The products described in this catalog are specified to the best of our knowledge. The data given herein are dependent on the conditions under which they are measured and are derived from tests carried out under defined lab conditions at **REGO-FIX AG**. The performance of these tools depends on the conditions under which they are used and may vary from case to case. The information given in this catalog is believed to be correct. **REGO-FIX®** however assumes no responsibility or liability for any errors, inaccuracies or omissions that may appear in this catalog.

Information in this catalog is subject to change without notice and should not be construed as a commitment by **REGO-FIX®** or its subsidiaries. This is especially valid for adaptions to new or changed international standards or improvements to the products performance or production processes.

Icons used in this catalog

- **= Standard**
- **= With Friction Bearing**
- **= Balanced**
- **= For Coolant Through Tools**
- **= Collet Locking System**
- **= Mini Nut**
- **= Nut with External Thread**
- **= Counter Nut**

Edition 10/2004

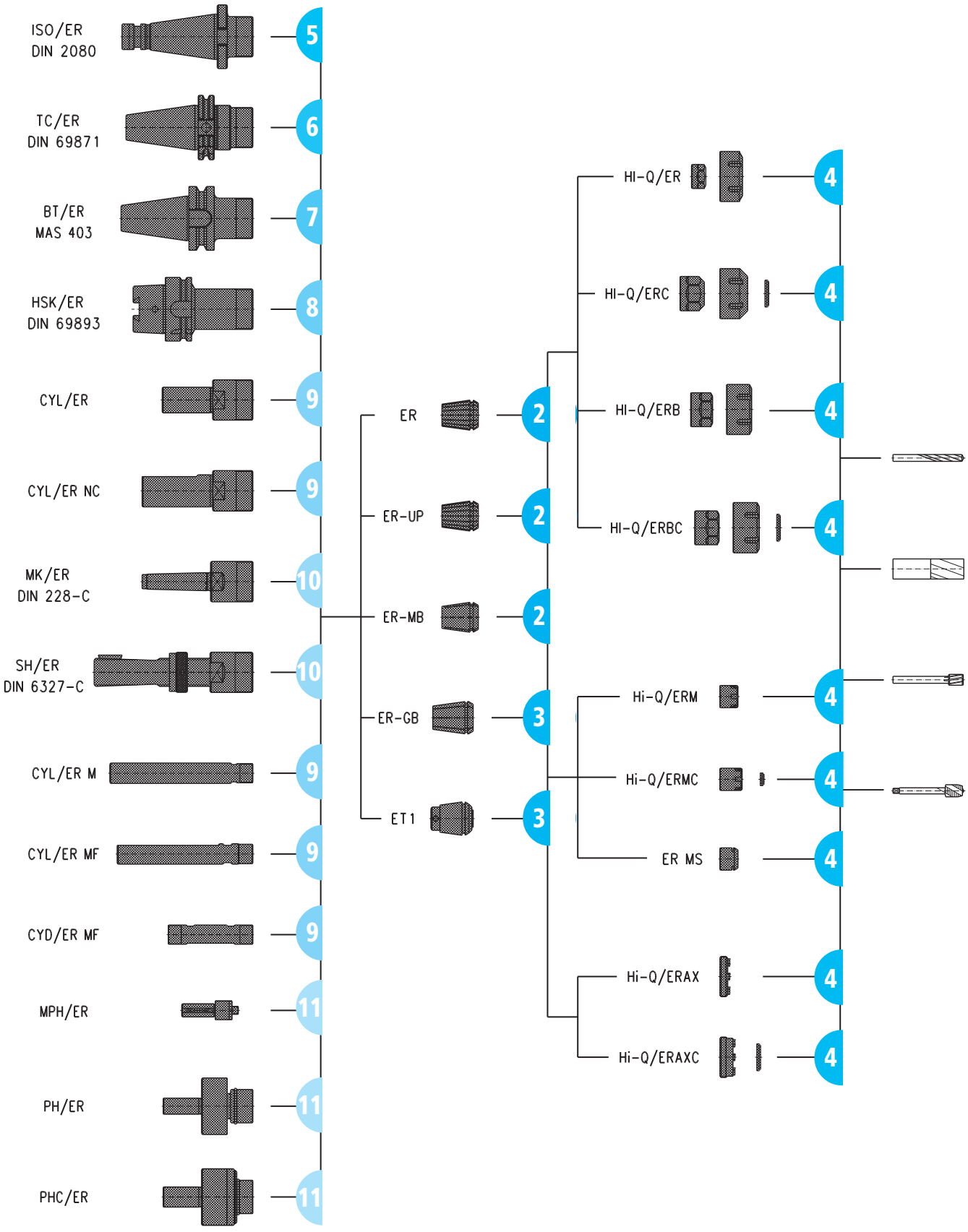
REGO-FIX®
Swiss Precision Tools

TABLE OF CONTENTS

Edition 10/2004

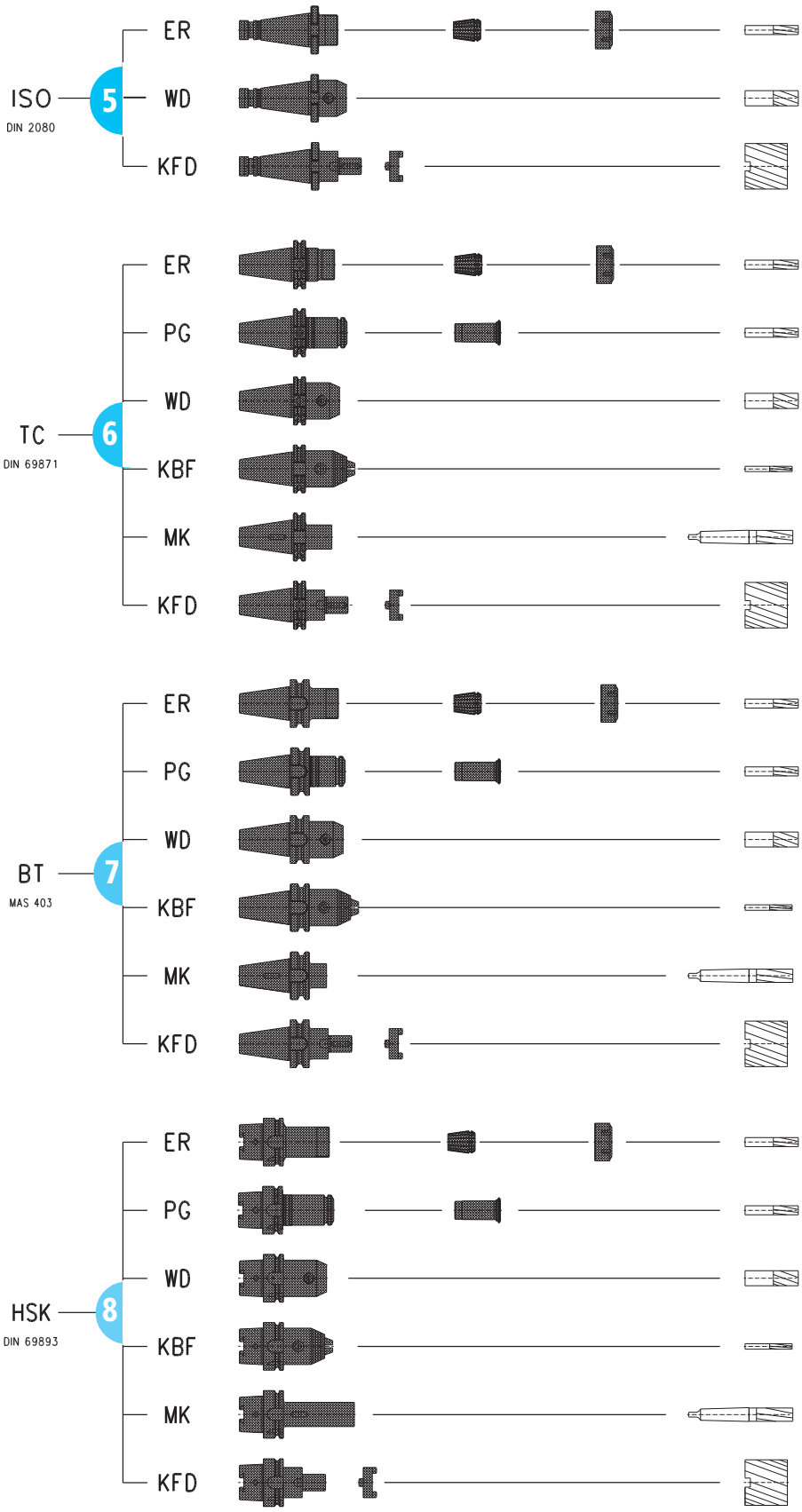
PRODUCT INDEX

ER-SYSTEM



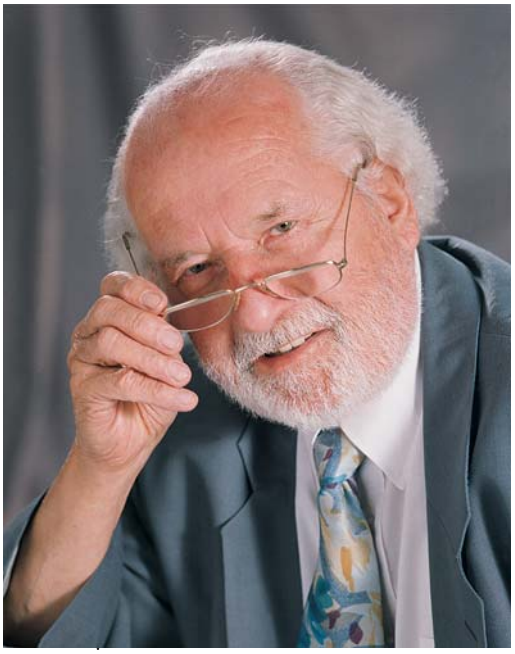
Edition 10/2004

TOOLHOLDERS



Edition 10/2004

REGO-FIX® - Our

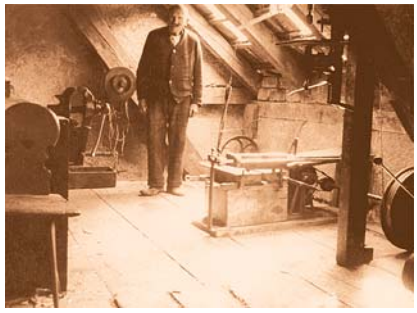


Company Founder: Fritz Weber

Headquarters in Tenniken

The REGO-FIX company history has been strongly influenced by it's founder, Fritz Weber. His innovative spirit and pre-sistance was instrumental in making his invention, the ER collet system, a world-wide industry standard. The DIN standar-dization of the ER collet system was the final confirmation that Fritz Weber was on the right track with his invention. Not only is REGO-FIX AG one of the leading manufacturer of tool holding systems in the world, it also has a reputation of being one of the best.

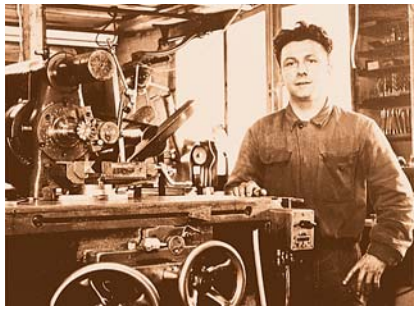
REGO-FIX®
Swiss Precision Tools



Fritz Weber takes over the attik of this house in Reigoldswil and uses it as workshop (pictures around 1900)

History

Scenes of a working day „Fritz Weber Feinmechanik und Werkzeugbau" in the 50ies and 60ies.



1950
«Fritz Weber Feinmechanik und Werkzeugbau», established by Fritz Weber, precision toolmaker.

1957
Moved from attic in Weber residence to new building in Reigoldswil (15 employees).

1962
First major production expansion (25 employees).

1968
Second production expansion (30 employees).

1973
ER Collet sysstem is developed and patented by REGO-FIX AG.

1980
REGO-FIX name and logo are officially adopted.

1982
REGO-FIX AG expands into second facility across the road in Reigoldswil (60 employees).

1988
«REGO-FIX TOOL Corporation» is established as a sales company in Indianapolis, Indiana, USA.

1990
REGO-FIX AG acquires Ramseyer SA, Le Landeron, Switzerland.

1991
Renovation is completed to building in Reigoldswil while the turning and milling division is established at a modern production facility in Liestal, Switzerland (85 employees).

1993
REGO-FIX ER Collet system becomes DIN Standard 6499.

1994
«REGO-FIX GmbH» is established as a sales company in Lörrach, Germany.

1995
Certification to ISO 9001.

1998
REGO-FIX AG consolidated into one facility in Tenniken, Switzerland. (100 employees)

1999
REGO-FIX AG makes major capital investment in new machine tools. «REGO-FIX TOOL Corporation» relocates to new, larger facility in Indianapolis.

2000
REGO-FIX celebrates 50 years as worldwide leader in the manufacturing of Swiss Precision tool holders and accessories.

50 YEARS

REGO-FIX®-Switzerland

Images: NASA / ©Kurt Müller, Archiv Kurverein Zermatt

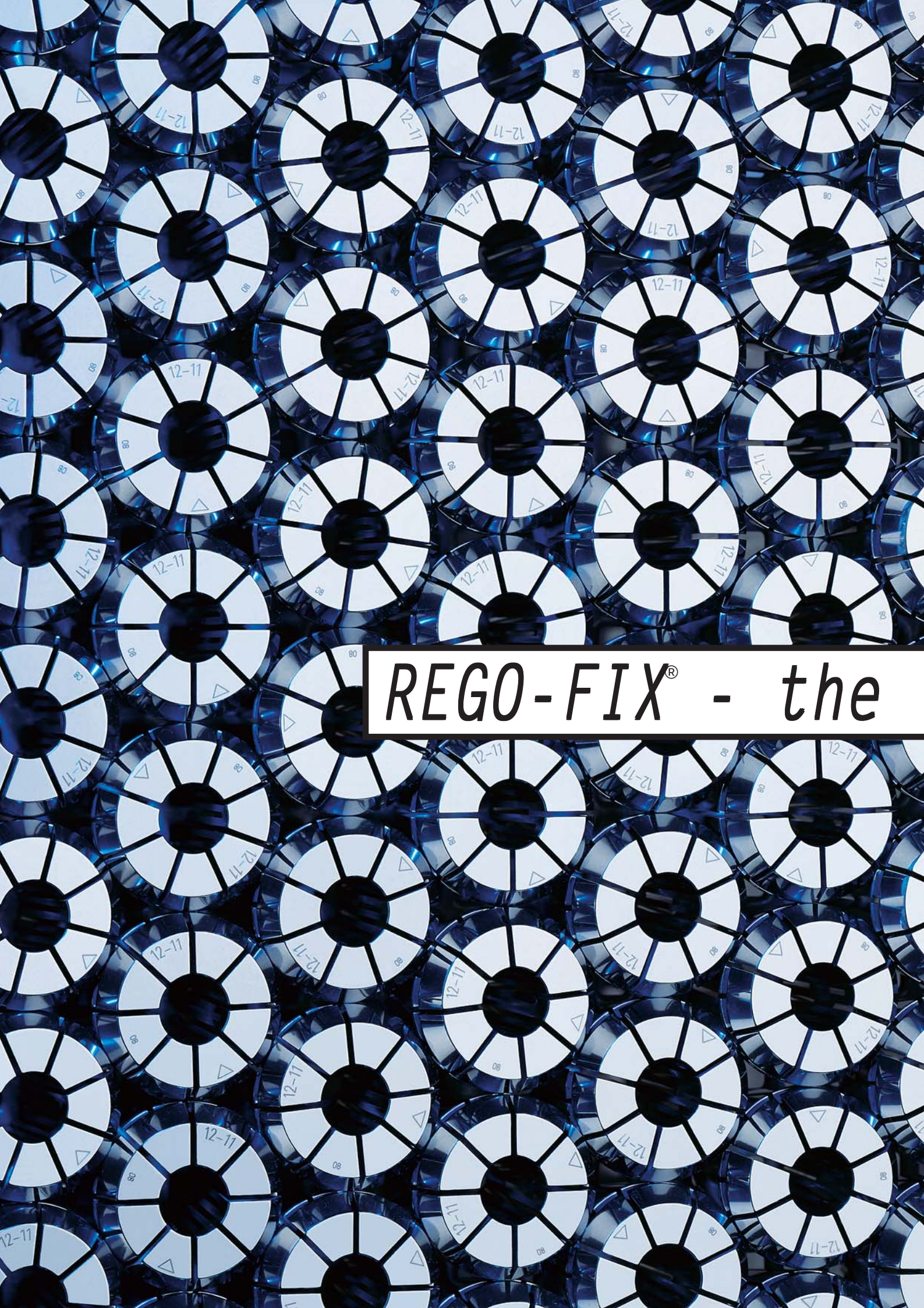
REGO-FIX®
Swiss Precision Tools

The Jura region in Northwestern Switzerland has long been famous for its watch making industry and its production of precision mechanical products. It's here, in the village of Tenniken, where REGO-FIX products are manufactured and distributed worldwide. Company sales organizations in the US and Germany along with a world wide network of manufacturer representatives complete the REGO-FIX global distribution system.

The town nestled in the hilly landscape ot the «Baselbieter Jura».

and worldwide

The new building of «REGO-FIX TOOL Corporation» in Indianapolis, USA



REGO-FIX® - the

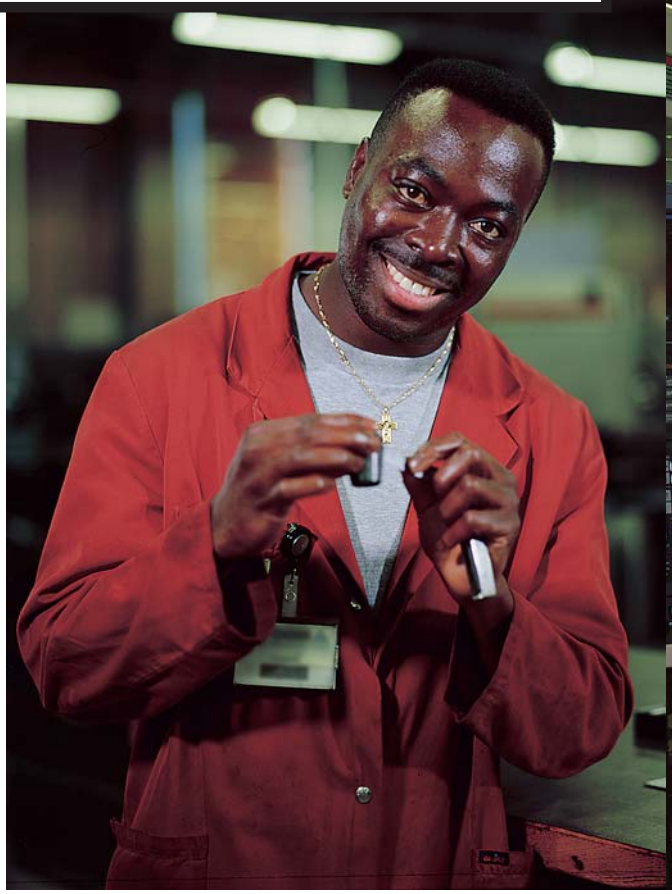
REGO-FIX®
Swiss Precision Tools

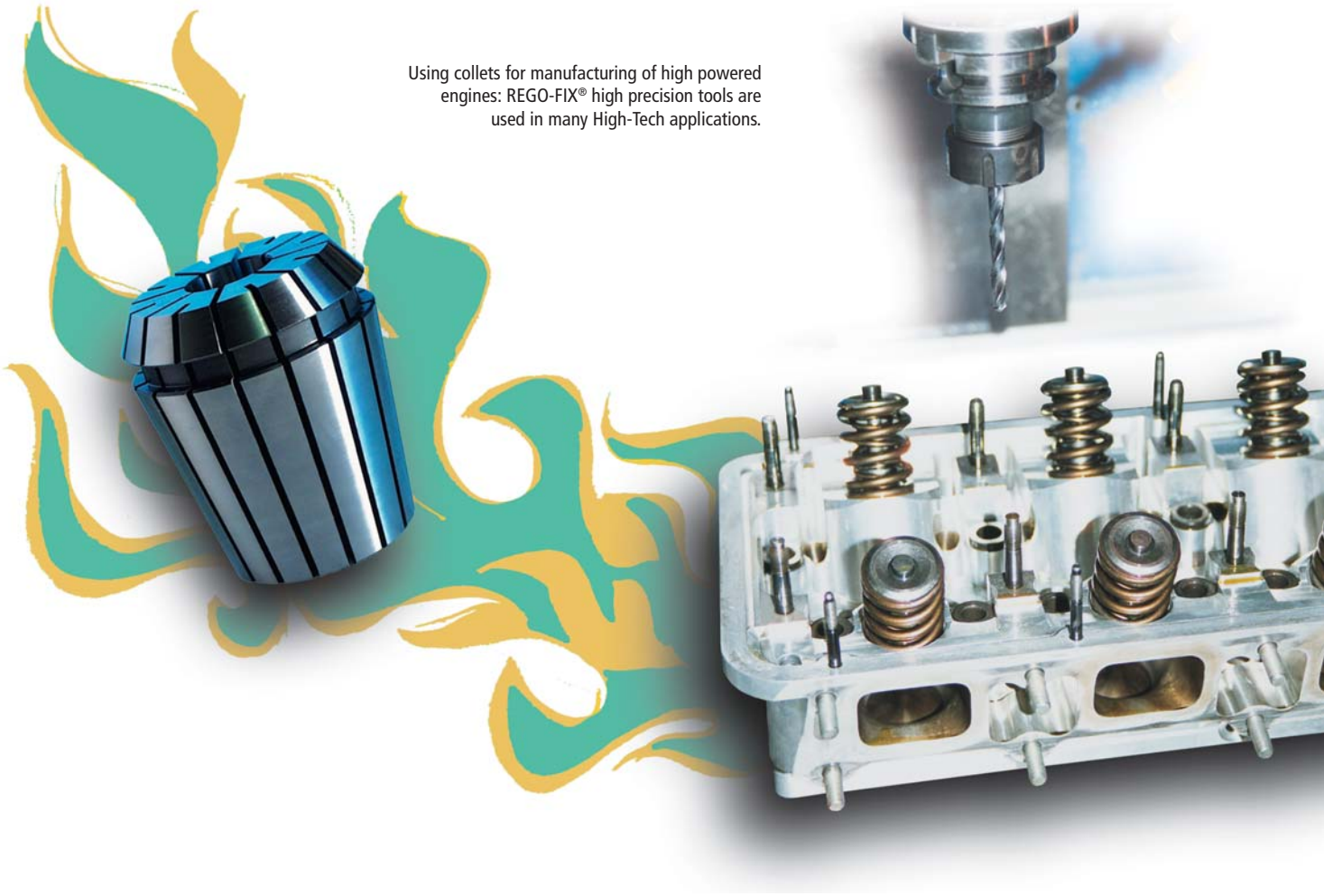
Behind every product stand experienced people. An innovative spirit within REGO-FIX encourages continuous improvement of existing products and the development of new ones. Motivated, well-trained employees with year's of experience, represent «Swiss Quality». Their ideas, experience and skills are put to use in the new and modern REGO-FIX manufacturing facility.

- Production and
- Engineering

- REGO-FIX employs over
- 120 people around the world

Production





Using collets for manufacturing of high powered engines: REGO-FIX® high precision tools are used in many High-Tech applications.

REGO-FIX® - the

In 0.8 seconds from 0 to 100 km/h – behind this extreme acceleration stands an extra class engine. Burning methanol, this engine produces 2,800hp.

What does this all have to do with REGO-FIX®? Behind most High-Tech products stands an equally High-Tech manufacturing process.

For highest precision and longest tool life **REGO-FIX® toolholding systems are the preferred choice**.

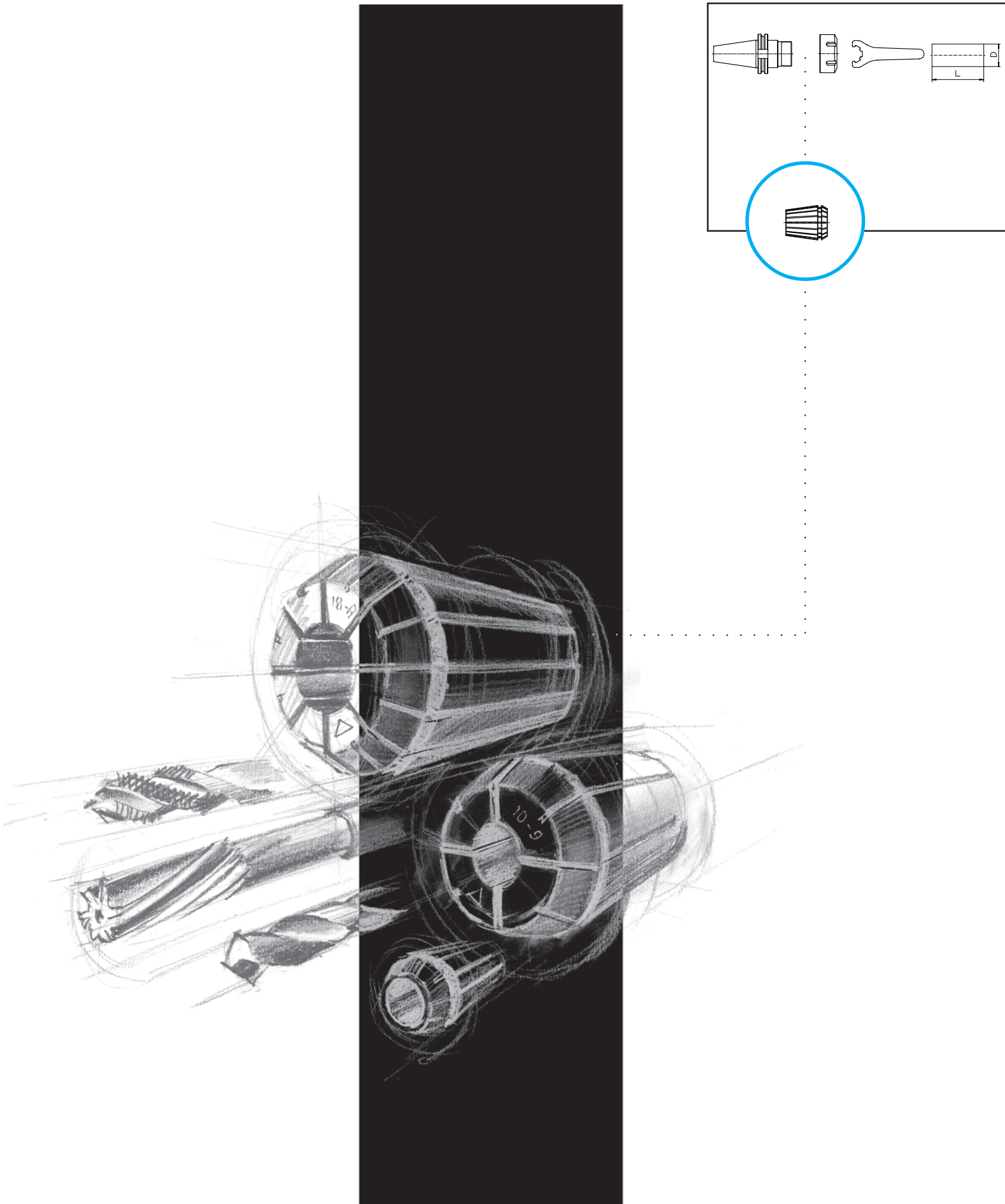
REGO-FIX®
Swiss Precision Tools

Application

Picture by Remco Scheelings

3 p.m.: On the stands along the track 50,000 spectators wait for the show-down. After a short burn-out, two funny cars inch forward to the starting line. The lights turn green and off they go, thundering down the track. After a short 6 seconds they reach the finish line at a speed of close to 400 km/h.

Picture by Fat Attack Drag Racing, Grellingen, Schweiz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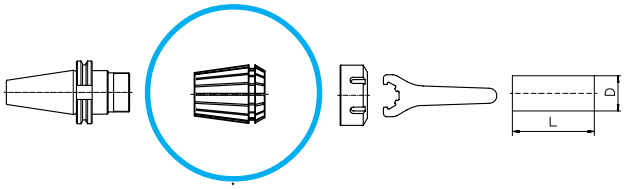
REGO-FIX®
Swiss Precision Tools

Collets and Hydraulic Reduction Sleeves

Contents

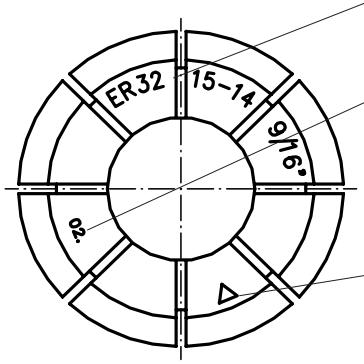
COLLETS



2

ER
ER-UP

FEATURES AND BENEFITS



Marking: Type and size markings easy to read
➪ *Reduced collet selection errors*

Product Traceability: Lot number marked on collets
➪ *Quality control and accountability*

Origin: **REGO-FIX®** invented the ER collet system
➪ *Many years of experience, proven system and reliability*

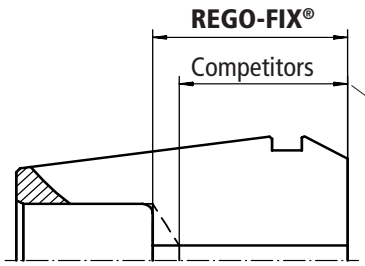
△ : Only original **REGO-FIX®** products have this special symbol
➪ *Guarantees highest quality*

Quality: Swiss made to ISO 9001; DIN 6499
➪ *Product consistency and worldwide acceptance*

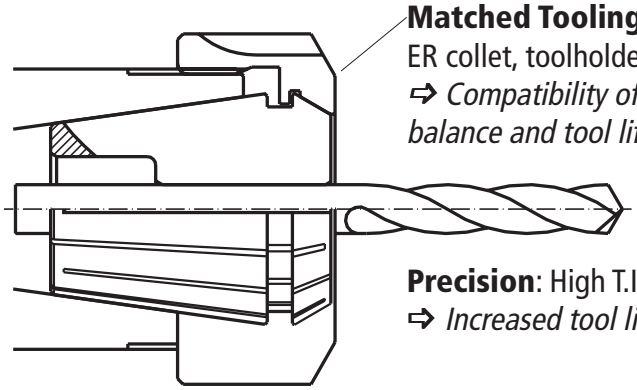
Material: Special spring steel
➪ *Durability and increased collet life*

Wide Clamping Range: Due to 16 slot design
➪ *Less collet inventory necessary*

Wide Product Range: Types ER 8 to ER 50. Clamping Ø 0.2 - 34 mm
➪ *Versatility for a variety of applications*



Clamping Length: 20% greater shank contact on small diameters than other brands
➪ *Higher clamping power and improved T.I.R.*



Matched Tooling System for Best Fit:
ER collet, toolholder, clamping nut and spanner all from **REGO-FIX®**
➪ *Compatibility of the whole system results in the maximum precision, balance and tool life*

Precision: High T.I.R. accuracy over the entire clamping range
➪ *Increased tool life and part quality*

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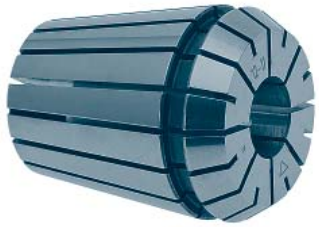
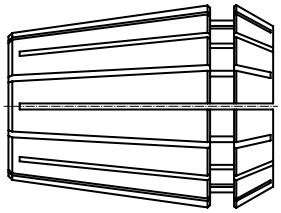


ER
ER-UP

ER STANDARD COLLETS PER DIN STD 6499 FORM B



The **REGO-FIX®** Standard ER collet is the most widely used clamping system in the world. Originally created and patented in 1973 by **REGO-FIX®**, it is ideal for a variety of machining applications including boring, milling, reaming, tapping and grinding. Compared to the Form A nominal diameter collets, Form B collets have a wide clamping range. With a short design profile and greater elasticity, the ER Form B collet offers tighter precision than competitors' collets when used with the **REGO-FIX®** system.

