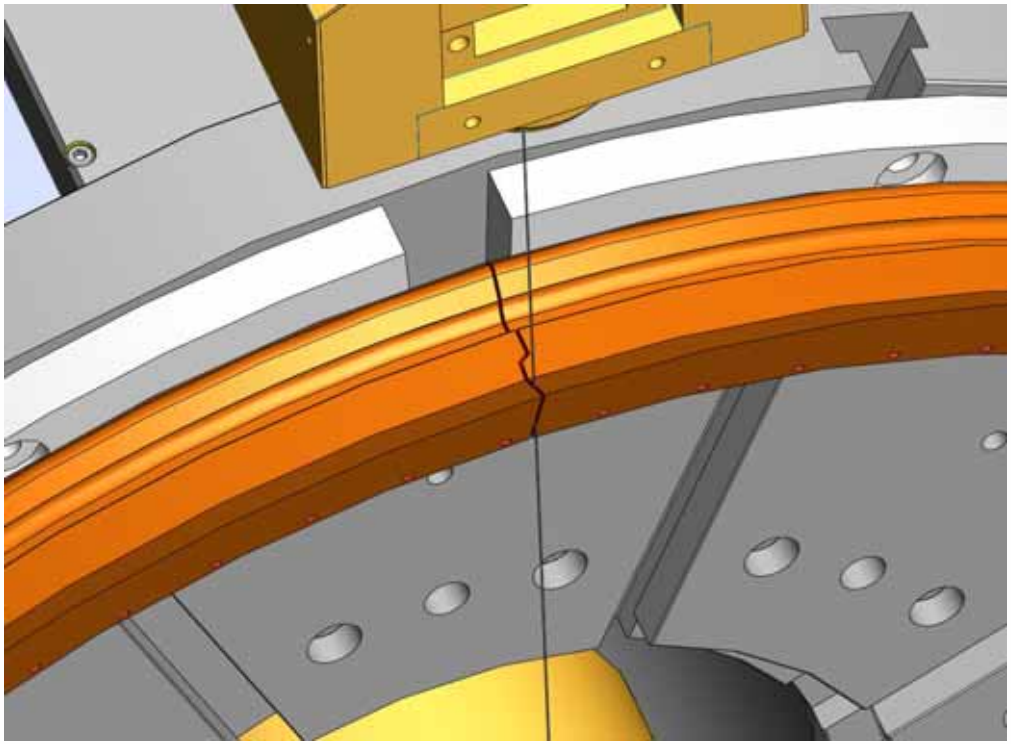


JS GmbH

objet: Axe simple pour fabrication de segments d'anneau de turbine

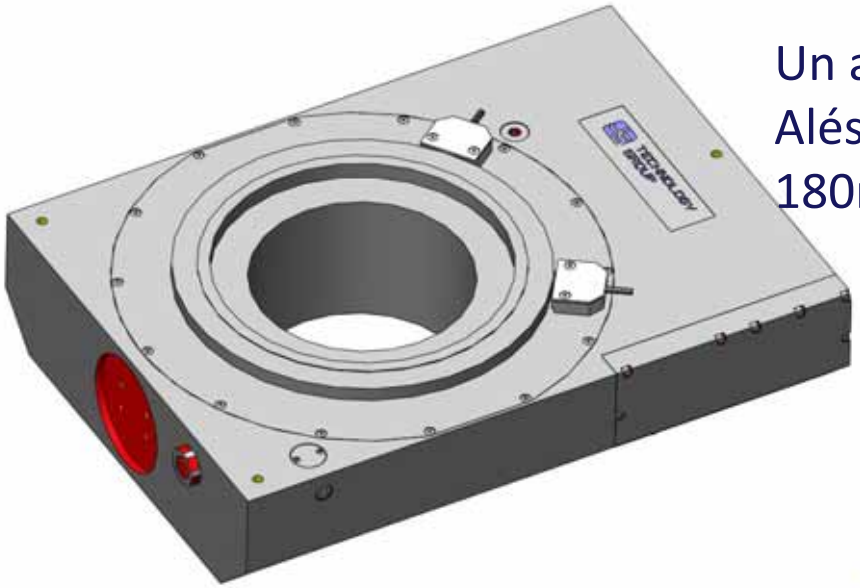




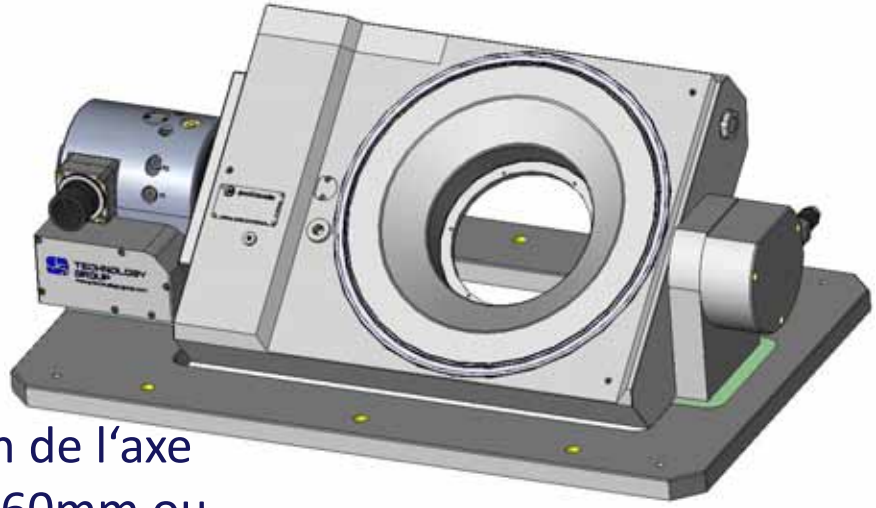


JS GmbH

objet: Plateau sans centre conçu pour un ou deux axes



Un axe,
Alésage central de
180mm

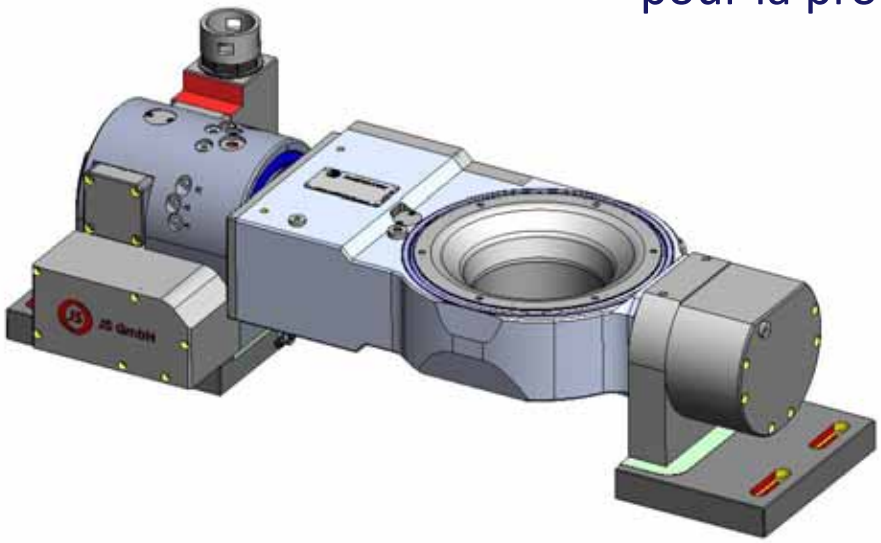


Rotation et inclinaison de l'axe
Diamètre d'alésage: 160mm ou
115mm

JS GmbH

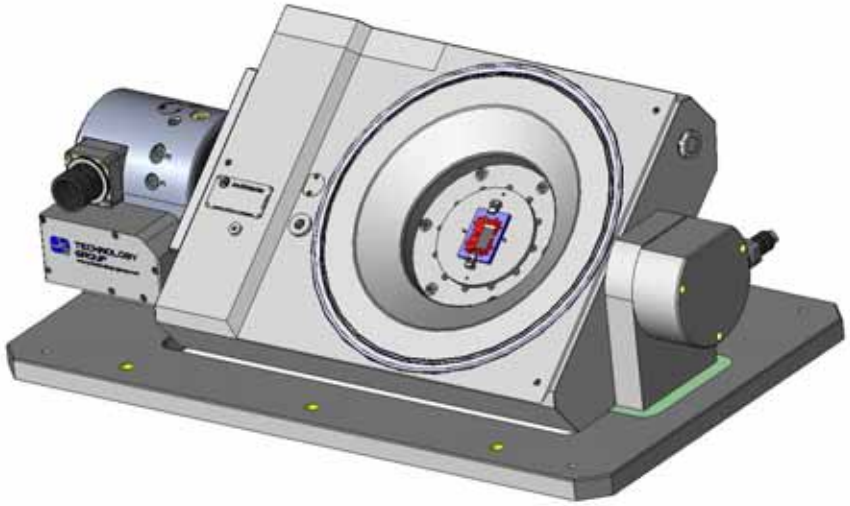
objet: Dernier plateau sans centre

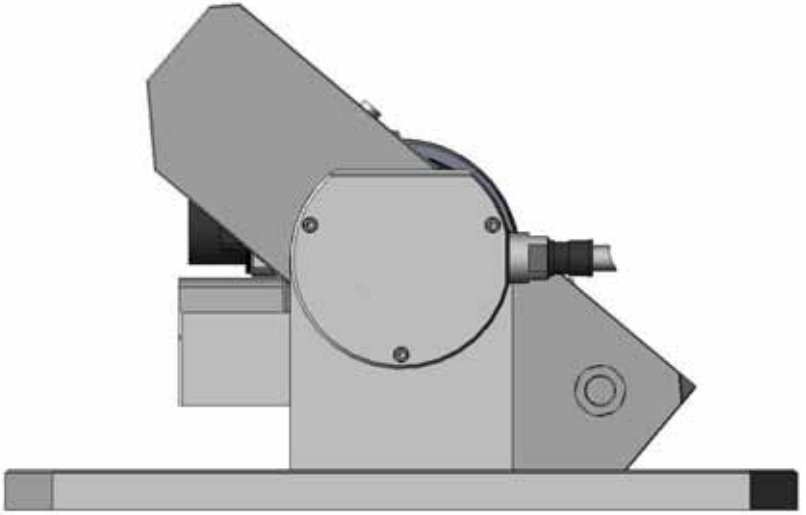
Plateau sans centre compact avec inclinaison, Diamètre d‘alésage 115 mm pour la production de petites pièces