The **REGO-FIX®** Standard ER collet (to DIN 6499) is available in a variety of sizes including ER 8, 11, 16, 20, 25, 32, 40, 50. This wide selection of ER collets can accurately clamp tool shanks ranging from 0.5 mm (0.0197") up to 34.0 mm (1.3386"). Look for the △ on the top of your collet to be assured that you have a quality, Swiss Precision **REGO-FIX®** product.

ER-UP COLLETS ULTRA-PRECISION PER DIN STD 6499 FORM B

The **REGO-FIX®** Ultra-Precision (UP) ER collet is similar to the ER Standard collet except that it combines the advantages of the DIN 6499 Form A + B into one collet. Like the ER Standard collet, it is ideal for a variety of machining applications including boring, milling, reaming, tapping and grinding.

With a multiple clamping range and high concentricity (to DIN 6499 Form A), the **REGO-FIX®** ER-UP collets are primarily used on high-speed spindles or in other high-speed machining applications where low T.I.R. (Total Indicated Runout) is required. Low T.I.R. improves tool life and results in greater machining precision (see chart on page 2-3).

REGO-FIX® ER-UP collets are available in a variety of sizes including ER 8, 11, 16, 20, 25, 32, 40, 50. Clamping capacity is the same as for standard precision collets which ranges from 0.5 mm (0.0197") up to 34.0 mm (1.3386").

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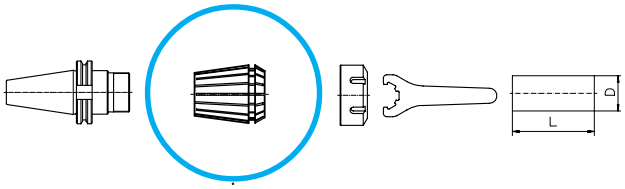
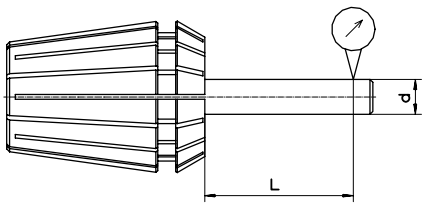


2

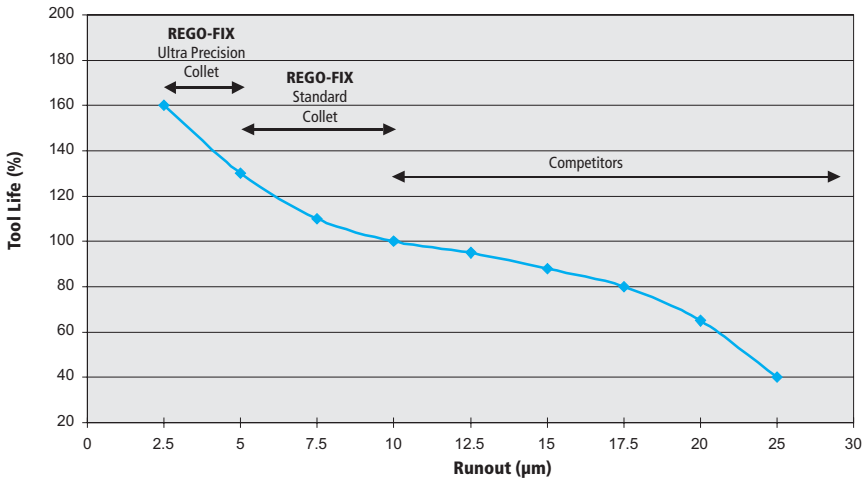
CONCENTRICITY

CONCENTRICITY (T.I.R.) OF COLLETS (DIN 6499 FORM B), TYPE ER (STANDARD) AND ER-UP (ULTRA-PRECISION)



Clamping Range[mm]			T.I.R. [mm]		
From d	**To d**	**L**	**DIN**	**ER** (Standard)	**ER-UP** (Ultra-Precision)
1.0 1.6 3.0 6.0	1.6 3.0 6.0 10.0	6.0 10.0 16.0 25.0	0.015	**0.010**	**0.005**
10.0 18.0	18.0 26.0	40.0 50.0	0.020	**0.010**	**0.005**
26.0	34.0	60.0	0.025	**0.015**	**0.010**

INFLUENCE OF TOOL RUNOUT (T.I.R.) ON TOOL LIFE



Precision is a function of the whole system of toolholder, collet and nut. For best results we recommend that you use **REGO-FIX®** toolholders, **REGO-FIX®** collets and **REGO-FIX®** nuts.

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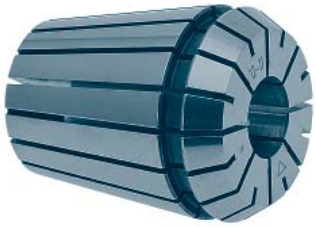
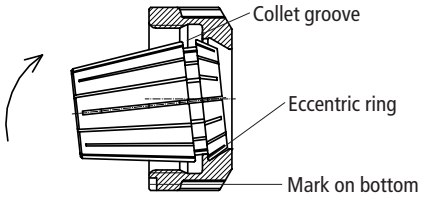


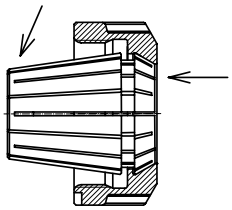
MOUNTING INSTRUCTIONS

MOUNTING INSTRUCTIONS FOR ER-COLLETS PER DIN STD 6499-B

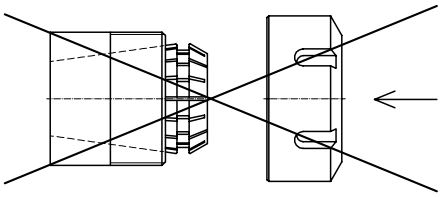
Assembling Collet:
Insert groove of the collet into eccentric ring of the clamping nut at the mark on the bottom of the nut. Push collet in the direction of the arrow until it clicks in. Insert tool. Screw nut with collet onto tool holder.



Removing Collet:
After the nut is unscrewed from the toolholder, press on the face of the collet while simultaneously pushing sideways on the back of the collet until it disengages from the clamping nut.



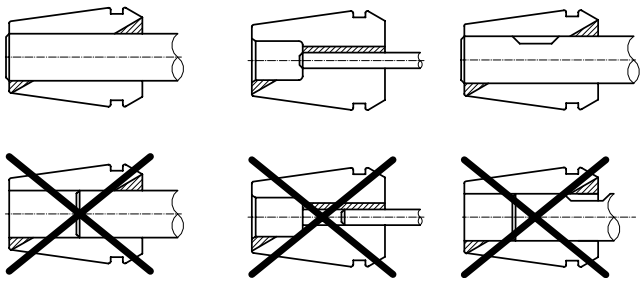
Improper assembly can permanently destroy the concentricity of the collet and may result in a damaged clamping nut.



NOTE:

- Only mount nuts with correctly inserted collets! Never place the collet into the holder without first assembling it into the nut.

- Never clamp oversize tool shanks !!
e.g. never use a Ø 12-11mm collet to clamp a Ø 12.2 mm shank. Rather use the next bigger collet (here Ø 12.5-11.5mm or Ø 13-12mm collet).



- Insert tool the full length of the collet for best results if possible. However never insert tool less than 2/3 of the collet bore length. Improper tool insertion can permanently deform the collet and will result in poor runout.

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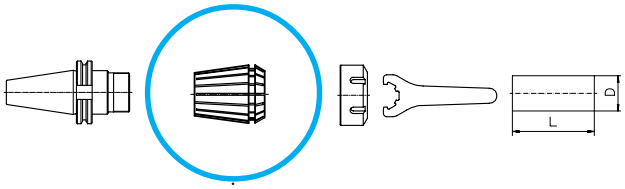
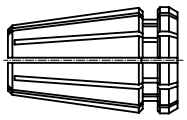


2

ER 8
ER 8-UP

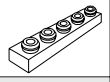


MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ERM 8	3508.00000	4-14			▲			■				E 8 M	7113.08000	12-1
	ER 8 MS	3208.50000	4-16			▲			■				E 8 MS	7114.08000	12-1

COLLET SET

ER 8 (STANDARD)
ER 8-UP (ULTRA-PRECISION)

Clamping Capacity [mm]					Set ER 8 Part No.	Set ER 8-UP Part No.
					1108.00000	1108.00001
1.0 ... 0.5	1.5 ... 1.0	2.0 ... 1.5	2.5 ... 2.0	Wooden Tray ZWT/8	**Supplied with:** **9 Collets** **1 Wooden Tray**	
3.0 ... 2.5	3.5 ... 3.0	4.0 ... 3.5	4.5 ... 4.0			
5.0 ... 4.5	–	–	–			

Edition 10/2004

ER 8
ER 8-UP

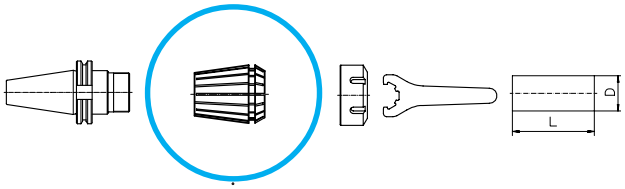
2

COLLETS
ER 8 (STANDARD)
ER 8-UP (ULTRA-PRECISION)

Clamping Capacity [mm]	Clamping Capacity [inch]	ø [inch]	ER 8 Part No.	ER 8-UP Part Nr.
1.00 ... 0.50	0.0394 ... 0.0197	1/32"	1108.01000	1108.01001
1.50 ... 1.00	0.0591 ... 0.0394		1108.01500	1108.01501
2.00 ... 1.50	0.0787 ... 0.0591	1/16"	1108.02000	1108.02001
2.50 ... 2.00	0.0984 ... 0.0787	3/32"	1108.02500	1108.02501
3.00 ... 2.50	0.1181 ... 0.0984		1108.03000	1108.03001
3.50 ... 3.00	0.1378 ... 0.1181	1/8"	1108.03500	1108.03501
4.00 ... 3.50	0.1575 ... 0.1378	5/32"	1108.04000	1108.04001
4.50 ... 4.00	0.1772 ... 0.1575		1108.04500	1108.04501
5.00 ... 4.50	0.1969 ... 0.1772	3/16"	1108.05000	1108.05001
Wooden Tray ZWT/8			7121.08000	7121.08000

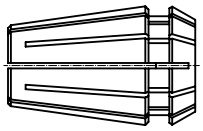
Additional technical information on page 13-2

Edition 10/2004



2

ER 11
ER 11-UP



MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ER 11	3411.00000	4- 4	■		▲							GS 17	7112.11000	12-1
	Hi-Q/ERC 11	3411.20300 - 3411.20700	4- 8			▲							GS 17	7112.11000	12-1
	Hi-Q/ERM 11	3511.00000	4-12			▲							E 11 M	7113.11000	12-1
	Hi-Q/ERMC 11	3511.20300 - 3511.20700	4-14			▲							E 11 M	7113.11000	12-1
	ER 11 MS	3211.50000	4-16			▲							E 11 MS	7114.11000	12-1
	Hi-Q/ERAX 11	3311.60000	4-18			▲							E 11 AX	7117.11000	12-1

COLLET SET
ER 11 (STANDARD)
ER 11-UP (ULTRA-PRECISION)

Clamping Capacity [mm]				
1.0 ... 0.5	1.5 ... 1.0	2.0 ... 1.5	2.5 ... 2.0	3.0 ... 2.5
3.5 ... 3.0	4.0 ... 3.5	4.5 ... 4.0	5.0 ... 4.5	Wooden Tray
5.5 ... 5.0	6.0 ... 5.5	6.5 ... 6.0	7.0 ... 6.5	ZWT/11

Set ER 11 Part No.	Set ER 11-UP Part No.
1111.00000	1111.00001

Supplied with:
13 Collets
1 Wooden Tray

Edition 10/2004

ER 11
ER 11-UP

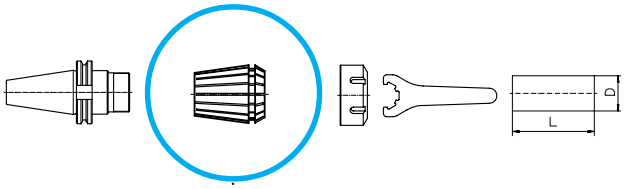
2

COLLETS
ER 11 (STANDARD)
ER 11-UP (ULTRA-PRECISION)

Clamping Capacity [mm]	Clamping Capacity [inch]	ø [inch]	ER 11 Part No.	ER 11-UP Part No.
1.00 ... 0.50	0.0394 ... 0.0197	1/32"	1111.01000	1111.01001
1.50 ... 1.00	0.0591 ... 0.0394		1111.01500	1111.01501
2.00 ... 1.50	0.0787 ... 0.0591	1/16"	1111.02000	1111.02001
2.50 ... 2.00	0.0984 ... 0.0787	3/32"	1111.02500	1111.02501
3.00 ... 2.50	0.1181 ... 0.0984		1111.03000	1111.03001
3.50 ... 3.00	0.1378 ... 0.1181	1/8"	1111.03500	1111.03501
4.00 ... 3.50	0.1575 ... 0.1378	5/32"	1111.04000	1111.04001
4.50 ... 4.00	0.1772 ... 0.1575		1111.04500	1111.04501
5.00 ... 4.50	0.1969 ... 0.1772	3/16"	1111.05000	1111.05001
5.50 ... 5.00	0.2165 ... 0.1969		1111.05500	1111.05501
6.00 ... 5.50	0.2362 ... 0.2165	7/32"	1111.06000	1111.06001
6.50 ... 6.00	0.2559 ... 0.2362	1/4"	1111.06500	1111.06501
7.00 ... 6.50	0.2756 ... 0.2559		1111.07000	1111.07001
Wooden Tray ZWT/11			7121.11000	7121.11000

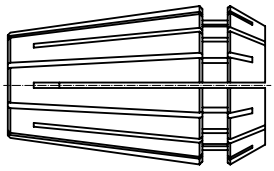
Additional technical information on page 13-2

Edition 10/2004



2

ER 16
ER 16-UP



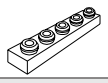
MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ER 16	3416.00000	4- 4	■									GS 25	7112.16000	12-1
	Hi-Q/ERC 16	3416.20000	4- 6										GS 25	7112.16000	12-1
	Hi-Q/ERB 16	3416.30000	4-10										GS 25	7112.16000	12-1
	Hi-Q/ERBC 16	3416.40000	4-10										GS 25	7112.16000	12-1
	Hi-Q/ERM 16	3516.00000	4-12										E 16 M	7113.16000	12-1
	Hi-Q/ERMC 16	3516.20000	4-12										E 16 M	7113.16000	12-1
	ER 16 MS	3216.50000	4-16										E 16 MS	7114.16000	12-1
	Hi-Q/ERAX 16	3316.60000	4-18										E 16 AX	7117.16000	12-1
	Hi-Q/ERAXC 16	3316.70000	4-18										E 16 AX	7117.16000	12-1
	CM/ER 16	3116.90000	12-4										E 16	7111.16000	12-1

COLLET SET

ER 16 (STANDARD)
ER 16-UP (ULTRA-PRECISION)

Clamping Capacity [mm]				
1.0 ... 0.5	2.0 ... 1.0	3.0 ... 2.0	4.0 ... 3.0	5.0 ... 4.0
6.0 ... 5.0	7.0 ... 6.0	8.0 ... 7.0	9.0 ... 8.0	10.0 ... 9.0
Wooden Tray ZWT/16				



Set ER 16 Part No.	Set ER 16-UP Part No.
1116.00000	1116.00001

Supplied with:
10 Collets
1 Wooden Tray

Edition 10/2004

ER 16
ER 16-UP

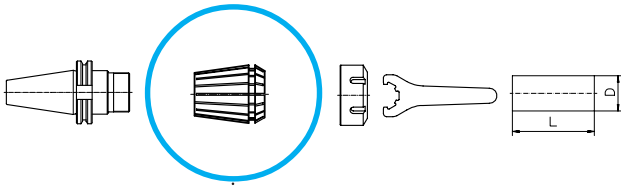
2

COLLETS
ER 16 (STANDARD)
ER 16-UP (ULTRA-PRECISION)

Clamping Capacity [mm]	Clamping Capacity [inch]	ø [inch]	ER 16 Part No.	ER 16-UP Part No.
1.00 ... 0.50	0.0394 ... 0.0197	1/32"	1116.01000	1116.01001
1.50 ... 1.00	0.0591 ... 0.0394		1116.01500	1116.01501
2.00 ... 1.00	0.0787 ... 0.0394	1/16"	1116.02000	1116.02001
2.50 ... 1.50	0.0984 ... 0.0591	3/32"	1116.02500	1116.02501
3.00 ... 2.00	0.1181 ... 0.0787		1116.03000	1116.03001
3.50 ... 2.50	0.1378 ... 0.0984	1/8"	1116.03500	1116.03501
4.00 ... 3.00	0.1575 ... 0.1181	5/32"	1116.04000	1116.04001
4.50 ... 3.50	0.1772 ... 0.1378		1116.04500	1116.04501
5.00 ... 4.00	0.1969 ... 0.1575	3/16"	1116.05000	1116.05001
5.50 ... 4.50	0.2165 ... 0.1772		1116.05500	1116.05501
6.00 ... 5.00	0.2362 ... 0.1969	7/32"	1116.06000	1116.06001
6.50 ... 5.50	0.2559 ... 0.2165	1/4"	1116.06500	1116.06501
7.00 ... 6.00	0.2756 ... 0.2362		1116.07000	1116.07001
7.50 ... 6.50	0.2953 ... 0.2559	9/32"	1116.07500	1116.07501
8.00 ... 7.00	0.3150 ... 0.2756	5/16"	1116.08000	1116.08001
8.50 ... 7.50	0.3347 ... 0.2953		1116.08500	1116.08501
9.00 ... 8.00	0.3543 ... 0.3150	11/32"	1116.09000	1116.09001
9.50 ... 8.50	0.3740 ... 0.3347		1116.09500	1116.09501
10.00 ... 9.00	0.3937 ... 0.3543	3/8"	1116.10000	1116.10001
Wooden Tray ZWT/16			7121.16000	7121.16000

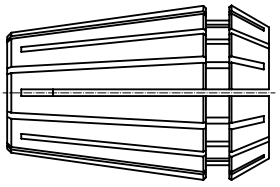
Additional technical information on page 13-2

Edition 10/2004



2

ER 20
ER 20-UP



MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ER 20	3420.00000	4- 4	■		▲		●					GS 30	7112.20000	12-1
	Hi-Q/ERC 20	3420.20000	4- 6			▲	●	●					GS 30	7112.20000	12-1
	Hi-Q/ERB 20	3420.30000	4-10		■	▲		●					GS 30	7112.20000	12-1
	Hi-Q/ERBC 20	3420.40000	4-10		■	▲	●	●					GS 30	7112.20000	12-1
	Hi-Q/ERM 20	3520.00000	4-12			▲		●	■				E 20 M	7113.20000	12-1
	Hi-Q/ERMC 20	3520.20000	4-12			▲	●	●	■				E 20 M	7113.20000	12-1
	ER 20 MS	3220.50000	4-16			▲			■				E 20 MS	7114.20000	12-1
	Hi-Q/ERAX 20	3320.60000	4-18			▲		●		■			E 20 AX	7117.20000	12-1
	Hi-Q/ERAXC 20	3320.70000	4-18			▲	●	●		■			E 20 AX	7117.20000	12-1
	CM/ER 20	3120.90000	12-4								■		E 20	7111.20000	12-1

COLLET SET

ER 20 (STANDARD)
ER 20-UP (ULTRA-PRECISION)

Clamping Capacity [mm]					Set ER 20 Part No.	Set ER 20-UP Part No.
2.0 ... 1.0	3.0 ... 2.0	4.0 ... 3.0	5.0 ... 4.0	Wooden Tray ZWT/20	1120.00000	1120.00001
6.0 ... 5.0	7.0 ... 6.0	8.0 ... 7.0	9.0 ... 8.0			
10.0 ... 9.0	11.0 ... 10.0	12.0 ... 11.0	13.0 ... 12.0			

Supplied with:
12 Collets
1 Wooden Tray

Edition 10/2004

ER 20
ER 20-UP

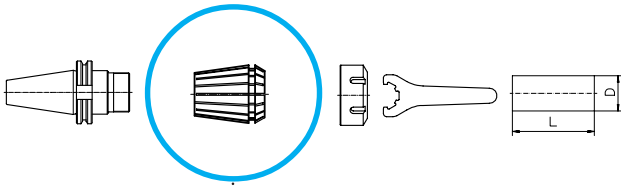
2

COLLETS
ER 20 (STANDARD)
ER 20-UP (ULTRA-PRECISION)

Clamping Capacity [mm]	Clamping Capacity [inch]	ø [inch]	ER 20 Part No.	ER 20-UP Part No.
1.00 ... 0.50	0.0394 ... 0.0197	1/32"	1120.01000	1120.01001
1.50 ... 1.00	0.0591 ... 0.0394		1120.01500	1120.01501
2.00 ... 1.00	0.0787 ... 0.0394	1/16"	1120.02000	1120.02001
2.50 ... 1.50	0.0984 ... 0.0591	3/32"	1120.02500	1120.02501
3.00 ... 2.00	0.1181 ... 0.0787		1120.03000	1120.03001
3.50 ... 2.50	0.1378 ... 0.0984	1/8"	1120.03500	1120.03501
4.00 ... 3.00	0.1575 ... 0.1181	5/32"	1120.04000	1120.04001
4.50 ... 3.50	0.1772 ... 0.1378		1120.04500	1120.04501
5.00 ... 4.00	0.1969 ... 0.1575	3/16"	1120.05000	1120.05001
5.50 ... 4.50	0.2165 ... 0.1772		1120.05500	1120.05501
6.00 ... 5.00	0.2362 ... 0.1969	7/32"	1120.06000	1120.06001
6.50 ... 5.50	0.2559 ... 0.2165	1/4"	1120.06500	1120.06501
7.00 ... 6.00	0.2756 ... 0.2362		1120.07000	1120.07001
7.50 ... 6.50	0.2953 ... 0.2559	9/32"	1120.07500	1120.07501
8.00 ... 7.00	0.3150 ... 0.2756	5/16"	1120.08000	1120.08001
8.50 ... 7.50	0.3347 ... 0.2953		1120.08500	1120.08501
9.00 ... 8.00	0.3543 ... 0.3150	11/32"	1120.09000	1120.09001
9.50 ... 8.50	0.3740 ... 0.3347		1120.09500	1120.09501
10.00 ... 9.00	0.3937 ... 0.3543	3/8"	1120.10000	1120.10001
10.50 ... 9.50	0.4134 ... 0.3740	13/32"	1120.10500	1120.10501
11.00 ... 10.00	0.4330 ... 0.3937		1120.11000	1120.11001
11.50 ... 10.50	0.4528 ... 0.4134	7/16"	1120.11500	1120.11501
12.00 ... 11.00	0.4724 ... 0.4375	15/32"	1120.12000	1120.12001
12.50 ... 11.50	0.4921 ... 0.4528		1120.12500	1120.12501
13.00 ... 12.00	0.5118 ... 0.4724	1/2"	1120.13000	1120.13001
Wooden Tray ZWT/20			7121.20000	7121.20000

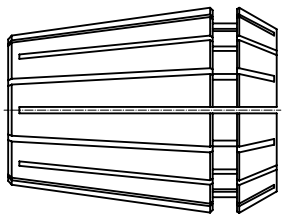
Additional technical information on page 13-2

Edition 10/2004



2

ER 25
ER 25-UP



MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ER 25	3425.00000	4- 4	■		▲		●					E 25	7111.25000	12-1
	Hi-Q/ERC 25	3425.20000	4- 6			▲	●	●					E 25	7111.25000	12-1
	Hi-Q/ERB 25	3425.30000	4-10		■	▲		●					E 25	7111.25000	12-1
	Hi-Q/ERBC 25	3425.40000	4-10		■	▲	●	●					E 25	7111.25000	12-1
	Hi-Q/ERM 25	3525.00000	4-12			▲		●	■				E 25 M	7113.25000	12-1
	Hi-Q/ERMC 25	3525.20000	4-12			▲	●	●	■				E 25 M	7113.25000	12-1
	Hi-Q/ERAX 25	3325.60000	4-18			▲		●		■			E 25 AX	7117.25000	12-1
	Hi-Q/ERAXC 25	3325.70000	4-18			▲	●	●		■			E 25 AX	7117.25000	12-1
	CM/ER 25	3125.90000	12-4								■		E 25	7111.25000	12-1

COLLET SET

ER 25 (STANDARD)
ER 25-UP (ULTRA-PRECISION)

Clamping Capacity [mm]					Set ER 25 Part No.	Set ER 25-UP Part No.
2.0 ... 1.0	3.0 ... 2.0	4.0 ... 3.0	5.0 ... 4.0	6.0 ... 5.0	1125.00000	1125.00001
7.0 ... 6.0	8.0 ... 7.0	9.0 ... 8.0	10.0 ... 9.0	11.0 ... 10.0		
12.0 ... 11.0	13.0 ... 12.0	14.0 ... 13.0	15.0 ... 14.0	16.0 ... 15.0		
Wooden Tray ZWT/25						

Supplied with:
15 Collets
1 Wooden Tray

Edition 10/2004

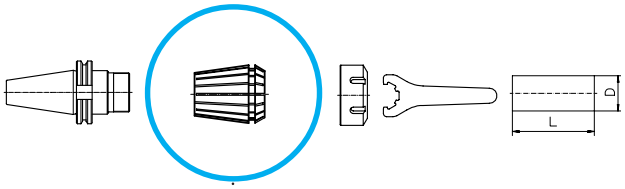
ER 25
ER 25-UP

2

COLLETS
ER 25 (STANDARD)
ER 25-UP (ULTRA-PRECISION)

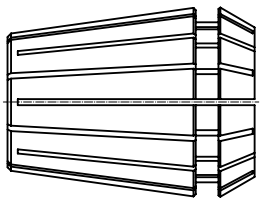
Clamping Capacity [mm]	[inch]	ø [Zoll]	ER 25 Part No.	ER 25-UP Part No.
1.00 ... 0.50	0.0394 ... 0.0197	1/32"	1125.01000	1125.01001
1.50 ... 1.00	0.0591 ... 0.0394		1125.01500	1125.01501
2.00 ... 1.00	0.0787 ... 0.0394	1/16"	1125.02000	1125.02001
2.50 ... 1.50	0.0984 ... 0.0591	3/32"	1125.02500	1125.02501
3.00 ... 2.00	0.1181 ... 0.0787		1125.03000	1125.03001
3.50 ... 2.50	0.1378 ... 0.0984	1/8"	1125.03500	1125.03501
4.00 ... 3.00	0.1575 ... 0.1181	5/32"	1125.04000	1125.04001
4.50 ... 3.50	0.1772 ... 0.1378		1125.04500	1125.04501
5.00 ... 4.00	0.1969 ... 0.1575	3/16"	1125.05000	1125.05001
5.50 ... 4.50	0.2165 ... 0.1772		1125.05500	1125.05501
6.00 ... 5.00	0.2362 ... 0.1969	7/32"	1125.06000	1125.06001
6.50 ... 5.50	0.2559 ... 0.2165	1/4"	1125.06500	1125.06501
7.00 ... 6.00	0.2756 ... 0.2362		1125.07000	1125.07001
7.50 ... 6.50	0.2953 ... 0.2559	9/32"	1125.07500	1125.07501
8.00 ... 7.00	0.3150 ... 0.2756	5/16"	1125.08000	1125.08001
8.50 ... 7.50	0.3347 ... 0.2953		1125.08500	1125.08501
9.00 ... 8.00	0.3543 ... 0.3150	11/32"	1125.09000	1125.09001
9.50 ... 8.50	0.3740 ... 0.3347		1125.09500	1125.09501
10.00 ... 9.00	0.3937 ... 0.3543	3/8"	1125.10000	1125.10001
10.50 ... 9.50	0.4134 ... 0.3740	13/32"	1125.10500	1125.10501
11.00 ... 10.00	0.4330 ... 0.3937		1125.11000	1125.11001
11.50 ... 10.50	0.4528 ... 0.4134	7/16"	1125.11500	1125.11501
12.00 ... 11.00	0.4724 ... 0.4375	15/32"	1125.12000	1125.12001
12.50 ... 11.50	0.4921 ... 0.4528		1125.12500	1125.12501
13.00 ... 12.00	0.5118 ... 0.4724	1/2"	1125.13000	1125.13001
13.50 ... 12.50	0.5315 ... 0.4921	17/32"	1125.13500	1125.13501
14.00 ... 13.00	0.5512 ... 0.5118		1125.14000	1125.14001
14.50 ... 13.50	0.5709 ... 0.5315	9/16"	1125.14500	1125.14501
15.00 ... 14.00	0.5905 ... 0.5512		1125.15000	1125.15001
15.50 ... 14.50	0.6102 ... 0.5315	19/32"	1125.15500	1125.15501
16.00 ... 15.00	0.6300 ... 0.5905	5/8"	1125.16000	1125.16001
Wooden Tray ZWT/25			7121.25000	7121.25000

Additional technical information on page 13-2



2

ER 32
ER 32-UP

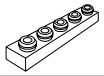


MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ER 32	3432.00000	4- 4	■		▲		●				E 32		7111.32000	12-1
	Hi-Q/ERC 32	3432.20000	4- 6			▲	●	●				E 32		7111.32000	12-1
	Hi-Q/ERB 32	3432.30000	4-10		■	▲		●				E 32		7111.32000	12-1
	Hi-Q/ERBC 32	3432.40000	4-10		■	▲	●	●				E 32		7111.32000	12-1
	Hi-Q/ERAX 32	3332.60000	4-18			▲		●		■		E 32 AX		7117.32000	12-1
	HiQ/ERAXC 32	3332.70000	4-18			▲	●	●		■		E 32 AX		7117.32000	12-1
	CM/ER 32	3132.90000	12-4								■	E 32		7111.32000	12-1

COLLET SET

ER 32 (STANDARD)
ER 32-UP (ULTRA-PRECISION)



	ER 32 Part No.	ER 32-UP Part No.
	1132.00000	1132.00001

Clamping Capacity [mm]

3.0 ... 2.0	4.0 ... 3.0	5.0 ... 4.0	6.0 ... 5.0	7.0 ... 6.0
8.0 ... 7.0	9.0 ... 8.0	10.0 ... 9.0	11.0 ... 10.0	12.0 ... 11.0
13.0 ... 12.0	14.0 ... 13.0	15.0 ... 14.0	16.0 ... 15.0	Wooden Tray
17.0 ... 16.0	18.0 ... 17.0	19.0 ... 18.0	20.0 ... 19.0	ZWT/32

Supplied with:
18 Collets
1 Wooden Tray

Edition 10/2004

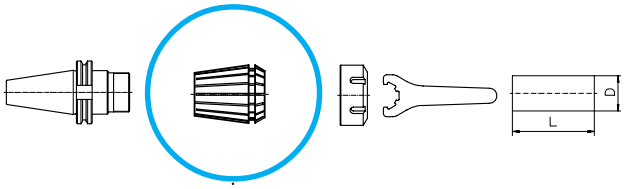
ER 32
ER 32-UP

2

COLLETS
ER 32 (STANDARD)
ER 32-UP (ULTRA-PRECISION)

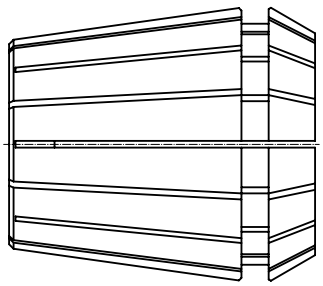
Clamping Capacity [mm]	Clamping Capacity [inch]	ø [Zoll]	ER 32 Part No.	ER 32-UP Part No.
2.00 ... 1.00	0.0787 ... 0.0394	1/16"	1132.02000	1132.02001
2.50 ... 1.50	0.0984 ... 0.0591	3/32"	1132.02500	1132.02501
3.00 ... 2.00	0.1181 ... 0.0787		1132.03000	1132.03001
3.50 ... 2.50	0.1378 ... 0.0984	1/8"	1132.03500	1132.03501
4.00 ... 3.00	0.1575 ... 0.1181	5/32"	1132.04000	1132.04001
4.50 ... 3.50	0.1772 ... 0.1378		1132.04500	1132.04501
5.00 ... 4.00	0.1969 ... 0.1575	3/16"	1132.05000	1132.05001
5.50 ... 4.50	0.2165 ... 0.1772		1132.05500	1132.05501
6.00 ... 5.00	0.2362 ... 0.1969	7/32"	1132.06000	1132.06001
6.50 ... 5.50	0.2559 ... 0.2165	1/4"	1132.06500	1132.06501
7.00 ... 6.00	0.2756 ... 0.2362		1132.07000	1132.07001
7.50 ... 6.50	0.2953 ... 0.2559	9/32"	1132.07500	1132.07501
8.00 ... 7.00	0.3150 ... 0.2756	5/16"	1132.08000	1132.08001
8.50 ... 7.50	0.3347 ... 0.2953		1132.08500	1132.08501
9.00 ... 8.00	0.3543 ... 0.3150	11/32"	1132.09000	1132.09001
9.50 ... 8.50	0.3740 ... 0.3347		1132.09500	1132.09501
10.00 ... 9.00	0.3937 ... 0.3543	3/8"	1132.10000	1132.10001
10.50 ... 9.50	0.4134 ... 0.3740	13/32"	1132.10500	1132.10501
11.00 ... 10.00	0.4330 ... 0.3937		1132.11000	1132.11001
11.50 ... 10.50	0.4528 ... 0.4134	7/16"	1132.11500	1132.11501
12.00 ... 11.00	0.4724 ... 0.4375	15/32"	1132.12000	1132.12001
12.50 ... 11.50	0.4921 ... 0.4528		1132.12500	1132.12501
13.00 ... 12.00	0.5118 ... 0.4724	1/2"	1132.13000	1132.13001
13.50 ... 12.50	0.5315 ... 0.4921	17/32"	1132.13500	1132.13501
14.00 ... 13.00	0.5512 ... 0.5118		1132.14000	1132.14001
14.50 ... 13.50	0.5709 ... 0.5315	9/16"	1132.14500	1132.14501
15.00 ... 14.00	0.5905 ... 0.5512		1132.15000	1132.15001
15.50 ... 14.50	0.6102 ... 0.5315	19/32"	1132.15500	1132.15501
16.00 ... 15.00	0.6300 ... 0.5905	5/8"	1132.16000	1132.16001
16.50 ... 15.50	0.6496 ... 0.6102		1132.16500	1132.16501
17.00 ... 16.00	0.6693 ... 0.6300	21/32"	1132.17000	1132.17001
17.50 ... 16.50	0.6890 ... 0.6496	11/16"	1132.17500	1132.17501
18.00 ... 17.00	0.7087 ... 0.6693		1132.18000	1132.18001
18.50 ... 17.50	0.7284 ... 0.6890	23/32"	1132.18500	1132.18501
19.00 ... 18.00	0.7480 ... 0.7078		1132.19000	1132.19001
19.50 ... 18.50	0.7677 ... 0.7284	3/4"	1132.19500	1132.19501
20.00 ... 19.00	0.7874 ... 0.7480	25/32"	1132.20000	1132.20001
Wooden Tray ZWT/32			7121.32000	7121.32000

Additional technical information on page 13-2



2

ER 40
ER 40-UP



MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ER 40	3440.00000	4- 4	■									E 40	7111.40000	12-1
	Hi-Q/ERC 40	3440.20000	4- 6										E 40	7111.40000	12-1
	Hi-Q/ERB 40	3440.30000	4-10										E 40	7111.40000	12-1
	Hi-Q/ERBC 40	3440.40000	4-10										E 40	7111.40000	12-1
	Hi-Q/ERAX 40	3340.60000	4-18										E 40 AX	7117.40000	12-1
	Hi-Q/ERAXC 40	3340.70000	4-18										E 40 AX	7117.40000	12-1
	CM/ER 40	3140.90000	13-4										E 40	7111.40000	12-1

COLLET SET

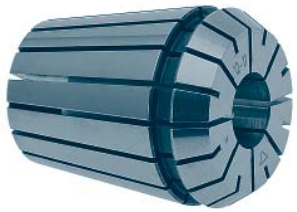
ER 40 (STANDARD)
ER 40-UP (ULTRA-PRECISION)

Clamping Capacity [mm]				
4.0 ... 3.0	5.0 ... 4.0	6.0 ... 5.0	7.0 ... 6.0	8.0 ... 7.0
9.0 ... 8.0	10.0 ... 9.0	11.0 ... 10.0	12.0 ... 11.0	13.0 ... 12.0
14.0 ... 13.0	15.0 ... 14.0	16.0 ... 15.0	17.0 ... 16.0	18.0 ... 17.0
19.0 ... 18.0	20.0 ... 19.0	21.0 ... 20.0	22.0 ... 21.0	Wooden Tray
23.0 ... 22.0	24.0 ... 23.0	25.0 ... 24.0	26.0 ... 25.0	ZWT/40

Set ER 40 Part No.	Set ER 40-UP Part No.
1140.00000	1140.00001

Supplied with:
23 Collets
1 Wooden Tray

Edition 10/2004



ER 40
ER 40-UP

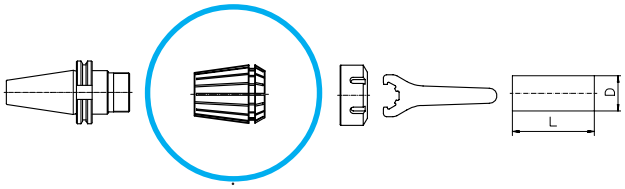
COLLETS
ER 40 (STANDARD)
ER 40-UP (ULTRA-PRECISION)

Clamping Capacity [mm]	Clamping Capacity [inch]	ø [Zoll]	ER 40 Part No.	ER 40-UP Part No.
3.00 ... 2.00	0.1181 ... 0.0787	3/32"	1140.03000	1140.03001
3.50 ... 2.50	0.1378 ... 0.0984	1/8"	1140.03500	1140.03501
4.00 ... 3.00	0.1575 ... 0.1181	5/32"	1140.04000	1140.04001
4.50 ... 3.50	0.1772 ... 0.1378		1140.04500	1140.04501
5.00 ... 4.00	0.1969 ... 0.1575	3/16"	1140.05000	1140.05001
5.50 ... 4.50	0.2165 ... 0.1772		1140.05500	1140.05501
6.00 ... 5.00	0.2362 ... 0.1969	7/32"	1140.06000	1140.06001
6.50 ... 5.50	0.2559 ... 0.2165	1/4"	1140.06500	1140.06501
7.00 ... 6.00	0.2756 ... 0.2362		1140.07000	1140.07001
7.50 ... 6.50	0.2953 ... 0.2559	9/32"	1140.07500	1140.07501
8.00 ... 7.00	0.3150 ... 0.2756	5/16"	1140.08000	1140.08001
8.50 ... 7.50	0.3347 ... 0.2953		1140.08500	1140.08501
9.00 ... 8.00	0.3543 ... 0.3150	11/32"	1140.09000	1140.09001
9.50 ... 8.50	0.3740 ... 0.3347		1140.09500	1140.09501
10.00 ... 9.00	0.3937 ... 0.3543	3/8"	1140.10000	1140.10001
10.50 ... 9.50	0.4134 ... 0.3740	13/32"	1140.10500	1140.10501
11.00 ... 10.00	0.4330... 0.3937		1140.11000	1140.11001
11.50 ... 10.50	0.4528 ... 0.4134	7/16"	1140.11500	1140.11501
12.00 ... 11.00	0.4724 ... 0.4375	15/32"	1140.12000	1140.12001
12.50 ... 11.50	0.4921 ... 0.4528		1140.12500	1140.12501
13.00 ... 12.00	0.5118 ... 0.4724	1/2"	1140.13000	1140.13001
13.50 ... 12.50	0.5315 ... 0.4921	17/32"	1140.13500	1140.13501
14.00 ... 13.00	0.5512 ... 0.5118		1140.14000	1140.14001
14.50 ... 13.50	0.5709 ... 0.5315	9/16"	1140.14500	1140.14501
15.00 ... 14.00	0.5905 ... 0.5512		1140.15000	1140.15001
15.50 ... 14.50	0.6102 ... 0.5315	19/32"	1140.15500	1140.15501
16.00 ... 15.00	0.6300 ... 0.5905	5/8"	1140.16000	1140.16001
16.50 ... 15.50	0.6496 ... 0.6102		1140.16500	1140.16501

Clamping Capacity [mm]	Clamping Capacity [inch]	ø [inch]	ER 40 Part No.	ER 40-UP Part No.
17.00 ...16.00	0.6693 ... 0.6300	21/32"	1140.17000	1140.17001
17.50 ...16.50	0.6890 ... 0.6496	11/16"	1140.17500	1140.17501
18.00 ...17.00	0.7087 ... 0.6693		1140.18000	1140.18001
18.50 ...17.50	0.7284 ... 0.6890	23/32"	1140.18500	1140.18501
19.00 ...18.00	0.7480 ... 0.7078		1140.19000	1140.19001
19.50 ...18.50	0.7677 ... 0.7284	3/4"	1140.19500	1140.19501
20.00 ...19.00	0.7874 ... 0.7480	25/32"	1140.20000	1140.20001
20.50 ...19.50	0.8071 ... 0.7677		1140.20500	1140.20501
21.00 ...20.00	0.8268 ... 0.7874	13/16"	1140.21000	1140.21001
21.50 ...20.50	0.8465 ... 0.8071	27/32"	1140.21500	1140.21501
22.00 ...21.00	0.8661 ... 0.8268		1140.22000	1140.22001
22.50 ...21.50	0.8858 ... 0.8465	7/8"	1140.22500	1140.22501
23.00 ...22.00	0.9055 ... 0.8661		1140.23000	1140.23001
23.50 ...22.50	0.9252 ... 0.8858	29/32"	1140.23500	1140.23501
24.00 ...23.00	0.9449 ... 0.9055	15/16"	1140.24000	1140.24001
24.50 ...23.50	0.9646 ... 0.9252		1140.24500	1140.24501
25.00 ...24.00	0.9843 ... 0.9449	31/32"	1140.25000	1140.25001
25.50 ...24.50	1.0039 ... 0.9646	1"	1140.25500	1140.25501
26.00 ...25.00	1.0236 ... 0.9843		1140.26000	1140.26001
27.00 ...26.00	1.0630 ... 1.0236	1-1/16"	1140.27000	1140.27001
28.00 ...27.00	1.1024 ... 1.0630	1-3/32"	1140.28000	1140.28001
29.00 ...28.00	1.1417 ... 1.1024	1-1/8"	1140.29000	1140.29001
30.00 ...29.00	1.1811 ... 1.1417	1-5/32"	1140.30000	1140.30001
Wooden Tray ZWT/40			7121.40000	7121.40000

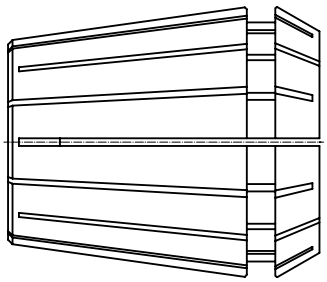
Additional technical information on page 13-2

Edition 10/2004



2

ER 50
ER 50-UP



MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ER 50	3450.00000	4- 4	■									E 50	7111.50000	12-1
	Hi-Q/ERB 50	3450.30000	4-10										E 50	7111.50000	12-1

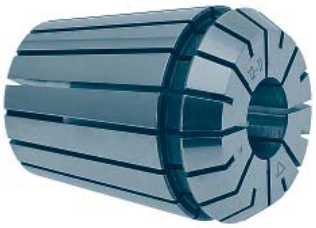
COLLET SET
ER 50 (STANDARD)
ER 50-UP (ULTRA-PRECISION)

Clamping Capacity [mm]					Set ER 50 Part No.	Set ER 50-UP Part No.
12.0 ... 10.0	14.0 ... 12.0	16.0 ... 14.0	18.0 ... 16.0	Wooden Tray ZWT/50	1150.00000	1150.00001
20.0 ... 18.0	22.0 ... 20.0	24.0 ... 22.0	26.0 ... 24.0			
28.0 ... 26.0	30.0 ... 28.0	32.0 ... 30.0	34.0 ... 32.0			

Supplied with:
12 Collets
1 WoodenTray

Edition 10/2004

ER 50
ER 50-UP

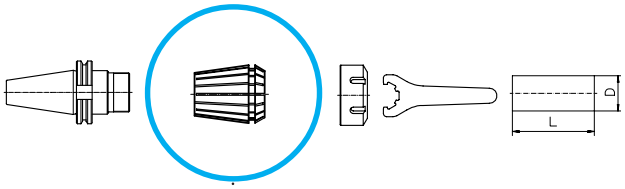


COLLETS
ER 50 (STANDARD)
ER 50-UP (ULTRA-PRECISION)

Clamping Capacity [mm]	[inch]	ø [inch]	ER 50 Part No.	ER 50-UP Part No.
6.00 ... 4.00	0.2362 ... 0.1575	3/16"	1150.06000	1150.06001
8.00 ... 6.00	0.3150 ... 0.2362	1/4"	1150.08000	1150.08001
10.00 ... 8.00	0.3937 ... 0.3150	3/8"	1150.10000	1150.10001
12.00 ... 10.00	0.4724 ... 0.3937	7/16"	1150.12000	1150.12001
14.00 ... 12.00	0.5512 ... 0.4724	1/2"	1150.14000	1150.14001
16.00 ... 14.00	0.6300 ... 0.5512	5/8"	1150.16000	1150.16001
18.00 ... 16.00	0.7087 ... 0.6300	11/16"	1150.18000	1150.18001
20.00 ... 18.00	0.7874 ... 0.7087	3/4"	1150.20000	1150.20001
22.00 ... 20.00	0.8661 ... 0.7874	13/16"	1150.22000	1150.22001
24.00 ... 22.00	0.9449 ... 0.8661	7/8"	1150.24000	1150.24001
25.00 ... 23.00	0.9843 ... 0.9055	31/32"	1150.25000	1150.25001
26.00 ... 24.00	1.0236 ... 0.9449	1"	1150.26000	1150.26001
28.00 ... 26.00	1.1024 ... 1.0236	1-1/16"	1150.28000	1150.28001
30.00 ... 28.00	1.1811 ... 1.1024	1-1/8"	1150.30000	1150.30001
32.00 ... 30.00	1.2598 ... 1.1811	1-1/4"	1150.32000	1150.32001
34.00 ... 32.00	1.3386 ... 1.2598	1-5/16"	1150.34000	1150.34001
Wooden Tray ZWT/50			7121.50000	7121.50000

Additional technical information on page 13-2

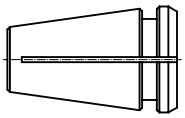
Edition 10/2004



2

ER-MB

MICROBORE COLLETS PER DIN STD 6499



The ER/MB microbore collet from **REGO-FIX®** is designed especially for clamping small drill and cutter shanks. Microbore collets do not have a clamping range. Therefore, only nominal diameters can be clamped.

MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ERM 8	3508.00000	4-12			■			■				E 8 M	7113.08000	12-1
	ER 8 MS	3208.50000	4-16			■			■				E 8 MS	7114.08000	12-1
	Hi-Q/ER 11	3411.00000	4- 4	■		■		■					GS 17	7112.11000	12-1
	Hi-Q/ERM 11	3511.00000	4-12			■		■	■				E 11 M	7113.11000	12-1
	ER 11 MS	3211.50000	4-16			■			■				E 11 MS	7114.11000	12-1
	Hi-Q/ERAX 11	3311.60000	4-18			■		■		■			E 11 AX	7117.11000	12-1

Edition 10/2004

ER 8-MB
ER 11-MB

MICROBORE COLLETS
ER 8-MB

Ø h7 [mm]	[inch]	ER 8-MB Part No.
0.2	0.0079	1308.00200
0.3	0.0118	1308.00300
0.4	0.0157	1308.00400
0.5	0.0197	1308.00500
0.6	0.0236	1308.00600
0.7	0.0276	1308.00700
0.8	0.0315	1308.00800
0.9	0.0354	1308.00900

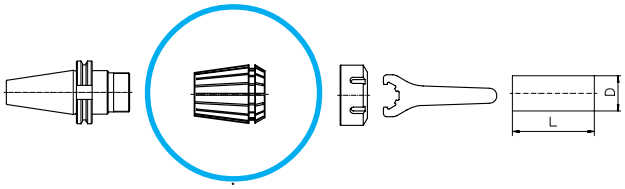
Additional technical information on page 13-3

MICROBORE COLLETS
ER 11-MB

Ø h7 [mm]	[inch]	ER 11-MB Part No.
0.2	0.0079	1311.00200
0.3	0.0118	1311.00300
0.4	0.0157	1311.00400
0.5	0.0197	1311.00500
0.6	0.0236	1311.00600
0.7	0.0276	1311.00700
0.8	0.0315	1311.00800
0.9	0.0354	1311.00900

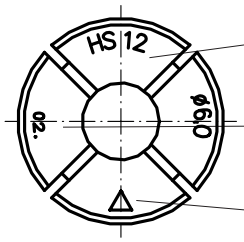
Additional technical information on page 13-3

Edition 10/2004



HS

FEATURES AND BENEFITS



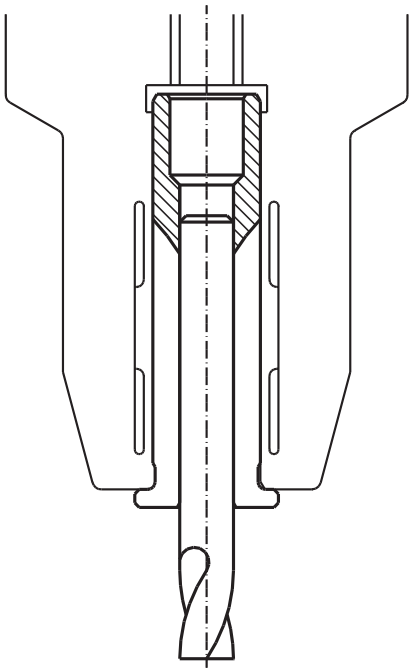
Marking: Size clearly visible from the front
➪ *Reduced collet selection errors*

Product Traceability: Lot number marked on sleeves
➪ *Quality control and accountability*

△ : Only original **REGO-FIX®** products have this special symbol
➪ *Guarantees highest quality*

Quality: Swiss-made to ISO 9001
➪ *Product consistency and worldwide acceptance*

Material: Special spring steel
➪ *Durability and increased collet life*



Higher Clamping Force: Use of hydraulic sleeves
➪ *Higher clamping power and improved T.I.R.*

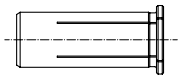
Flexibility: Adaptable to non **REGO-FIX®** hydraulic chucks
➪ *4 standard outside dia. 12, 20, 25 and 32 mm*

Precision: Manufactured to 3 µm or better T.I.R.
➪ *Greater precision*

Coolant Through Tools: Metallic-sealed
➪ *Higher pressure capability for prolonged tooling life and improved chip removal*

Edition 10/2004

REDUCTION SLEEVES FOR HYDRAULIC EXPANSION CHUCKS



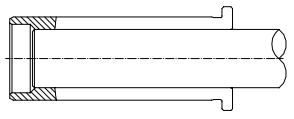
REGO-FIX® reduction sleeves are specially designed for high-precision clamping of straight cylindrical tool shanks per DIN STD 6335 form HA, HB and HE as well as for shanks per DIN STD 1835 Form A and B.

Concentricity (T.I.R.) on the high precision **REGO-FIX®** reduction sleeves can be found in the table on page 2-25.

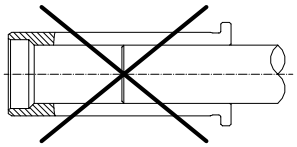
The special design of the **REGO-FIX®** reduction sleeves allows an efficient use of coolant through cutting tools. This self-sealing system is guaranteed only if using hydraulic expansion chucks which have **no** groove winding out of the chuck bore.

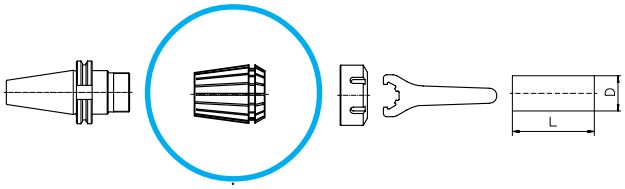
REGO-FIX® reduction sleeves can be used with different brands of hydraulic expansion chucks.

Improper assembly can permanently damage concentricity of reduction sleeve.



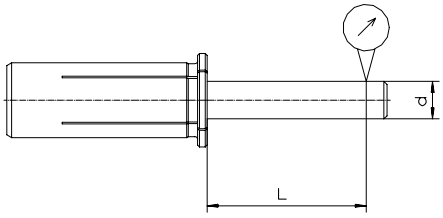
Caution:
- **Insert tool shank the full length of the reduction sleeve**
- **Do not clamp toolshanks with Weldon flat**
- **Do not clamp reduction sleeve without a tool**





HS

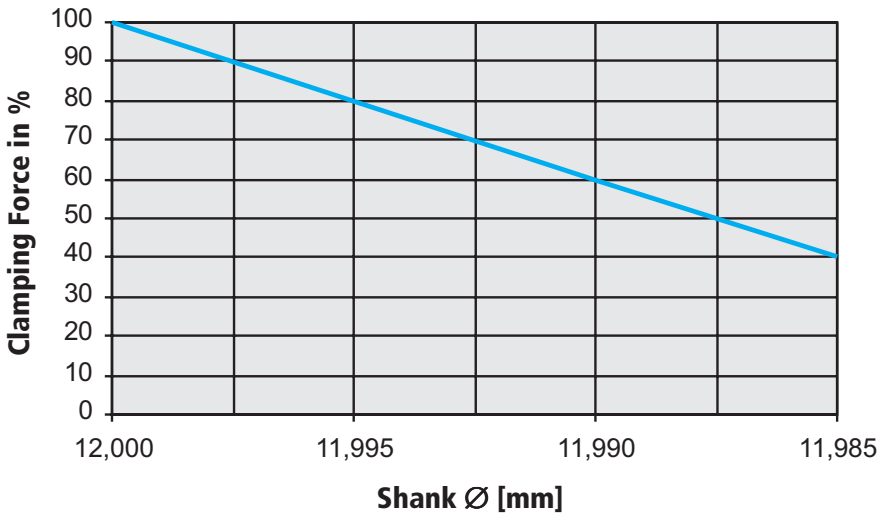
CONCENTRICITY (T.I.R.) OF HS TYPE REDUCTION SLEEVES



Clamping Diameter

Above d [mm]	Up to d [mm]	L [mm]	T.I.R. [mm]
3.0	6.0	16.0	0.003
6.0	10.0	25.0	0.003
10.0	18.0	40.0	0.003
18.0	26.0	50.0	0.003

CLAMPING FORCE DIAGRAM

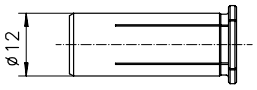


Influence of shank diameter on clamping force of hydraulic expansion holders.

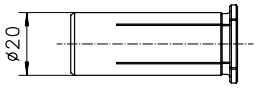
Edition 10/2004

REDUCTION SLEEVES HS

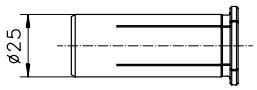
bore [mm]	bore ["]	Ø ["]	HS 12	HS 20	HS 25	HS 32
3.000	0.1181		1912.03000	1920.03000	1925.03000	–
3.175	0.1250	1/8"	1912.03181	1920.03181	1925.03181	–
4.000	0.1545		1912.04000	1920.04000	1925.04000	–
4.763	0.1875	3/16"	1912.04761	1920.04761	1925.04761	1932.04761
5.000	0.1969		1912.05000	1920.05000	1925.05000	–
6.000	0.2362		1912.06000	1920.06000	1925.06000	1932.06000
6.350	0.2500	1/4"	1912.06351	1920.06351	1925.06351	1932.06351
7.000	0.2756		1912.07000	1920.07000	1925.07000	1932.07000
7.938	0.3125	5/16"	1912.07941	1920.07941	1925.07941	1932.07941
8.000	0.3150		1912.08000	1920.08000	1925.08000	1932.08000
9.000	0.343		1912.09000	1920.09000	1925.09000	1932.09000
9.525	0.3750	3/8"	1912.09521	1920.09521	1925.09521	1932.09521
10.000	0.3937		1912.10000	1920.10000	1925.10000	1932.10000
11.000	0.4331		–	1920.11000	–	1932.11000
11.112	0.4375	7/16"	–	1920.11111	1925.11111	1932.11111
12.000	0.4724		–	1920.12000	1925.12000	1932.12000
12.700	0.5000	1/2"	–	1920.12701	1925.12701	1932.12701
13.000	0.5118		–	1920.13000	–	1932.13000
14.000	0.5512		–	1920.14000	1925.14000	1932.14000
14.288	0.5625	9/16"	–	1920.14291	1925.14291	1932.14291
15.000	0.5906		–	1920.15000	–	1932.15000
15.875	0.6250	5/8"	–	1920.15881	1925.15881	1932.15881
16.000	0.6300		–	1920.16000	1925.16000	1932.16000
17.000	0.6693		–	–	–	1932.17000
17.461	0.6875	11/16"	–	–	1925.17461	1932.17461
18.000	0.7087		–	–	1925.18000	1932.18000
19.000	0.7480		–	–	–	1932.19000
19.050	0.7500	3/4"	–	–	1925.19051	1932.19051
20.000	0.7480		–	–	1925.20000	1932.20000
20.638	0.8125	13/16"	–	–	–	1932.20631
22.000	0.8661		–	–	–	1932.22000
22.225	0.8750	7/8"	–	–	–	1932.22221
23.813	0.9375	15/16"	–	–	–	1932.23811
25.000	0.9842		–	–	–	1932.25000
25.400	1.0000	1"	–	–	–	1932.25401