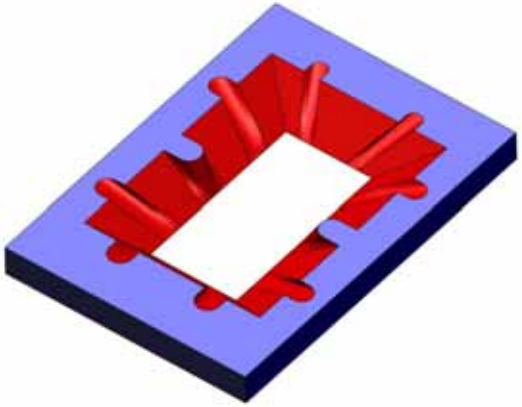


JS GmbH

objet: Système à deux axes avec rotation et inclinaison

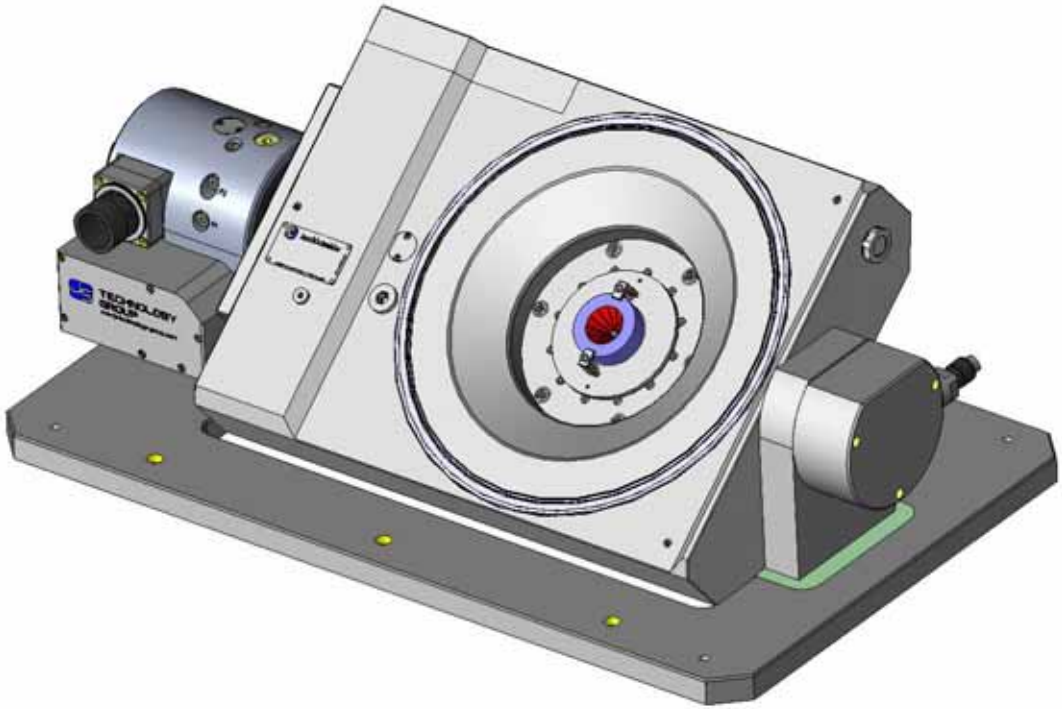