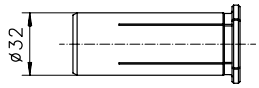
HS 12



HS 20



HS 25

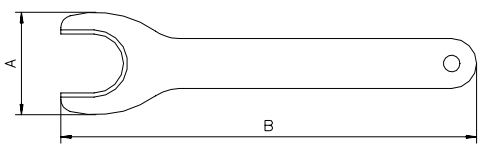


HS 32

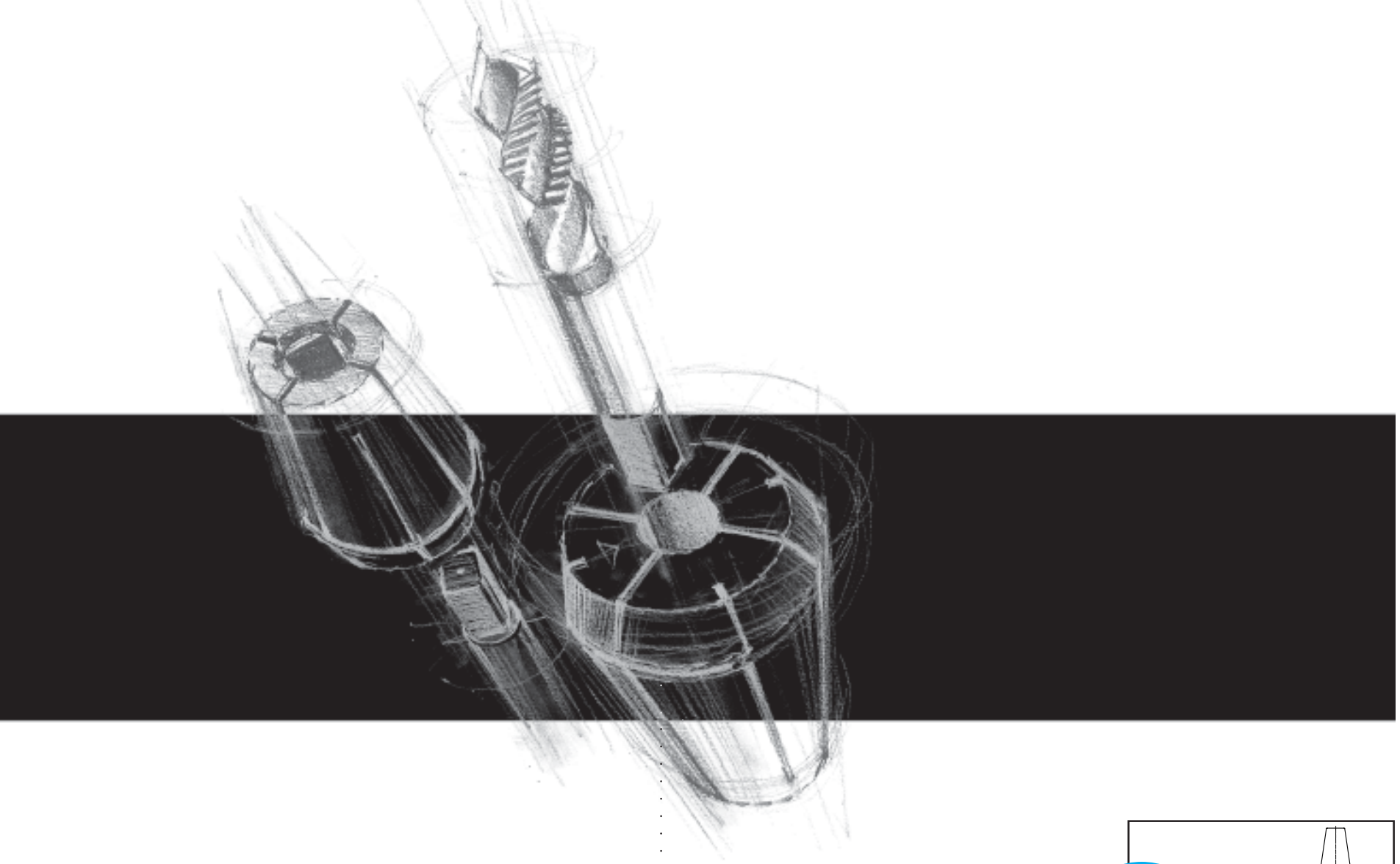
Additional technical information on page 13-4

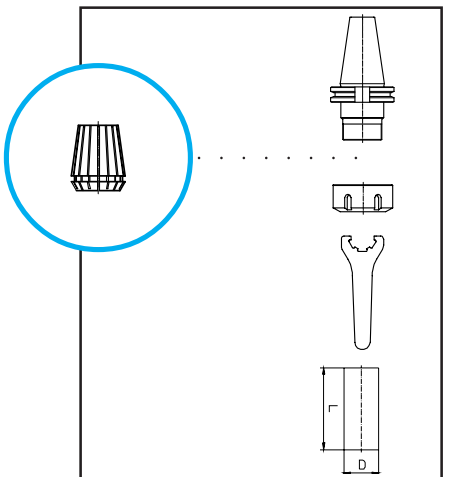
MATCHING PRODUCTS

Extractor	Part No.	for size	A [mm]	B [mm]
EHS 12	7321.12000	HS 12	24.6	100
EHS 20 - 3/4"	7321.20000	HS 20 / HS 3/4"	38.0	160
EHS 25 - 1"	7321.25000	HS 25 / HS 1"	51.0	180
EHS 32 - 1 1/4"	7321.32000	HS 32 / HS 1 1/4"	63.0	200



The extractor helps in the removal of HS reduction sleeves from hydrochucks





Edition 10/2004

REGO-FIX®
Swiss Precision Tools

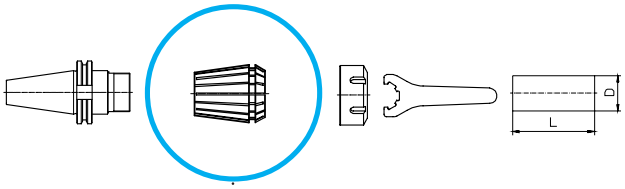
Tapping Collets

3

Contents

Edition 10/2004

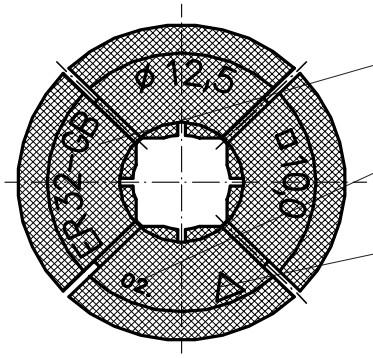
TAPPING COLLETS



ER-GB

3

FEATURES AND BENEFITS



Marking:Type and size markings easy to read
➪ *Reduced collet selection errors*

Product Tracability: Lot number marked on collets
➪ *Quality control and accountability*

△ : Only original **REGO-FIX®** with our trade mark
➪ *Guarantees highest quality*

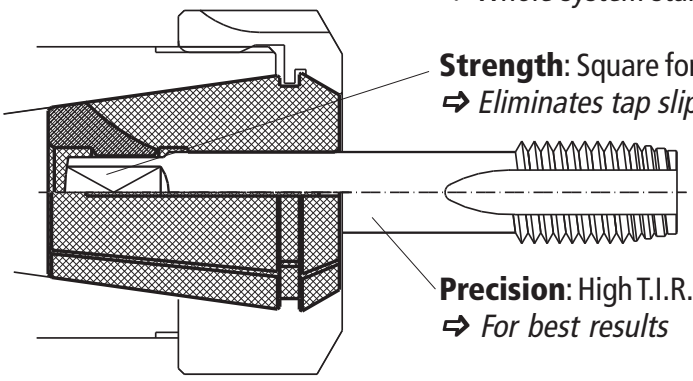
Quality: Swiss-made to ISO 9001; DIN 6499
➪ *Product consistency and worldwide acceptance*

Material: Special spring steel
➪ *Durability and increased collet life*

Interchangeable:With standard ER collet
➪ *No additional toolholders and clamping nuts necessary*

Wide Product Range:
Types ER-GB 11 - 40 and DIN, ISO, JIS & other standards
➪ *Covers full range of tapping needs*

Matched Tooling System for Best Fit: Tapping collet, toolholder, clamping nut and spanner all from **REGO-FIX®**
➪ *Whole system stands for highest precision and longest tool life*



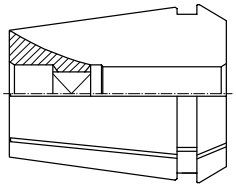
Strength: Square for tight grip of tapper
➪ *Eliminates tap slippage in collets*

Precision: High T.I.R. accuracy
➪ *For best results*

Edition 10/2004

ER-GB

ER-GB TAPPING COLLETS WITH INTERNAL SQUARE, WITHOUT AXIAL COMPENSATION PER DIN STD 6499



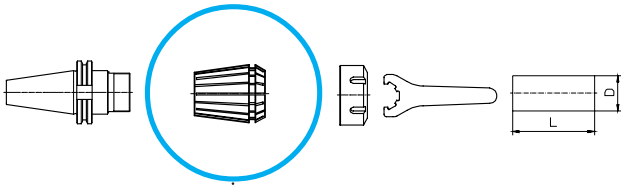
These rigid tapping collets are compatible with taps per DIN, ISO, JIS and ANSI standards.

The **REGO-FIX®** ER-GB tapping collets are manufactured with an internal square. They are intended for use on CNC machines that have synchronized machine spindle speed and feed rate. Machines that have such "rigid" tapping capabilities do not require the use of axial compensation type tooling.

For additional technical information on ER-GB please see page 13- 5 and 13- 9.

Edition 10/2004

TAPPING COLLETS



ER-GB

3

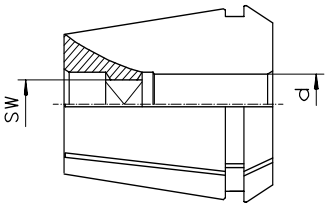
MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System*	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	3411.00000	3416.00000	3420.00000	3425.00000	3432.00000	3440.00000	4- 4	■		▲		●			
	Hi-Q/ERC	3411.20300 - 3411.20700	3416.20000	3420.20000	3425.20000	3432.20000	3440.20000	4- 6			▲	●	●			
	Hi-Q/ERB	---	3416.30000	3420.30000	3425.30000	3432.30000	3440.30000	4-10		■	▲		●			
	Hi-Q/ERBC	---	3416.40000	3420.40000	3425.40000	3432.40000	3440.40000	4-10		■	▲	●	●			
	GS / E	7112.11000	7112.16000	7112.20000	7111.25000	7111.32000	7111.40000	12-1								
	CM/ER	---	3116.90000	3120.90000	3125.90000	3132.90000	3140.90000	12-4								
	E	---	7111.16000	7111.20000	7111.25000	7111.32000	7111.40000	12-1								
	Hi-Q/ERM	3511.00000	3516.00000	3520.00000	3525.00000	---	---	4-14			▲		●	■		
	Hi-Q/ERMC	3511.20300 - 3511.20700	3516.20000	3520.20000	3525.20000	---	---	4-12			▲	●	●	■		
	EM	7113.11000	7113.16000	7113.20000	7113.25000	---	---	12-1								
	Hi-Q/ERAX	3311.60000	3316.60000	3320.60000	3325.60000	3332.60000	---	4-18			▲		●		■	
	EAX	7117.11000	7117.16000	7117.20000	7117.25000	7117.32000	---	12-1								
	Hi-Q/ERAXC	---	3316.70000	3320.70000	3325.70000	3332.70000	---	4-18			▲	●	●		■	
	EAX	---	7117.16000	7117.20000	7117.25000	7117.32000	---	12-1								

* Does not apply with use of ER-GB collets

Edition 10/2004

ER-GB

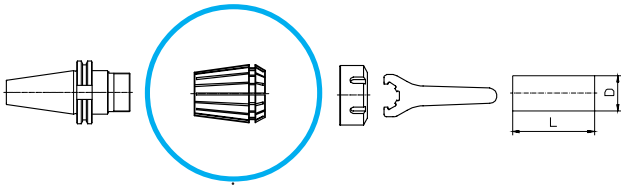


ER-GB RIGID TAPPING COLLETS WITHOUT AXIAL COMPENSATION

d [mm]	SW [mm]	STD.	ER 11-GB Part No.	ER 16-GB Part No.	ER 20-GB Part No.	ER 25-GB Part No.	ER 32-GB Part No.	ER 40-GB Part No.
2.8	2.1	DIN	1411.02800	-	-	-	-	-
3.5	2.7	DIN	1411.03500	-	-	-	-	-
4.0	3.0	DIN	1411.04000	-	-	-	-	-
4.0	3.15/3.2	ISO, JIS	-	1416.04002	1420.04002	1425.04002	1432.04002	-
4.5	3.4	DIN	1411.04500	1416.04500	1420.04500	1425.04500	1432.04500	-
5.0	4.0	ISO, JIS	-	1416.05002	1420.05002	1425.05002	1432.05002	-
5.5	4.3	DIN	-	1416.05500	1420.05500	1425.05500	1432.05500	-
5.5	4.5	JIS	-	1416.05501	1420.05501	1425.05501	1432.05501	-
6.0	4.5	JIS	-	1416.06001	1420.06001	1425.06001	1432.06001	1440.06001
6.0	4.9	DIN	1411.06000	1416.06000	1420.06000	1425.06000	1432.06000	1440.06000
6.2	5.0	JIS	-	1416.06201	1420.06201	1425.06201	1432.06201	1440.06201
6.3	5.0	ISO	-	1416.06302	1420.06302	1425.06302	1432.06302	1440.06302
7.0	5.5	DIN, JIS	-	1416.07000	1420.07000	1425.07000	1432.07000	1440.07000
7.1	5.6	ISO	-	1416.07102	1420.07102	1425.07102	1432.07102	1440.07102
8.0	6.2/6.3	DIN, ISO	-	1416.08000	1420.08000	1425.08000	1432.08000	1440.08000
8.5	6.5	JIS	-	1416.08501	1420.08501	1425.08501	1432.08501	1440.08501
9.0	7.0/7.1	DIN, ISO	-	1416.09000	1420.09000	1425.09000	1432.09000	1440.09000
10.0	8.0	DIN, ISO	-	-	1420.10000	1425.10000	1432.10000	1440.10000
10.5	8.0	JIS	-	-	1420.10501	1425.10501	1432.10501	1440.10501
11.0	9.0	DIN	-	-	1420.11000	1425.11000	1432.11000	1440.11000
11.2	9.0	ISO	-	-	1420.11202	1425.11202	1432.11202	1440.11202
12.0	9.0	DIN	-	-	-	1425.12000	1432.12000	1440.12000
12.5	10.0	ISO, JIS	-	-	-	1425.12502	1432.12502	1440.12502
14.0	11.0/11.2	DIN, ISO, JIS	-	-	-	1425.14000	1432.14000	1440.14000
15.0	12.0	JIS	-	-	-	1425.15001	1432.15001	1440.15001
16.0	12.0	DIN	-	-	-	1425.16000	1432.16000	1440.16000
17.0	13.0	JIS	-	-	-	-	1432.17001	1440.17001
18.0	14.0/14.5	DIN, ISO	-	-	-	-	1432.18000	1440.18000
20.0	16.0	DIN, ISO	-	-	-	-	1432.20000	1440.20000
22.0	18.0	DIN	-	-	-	-	-	1440.22000

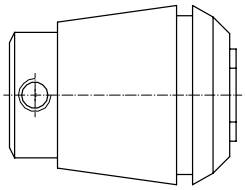
Additional technical information on page 13-5

Edition 10/2004



ET1

PCM ET1 TAPPING COLLETS WITH AXIAL COMPENSATION



PCM ET1 tapping collets with axial compensation offer a smart and cost-effective tool holding option for machines which need axial compensation for tapping.

These tapping collets offer many advantages:

– Fully interchangeable with **REGO-FIX®** collets DIN STD 6499

– No expensive tapping tools necessary

– Simple mounting of tapping collet

– Spring tension is adapted to tap size

– Compact and very robust design

For additional technical information see page 13- 6.

Edition 10/2004

MOUNTING INSTRUCTIONS FOR TAPPING COLLETS PCM ET1

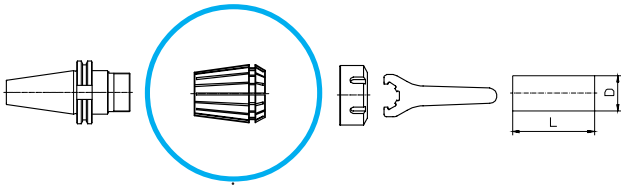
The following tapping process is recommended for tapping collets PCM ET1:

Fast approach, then tapping feed with approximately 95 % of the pitch value, which uses 20 - 30 % of the compensation stroke when the spindle rotation and the feed movement are simultaneously reversed.

Return feed must be made with 100 % of the pitch, which maintains the sleeve of the tapping collet in the compensation stroke up to the tap disengagement; quick return can then be programmed with usual stroke security. The relatively long axial compensation assists easy programming.

When tapping with very high speed, an appropriate programming compensation may be necessary to balance the differences of inertia between the spindle and the feed movement on reverse. Do not disturb the axial compensation, use external coolant supply only!

TAPPING COLLETS



ET1

3

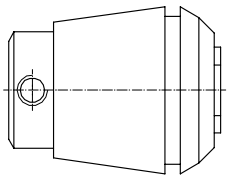
MATCHING PRODUCTS

Clamping Nut		ET1 12	ET1 16	ET1 20	ET1 25	ET1 32	ET1 40	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System*	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	3411.00000	3416.00000	3420.00000	3425.00000	3432.00000	3440.00000	4- 4	■		▲		🔒			
	Hi-Q/ERB	---	3416.30000	3420.30000	3425.30000	3432.30000	3440.30000	4-10		▬	▲		🔒			
	GS / E	7112.16000	7112.16000	7112.20000	7111.25000	7111.32000	7111.40000	12-1								
	CM/ER	---	3116.90000	3120.90000	3125.90000	3132.90000	3140.90000	12-4								
	E	---	7111.16000	7111.20000	7111.25000	7111.32000	7111.40000	12-1								
	Hi-Q/ERM	3511.00000	3516.00000	3520.00000	3525.00000	---	---	4-14			▲		🔒	▬		
	EM	7113.11000	7113.16000	7113.20000	7113.25000	---	---	12-1								
	Hi-Q/ERAX	3311.60000	3316.60000	3320.60000	3325.60000	3332.60000	---	4-18			▲		🔒		▬	
	E AX	7117.11000	7117.16000	7117.20000	7117.25000	7117.32000	---	12-1								

* Does **not** apply with use of ET1 collets.

Edition 10/2004

ET1

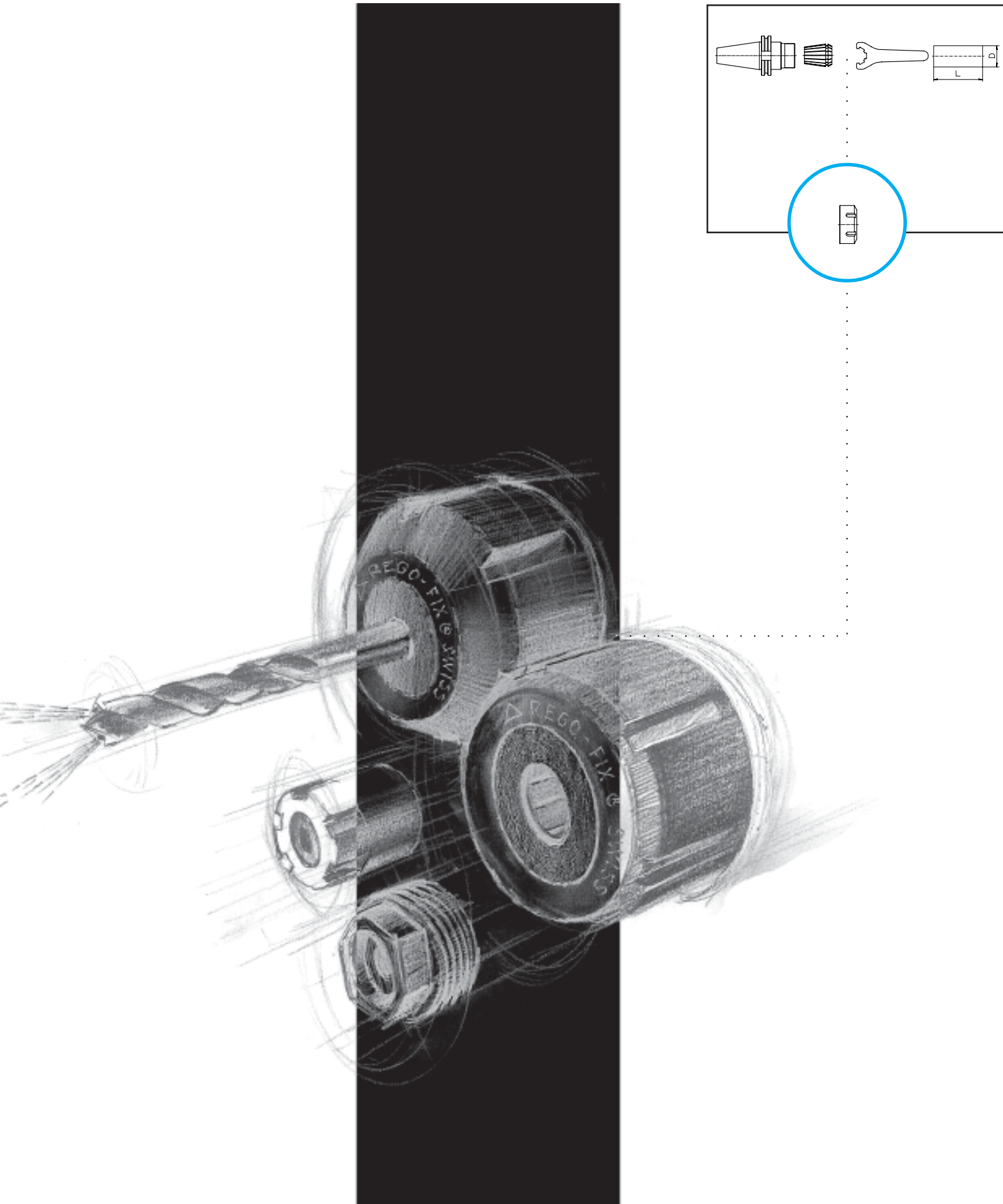


PCM ET1 TAPPING COLLETS WITH AXIAL COMPENSATION

Shank Dia. [mm]	STD.	ET1 12 Part No.	ET1 16 Part No.	ET1 20 Part No.	ET1 25 Part No.	ET1 32 Part No.	ET1 40 Part No.
1.40	DIN	1512.01400	1516.01400	–	–	–	–
1.60	DIN	1512.01600	1516.01600	–	–	–	–
1.80	DIN	1512.01800	1516.01800	–	–	–	–
2.00	ISO	1512.02000	1516.02000	–	–	–	–
2.20	DIN	1512.02200	1516.02200	1520.02200	–	–	–
2.24	ISO	1512.02240	1516.02240	1520.02240	–	–	–
2.50	DIN, ISO	1512.02500	1516.02500	1520.02500	1525.02500	–	–
2.80	DIN, ISO	1512.02800	1516.02800	1520.02800	1525.02800	–	–
3.00	JIS	1512.03000	1516.03000	1520.03000	1525.03000	–	–
3.15	ISO	1512.03150	1516.03150	1520.03150	1525.03150	–	–
3.50	DIN	1512.03500	1516.03500	1520.03500	1525.03500	–	–
3.55	ISO	1512.03550	1516.03550	1520.03550	1525.03550	–	–
4.00	DIN, ISO, JIS	–	1516.04000	1520.04000	1525.04000	–	–
4.50	DIN, ISO	–	1516.04500	1520.04500	1525.04500	1532.04500	–
5.00	ISO, JIS	–	1516.05000	1520.05000	1525.05000	1532.05000	–
5.50	DIN, ISO	–	1516.05500	1520.05500	1525.05500	1532.05500	–
5.60	ISO	–	1516.05600	1520.05600	1525.05600	1532.05600	–
6.00	DIN, JIS	–	1516.06000	1520.06000	1525.06000	1532.06000	1540.06000
6.20	JIS	–	1516.06200	1520.06200	1525.06200	1532.06200	1540.06200
6.30	ISO	–	1516.06300	1520.06300	1525.06300	1532.06300	1540.06300
7.00	DIN, JIS	–	–	1520.07000	1525.07000	1532.07000	1540.07000
7.10	ISO	–	–	–	1525.07100	1532.07100	1540.07100
8.00	DIN, ISO, JIS	–	–	–	1525.08000	1532.08000	1540.08000
8.50	JIS	–	–	–	1525.08500	1532.08500	1540.08500
9.00	DIN, ISO	–	–	–	1525.09000	1532.09000	1540.09000
10.00	DIN, ISO	–	–	–	1525.10000	1532.10000	1540.10000
10.50	JIS	–	–	–	–	1532.10500	1540.10500
11.00	DIN	–	–	–	–	1532.11000	1540.11000
11.20	ISO	–	–	–	–	1532.11200	1540.11200
12.00	DIN	–	–	–	–	1532.12000	1540.12000
12.50	ISO, JIS	–	–	–	–	1532.12500	1540.12500
14.00	DIN, ISO, JIS	–	–	–	–	–	1540.14000
15.00	JIS	–	–	–	–	–	1540.15000
16.00	DIN, ISO	–	–	–	–	–	1540.16000
17.00	JIS	–	–	–	–	–	1540.17000

Additional technical information on page 13-5

Edition 10/2004


D
L
REGO-FIX

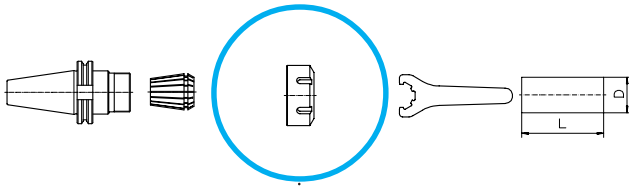
REGO-FIX®
Swiss Precision Tools

Clamping Nuts Sealing Disks

Contents

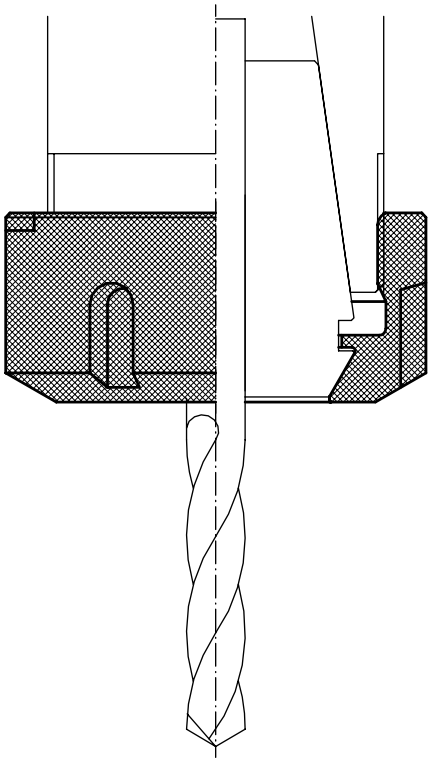
4

Edition 10/2004



CLAMPING NUTS

FEATURES AND BENEFITS



Quality: Swiss-made to ISO 9001
➪ *Product consistency and worldwide acceptance*

Material: High tensile strength steel
➪ *Reduced wear and increased life*

Protection Against Corrosion: With a special treatment of the surface
➪ *Longer life*

Collet Locking System: Hi-Q snap-in collet design
➪ *Retains collet in nut for easier assembly*

Q⁺ Balancing: Balanced-by-design
➪ *Ideal for high-speed applications*

Wide Product Range: Sizes ER 8- 50, in many different types:
- Friction-bearing
- Coolant through tools
- Mini-nut
- High-speed nuts (for high rpm)
- Externally threaded nut

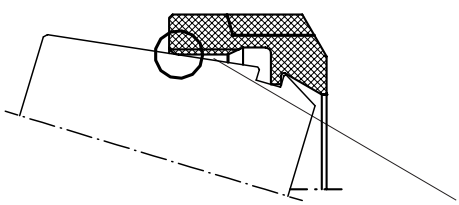
➪ *Greater selection of specific products for virtually any application*

Marking: Type and size markings easy to read
➪ *Reduced selection errors*

Product Traceability: Lot number marked on clamping nut
➪ *Quality control and accountability*

Higher Clamping Force: Resulting from special nut processing
➪ *Lower frictional forces resulting in up to 80% higher gripping force over standard non-treated clamping nuts*

Matched Tooling System for Best Fit: ER collet, toolholder, clamping nut and spanner, all from **REGO-FIX®**
➪ *Whole system stands for highest precision and longest tool life*



Ergonomy: Rounded thread start
➪ *Prevents damaging of collets on tool changes*

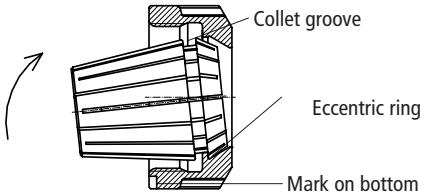
Edition 10/2004

MOUNTING INSTRUCTIONS

MOUNTING INSTRUCTIONS FOR Hi-Q CLAMPING NUTS

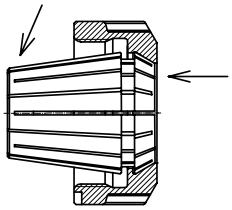
Assembling Collet:

Insert groove of the collet into eccentric ring of the clamping nut at the mark on the bottom of the nut. Push collet in the direction of the arrow until it clicks in. Insert tool.
Screw nut with collet onto tool holder.



Removing Collet:

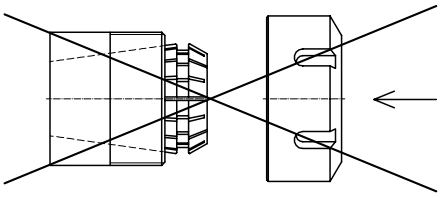
After the nut is unscrewed from the toolholder, press on the face of the collet while simultaneously pushing sideways on the back of the collet until it disengages from the clamping nut.



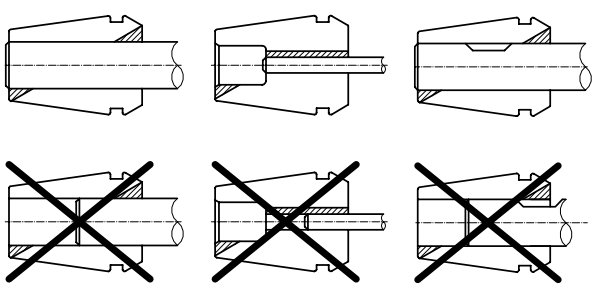
Improper assembly can permanently destroy the concentricity of the collet and may result in a damaged clamping nut.

NOTE:

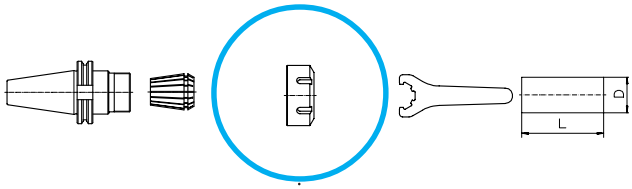
- Only mount nuts with correctly inserted collets!
Never place the collet into the holder without first assembling into the nut.



- Never clamp oversize tool shanks !!
e.g. never use a Ø 12-11mm collet to clamp a Ø 12.2 mm shank.
Rather use the next bigger collet (here Ø 12.5-11.5mm or Ø 13-12mm collet).



- **Insert tool the full length of the collet for best results if possible. However never insert tool less than 2/3 of the collet bore length. Improper tool insertion can permanently deform the collet and will result in poor runout.**



Hi-Q/ER

4

Hi-Q/ER STANDARD CLAMPING NUTS

The new **REGO-FIX®** Hi-Q nuts have the following benefits:

– Imbalance compensation for high speed applications

– Up to 80% higher clamping force

– New "Collet Locking System"

– Protection against corrosion

Caution: Higher clamping force of the clamping nut at the same time means higher stress on the toolholder. REGO-FIX® will not be responsible for damages on toolholders or spindles of other manufacturers. We recommend the use of REGO-FIX® torque wrench.