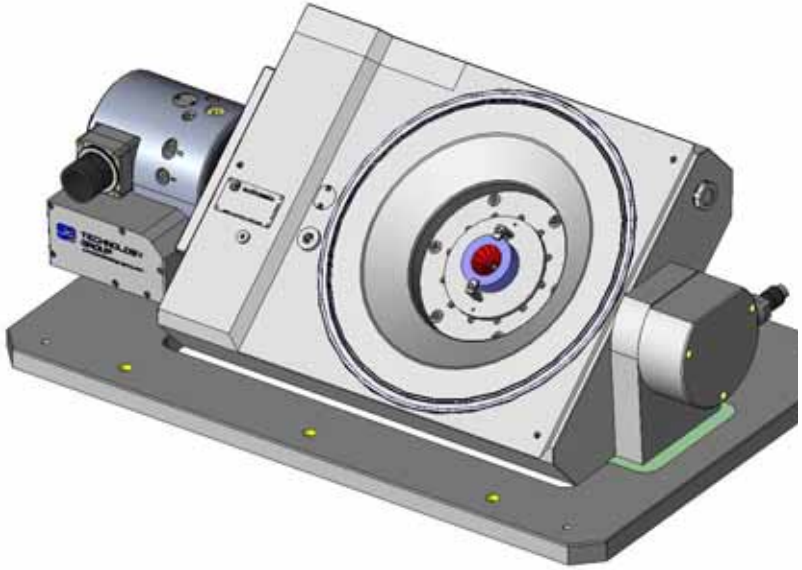
JS GmbH

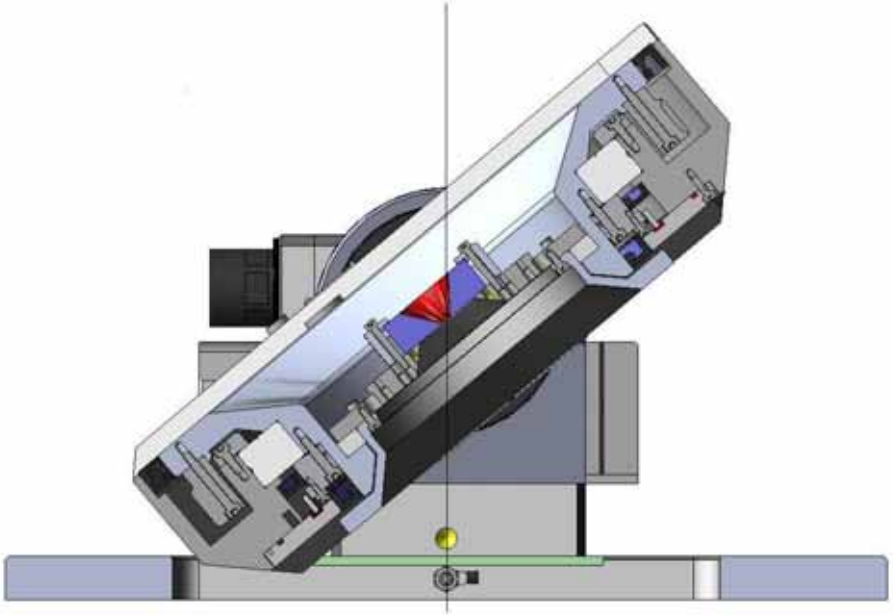
objet: Système à deux axes, intégré à une machine à fil