Maximum Imbalance [gmm]

Torque Comparison Clamping Nuts UM/ER - Hi-Q/ER - Hi-Q/ERB

Torque Transfered to Tool

Edition 10/2004

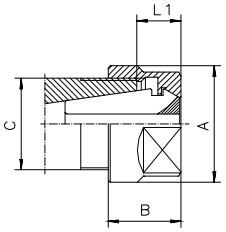
Hi-Q/ER

CLAMPING NUTS

Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	A [mm]	B [mm]	C	L1 [mm]	Ma max* [Nm]	Ma max* [Nm]	Drawing
Hi-Q/ER 11	3411.00000	■		⧗		🔒			19	11.3	M 14 x 0.75	4.4 ... 6.6	18	30	1
Hi-Q/ER 16	3416.00000	■		⧗		🔒			28	17.5	M 22 x 1.5	6.1 ... 10.5	50	70	1
Hi-Q/ER 20	3420.00000	■		⧗		🔒			34	19.0	M 25 x 1.5	7.1 ... 11.5	40	100	1
Hi-Q/ER 25	3425.00000	■		⧗		🔒			42	20.0	M 32 x 1.5	7.6 ... 12.0	130	130	2
Hi-Q/ER 32	3432.00000	■		⧗		🔒			50	22.5	M 40 x 1.5	8.6 ... 13.0	170	170	2
Hi-Q/ER 40	3440.00000	■		⧗		🔒			63	25.5	M 50 x 1.5	10.6 ... 15.0	220	220	2
Hi-Q/ER 50	3450.00000	■		⧗		🔒			78	35.3	M 64 x 2.0	12.2 ... 21.0	300	300	2

Ma* max = maximum tightening torque [Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13- 7 and 13- 8.

1



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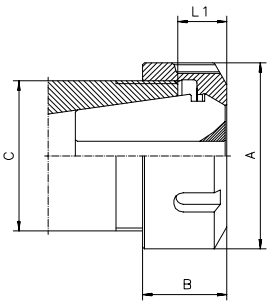
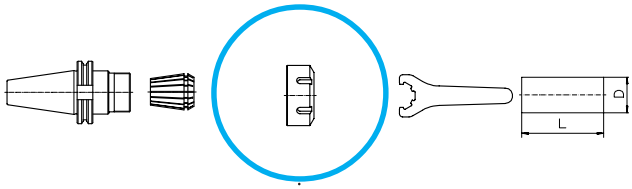


MATCHING PRODUCTS

Size	Counter Nut	Part No.	Page	Sealing Disks	Page	For Collets	Page	For Tapping Collets without Axial Compensation	Page	For Tapping Collets with Axial Compensation	Page	Spanner		Part No.	Page
ER 11	–	–	–	–	–	ER 11	2- 8	ER 11-GB	3-4	ET1-12	3-8		GS 17	7112.11000	12- 1
ER 16	CM/ER 16	3116.90000	12- 4	–	–	ER 16	2-10	ER 16-GB	3- 4	ET1-16	3-8		GS 25	7112.16000	12- 1
ER 20	CM/ER 20	3120.90000	12- 4	–	–	ER 20	2-12	ER 20-GB	3- 4	ET1-20	3-8		GS 30	7112.20000	12- 1
ER 25	CM/ER 25	3125.90000	12- 4	–	–	ER 25	2-14	ER 25-GB	3- 4	ET1-25	3-8		E 25	7111.25000	12- 1
ER 32	CM/ER 32	3132.90000	12- 4	–	–	ER 32	2-16	ER 32-GB	3- 4	ET1-32	3-8		E 32	7111.32000	12- 1
ER 40	CM/ER 40	3140.90000	12- 4	–	–	ER 40	2-18	ER 40-GB	3- 4	ET1-40	3-8		E 40	7111.40000	12- 1
ER 50	–	–	–	–	–	ER 50	2-20	–	–	–	–		E 50	7111.50000	12- 1



Hi-Q/ERC

4

Hi-Q/ERC CLAMPING NUTS FOR COOLANT THROUGH TOOLS

The Hi-Q/ERC clamping nut is the internal cooling version for Hi-Q/ER clamping nuts. *This nut together with the coolant disk DS/ER allows the use of coolant through tools.*

The system offers the following benefits:

- Up to 150 bar (2'000 psi) coolant pressure
- Prebalanced for high speed applications
- Prevents dirt and chips from entering the collet
- The "Collet Locking System" prevents collets from falling out of the clamping nut upon assembly
- Corrosion resistant surface

Caution: Higher clamping force of the clamping nut at the same time means higher stress on the toolholer. We recommend the use of REGO-FIX® torque wrench. REGO-FIX® will not be responsible for damages to toolholders or spindles of other manufacturers.

Edition 10/2004

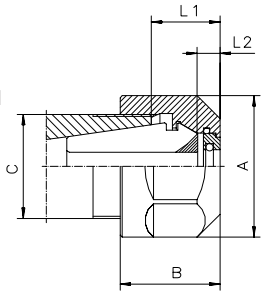
Hi-Q/ERC

CLAMPING NUTS

Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	A [mm]	B [mm]	C	L1 [mm]	L2 [mm]	Ma max* [Nm]	Ma max* [Nm]	Drawing
Hi-Q/ERC 11	see page 4-8															
Hi-Q/ERC 16	3416.20000			⧗	💧	🔒			28	22.5	M 22 x 1.5	11.1 ... 15.5	5.0	50	70	1
Hi-Q/ERC 20	3420.20000			⧗	💧	🔒			34	24.0	M 25 x 1.5	12.1 ... 16.5	5.0	40	100	1
Hi-Q/ERC 25	3425.20000			⧗	💧	🔒			42	25.0	M 32 x 1.5	12.6 ... 17.0	5.0	130	130	2
Hi-Q/ERC 32	3432.20000			⧗	💧	🔒			50	27.5	M 40 x 1.5	13.6 ... 18.0	5.0	170	170	2
Hi-Q/ERC 40	3440.20000			⧗	💧	🔒			63	30.5	M 50 x 1.5	15.6 ... 20.0	5.0	220	220	2

*** Ma max** = maximum tightening torque[Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13- 7 and 13- 8.

1



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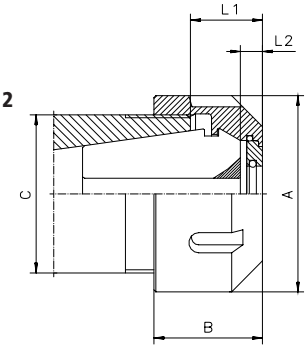
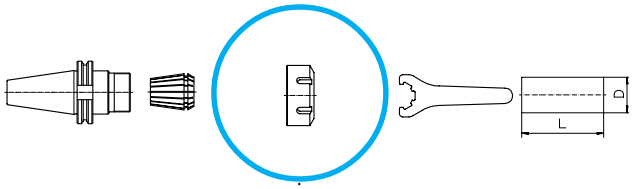


MATCHING PRODUCTS

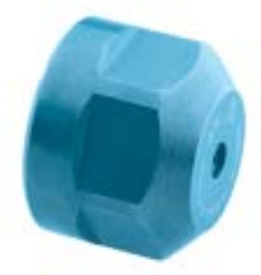
Size	Counter Nut	Part No.	Page	Sealing Disks	Page	For Collets	Page	For Tapping Collets without Axial Compensation	Page	For Tapping Collets with Axial Compensation **	Page	Spanner		Part No.	Page
ER 11	–	–	–	–	–	ER 11	2- 8	ER 11-GB	3- 4	–	–		GS 17	7112.11000	12- 1
ER 16	CM/ER 16	3116.90000	12- 4	DS/ER 16	4-20	ER 16	2-10	ER 16-GB	3- 4	–	–		GS 25	7112.16000	12- 1
ER 20	CM/ER 20	3120.90000	12- 4	DS/ER 20	4-20	ER 20	2-12	ER 20-GB	3- 4	–	–		GS 30	7112.20000	12- 1
ER 25	CM/ER 25	3125.90000	12- 4	DS/ER 25	4-22	ER 25	2-14	ER 25-GB	3- 4	–	–		E 25	7111.25000	12- 1
ER 32	CM/ER 32	3132.90000	12- 4	DS/ER 32	4-22	ER 32	2-16	ER 32-GB	3- 4	–	–		E 32	7111.32000	12- 1
ER 40	CM/ER 40	3140.90000	12- 4	DS/ER 40	4-24	ER 40	2-18	ER 40-GB	3- 4	–	–		E 40	7111.40000	12- 1

**** not recommended for coolant through applications**



Hi-Q/ERC 11

Hi-Q/ERC 11 CLAMPING NUTS WITH BUILT-IN SEALING SYSTEM



The Hi-Q/ERC 11 clamping nut for coolant through tools is the internal cooling version of the Hi-Q/ER 1 clamping nut.

This clamping nut does not require sealing disks. For different tool shank diameters please order the appropriate clamping nuts.

The system offers the following benefits:

- Up to 150 bar (2000 psi) coolant pressure
- Prebalanced for high-speed applications
- Prevents dirt and chips from enfering the collet
- The "Collet Locking System" prevents collets from falling out of the clamping nut upon assembly
- Corrosion resistant surface

Caution: Higher clamping force of the clamping nut at the same time means higher stress on the toolholder. REGO-FIX® will not be responsible for damages to toolholders or spindles of other manufacturers. We recommend the use of REGO-FIX® torque wrench.

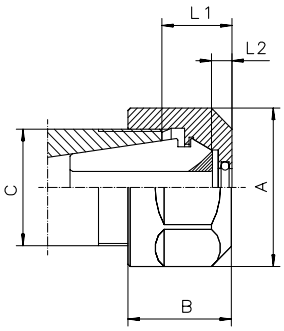
Edition 10/2004

Hi-Q/ERC 11

CLAMPING NUTS

Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Sealing Capacity [mm]	Sealing Capacity [inch]	ø [inch]
Hi-Q / ERC 11 Ø 3.0	3411.20300			▲	●	●			3.00 ... 2.50	0.1181 ... 0.0984	3/32"
Hi-Q / ERC 11 Ø 3.5	3411.20350			▲	●	●			3.50 ... 3.00	0.1378 ... 0.1181	1/8"
Hi-Q / ERC 11 Ø 4.0	3411.20400			▲	●	●			4.00 ... 3.50	0.1575 ... 0.1378	5/32"
Hi-Q / ERC 11 Ø 4.5	3411.20450			▲	●	●			4.50 ... 4.00	0.1772 ... 0.1575	
Hi-Q / ERC 11 Ø 5.0	3411.20500			▲	●	●			5.00 ... 4.50	0.1969 ... 0.1772	3/16"
Hi-Q / ERC 11 Ø 5.5	3411.20550			▲	●	●			5.50 ... 5.00	0.2165 ... 0.1969	7/32"
Hi-Q / ERC 11 Ø 6.0	3411.20600			▲	●	●			6.00 ... 5.50	0.2362 ... 0.2165	
Hi-Q / ERC 11 Ø 6.5	3411.20650			▲	●	●			6.50 ... 6.00	0.2559 ... 0.2362	1/4"
Hi-Q / ERC 11 Ø 7.0	3411.20700			▲	●	●			7.00 ... 6.50	0.2756 ... 0.2559	

Type	A [mm]	B [mm]	C	L1 [mm]	L2 [mm]	Ma max* [Nm]	Ma max* [Nm]
Hi-Q / ERC 11	19	14.6	M14 x 0,75	7.6 ... 9.8	3.5	18	30

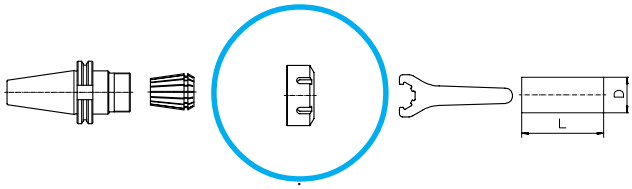


*** Ma max** = maximum thightening torque [Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13-7 and 13-8.

For other sizes see page 4-6.

MATCHING PRODUCTS

Size	Counter Nut	Part No.	Page	Sealing Dsiks	Page	For Collets	Page	For Tapping Collets Without Axial Compensation	Page	For Tapping Collets with Axial Compensation **	Page	Spanner	Part No.	Page
ER 11	–	–	–	–	–	ER 11	2- 8	ER 11-GB	3-4	–	–	GS 17	7112.11000	12- 1



Hi-Q/ERB
Hi-Q/ERBC

Hi-Q/ERB FRICTION-BEARING CLAMPING NUTS

The **REGO-FIX®** Hi-Q/ERB is a friction-bearing nut that offers the highest clamping force available; more than twice the clamping force of standard nuts. It is interchangeable with all other nuts per DIN STD 6499.

These clamping nuts also offer the new "Collet Locking System". The Hi-Q/ERB clamping nut replaces the GM/ER clamping nut .

Other clamping nuts with the friction-bearing system are listed on the following pages.

Hi-Q/ERBC FRICTION BEARING CLAMPING NUTS FOR COOLANT THROUGH TOOLS

The **REGO-FIX®** Hi-Q/ERBC is a friction-bearing, coolant through tools clamping nut that offers high clamping force: twice as much as that of standard nuts. The Hi-Q/ERBC clamping nut replaces the KC/ER clamping nut. It is interchangeable with other nuts per DIN STD 6499.

The system offers the following benefits:

- Up to 150 bar (2'000 psi) coolant pressure
- All **REGO-FIX®** collets can be used
- Prevents dirt and chips from entering the collet
- Interchangeable with all other nuts per DIN STD 6499

Edition 10/2004

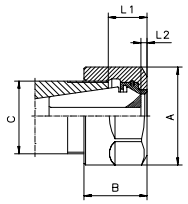
Hi-Q/ERB
Hi-Q/ERBC

CLAMPING NUTS

Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	A [mm]	B [mm]	C	L1 [mm]	L2 [mm]	Ma max* [Nm]	Ma max* [Nm]	Drawing
Hi-Q/ERB 16	3416.30000		●	●		●			28	20.2	M 22 x 1.5	9.2 ... 13.6	3.0	50	70	1
Hi-Q/ERB 20	3420.30000		●	●		●			34	21.7	M 25 x 1.5	10.1 ... 14.5	3.0	30	100	1
Hi-Q/ERB 25	3425.30000		●	●		●			42	22.6	M 32 x 1.5	10.6 ... 15.0	3.0	90	130	2
Hi-Q/ERB 32	3432.30000		●	●		●			50	25.0	M 40 x 1.5	11.6 ... 16.0	3.0	130	170	2
Hi-Q/ERB 40	3440.30000		●	●		●			63	28.2	M 50 x 1.5	13.6 ... 18.0	3.0	220	220	2
Hi-Q/ERB 50	3450.30000		●	●		●			78	38.1	M 64 x 2.0	15.2 ... 24.0	3.0	300	300	2
Hi-Q/ERBC 16	3416.40000		●	●	●	●			28	22.7	M 22 x 1.5	11.6 ... 16.0	5.5	50	70	3
Hi-Q/ERBC 20	3420.40000		●	●	●	●			34	24.2	M 25 x 1.5	12.6 ... 17.0	5.5	30	100	3
Hi-Q/ERBC 25	3425.40000		●	●	●	●			42	25.2	M 32 x 1.5	13.1 ... 17.5	5.5	90	130	4
Hi-Q/ERBC 32	3432.40000		●	●	●	●			50	27.4	M 40 x 1.5	14.1 ... 18.5	5.5	130	170	4
Hi-Q/ERBC 40	3440.40000		●	●	●	●			63	30.7	M 50 x 1.5	16.1 ... 20.5	5.5	220	220	4

***Ma max** = maximum tightening torque [Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13- 7 and 13- 8.

1



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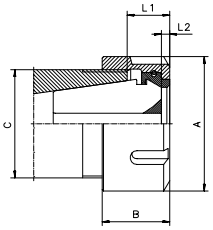

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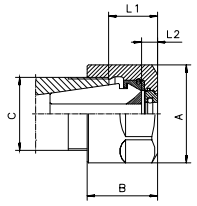
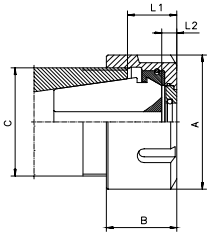


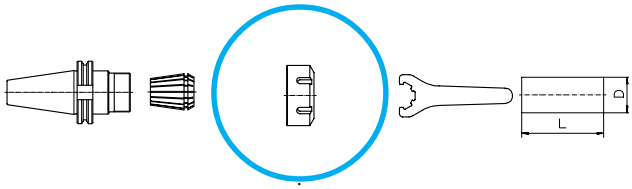
4



MATCHING PRODUCTS

Size	Counter Nut	Part No.	Page	Sealing Disks (for Hi-Q/ERBC only)	Page	For Collets	Page	For Tapping Collets without Axial Compensation	Page	For Tapping Collets with Axial Compensation**	Page	Spanner	Part No.	Page
ER 16	CM/ER 16	3116.90000	12- 4	DS/ER 16	4-20	ER 16	2-10	ER 16-GB	3- 4	ET1-16	3- 8	GS 25	7112.16000	12- 1
ER 20	CM/ER 20	3120.90000	12- 4	DS/ER 20	4-20	ER 20	2-12	ER 20-GB	3- 4	ET1-20	3- 8	GS 30	7112.20000	12- 1
ER 25	CM/ER 25	3125.90000	12- 4	DS/ER 25	4-22	ER 25	2-14	ER 25-GB	3- 4	ET1-25	3- 8	E 25	7111.25000	12- 1
ER 32	CM/ER 32	3132.90000	12- 4	DS/ER 32	4-22	ER 32	2-16	ER 32-GB	3- 4	ET1-32	3- 8	E 32	7111.32000	12- 1
ER 40	CM/ER 40	3140.90000	12- 4	DS/ER 40	4-24	ER 40	2-18	ER 40-GB	3- 4	ET1-40	3- 8	E 40	7111.40000	12- 1
ER 50	–	–	–	–	–	ER 50	2-20	–	–	–	–	E 50	7111.50000	12- 1

**** not recommended for coolant through applications**



Hi-Q/ERM
Hi-Q/ERMC

Hi-Q/ERM CLAMPING NUTS WITH MINIMAL EXTERNAL DIAMETER

The **REGO-FIX®** Hi-Q/ERM mini clamping nut is recommended for use where minimal external diameters are important. For example, it is ideal for multi-spindle drilling heads and colletholder extensions. The corresponding spanners have the same external dimensions as the clamping nuts.

Caution: Higher clamping force of the clamping nut at the same time means higher stress on the toolholder. REGO-FIX® will not be responsible for damages on toolholders or spindles of other manufacturers. We recommend the use of REGO-FIX® torque wrench.

Hi-Q/ERMC COOLANT THROUGH TOOLS CLAMPING NUTS WITH MINIMAL EXTERNAL DIAMETER

The Hi-Q/ERMC coolant through tools clamping nut is the internal coolant version of the Hi-Q/ERM clamping nut. Together with the sealant disks this nut allows the use of the standard ER collet system for internally cooled tools. This system has many advantages over other sealing systems:

- High pressure, up to 150 bar (2'000 psi)
- All **REGO-FIX®** collets can be used
- Use of regular ER collets
- Prevents dirt and chips from entering the collet

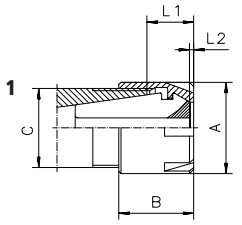
Edition 10/2004

Hi-Q/ERM
Hi-Q/ERMC

CLAMPING NUTS

Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	A [mm]	B [mm]	C	L1 [mm]	L2 [mm]	Ma max* [Nm]	[Nm]	Drawing
Hi-Q/ERM 8	3508.00000			▲			■		12	10.8	M 10 x 0.75	4.3 ... 6.1	1.5	6	6	1
Hi-Q/ERM 11	3511.00000			▲		🔒	■		16	12.0	M 13 x 0.75	5.3 ... 7.5	0.9	15	20	1
Hi-Q/ERM 16	3516.00000			▲		🔒	■		22	18.4	M 19 x 1.00	7.1 ... 11.5	0.9	30	30	1
Hi-Q/ERM 20	3520.00000			▲		🔒	■		28	19.0	M 24 x 1.00	7.1 ... 11.5	–	35	35	1
Hi-Q/ERM 25	3525.00000			▲		🔒	■		35	20.0	M 30 x 1.00	7.6 ... 12.0	–	40	40	1
Hi-Q/ERMC 11	see page 4-14															
Hi-Q/ERMC 16	3516.20000			▲	💧	🔒	■		22	22.5	M 19 x 1.00	10.6 ... 15.0	5.0	30	30	2
Hi-Q/ERMC 20	3520.20000			▲	💧	🔒	■		28	24.0	M 24 x 1.00	12.1 ... 16.5	5.0	35	35	2
Hi-Q/ERMC 25	3525.20000			▲	💧	🔒	■		35	25.0	M 30 x 1.00	12.6 ... 17.0	5.0	40	40	2

1



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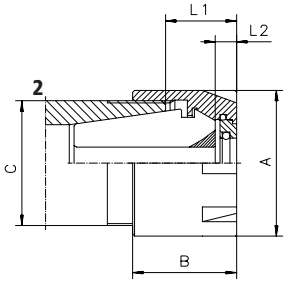
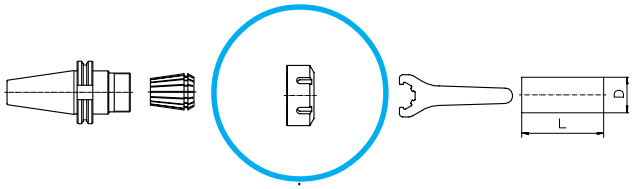


***Ma max** = maximum tightening torque [Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13- 7 and 13- 8.

MATCHING PRODUCTS

Size	Counter Nut	Part No.	Page	Sealing Disks (for Hi-Q/ERMC only)	Page	For Collets	Page	For Tapping Collets without Axial Compensation	Page	For Tapping Collets with Axial Compensation**	Page	Spanner	Part No.	Page
ER 8	–	–	–	–	–	ER 8	2- 6	–	–	–	–	E 8 M	7113.08000	12- 1
ER 11	–	–	–	–	–	ER 11	2- 8	ER 11-GB	3- 4	ET1-12	3-10	E 11 M	7113.11000	12- 1
ER 16	–	–	–	DS/ER 16	4-20	ER 16	2-10	ER 16-GB	3- 4	ET1-16	3-10	E 16 M	7113.16000	12- 1
ER 20	–	–	–	DS/ER 20	4-20	ER 20	2-12	ER 20-GB	3- 4	ET1-20	3-10	E 20 M	7113.20000	12- 1
ER 25	–	–	–	DS/ER 25	4-22	ER 25	2-14	ER 25-GB	3- 4	ET1-25	3-10	E 25 M	7113.25000	12- 1

**** not recommended for coolant through applications**



Hi-Q/ERMC 11

Hi-Q/ERMC 11 CLAMPING NUTS WITH BUILT-IN SEALING SYSTEM

The Hi-Q/ERMC 11 clamping nut is recommended for use where minimal external diameters are important. It is the coolant through tools version of the Hi-Q/ERM11 clamping nut.

This clamping nut does not require sealing disks. For different tool shank diameters please order the appropriate clamping nuts.

The system offers the following benefits:

- Up to 150 bar (2000 psi) coolant pressure
- Prebalanced for high-speed applications
- Prevents dirt and chips from entering the collet
- The "Collet Locking System" prevents collets from falling out of the clamping nut upon assembly
- Corrosion resistant surface

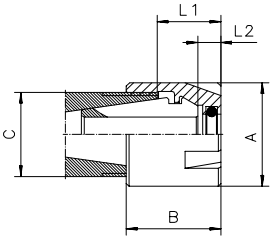
Caution: Higher clamping force of the clamping nut at the same time means higher stress on the toolholder. REGO-FIX® will not be responsible for damages to toolholders or spindles of other manufacturers. We recommend the use of REGO-FIX® torque wrench.

Edition 10/2004

Hi-Q/ERMC 11

CLAMPING NUTS

Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Sealing Capacity [mm]	Sealing Capacity [inch]	ø [inch]
Hi-Q / ERMC 11 Ø 3.0 mm	3511.20300			▲	●	●	■		3.00 ... 2.50	0.1181 ... 0.0984	3/32"
Hi-Q / ERMC 11 Ø 3.5 mm	3511.20350			▲	●	●	■		3.50 ... 3.00	0.1378 ... 0.1181	1/8"
Hi-Q / ERMC 11 Ø 4.0 mm	3511.20400			▲	●	●	■		4.00 ... 3.50	0.1575 ... 0.1378	5/32"
Hi-Q / ERMC 11 Ø 4.5 mm	3511.20450			▲	●	●	■		4.50 ... 4.00	0.1772 ... 0.1575	
Hi-Q / ERMC 11 Ø 5.0 mm	3511.20500			▲	●	●	■		5.00 ... 4.50	0.1969 ... 0.1772	3/16"
Hi-Q / ERMC 11 Ø 5.5 mm	3511.20550			▲	●	●	■		5.50 ... 5.00	0.2165 ... 0.1969	7/32"
Hi-Q / ERMC 11 Ø 6.0 mm	3511.20600			▲	●	●	■		6.00 ... 5.50	0.2362 ... 0.2165	
Hi-Q / ERMC 11 Ø 6.5 mm	3511.20650			▲	●	●	■		6.50 ... 6.00	0.2559 ... 0.2362	1/4"
Hi-Q / ERMC 11 Ø 7.0 mm	3511.20700			▲	●	●	■		7.00 ... 6.50	0.2756 ... 0.2559	

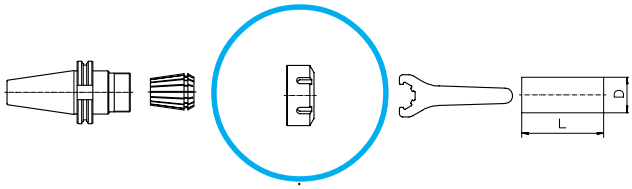


Type	A [mm]	B [mm]	C	L1 [mm]	L2 [mm]	Ma max* [Nm]	Ma max* [Nm]
Hi-Q / ERMC 11	16	14.6	M13 x 0,75	7.6 ... 9.8	3.5	15	20

Ma* max = maximum tightening torque [Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13- 7 and 13- 8.

MATCHING PRODUCTS

Size	Counter Nut	Part No.	Page	Sealing Disks	Page	For Collets	Page	For Tapping Collets without Axial Compensation	Page	For Tapping Collets with Axial Compensation	Page	Spanner	Part No.	Page
ER 11	–	–	–	–	–	ER 11	2- 8	ER 11 GB	3-4	–	–	E 11 M	7113.11000	12- 1



ER MS

ER MS CLAMPING NUTS WITH MINIMAL EXTERNAL DIAMETER

The **REGO-FIX®** ER MS clamping nut for highest RPM with minimal external diameter does not have the extractor ring and all the contours are ground. This provides best balancing for critical high-speed machining applications. The collet is released with the special EMS spanner. ER MS nuts are also interchangeable with the HI-Q/ERM and HI-Q/ERMC nuts.

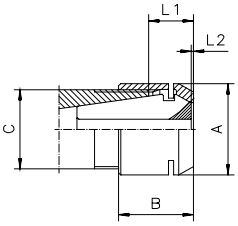
With the ER MS clamping nuts we recommend using ER-UP (ultra-precision) collets to achieve the highest concentricity. The design of the ER MS clamping nut allows high speed machining with low noise.

Edition 10/2004

ER MS

CLAMPING NUTS

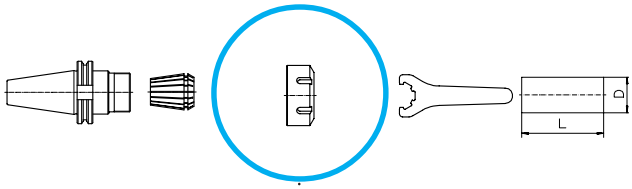
Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	A [mm]	B [mm]	C	L1 [mm]	L2 [mm]	Ma max* [Nm]
ER 8 MS	3208.50000			▲			■		12	10.8	M 10 x 0.75	4.3 ... 6.1	1.5	6
ER 11 MS	3211.50000			▲			■		16	11.5	M 13 x 0.75	4.6 ... 6.8	0.4	12
ER 16 MS	3216.50000			▲			■		22	17.8	M 19 x 1.00	6.1 ...10.5	0.3	18
ER 20 MS	3220.50000			▲			■		28	19.0	M 24 x 1.00	7.1 ...11.5	0.3	23



***Ma max** = maximum tightening torque [Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13- 7 and 13- 8.

MATCHING PRODUCTS

Size	Counter Nut	Part No.	Page	Sealing Disks	Page	For Collets	Page	For Tapping Collets without Axial Compensation	Page	For Tapping Collets with Axial Compensation	Page	Spanner	Part No.	Page
ER 8	–	–	–	–	–	ER 8	2- 6	–	–	–	–	E 8 MS	7114.08000	12- 1
ER 11	–	–	–	–	–	ER 11	2- 8	–	–	–	–	E 11 MS	7114.11000	12- 1
ER 16	–	–	–	–	–	ER 16	2-10	–	–	–	–	E 16 MS	7114.16000	12- 1
ER 20	–	–	–	–	–	ER 20	2-12	–	–	–	–	E 20 MS	7114.20000	12- 1



Hi-Q/ERAX
Hi-Q/ERAXC

Hi-Q/ERAX CLAMPING NUTS WITH EXTERNAL THREAD

The **REGO-FIX®** Hi-Q/ERAX clamping nut is an external threaded nut designed for special applications where it is necessary that the nut is flush with the end of the toolholder. The corresponding spanner is inserted from the front side. This allows optional tooling to be mounted around the collet area allowing for combined drilling and turning applications.

The Hi-Q/ERAX clamping nut is adapted in **REGO-FIX®** floating chucks and other collet holders with internal thread.

Hi-Q/ERAXC CLAMPING NUTS FOR COOLANT THROUGH TOOLS WITH EXTERNAL THREAD

The **REGO-FIX®** Hi-Q/ERAXC is a coolant through tools version of the Hi-Q/ERAX nut. This nut together with the sealing disk DS/ER allows the use of internally cooled tools

This system offers the following advantages:

- Safety features prevent wrench from slipping off the clamping nut when tightening
- Higher transmittable torque
- Minimal length
- Coolant pressure up to 150 bar (2000 psi)
- Prebalanced for high-speed applications
- System prevents dirt and chips from entering the collet
- The "Collet Locking System" prevents collets form falling out of the clamping nut upon assembly
- Corrosion resistant surface

Edition 10/2004

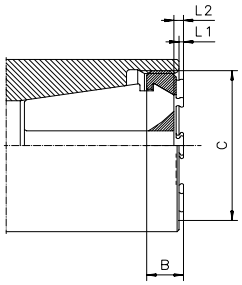
Hi-Q/ERAX
Hi-Q/ERAXC

CLAMPING NUTS

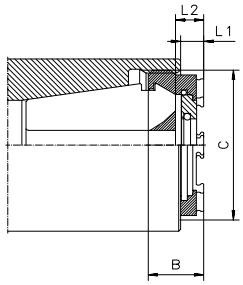
Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	B [mm]	C	L1 [mm]	L2 [mm]	Ma max* [Nm]	Drawing
Hi-Q/ERAX 11	3311.60000			▲		🔒		⬛	7.5	M 18 x 1.0	1.0 ... 3.2	3.9	30	1
Hi-Q/ERAX 16	3316.60000			▲		🔒		⬛	7.6	M 24 x 1.0	0.0 ... 2.6	2.3	50	1
Hi-Q/ERAX 20	3320.60000			▲		🔒		⬛	8.5	M 28 x 1.5	0.0 ... 2.5	2.3	65	1
Hi-Q/ERAX 25	3325.60000			▲		🔒		⬛	8.8	M 32 x 1.5	0.0 ... 1.9	2.3	100	1
Hi-Q/ERAX 32	3332.60000			▲		🔒		⬛	9.8	M 40 x 1.5	0.0 ... 1.1	2.5	130	1
Hi-Q/ERAX 40	3340.60000			▲		🔒		⬛	11.7	M 50 x 1.5	0.0 ... 1.0	2.4	160	1
Hi-Q/ERAXC 16	3316.70000			▲	💧	🔒		⬛	12.5	M 24 x 1.0	3.1 ... 7.5	7.2	50	2
Hi.Q/ERAXC 20	3320.70000			▲	💧	🔒		⬛	13.5	M 28 x 1.5	3.1 ... 7.5	7.3	65	2
Hi-Q/ERAXC 25	3325.70000			▲	💧	🔒		⬛	13.8	M 32 x 1.5	2.5 ... 6.9	7.3	100	2
Hi.Q/ERAXC 32	3332.70000			▲	💧	🔒		⬛	14.9	M 40 x 1.5	1.8 ... 6.2	7.6	130	2
Hi-Q/ERAXC 40	3340.70000			▲	💧	🔒		⬛	16.6	M 50 x 1.5	1.5 ... 5.9	7.3	160	2

Ma max = maximum tightening torque [Nm]. Recommended torque = 80% of Ma max.
Additional technical information on page 13- 7 and 13- 8.

1



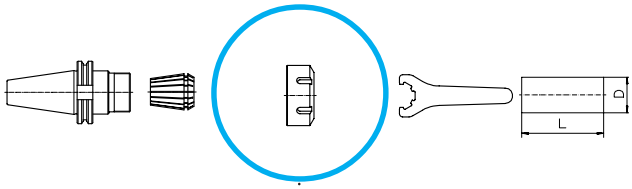
2



MATCHING PRODUCTS

Size	Counter Nut	Part No.	Page	Sealing Disks (for Hi-Q/ERAXC only)	Page	For Collets	Page	For Tapping Collets without Axial Compensation	Page	For Tapping Collets with Axial Compensation **	Page	Spanner	Part No.	Page
ER 11	–	–	–	–	–	ER 11	2- 8	ER 11-GB	3- 4	ET1-12	3- 8	E 11 AX	7117.11000	12- 1
ER 16	–	–	–	DS/ER 16	4-20	ER 16	2-10	ER 16-GB	3- 4	ET1-16	3- 8	E 16 AX	7117.16000	12- 1
ER 20	–	–	–	DS/ER 20	4-20	ER 20	2-12	ER 20-GB	3- 4	ET1-20	3- 8	E 20 AX	7117.20000	12- 1
ER 25	–	–	–	DS/ER 25	4-22	ER 25	2-14	ER 25-GB	3- 4	ET1-25	3- 8	E 25 AX	7117.25000	12- 1
ER 32	–	–	–	DS/ER 32	4-22	ER 32	2-16	ER 32-GB	3- 4	ET1-32	3- 8	E 32 AX	7117.32000	12- 1
ER 40	–	–	–	DS/ER 40	4-24	ER 40	2-18	ER 40-GB	3- 4	ET1-40	3- 8	E 40 AX	7117.40000	12- 1

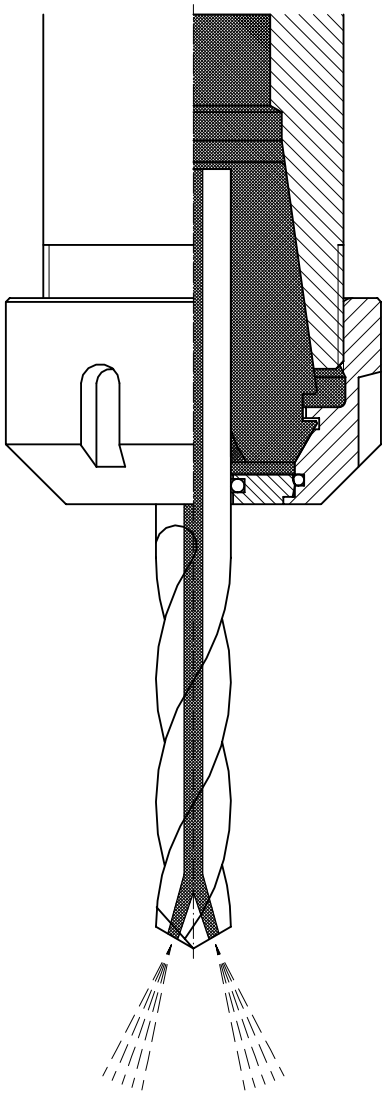
**** not recommended for coolant through applications**



DS/ER

4

FEATURES AND BENEFITS



Quality: Swiss-made to ISO 9001; DIN 6499
⇨ *Product consistency and worldwide acceptance*

Innovative: Patented sealing disk system
⇨ *0.5 mm clamping range*

Product Traceability: Lot number marked on disks
⇨ *Quality control and accountability*

High Pressure: ⇨ *For applications up to 150 bar (2'000 psi)*

Protection: Sealing disk built-in in front of collet
⇨ *Protects against all kind of dirt and chips entering the slots of collet*

Coolant Through Tools
⇨ *Improved cooling and lubrication of cutting tools*
⇨ *Longer tool life*
⇨ *Improved chip removal*

Marking: Type and size markings easy to read
⇨ *Reduced disk selection errors*

Compact Design: Short design
⇨ *Very short extension of clamping nut*

Wide Product Range: ⇨ *To be used with all **REGO-FIX®** collets and tapping collets ER-GB together with 5 different types of clamping nuts*

Interchangeable: ⇨ *Easy changing of sealing disks according to required application*

Sealing Range: ⇨ *0.5 mm per disk*

Matched Tooling System for Best Fit:
ER collet, toolholder, clamping nut, sealing disk and spanner all from **REGO-FIX®**
⇨ *Whole system stands for highest precision and longest tool life*

Maintenance: Standard size replaceable O-rings
⇨ *Long tool life, replacement everywhere available*

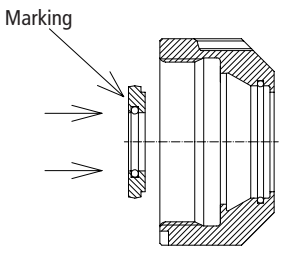
Edition 10/2004

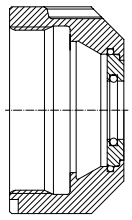
MOUNTING INSTRUCTIONS FOR SEALING DISKS DS/ER

Assembling Sealing Disk:

Insert the small diameter of the disk into the center of the coolant nut and apply even pressure until the disk is properly seated into the nut.

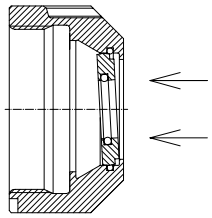
The disk must be flush with the outside ot the nut and the marking on the disk must be seen inside the nut.

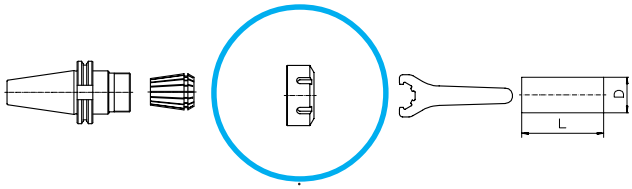




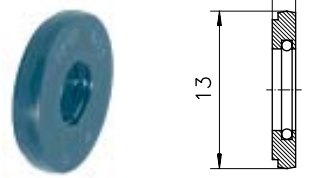
Removing Sealing Disk:

To remove the disk, simply press on the outside of the disk evenly until it snaps out.



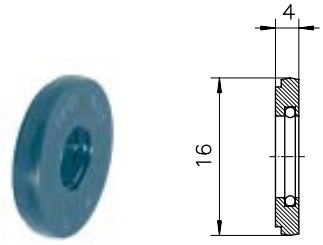


DS/ER 16
DS/ER 20



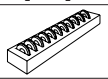
MATCHING PRODUCTS

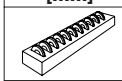
Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	HiQ/ERC 16	3416.20000	4- 6			▲	●	🔒					GS 25	7112.16000	12-1
	HiQ/ERBC 16	3416.40000	4-10		■	▲	●	🔒					GS 25	7112.16000	12-1
	HiQ/ERMC 16	3516.20000	4-14			▲	●	🔒	■				E 16 M	7113.16000	12-1
	HiQ/ERAXC 16	3316.70000	4-18			▲	●	🔒		■			E 16 AX	7117.16000	12-1



	HiQ/ERC 20	3420.20000	4- 6			▲	●	🔒					GS 30	7112.20000	12-1
	HiQ/ERBC 20	3420.40000	4-10		■	▲	●	🔒					GS 30	7112.20000	12-1
	HiQ/ERMC 20	3520.20000	4-14			▲	●	🔒	■				E 20 M	7113.20000	12-1
	HiQ/ERAXC 20	3320.70000	4-18			▲	●	🔒		■			E 20 AX	7117.20000	12-1

SEALING DISK SETS DS/ER 16 AND DS/ER 20

Sealing Capacity [mm]	Set DS/ER 16 Part No.
	3916.00000
3.5 ... 10.0	**Supplied with:**
Wooden Tray DSR/16	**14 Sealing Disks** **1 Wooden Tray**

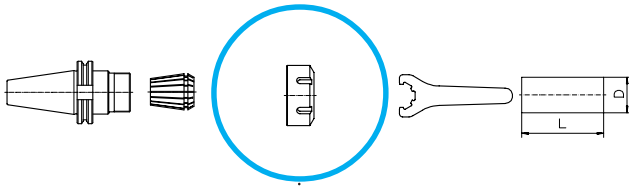
Sealing Capacity [mm]	Set DS/ER 20 Part No.
	3920.00000
3.5 ... 13.0	**Supplied with:**
Wooden Tray DSR/20	**20 Sealing Disks** **1 Wooden Tray**

Edition 10/2004

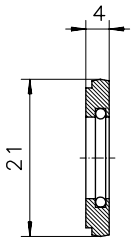
DS/ER 16
DS/ER 20

SEALING DISKS DS/ER 16 AND DS/ER 20

Sealing Capacity [mm]	[inch]	ø [inch]	DS/ER 16 Part No.	DS/ER 20 Part No.
3.00 ... 2.50	0.1181 ... 0.0984	3/32"	3916.00300	3920.00300
3.50 ... 3.00	0.1378 ... 0.1181	1/8"	3916.00350	3920.00350
4.00 ... 3.50	0.1575 ... 0.1378	5/32"	3916.00400	3920.00400
4.50 ... 4.00	0.1772 ... 0.1575		3916.00450	3920.00450
5.00 ... 4.50	0.1969 ... 0.1772	3/16"	3916.00500	3920.00500
5.50 ... 5.00	0.2165 ... 0.1969	7/32"	3916.00550	3920.00550
6.00 ... 5.50	0.2362 ... 0.2165		3916.00600	3920.00600
6.50 ... 6.00	0.2559 ... 0.2362	1/4"	3916.00650	3920.00650
7.00 ... 6.50	0.2756 ... 0.2559		3916.00700	3920.00700
7.50 ... 7.00	0.2953 ... 0.2756	9/32"	3916.00750	3920.00750
8.00 ... 7.50	0.3150 ... 0.2953	5/16"	3916.00800	3920.00800
8.50 ... 8.00	0.3347 ... 0.3150		3916.00850	3920.00850
9.00 ... 8.50	0.3543 ... 0.3347	11/32"	3916.00900	3920.00900
9.50 ... 9.00	0.3740 ... 0.3543	3/8"	3916.00950	3920.00950
10.00 ... 9.50	0.3937 ... 0.3740		3916.01000	3920.01000
10.50 ... 10.00	0.4134 ... 0.3937	13/32"	–	3920.01050
11.00 ... 10.50	0.4330 ... 0.4134		–	3920.01100
11.50 ... 11.00	0.4528 ... 0.4330	7/16"	–	3920.01150
12.00 ... 11.50	0.4724 ... 0.4528	15/32"	–	3920.01200
12.50 ... 12.00	0.4921 ... 0.4724		–	3920.01250
13.00 ... 12.50	0.5118 ... 0.4921	1/2"	–	3920.01300
Wooden Tray DSR			7122.16000	7122.20000

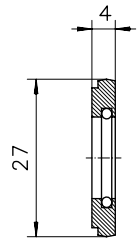


DS/ER 25
DS/ER 32



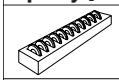
MATCHING PRODUCTS

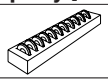
Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ERC 25	3425.20000	4- 6			●	●	●					E 25	7111.25000	12-1
	Hi-Q/ERBC 25	3425.40000	4-10		●	●	●	●					E 25	7111.25000	12-1
	Hi-Q/ERMC 25	3525.20000	4-14			●	●	●	●				E 25 M	7113.25000	12-1
	Hi-Q/ERAXC 25	3325.70000	4-18			●	●	●		●			E 25 AX	7117.25000	12-1



	Hi-Q/ERC 32	3432.20000	4- 6			●	●	●					E 32	7111.32000	12-1
	Hi-Q/ERBC 32	3432.40000	4-10		●	●	●	●					E 32	7111.32000	12-1
	Hi-Q/ERAXC 32	3332.70000	4-18			●	●	●		●			E 32 AX	7117.32000	12-1

SEALING DISK SETS DS/ER 25 AND DS/ER 32

Sealing Capacity [mm]	Set DS/ER 25 Part No.
	3925.00000
3.5 ... 16.0	**Supplied with:**
Wooden Tray DSR/25	**26 Sealing Disks** **1 Wooden Tray**

Sealing Capacity [mm]	Set DS/ER 32 Part No.
	3932.00000
3.5 ... 20.0	**Supplied with:**
Wooden Tray DSR/32	**34 Sealing Disks** **1 Wooden Tray**

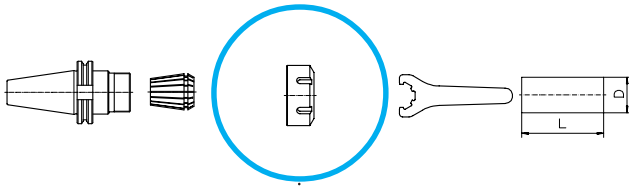
Edition 10/2004

DS/ER 25
DS/ER 32

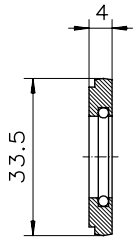
SEALING DISKS DS/ER 25 AND DS/ER 32

Sealing Capacity [mm]	[inch]	ø [inch]	DS/ER 25 Part No.	DS/ER 32 Part No.
3.00 ... 2.50	0.1181 ... 0.0984	3/32"	3925.00300	3932.00300
3.50 ... 3.00	0.1378 ... 0.1181	1/8"	3925.00350	3932.00350
4.00 ... 3.50	0.1575 ... 0.1378	5/32"	3925.00400	3932.00400
4.50 ... 4.00	0.1772 ... 0.1575		3925.00450	3932.00450
5.00 ... 4.50	0.1969 ... 0.1772	3/16"	3925.00500	3932.00500
5.50 ... 5.00	0.2165 ... 0.1969	7/32"	3925.00550	3932.00550
6.00 ... 5.50	0.2362 ... 0.2165		3925.00600	3932.00600
6.50 ... 6.00	0.2559 ... 0.2362	1/4"	3925.00650	3932.00650
7.00 ... 6.50	0.2756 ... 0.2559		3925.00700	3932.00700
7.50 ... 7.00	0.2953 ... 0.2756	9/32"	3925.00750	3932.00750
8.00 ... 7.50	0.3150 ... 0.2953	5/16"	3925.00800	3932.00800
8.50 ... 8.00	0.3347 ... 0.3150		3925.00850	3932.00850
9.00 ... 8.50	0.3543 ... 0.3347	11/32"	3925.00900	3932.00900
9.50 ... 9.00	0.3740 ... 0.3543	3/8"	3925.00950	3932.00950
10.00 ... 9.50	0.3937 ... 0.3740		3925.01000	3932.01000
10.50 ... 10.00	0.4134 ... 0.3937	13/32"	3925.01050	3932.01050
11.00 ... 10.50	0.4330 ... 0.4134		3925.01100	3932.01100
11.50 ... 11.00	0.4528 ... 0.4330	7/16"	3925.01150	3932.01150
12.00 ... 11.50	0.4724 ... 0.4528	15/32"	3925.01200	3932.01200

Sealing Capacity [mm]	[inch]	ø [inch]	DS/ER 25 Part No.	DS/ER 32 Part No.
12.50 ... 12.00	0.4921 ... 0.4724		3925.01250	3932.01250
13.00 ... 12.50	0.5118 ... 0.4921	1/2"	3925.01300	3932.01300
13.50 ... 13.00	0.5315 ... 0.5118	17/32"	3925.01350	3932.01350
14.00 ... 13.50	0.5512 ... 0.5315		3925.01400	3932.01400
14.50 ... 14.00	0.5709 ... 0.5512	9/16"	3925.01450	3932.01450
15.00 ... 14.50	0.5905 ... 0.5709		3925.01500	3932.01500
15.50 ... 15.00	0.6102 ... 0.5905	19/32"	3925.01550	3932.01550
16.00 ... 15.50	0.6300 ... 0.6102	5/8"	3925.01600	3932.01600
16.50 ... 16.00	0.6496 ... 0.6300		–	3932.01650
17.00 ... 16.50	0.6693 ... 0.6496	21/32"	–	3932.01700
17.50 ... 17.00	0.6890 ... 0.6693	11/16"	–	3932.01750
18.00 ... 17.50	0.7087 ... 0.6890		–	3932.01800
18.50 ... 18.00	0.7284 ... 0.7087	23/32"	–	3932.01850
19.00 ... 18.50	0.7480 ... 0.7284	3/4"	–	3932.01900
19.50 ... 19.00	0.7677 ... 0.7480		–	3932.01950
20.00 ... 19.50	0.7874 ... 0.7677	25/32"	–	3932.02000
Wooden Tray DSR			7122.25000	7122.32000



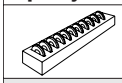
DS/ER 40



MATCHING PRODUCTS

Clamping Nut		Part No.	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	Spanner		Part No.	Page
	Hi-Q/ERC 40	3440.20000	4- 6			▲	●	🔒					E 40	7111.40000	12-1
	Hi-Q/ERBC 40	3440.40000	4-10		■	▲	●	🔒					E 40	7111.40000	12-1
	Hi-Q/ERAXC 40	3340.70000	4-18			▲	●	🔒		■			E 40 AX	7117.40000	12-1

SEALING DISKS SET DS/ER 40

Sealing Capacity [mm]	Set ER 40 Part No.
	3940.00000
3.5 ... 26.0	**Supplied with:**
Wooden Tray DSR/40	**46 Sealing Disks** **1 Wooden Tray**

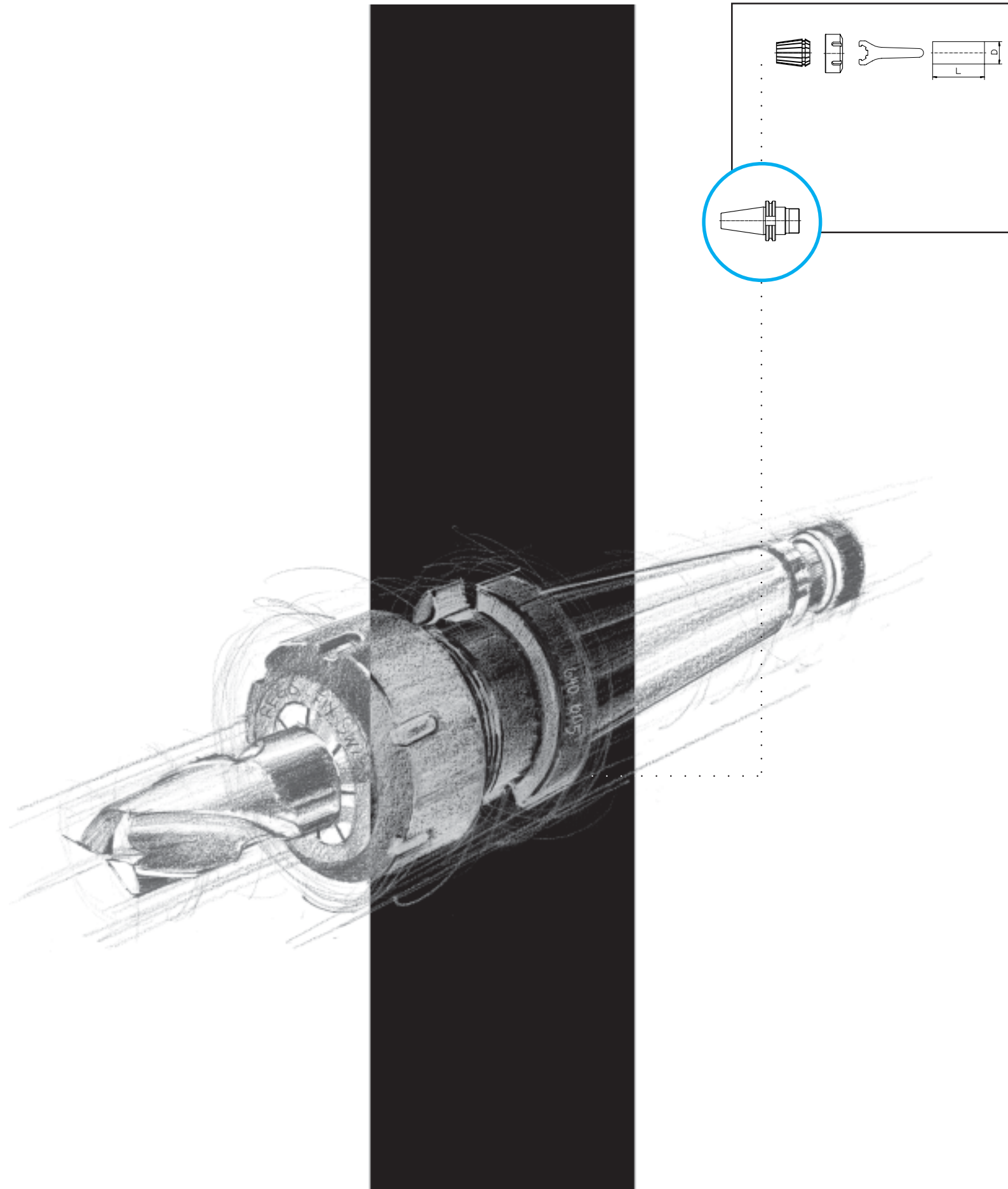
Edition 10/2004

DS/ER 40

SEALING DISKS DS/ER 40

Sealing Capacity [mm]	[inch]	ø [inch]	DS/ER 40 Part No.
3.00 ... 2.50	0.1181 ... 0.0984	3/32"	3940.00300
3.50 ... 3.00	0.1378 ... 0.1181	1/8"	3940.00350
4.00 ... 3.50	0.1575 ... 0.1378	5/32"	3940.00400
4.50 ... 4.00	0.1772 ... 0.1575		3940.00450
5.00 ... 4.50	0.1969 ... 0.1772	3/16"	3940.00500
5.50 ... 5.00	0.2165 ... 0.1969	7/32"	3940.00550
6.00 ... 5.50	0.2362 ... 0.2165		3940.00600
6.50 ... 6.00	0.2559 ... 0.2362	1/4"	3940.00650
7.00 ... 6.50	0.2756 ... 0.2559		3940.00700
7.50 ... 7.00	0.2953 ... 0.2756	9/32"	3940.00750
8.00 ... 7.50	0.3150 ... 0.2953	5/16"	3940.00800
8.50 ... 8.00	0.3347 ... 0.3150		3940.00850
9.00 ... 8.50	0.3543 ... 0.3347	11/32"	3940.00900
9.50 ... 9.00	0.3740 ... 0.3543	3/8"	3940.00950
10.00 ... 9.50	0.3937 ... 0.3740		3940.01000
10.50 ... 10.00	0.4134 ... 0.3937	13/32"	3940.01050
11.00 ... 10.50	0.4330 ... 0.4134		3940.01100
11.50 ... 11.00	0.4528 ... 0.4330	7/16"	3940.01150
12.00 ... 11.50	0.4724 ...0.4528	15/32"	3940.01200
12.50 ... 12.00	0.4921 ... 0.4724		3940.01250
13.00 ... 12.50	0.5118 ... 0.4921	1/2"	3940.01300
13.50 ... 13.00	0.5315 ... 0.5118	17/32"	3940.01350
14.00 ... 13.50	0.5512 ... 0.5315		3940.01400
14.50 ... 14.00	0.5709 ... 0.5512	9/16"	3940.01450

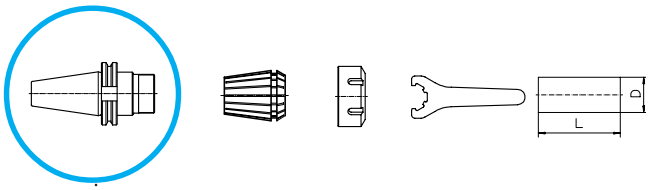
Sealing Capacity [mm]	[inch]	ø [inch]	DS/ER 40 Part No.
15.00 ... 14.50	0.5905 ... 0.5709		3940.01500
15.50 ... 15.00	0.6102 ... 0.5905	19/32"	3940.01550
16.00 ... 15.50	0.6300 ... 0.6102	5/8"	3940.01600
16.50 ... 16.00	0.6496 ... 0.6300		3940.01650
17.00 ... 16.50	0.6693 ... 0.6496	21/32"	3940.01700
17.50 ... 17.00	0.6890 ... 0.6693	11/16"	3940.01750
18.00 ... 17.50	0.7087 ... 0.6890		3940.01800
18.50 ... 18.00	0.7283 ... 0.7087	23/32"	3940.01850
19.00 ... 18.50	0.7480 ... 0.7283	3/4"	3940.01900
19.50 ... 19.00	0.7677 ... 0.7480		3940.01950
20.00 ... 19.50	0.7874 ... 0.7677	25/32"	3940.02000
20.50 ... 20.00	0.8071 ... 0.7874		3940.02050
21.00 ... 20.50	0.8268 ... 0.8071	13/16"	3940.02100
21.50 ... 21.00	0.8465 ... 0.7874	27/32"	3940.02150
22.00 ... 21.50	0.8661 ... 0.8465		3940.02200
22.50 ... 21.00	0.8858 ... 0.8661	7/8"	3940.02250
23.00 ... 22.50	0.9055 ... 0.8858	29/32"	3940.02300
23.50 ... 23.00	0.9252 ... 0.9055		3940.02350
24.00 ... 23.50	0.9449 ... 0.9252	15/16"	3940.02400
24.50 ... 24.00	0.9646 ... 0.9449		3940.02450
25.00 ... 24.50	0.9843 ... 0.9646	31/32"	3940.02500
25.50 ... 25.00	1.0039 ... 0.9843	1"	3940.02550
26.00 ... 25.50	1.0236 ... 1.0039		3940.02600
Wooden Tray			7122.40000


D
L

ISO-Shank Toolholders

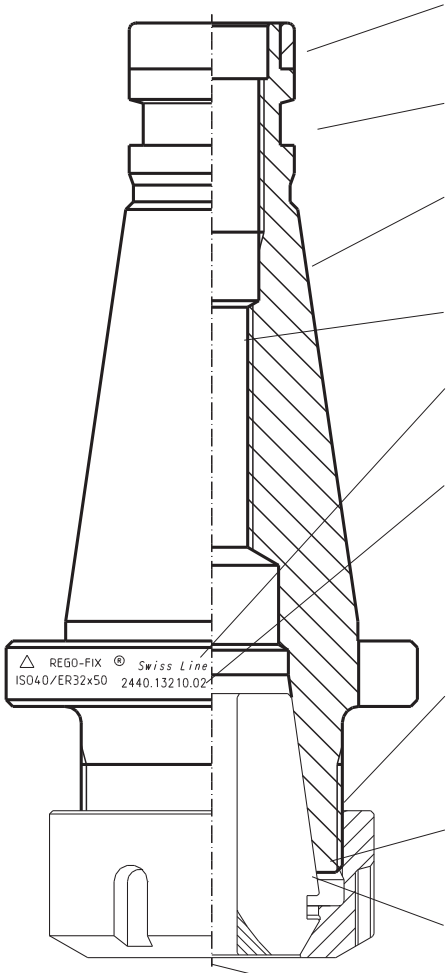
Contents

Edition 10/2004



ISO
DIN 2080

FEATURES AND BENEFITS



Quality: Swiss-made to ISO 9001; DIN STD 2080
⇨ *Product consistency and worldwide acceptance*

Material: High tensile strength case-hardened steel
⇨ *Reduced wear and increased life*

High Precision: Steep taper accuracy to AT3 tolerances
⇨ *Better spindle-to-holder fit and accuracy*

Thread: For back-up screw

Marking: Type and size markings easy to read
⇨ *Reduced tool selection errors*

Product Traceability: Lot number marked on toolholders
⇨ *Quality control and accountability*

Matched Tooling System for Best Fit: ER collet, toolholders, clamping nut and spanner all from **REGO-FIX®**
⇨ *Whole system stands for highest precision and longest tool life*

Finish: Special thread design
⇨ *Easier threading*

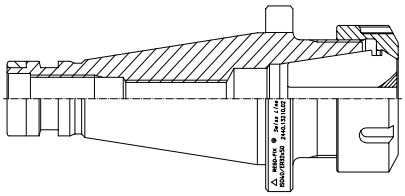
Surface Finish: max. Ra 0.25
⇨ *High clamping force*

Runout: O.D. to I.D. max. 0.003 mm
⇨ *Better machining results*

Edition 10/2004

ISO
DIN 2080

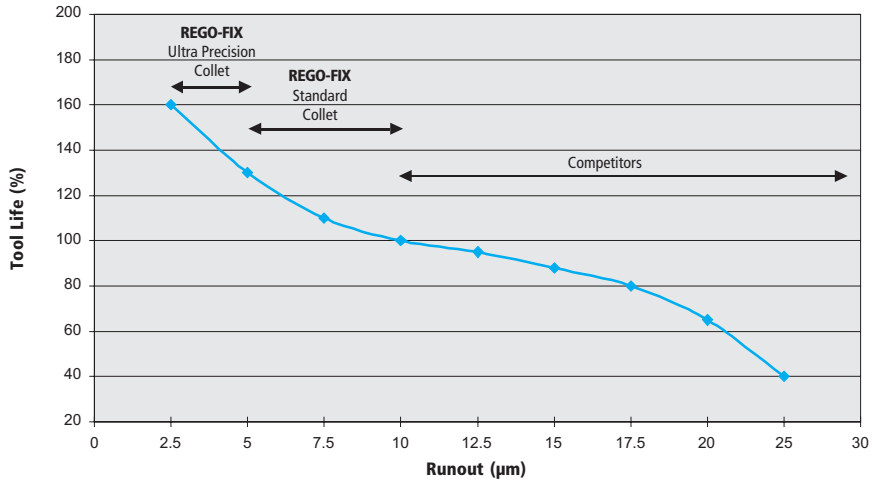
ISO-COLLETHOLDERS PER DIN STD 2080



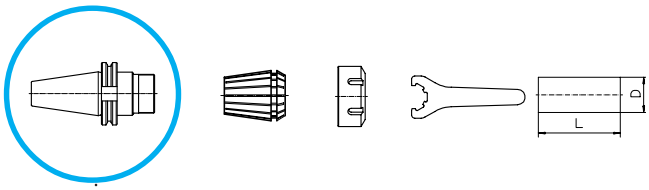
These **REGO-FIX®** colletholders with ISO shank per DIN STD 2080 are used on conventional milling machines. The shank of type ISO 40 incorporates a retention groove per system OTT. Upon request end mill and universal shell mill/face mill holders can be supplied with retention groove per system OTT.