JS GmbH

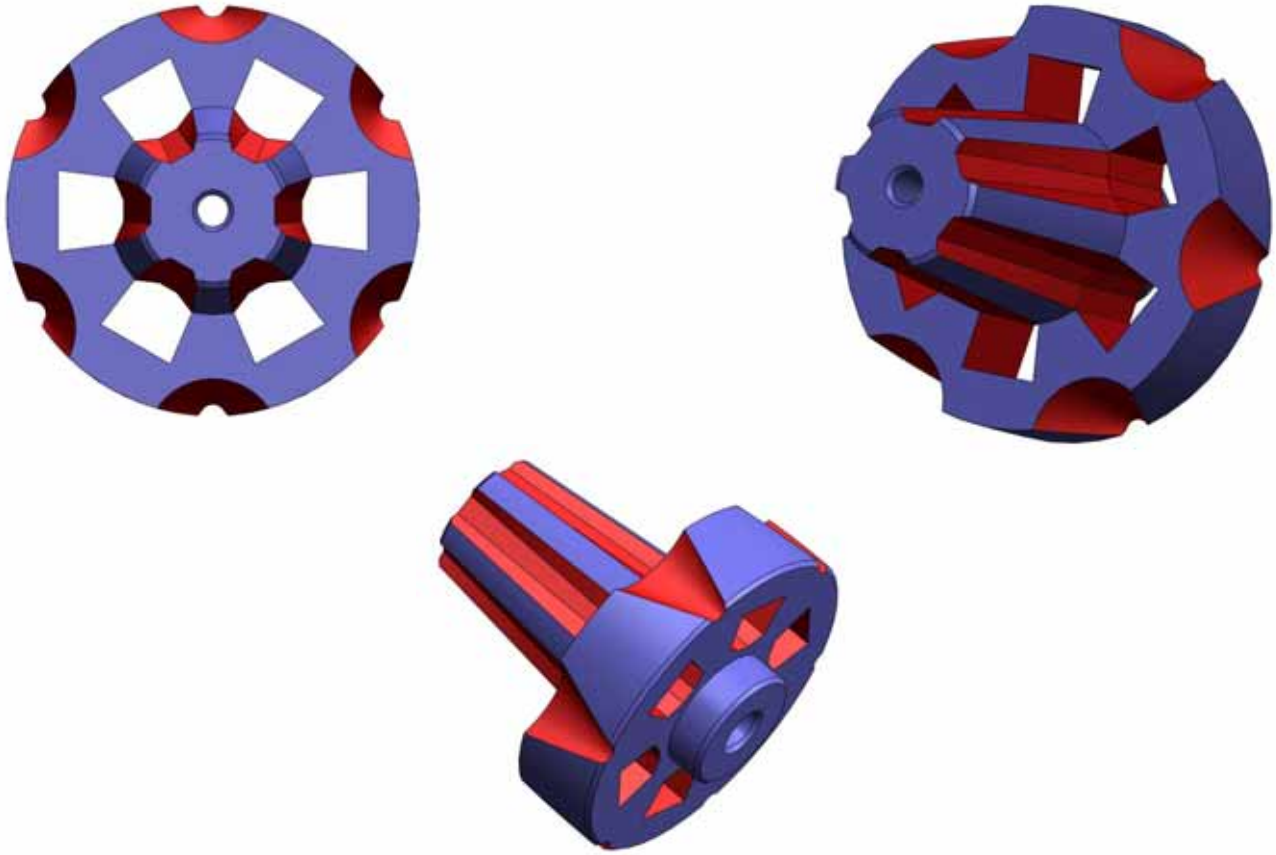
objet: Le fil reste droit, c‘est la pièce qui est inclinée