For highest precision and best results the whole system counts. For that reason all **REGO-FIX®** components (collets, clamping nuts and tool holders) are carefully matched to fit together. This guarantees lowest T.I.R. and maximum balancing. For best manufacturing results and longest tool life, please use **REGO-FIX®** toolholders together with **REGO-FIX®** collets and clamping nuts only. For highest clamping force, as required for tapping with GB collets or ET1 collets, we recommend **REGO-FIX®** friction bearing nuts. **REGO-FIX®** end mill holders and universal shell mill/face mill holders are manufactured to the same exacting standards as all other **REGO-FIX®** products.

INFLUENCE OF TOOL RUNOUT ON TOOL LIFE



Precision depends on the matching of the whole system, from holder to collets and nuts. For highest precision and best results, we recommend using **REGO-FIX®** toolholders, **REGO-FIX®** collets and **REGO-FIX®** clamping nuts.



ISO/ER
DIN 2080

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	–	–	–	3425.00000	3432.00000	3440.00000	3450.00000	4- 4	■		▲		●			
	Hi-Q/ERC	–	–	–	3425.20000	3432.20000	3440.20000	–	4- 8			▲	●	●			
	Hi-Q/ERB	–	–	–	3425.30000	3432.30000	3440.30000	3450.30000	4-10		■	▲		●			
	Hi-Q/ERBC	–	–	–	3425.40000	3432.40000	3440.40000	–	4-10		■	▲	●	●			
	CM/ER	–	–	–	3125.90000	3132.90000	3140.90000	–	12-4								■
	E	–	–	–	7111.25000	7111.32000	7111.40000	7111.50000	12-1								

Collet		ER 11/ET1-12 Clamping Range [mm]	Page	ER 16/ET1-16 Clamping Range [mm]	Page	ER 20/ET1-20 Clamping Range [mm]	Page	ER 25/ET1-25 Clamping Range [mm]	Page	ER 32/ET1-32 Clamping Range [mm]	Page	ER 40/ET1-40 Clamping Range [mm]	Page	ER 50 Clamping Range [mm]	Page
	ER	–	–	–	–	–	–	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	4.0 ... 34.0	2-20
	ER-UP	–	–	–	–	–	–	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	4.0 ... 34.0	2-20
	ER-GB	–	–	–	–	–	–	4.0 ... 16.0	3- 4	4.0 ... 20.0	3- 4	6.0 ... 22.0	3- 4	–	–
	ET 1	–	–	–	–	–	–	2.5 ... 10.0	3- 8	4.5 ... 12.5	3- 8	6.0 ... 16.0	3- 8	–	–

Edition 10/2004

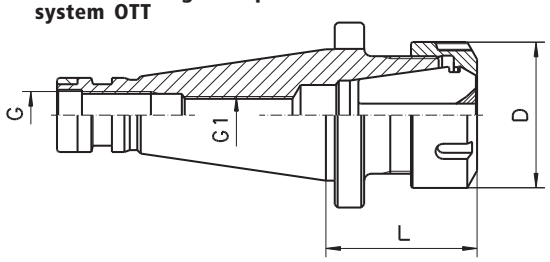
ISO/ER
DIN 2080

COLLETHOLDERS

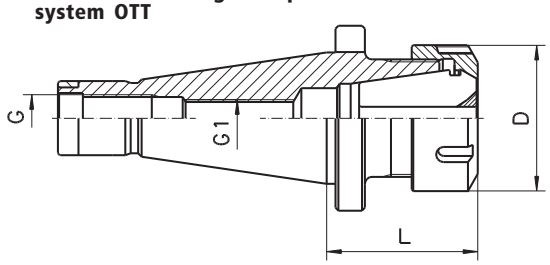
Type	Part No.	D [mm]	G	G1	L [mm]	Drawing
ISO 30/ER 25 x 043	2430.12510	42	M12	M12	43	2
ISO 30/ER 32 x 050	2430.13210	50	M12	M12	50	2
ISO 40/ER 32 x 050	2440.13210	50	M16	M12	50	1
ISO 40/ER 40 x 055	2440.14010	63	M16	M12	55	1
ISO 40/ER 50 x 078	2440.15030	78	M16	M12	78	1
ISO 50/ER 40 x 058	2450.14010	63	M24	M12	58	2
ISO 50/ER 50 x 064	2450.15020	78	M24	M12	64	2

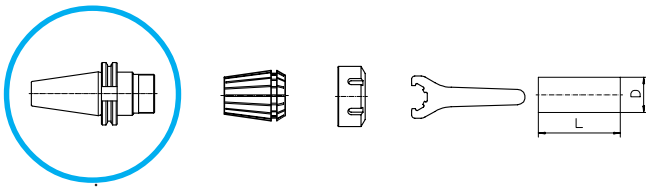
Supplied with: Colletholder and clamping nut

1 **With retention groove per system OTT**



2 **Without retention groove per system OTT**

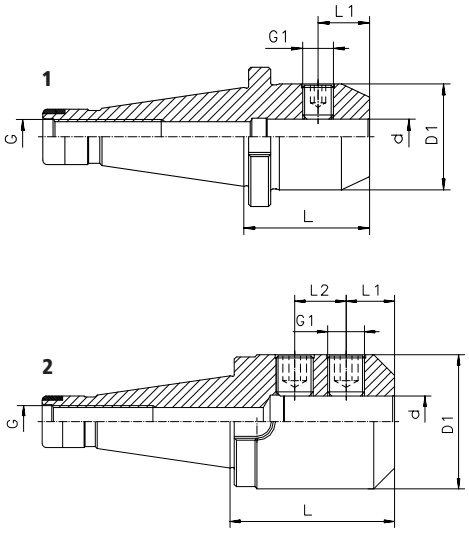




ISO/WD
DIN 2080

END MILL HOLDERS (WELDON)

5



Type	Part No.	d [mm]	D1 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
ISO 40/WD 6 x 050	2440.30620	6	25	M16	M 6	50	17.5	-	1
ISO 40/WD 8 x 050	2440.30820	8	28	M16	M 8	50	17.5	-	1
ISO 40/WD 10 x 050	2440.31020	10	35	M16	M10	50	19.5	-	1
ISO 40/WD 12 x 050	2440.31220	12	42	M16	M12	50	22.0	-	1
ISO 40/WD 14 x 050	2440.31420	14	44	M16	M12	50	22.0	-	1
ISO 40/WD 16 x 063	2440.31630	16	48	M16	M14	63	23.5	-	1
ISO 40/WD 18 x 063	2440.31830	18	50	M16	M14	63	23.5	-	1
ISO 40/WD 20 x 063	2440.32030	20	52	M16	M16	63	24.5	-	1
ISO 40/WD 25 x 080	2440.32550	25	65	M16	M18x2	80	23.5	25	2
ISO 40/WD 32 x 080	2440.33250	32	72	M16	M20x2	80	23.5	28	2

Supplied with: End mill holder and lock screw

Edition 10/2004

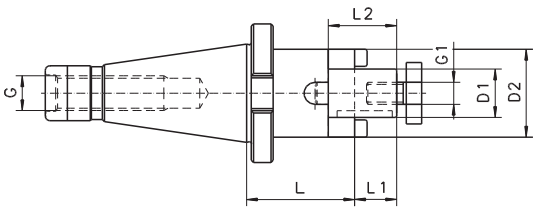
ISO/KFD
DIN 2080

UNIVERSAL SHELL MILL/FACE MILL HOLDERS

Type	Part No.	D1 [mm]	D2 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
ISO 40/KFD 16 x 052	2440.41630	16	32	M16	M 8	52	17.0	27	1
ISO 40/KFD 22 x 052	2440.42230	22	40	M16	M10	52	19.0	31	1
ISO 40/KFD 27 x 052	2440.42730	27	48	M16	M12	52	21.0	33	1
ISO 40/KFD 32 x 052	2440.43230	32	58	M16	M16	52	24.0	38	1
ISO 40/KFD 40 x 052	2440.44030	40	70	M16	M20	52	27.0	41	2

Supplied with: Universal shell mill / face mill holder, lock screw, feather key and drive ring

1



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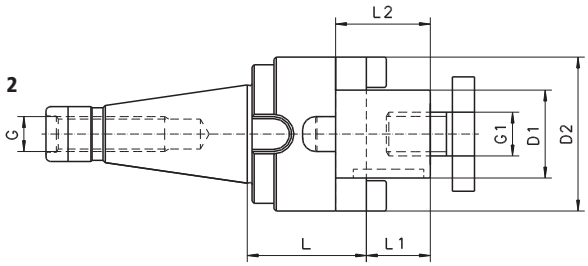
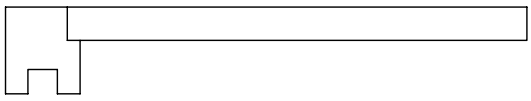
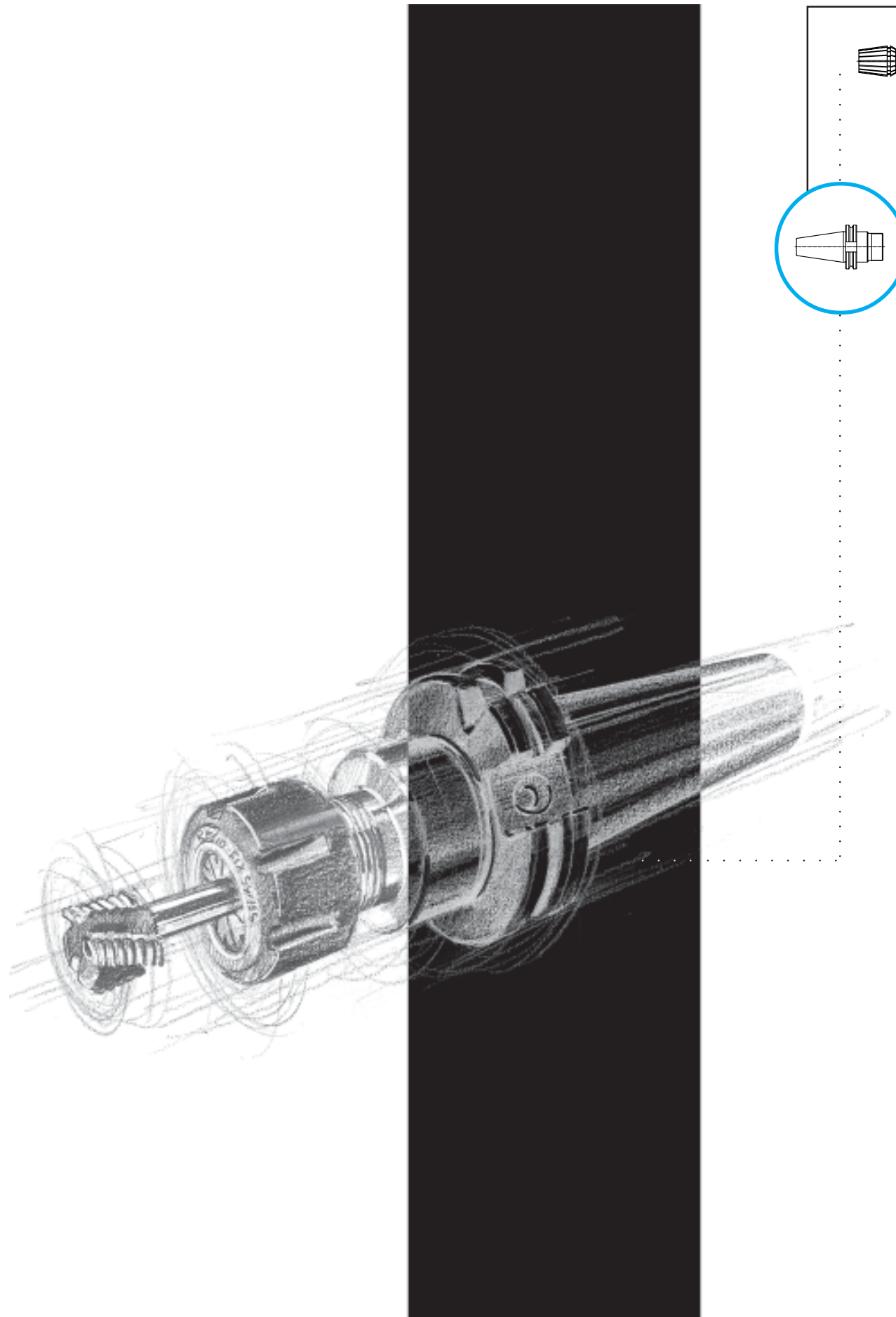


MATCHING SPANNERS

Type	Part No.
FDS 16	7711.16000
FDS 22	7711.22000
FDS 27	7711.27000
FDS 32	7711.32000
FDS 40	7711.40000

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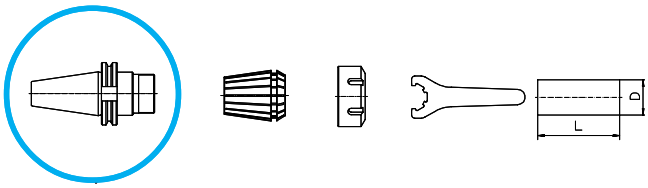
REGO-FIX®
Swiss Precision Tools

TC-Shank Toolholders

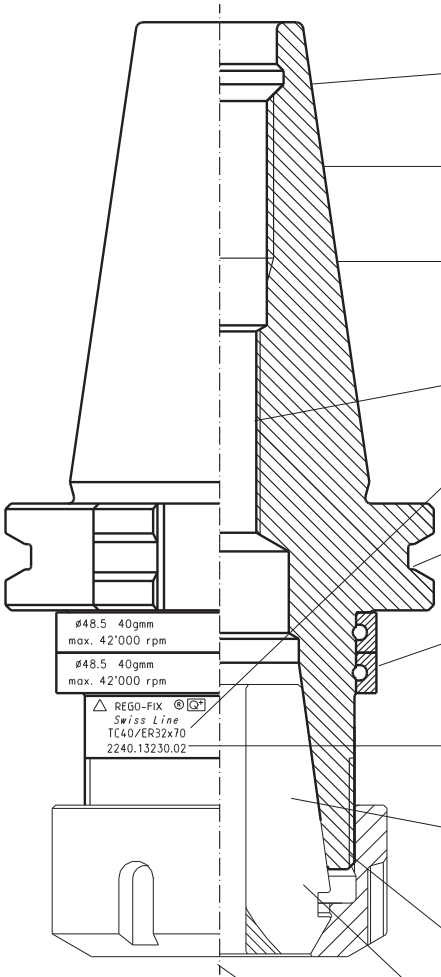
Contents

Edition 10/2004



TC
DIN 69871

FEATURES AND BENEFITS



Quality: Swiss-made to ISO 9001; DIN STD 69871
⇨ *Product consistency and worldwide acceptance*

Material: High tensile strength case-hardened steel
⇨ *Reduced wear and increased life*

High Precision: Steep taper accuracy to AT3 tolerances
⇨ *Better spindle-to-holder fit and accuracy*

Thread: For back-up screw

Marking: Type and size markings easy to read
⇨ *Reduced tool selection errors*

Q⁺ Balancing: G 6.3 @ 15'000 min^{-1}
⇨ *Ideal for all applications including high-speed*

Hi-Q Balancing System: Ready to accept Hi-Q balancing rings
⇨ *System balanceable to 42'000 min^{-1}*

Product Traceability: Lot number marked on toolholders
⇨ *Quality control and accountability*

Matched Tooling System for Best Fit: ER collet, toolholders, clamping nut and spanner all from **REGO-FIX®**
⇨ *Whole system stands for highest precision and longest tool life*

Finish: Special thread design
⇨ *Easier threading*

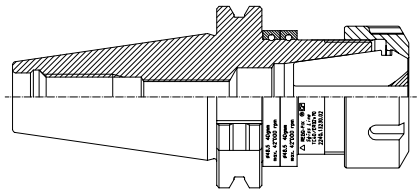
Surface Finish: max. Ra 0.25
⇨ *High clamping force*

Runout: O.D. to I.D. max. 0.003 mm
⇨ *Better machining results*

Edition 10/2004

TC
DIN 69871

TC-COLLETHOLDERS PER DIN STD 69871

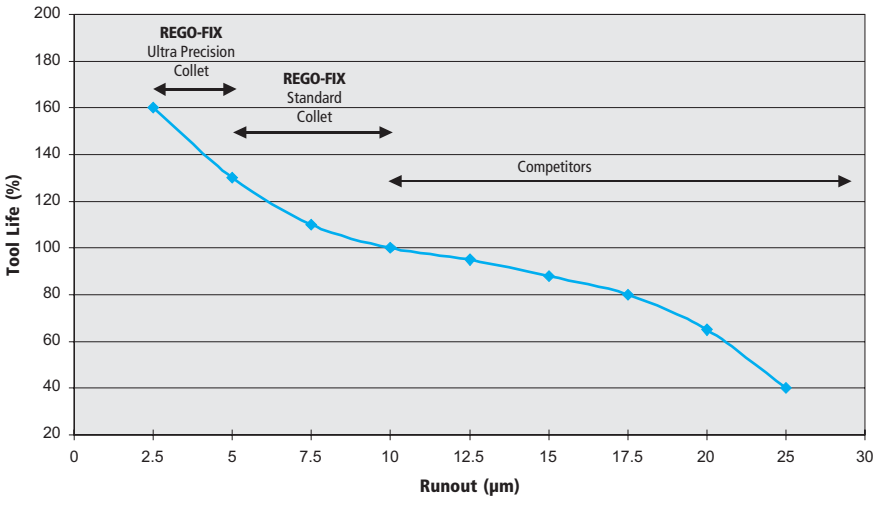


TC/ER colletholders are available in various gauge lengths. They are especially designed for use on machining centers with automatic tool change. **REGO-FIX®** Q^+ -System TC/ER colletholders are balanced by design to G 6.3 @ 15,000 min^{-1}.

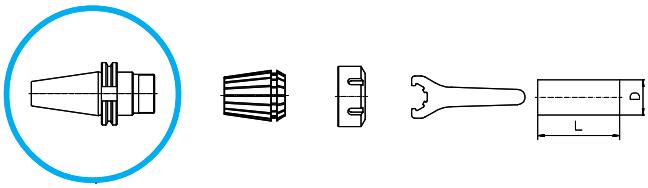
Type H colletholders are ready to accept Hi-Q balancing rings. The balancing rings allow precision balancing to 42'000 min^{-1}.

For highest precision and best results the whole system counts. For that reason all **REGO-FIX®** components (collets, clamping nuts and toolholders) are carefully matched to fit together. This guarantees lowest T.I.R. and maximum balancing. For best manufacturing results and longest tool life, please use **REGO-FIX®** toolholders together with **REGO-FIX®** collets and clamping nuts only. For highest clamping force, as required for tapping with GB collets or ET1 collets we recommend **REGO-FIX®** friction-bearing nuts. **REGO-FIX®** end mill holders and universal shell mill/face mill holders are manufactured to the same exacting standards as all other **REGO-FIX®** products.

INFLUENCE OF TOOL RUNOUT ON TOOL LIFE



Precision depends on the matching of the whole system, from holder to collets and nuts. For highest precision and best results, we recommend using **REGO-FIX®** toolholders, **REGO-FIX®** collets and **REGO-FIX®** clamping nuts.



TC/ER
DIN 69871

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	–	3416.00000	–	3425.00000	3432.00000	3440.00000	3450.00000	4- 4	■							
	Hi-Q/ERC	–	3416.20000	–	3425.20000	3432.20000	3440.20000	–	4- 6								
	Hi-Q/ERB	–	3416.30000	–	3425.30000	3432.30000	3440.30000	3450.30000	4-10								
	Hi-Q/ERBC	–	3416.40000	–	3425.40000	3425.40000	3440.40000	–	4-10								
	GS /E	-	7112.16000	–	7111.25000	7111.32000	7111.40000	7111.50000	12-1								
	CM/ER	–	3116.90000	–	3125.90000	3132.90000	3140.90000	–	12-4								
	E	–	7111.16000	–	7111.25000	7111.32000	7111.40000	–	12-1								

*** Note: This is a conventional UM/ER 50 clamping nut which is not balanced and has no "Collet Locking System"!**

Hi-Q Balancing Ring		Part No.	Page
	FWR 225	7490.22500	12-12
	FWR 285	7490.28500	12-12
	FWR 325	7490.32500	12-12
	FWR 405	7490.40500	12-12
	FWR 505	7490.50500	12-12

Suggested tightening torque of set screw = 0.9 Nm
Torque screwdriver (TSD), page 12-12
max. rpm for Hi-Q balancing rings = 42'000 min^{-1}.

Collet		ER 11/ET1-12 Clamping [mm]	Range Page	ER 16/ET1-16 Clamping [mm]	Range Page	ER 20/ET1-20 Clamping [mm]	Range Page	ER 25/ET1-25 Clamping [mm]	Range Page	ER 32/ET1-32 Clamping [mm]	Range Page	ER 40/ET1-40 Clamping [mm]	Range Page	ER 50 Clamping [mm]	Range Page
	ER	–	–	0.5 ... 10.0	2-10	–	–	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	4.0 ... 34.0	2-20
	ER-UP	–	–	0.5 ... 10.0	2-10	–	–	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	4.0 ... 34.0	2-20
	ER-GB	–	–	4.0 ... 9.0	3- 4	–	–	4.0 ... 16.0	3- 4	4.0 ... 20.0	3- 4	6.0 ... 22.0	3- 4	–	–
	ET 1	–	–	1.4 ... 6.3	3- 8	–	–	2.5 ... 10.0	3- 8	4.5 ... 12.5	3- 8	6.0 ... 16.0	3- 8	–	–

Edition 10/2004

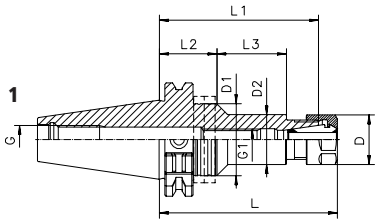
TC/ER
DIN 69871

COLLETHOLDERS

Type	Form A+AD Part No.	D [mm]	D1 [mm]	D2 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Drawing	Balancing Rings Plane 1 Plane 2
TC 30/ER 16 x 070 H	4230.11630	28	28	–	M12	M12	70	59.5	41.5	–	2	FWR 285
TC 30/ER 16 x 100 H	4230.11650	28	28	–	M12	M12	100	89.5	71.5	–	2	FWR 285
TC 30/ER 25 x 060 H	4230.12520	42	32	–	M12	M12	60	48.5	–	–	3	FWR 325
TC 30/ER 32 x 065	2230.13220	50	40	–	M12	M12	65	52.4	–	–	3	–
TC 40/ER 16 x 070 H	4240.11630	28	40	22	M16	M12	70	59.5	32.5	9.5	1	FWR 405
TC 40/ER 16 x 100 H	4240.11650	28	40	28	M16	M12	100	89.5	32.5	39.0	1	FWR 405
TC 40/ER 16 x 150 H	4240.11670	28	40	28	M16	M12	150	139.5	58.5	50.5	1	FWR 405 FWR 225
TC 40/ER 25 x 070 H	4240.12530	42	40	–	M16	M12	70	58.0	38.0	–	2	FWR 405
TC 40/ER 25 x 100 H	4240.12550	42	40	–	M16	M12	100	88.0	68.0	–	2	FWR 405
TC 40/ER 25 x 150 H	4240.12570	42	40	–	M16	M12	150	138.0	106	–	2	FWR 405 FWR 325
TC 40/ER 32 x 070 H	4240.13230	50	40	–	M16	M12	70	57.5	–	–	3	FWR 405
TC 40/ER 32 x 100 H	4240.13250	50	40	–	M16	M12	100	87.5	–	–	3	FWR 405
TC 40/ER 32 x 150 H	4240.13270	50	40	–	M16	M12	150	137.5	–	–	4	FWR 405 FWR 405
TC 40/ER 40 x 080	2240.14040	63	44.45	–	M16	M12	80	65.5	–	–	3	–
TC 40/ER 40 x 100 H	4240.14050	63	44.45	–	M16	M12	100	85.5	35.5	–	4	FWR 505
TC 40/ER 40 x 150 H	4240.14070	63	44.45	–	M16	M12	150	135.5	35.5	–	4	FWR 505 FWR 505
TC 50/ER 16 x 100	2250.11650	28	28	–	M24	M12	100	89.5	71.5	–	2	–
TC 50/ER 16 x 150	2250.11670	28	28	–	M24	M12	150	139.5	121.5	–	2	–
TC 50/ER 32 x 100 H	4250.13250	50	50.50	–	M24	M12	100	87.5	35	30.5	2	FWR 505
TC 50/ER 32 x 160	2250.13280	50	69.85	50	M24	M12	160	147.5	38.5	27.3	1	–
TC 50/ER 40 x 100 H	4250.14050	63	50.50	63	M24	M12	100	85.5	39.0	24.4	3	FWR 505
TC 50/ER 40 x 160	2250.14080	63	69.85	50	M24	M12	160	145.5	48.5	37.0	1	–
TC 50/ER 50 x 100	2250.15050	78	69.85	–	M24	M12	100	79.3	49.5	–	2	–

Supplied with: Colletholder and clamping nut

1



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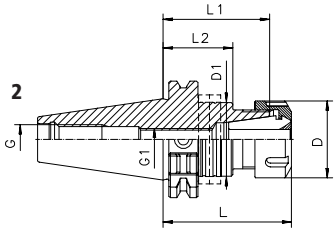

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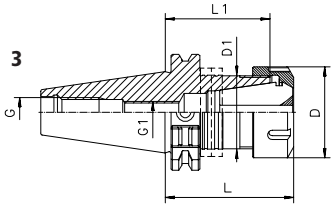

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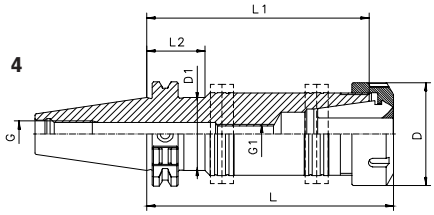
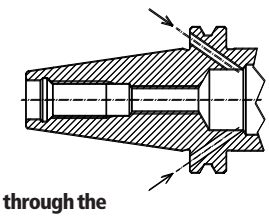
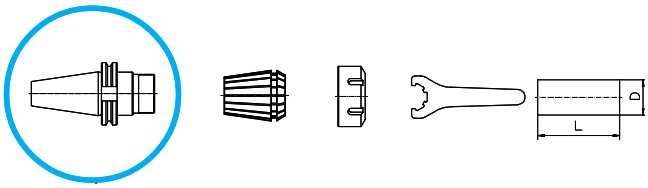


Option Form B



cooling through the flange



powRgrip® -System

powRgrip® Clamping Units PGU and PGC with accesorries

Type	Part No.	Description	Dimensions W x D x H	Weight
PGU 6100 E	7610.30000	Automatic Clamping Unit - Main Voltage 230 V	490 x 490 x 730 mm	75 kg
PGU 6100 A	7610.30100	Automatic Clamping Unit - Main Voltage 100/110 V	490 x 490 x 730 mm	75 kg
APG 10	7611.10000	Clamping Insert for PG 10, Taper Cleaner included	–	–
APG 15	7611.15000	Clamping Insert for PG 15, Taper Cleaner included	–	–
APG 25	7611.25000	Clamping Insert for PG 25, Taper Cleaner included	–	–
PGC 1000	7621.10000	Manual Clamping Unit for PG 10, Taper Cleaner incl.	–	7 kg
PGC 1500	7621.15000	Manual Clamping Unit for PG 15, Taper Cleaner incl.	–	12 kg
PGC 2500	7621.25000	Manual Clamping Unit for PG 25, Taper Cleaner incl.	–	12 kg
PGS 1	7625.00100	Stand No. 1	–	4 kg
PGP 300 M	7629.00300	Hand Pump, 300 bar	–	6 kg

- ***Highest transmittable torque, superior runout and vibration dampening***
- ***Tool change in less than 10 seconds***
- ***Clamps tool shanks down to Ø 3.0 mm (0.1181"), PG 10 down to Ø 2.0 mm (0.0787")***
- ***Balanceable - Just add REGO-FIX® balancing rings***
- ***For use with coolant through tooling***
- ***Tool presetting feature***

For further information about the powRgrip®-System please ask for the latest brochure