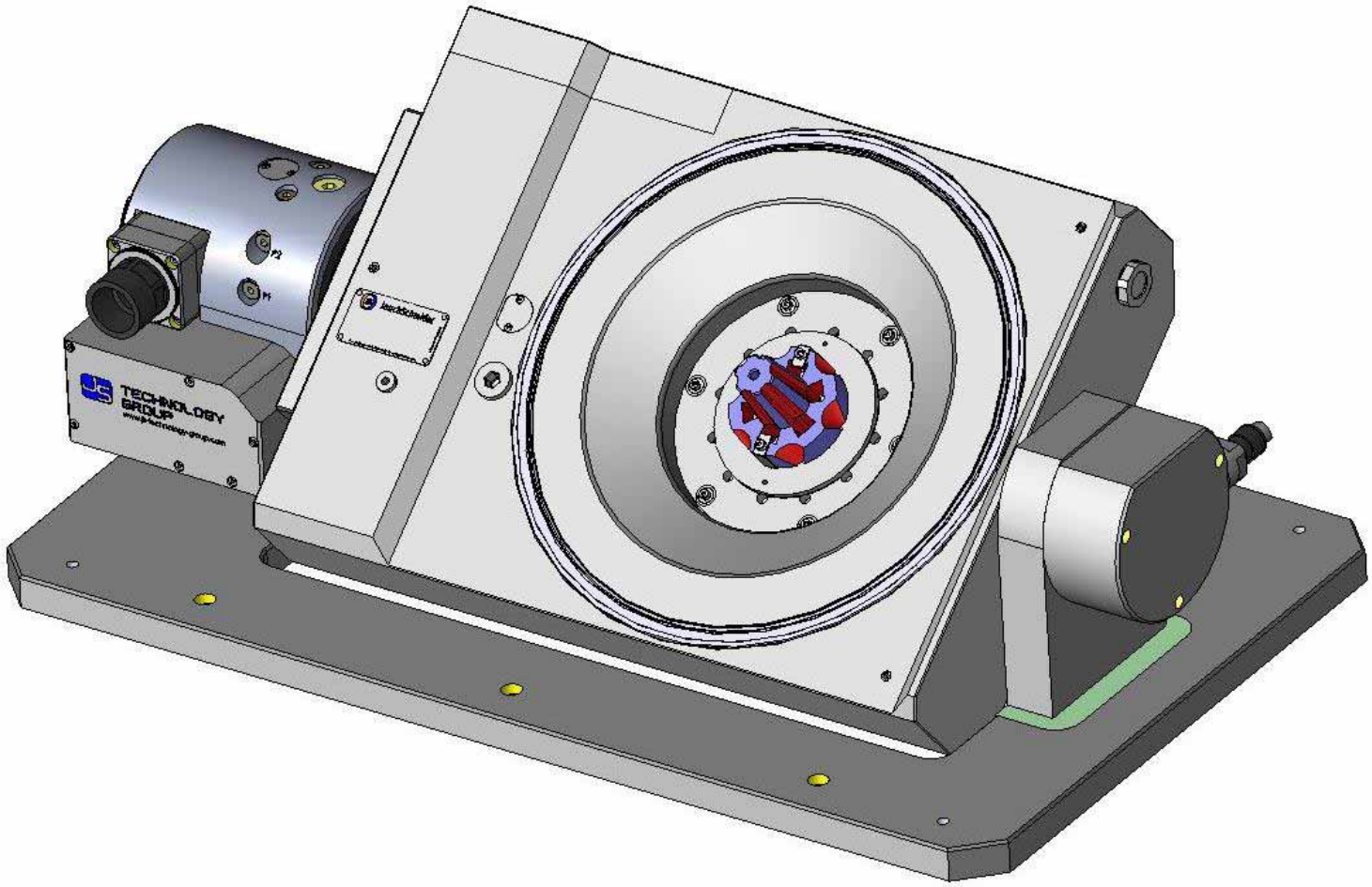
JS GmbH

objet: Exemple de fabrication avec un plateau sans centre



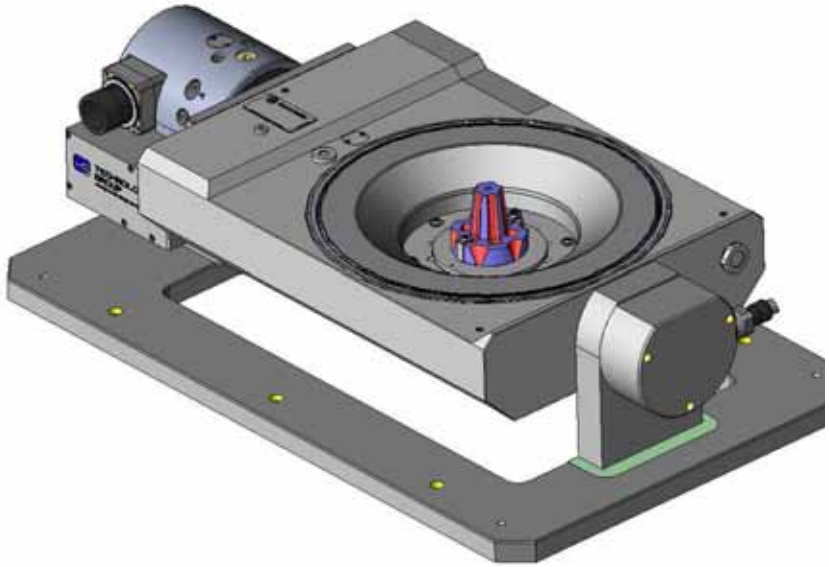
JS GmbH

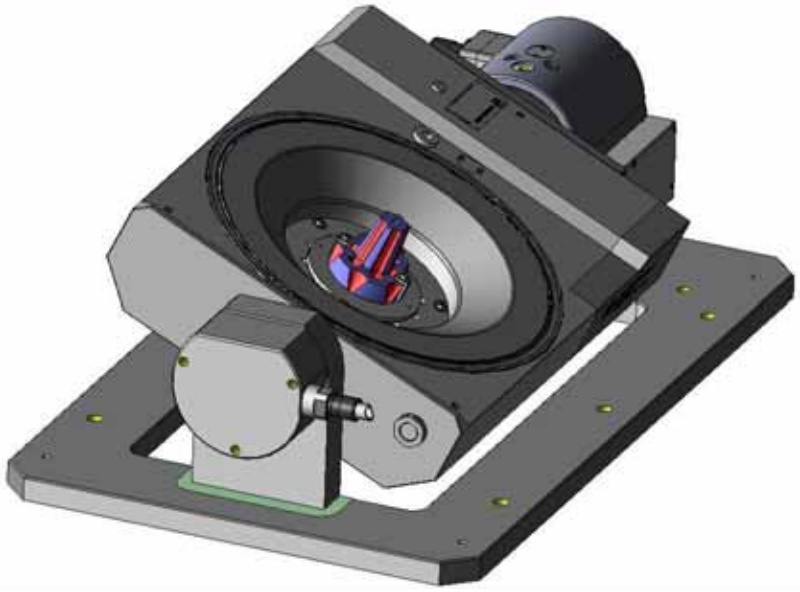
objet: Plateau sans centre avec la pièce en position



JS GmbH

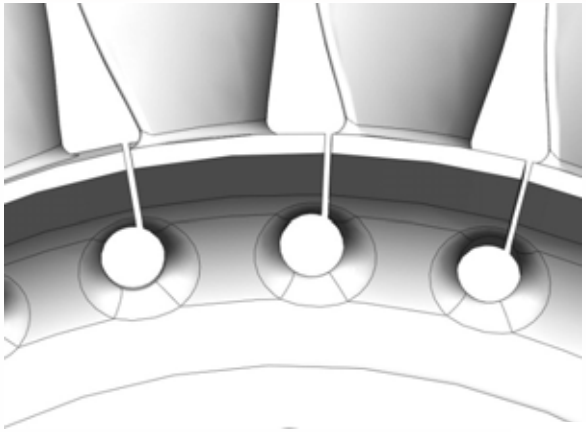
objet: Différents points de vue de l'ensemble

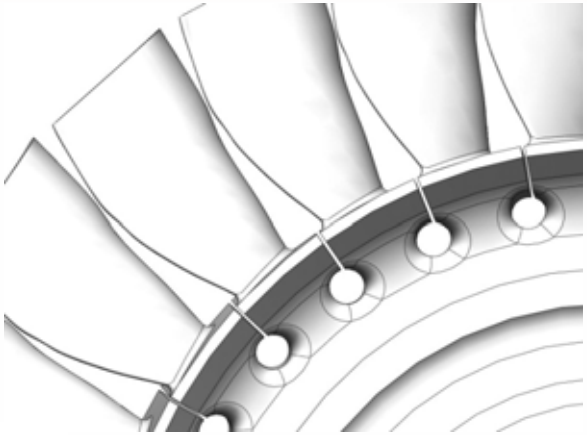


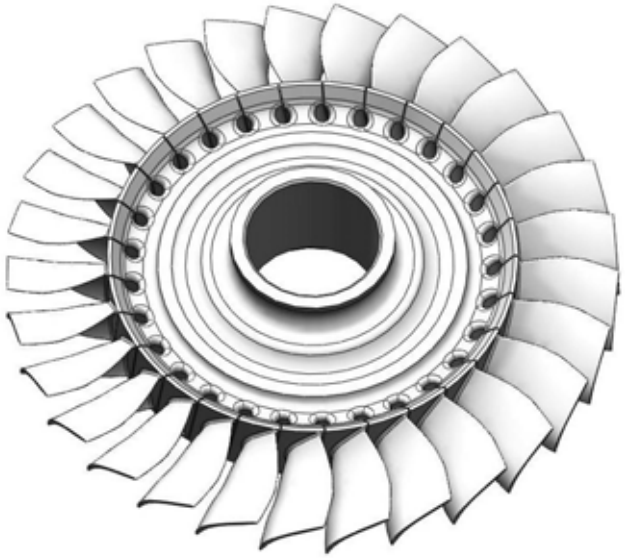


JS GmbH

objet: Anneau de turbine

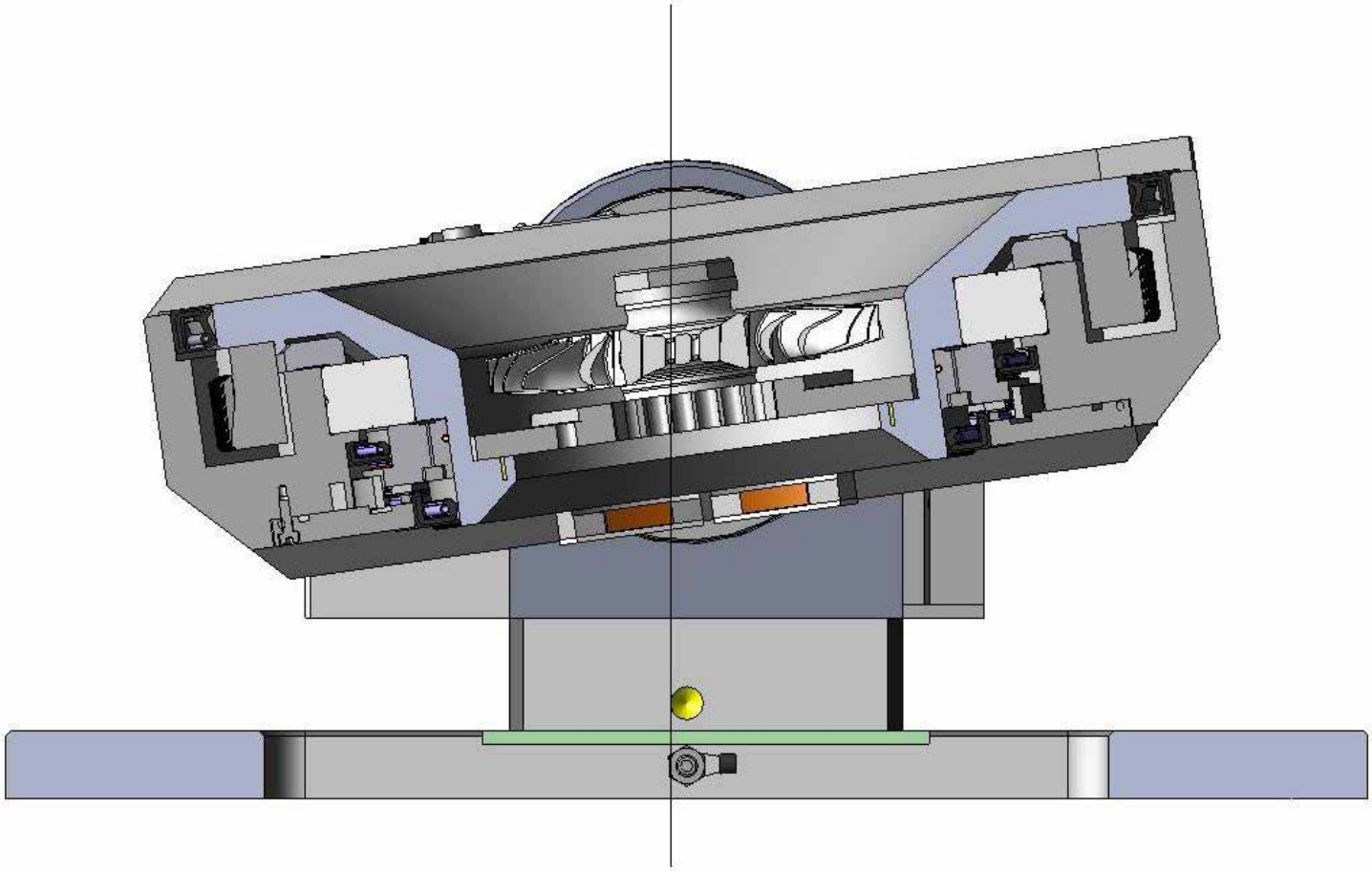






JS GmbH

objet: Petite turbine usinée sur machine à fil

JS GmbH

objet: Axe d‘inclinaison permettant au fil de rester droit