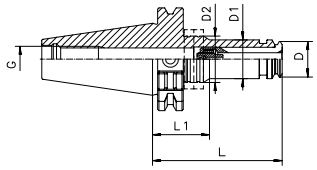
Edition 10/2004

TC/PG
DIN 69871

powRgrip® - COLLETHOLDERS

Type	Part. No.	D [mm]	D1 [mm]	D2 [mm]	G	L [mm]	L1 [mm]	Drawing	Balancing Rings Plane 1 Plane 2
TC 30 / PG 10 x 073 H	4230.71030	16	16	28	M 12	73	32	1	FWR 285
TC 30 / PG 15 x 080 H	4230.71540	22	24	28	M 12	80	35	1	FWR 285
TC 30 / PG 25 x 080	2230.72540	22	40	-	M 12	80	-	1	-
TC 40 / PG 10 x 080 H	4240.71040	16	16	28	M 16	80	32	1	FWR 285
TC 40 / PG 10 x 120 H	4240.71060	16	16	28	M 16	120	32	1	FWR 285
TC 40 / PG 10 x 160 H	4240.71080	16	16	32	M16	160	32	1	FWR 325
TC 40 / PG 15 x 080 H	4240.71540	22	24	28	M 16	80	35	1	FWR 285
TC 40 / PG 15 x 120 H	4240.71560	22	24	32	M 16	120	73.5	1	FWR 325
TC 40 / PG 15 x 160 H	4240.71580	22	24	32	M 16	160	115.5	2	FWR 325/285
TC 40 / PG 25 x 080 H	4240.72540	33	40	-	M 16	80	-	1	FWR 405
TC 40 / PG 25 x 120 H	4240.72560	33	40	-	M 16	120	-	1	FWR 405
TC 40 / PG 25 x 160 H	4240.72580	33	40	-	M 16	160	-	2	FWR 405/ 405
TC 50 / PG 25 x 100 H	4250.72550	33	40	50	M 24	100	34.5	1	FWR 505
TC 50 / PG 25 x 160 H	4250.72580	33	40	50	M 24	160	34.5	2	FWR 505 / 405

1



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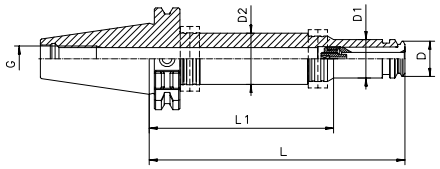
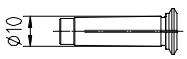


MATCHING powRgrip® COLLETS

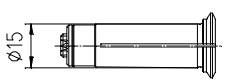
Clamping Diameter [mm]	[Inch]	Ø [Inch]	PG 10 Part. No.	PG 15 Part. No.	PG 25 Part. No.
2.000	0.0787		1710.02000	-	-
3.000	0.1181		1710.03000	1715.03000	1725.03000
3.175	0.1250	1/8"	1710.03181	1715.03181	1725.03181
4.000	0.1575		1710.04000	1715.04000	1725.04000
4.763	0.1875	3/16"	1710.04761	1715.04761	1725.04761
5.000	0.1969		1710.05000	1715.05000	1725.05000
6.000	0.2362		1710.06000	1715.06000	1725.06000
6.350	0.2500	1/4"	1715.06351	1715.06351	1725.06351
7.938	0.3125	5/16"	-	1715.07941	1725.07941
8.000	0.3150		-	1715.08000	1725.08000
9.525	0.3750	3/8"	-	1715.09521	1725.09521
10.000	0.3937		-	1715.10000	1725.10000
12.000	0.4724		-	-	1725.12000
12.700	0.5000	1/2"	-	-	1725.12701
14.000	0.5512		-	-	1725.14000
15.875	0.6250	5/8"	-	-	1725.15881
16.000	0.6300		-	-	1725.16000
18.000	0.7087		-	-	1725.18000
19.050	0.7500	3/4"	-	-	1725.19051
20.000	0.7874		-	-	1725.20000

Supplied with: PG collet with set screw

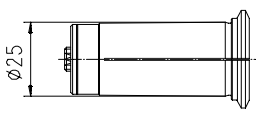
PG 10

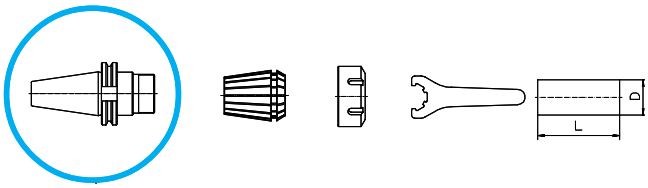


PG 15



PG 25

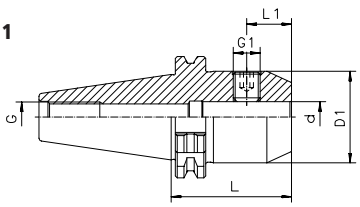




TC/WD
DIN 69871 A+AD

END MILL HOLDERS (WELDON)

1



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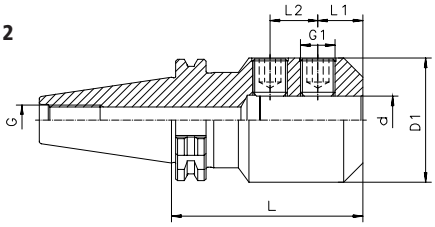


Type	Part No.	d [mm]	D1 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
TC 40/WD 6 x 050	2240.30620	6	25	M16	M 6	50	17.5	-	1
TC 40/WD 8 x 050	2240.30820	8	28	M16	M 8	50	17.5	-	1
TC 40/WD 10 x 050	2240.31020	10	35	M16	M10	50	19.5	-	1
TC 40/WD 12 x 050	2240.31220	12	42	M16	M12	50	22.0	-	1
TC 40/WD 14 x 050	2240.31420	14	44	M16	M12	50	22.0	-	1
TC 40/WD 16 x 063	2240.31630	16	48	M16	M14	63	23.5	-	1
TC 40/WD 18 x 063	2240.31830	18	50	M16	M14	63	23.5	-	1
TC 40/WD 20 x 063	2240.32030	20	52	M16	M16	63	24.5	-	1
TC 40/WD 25 x 100	2240.32560	25	65	M16	M18x2	100	23.5	25	2
TC 40/WD 32 x 100	2240.33260	32	72	M16	M20x2	100	23.5	28	2

Supplied with: End mill holder and lock screw.

Edition 10/2004

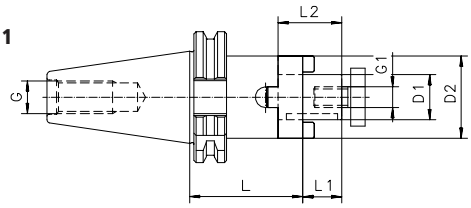
TC/KFD
DIN 69871 A

UNIVERSAL SHELL MILL / FACE MILL HOLDERS

Type	Part No.	D1 [mm]	D2 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
TC 40/KFD 16 x 055	2240.41630	16	32	M16	M 8	55	17	27	1
TC 40/KFD 22 x 055	2240.42230	22	40	M16	M10	55	19	31	1
TC 40/KFD 27 x 055	2240.42730	27	48	M16	M12	55	21	33	1
TC 40/KFD 32 x 060	2240.43240	32	58	M16	M16	60	24	38	1
TC 40/KFD 40 x 060	2240.44040	40	70	M16	M20	60	27	41	2

Supplied with: Universal shell mill / face mill holder, lock screw, feather key and drive ring.

1



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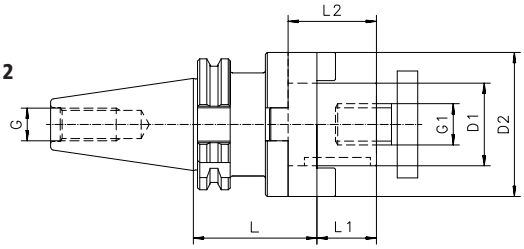
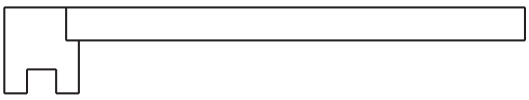
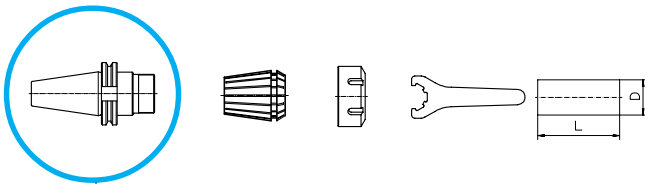


MATCHING SPANNERS

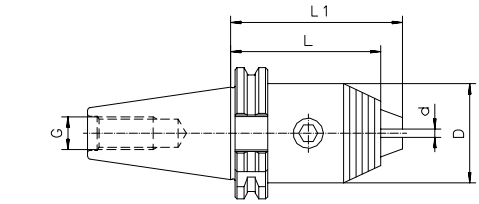
Type	Part No.
FDS 16	7711.16000
FDS 22	7711.22000
FDS 27	7711.27000
FDS 32	7711.32000
FDS 40	7711.40000

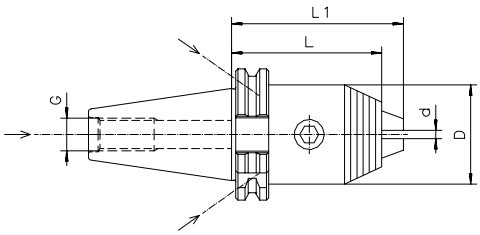




TC/KBF
DIN 69871

DRILL CHUCKS





Type	Form A Part No.	Form AD+B Part No.	d [mm]	D [mm]	G	L [mm]	L1 [mm]	Drawing
TC 30/KBF 1 - 13 mm	2230.50100	–	1-13	50	M12	111	117	1
TC 40/KBF 1 - 13 mm	–	2240.50103	1-13	50	M16	90	96	2
TC 50/KBF 1 - 13 mm	–	2250.50103	1-13	50	M24	106	112	2

Supplied with: Drill chuck and Allen-key

Clamping Range	1 - 13 mm
Maximum Runout	0.03 mm
Maximum Tightening Torque	20 Nm
Clamping Force (@20 Nm Tightening Torque)	80 Nm
Maximum rpm	up to 35'000 min^{-1}

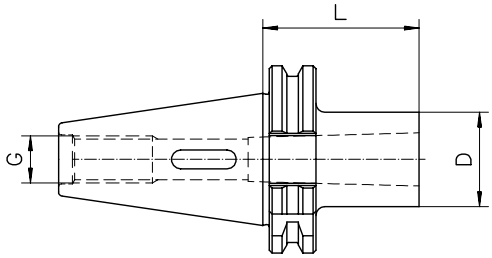
Edition 10/2004

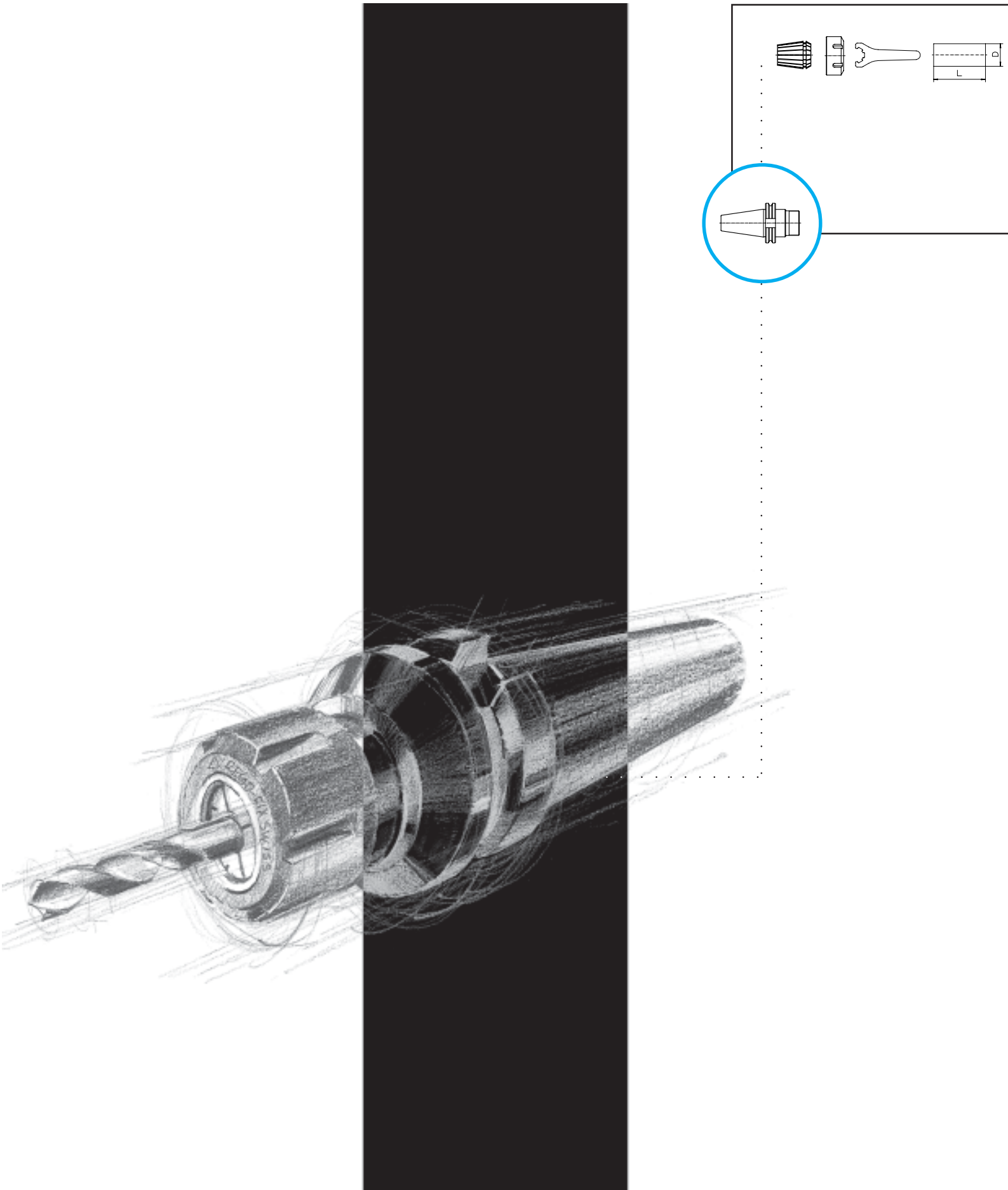
TC/MK
DIN 69871 A+AD

EXTENSION SLEEVES

Type	Part No.	D [mm]	G	L [mm]
TC 40/MK 1 x 050	2240.80110	25	M16	50
TC 40/MK 2 x 050	2240.80210	32	M16	50
TC 40/MK 3 x 070	2240.80320	40	M16	70
TC 40/MK 4 x 095	2240.80430	48	M16	95

Supplied with: Extension sleeve



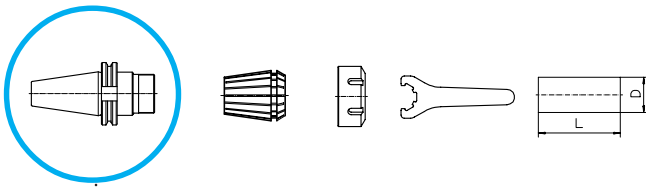

D
L

REGO-FIX®
Swiss Precision Tools

BT-Shank Toolholders

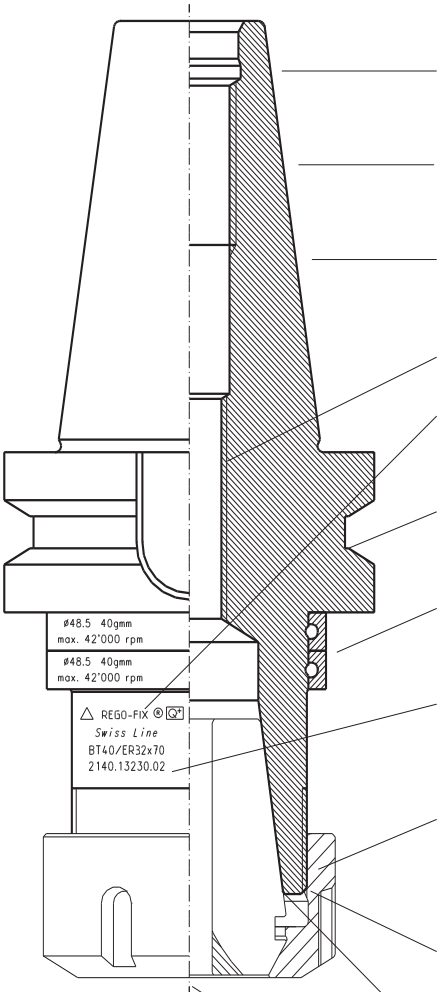
Contents

Edition 10/2004



BT
MAS 403

FEATURES AND BENEFITS



Quality: Swiss-made to ISO 9001; MAS 403
➪ *Product consistency and worldwide acceptance*

Material: High tensile strength case-hardened steel
➪ *Reduced wear and increased life*

High Precision: Steep taper accuracy to AT3 tolerances
➪ *Better spindle-to-holder fit and accuracy*

Thread: For back-up screw

Marking: Type and size markings easy to read
➪ *Reduced tool selection errors*

Q⁺ Balancing: G 6.3 @ 15'000 min^{-1}
➪ *Ideal for all applications including high-speed*

Hi-Q Balancing System: Ready to accept Hi-Q balancing rings
➪ *System balanceable to 42'000 min^{-1}*

Product Traceability: Lot number marked on toolholders
➪ *Quality control and accountability*

Matched Tooling System for Best Fit: ER collet, toolholders, clamping nut and spanner all from **REGO-FIX®**
➪ *Whole system stands for highest precision and longest tool life*

Finish: Special thread design
➪ *Easier threading*

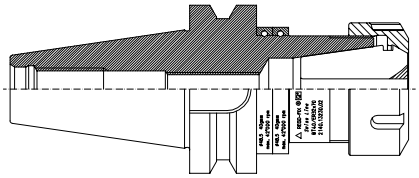
Surface Finish: max. Ra 0.25
➪ *High clamping force*

Runout: O.D. to I.D. max. 0.003 mm
➪ *Better machining results*

Edition 10/2004

BT
MAS 403

BT-COLLETHOLDERS PER JAPANESE STANDARD MAS 403

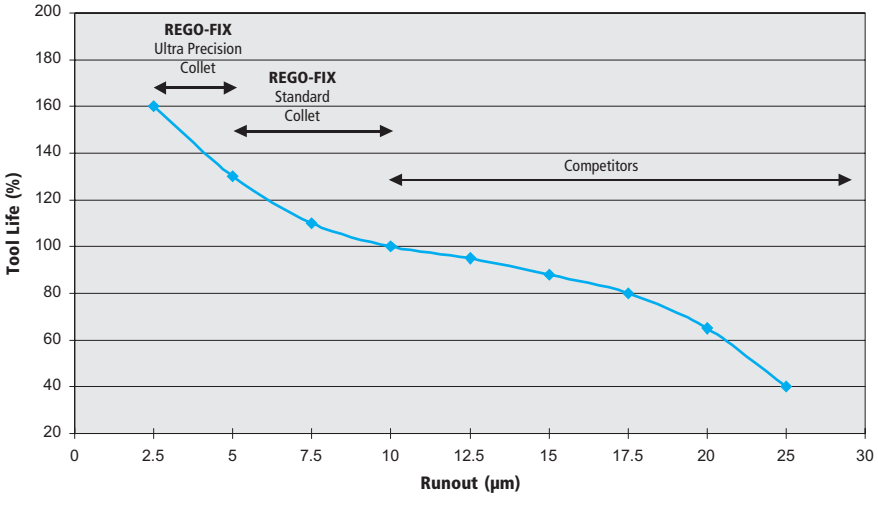


BT/ER colletholders are especially designed for use on machine centers with automatic tool change. **REGO-FIX®** Q^+ -System BT/ER colletholders are balanced by design to G 6.3 @ 15,000 min^{-1}.

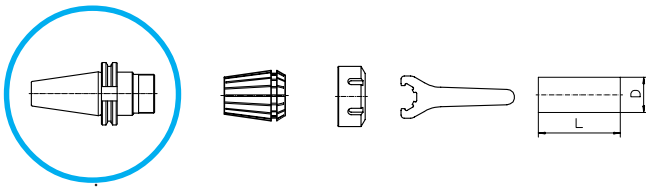
Type H colletholders are ready to accept Hi-Q balancing rings. The balancing rings allow precision balancing to 42'000 min^{-1}.

For highest precision and best results the whole system counts. For that reason all **REGO-FIX®** components (collets, clamping nuts and tool holders) are carefully matched to fit together. This guarantees lowest T.I.R. and maximum balancing. For best manufacturing results and longest tool life, please use **REGO-FIX®** toolholders together with **REGO-FIX®** collets and clamping nuts only. For highest clamping force, as required for tapping with GB collets or ET1 collets we recommend **REGO-FIX®** friction-bearing nuts. **REGO-FIX®** end mill holders and universal shell mill/face mill holders are manufactured to the same exacting standards as all other **REGO-FIX®** products.

INFLUENCE OF TOOL RUNOUT ON TOOL LIFE



Precision depends on the matching of the whole system, from holder to collets and nuts. For highest precision and best results, we recommend using **REGO-FIX®** toolholders, **REGO-FIX®** collets and **REGO-FIX®** clamping nuts.



BT/ER
MAS 403

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Cooltant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	–	3416.00000	–	3425.00000	3432.00000	3440.00000	3450.00000	4- 4	■		▲		●			
	Hi-Q/ERC	–	3416.20000	–	3425.20000	3432.20000	3440.20000	–	4- 6			▲	●	●			
	Hi-Q/ERB	–	3416.30000	–	3425.30000	3432.30000	3440.30000	3450.30000	4-10		▬	▲		●			
	Hi-Q/ERBC	–	3416.40000	–	3425.40000	3432.40000	3440.40000	–	4-10		▬	▲	●	●			
	GS / E	-	7112.16000	-	7111.25000	7111.32000	7111.40000	7111.50000	12-1								
	CM/ER	–	3116.90000	–	3125.90000	3132.90000	3140.90000	–	12-4								■
	E	–	7111.16000	–	7111.25000	7111.32000	7111.40000	–	12-1								

Hi-Q Balancing Rings		Part No.	Page
	FWR 225	7490.22500	12-12
	FWR 285	7490.28500	12-12
	FWR 325	7490.32500	12-12
	FWR 405	7490.40500	12-12
	FWR 505	7490.50500	12-12

Suggested tightening torque of set screw = 0.9 Nm
Torque screwdriver (TSD), page 12-12
max. rpm for Hi-Q balancing rings = 42'000 min^{-1}.

Collet		ER 11/ET1-12 Clamping [mm]	Range Page	ER 16/ET1-16 Clamping [mm]	Range Page	ER 20/ET1-20 Clamping [mm]	Range Page	ER 25/ET1-25 Clamping [mm]	Range Page	ER 32/ET1-32 Clamping [mm]	Range Page	ER 40/ET1-40 Clamping [mm]	Range Page	ER 50 Clamping [mm]	Range Page
	ER	–	–	0.5 ... 10.0	2-10	–	–	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	4.0 ... 34.0	2-20
	ER-UP	–	–	0.5 ... 10.0	2-10	–	–	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	4.0 ... 34.0	2-20
	ER-GB	–	–	4.0 ... 9.0	3- 4	–	–	4.0 ... 16.0	3- 4	4.0 ... 20.0	3- 4	6.0 ... 22.0	3- 4	–	–
	ET1	–	–	1.4 ... 6.3	3- 8	–	–	2.5 ... 10.0	3- 8	4.5 ... 12.5	3- 8	6.3 ... 16.0	3- 8	–	–

Edition 10/2004

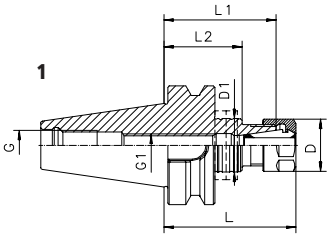
BT/ER
MAS 403

COLLETHOLDERS

Type	Form A+AD Part No.	D [mm]	D1 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing	Balancing Rings Plane 1 Plane 2
BT 30/ER 16 x 080 H	4130.11640	28	28	M12	M12	80	69.5	51.5	1	FRW 285
BT 30/ER 16 x 100 H	4130.11650	28	28	M12	M12	100	89.5	71.5	1	FWR 285
BT 30/ER 25 x 060 H	4130.12520	42	32	M12	M12	62.5	50.4	–	2	FWR 325
BT 30/ER 25 x 100 H	4130.12550	42	32	M12	M12	100	88.5	–	2	FWR 325
BT 30/ER 32 x 060	2130.13220	50	40	M12	M12	60	47.3	–	2	–
BT 30/ER 32 x 100	2130.13250	50	46	M12	M12	100	87.3	–	2	–
BT 40/ER 16 x 070 H	4140.11630	28	28	M16	M12	70	59.5	41.5	1	FWR 285
BT 40/ER 16 x 100 H	4140.11650	28	28	M16	M12	100	89.5	71.5	1	FWR 285
BT 40/ER 16 x 150 H	4140.11670	28	28	M16	M12	150	139.5	109	3	FWR 285 FWR 225
BT 40/ER 25 x 070 H	4140.12530	42	32	M16	M12	70	58.0	–	2	FWR 325
BT 40/ER 25 x 100 H	4140.12550	42	40	M16	M12	100	88.0	68.0	1	FWR 405
BT 40/ER 25 x 150 H	4140.12570	42	40	M16	M12	150	138.0	105.5	3	FWR 405 FWR 325
BT 40/ER 32 x 070 H	4140.13230	50	40	M16	M12	70	57.0	–	2	FWR 405
BT 40/ER 32 x 100 H	4140.13250	50	40	M16	M12	100	87.0	–	2	FWR 405
BT 40/ER 32 x 150 H	4140.13270	50	40	M16	M12	150	137.0	–	4	FWR 405 FWR 405
BT 40/ER 40 x 080	2140.14040	63	50	M16	M12	80	65.5	–	2	–
BT 40/ER 40 x 100 H	4140.14050	63	50	M16	M12	100	85.5	–	2	FWR 505
BT 40/ER 40 x 150 H	4140.14070	63	50	M16	M12	150	135.5	–	4	FWR 505 FWR 505
BT 50/ER 16 x 100	2150.11650	28	28	M24	M12	100	89.5	71.5	1	–
BT 50/ER 16 x 150 H	4150.11670	28	28	M24	M12	150	139.5	105.0	3	FWR 505 FWR 225
BT 50/ER 32 x 100	2150.13250	50	50	M24	M12	100	87.5	65.5	1	–
BT 50/ER 32 x 160	2150.13280	50	50	M24	M12	160	147.5	125.5	1	–
BT 50/ER 40 x 100	2150.14050	63	63	M24	M12	100	85.5	63.5	1	–
BT 50/ER 40 x 160	2150.14080	63	50	M24	M12	160	145.5	–	2	–
BT 50/ER 50 x 100	2150.15050	78	64	M24	M12	100	79.5	–	2	–

Supplied with: Colletholder and clamping nut

1



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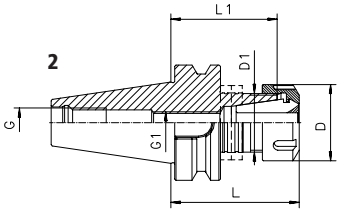

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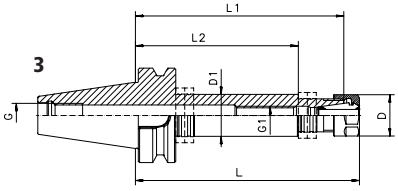
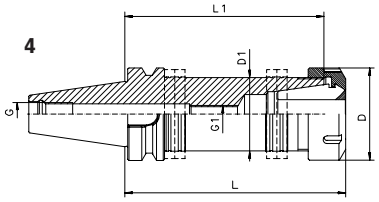
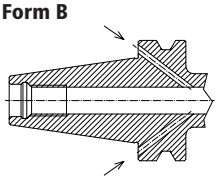


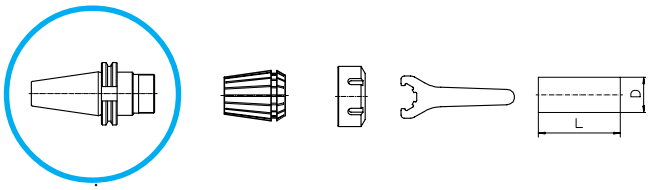
4



Option Form B



Cooling through the flange



powRgrip® - System

powRgrip® Clamping Units PGU and PGC with accesorries

Type	Part No.	Description	Dimensions W x D x H	Weight
PGU 6100 E	7610.30000	Automatic Clamping Unit - Main Voltage 230 V	490 x 490 x 730 mm	75 kg
PGU 6100 A	7610.30100	Automatic Clamping Unit - Main Voltage 100/110 V	490 x 490 x 730 mm	75 kg
APG 10	7611.10000	Clamping Insert for PG 10, Taper Cleaner included	–	–
APG 15	7611.15000	Clamping Insert for PG 15, Taper Cleaner included	–	–
APG 25	7611.25000	Clamping Insert for PG 25, Taper Cleaner included	–	–
PGC 1000	7621.10000	Manual Clamping Unit for PG 10, Taper Cleaner incl.	–	7 kg
PGC 1500	7621.15000	Manual Clamping Unit for PG 15, Taper Cleaner incl.	–	12 kg
PGC 2500	7621.25000	Manual Clamping Unit for PG 25, Taper Cleaner incl.	–	12 kg
PGS 1	7625.00100	Stand No. 1	–	4 kg
PGP 300 M	7629.00300	Hand Pump, 300 bar	–	6 kg

- ***Highest transmittable torque, superior runout and vibration dampening***
- ***Tool change in less than 10 seconds***
- ***Clamps tool shanks down to Ø 3.0 mm (0.1181"), PG 10 down to Ø 2.0 mm (0.0787")***
- ***Balanceable - Just add REGO-FIX® balancing rings***
- ***For use with coolant through tooling***
- ***Tool presetting feature***

For further information about the powRgrip®-System please ask for the latest brochure

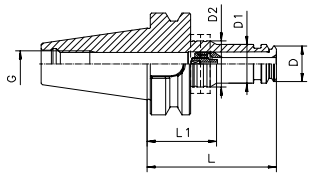
Edition 10/2004

BT / PG
MAS 403

powRgrip® - COLLETHOLDERS

Type	Form A + AD Part No.	D [mm]	D1 [mm]	D2 [mm]	G	L [mm]	L1 [mm]	Drawing	Balancing Rings Plane 1 Plane 2
BT 30 / PG 10 x 080 H	4130.71040	16	16	28	M 12	80	35	1	FWR 285
BT 30 / PG 10 x 160 H	4130.71080	16	16	28	M 12	160	35	1	FWR 285
BT 30 / PG 15 x 070 H	4130.71530	22	24	28	M 12	70	38	1	FWR 285
BT 30 / PG 25 x 080 H	4130.72540	33	40	40	M 12	80	-	1	FWR 405
BT 30 / PG 25 x 160 H	4130.72580	33	40	40	M 12	160	-	2	FWR 405/405
BT 40 / PG 10 x 080 H	4140.71040	16	16	28	M 16	80	40	1	FWR 285
BT 40 / PG 10 x 160 H	4140.71080	16	16	32	M 16	160	40	1	FWR 325
BT 40 / PG 15 x 080 H	4140.71540	22	24	28	M 16	80	43	1	FWR 285
BT 40 / PG 15 x 120 H	4140.71560	22	24	32	M 16	120	74	1	FWR 325
BT 40 / PG 15 x 160 H	4140.71580	22	24	32	M 16	160	116	2	FWR 325/285
BT 40 / PG 25 x 080 H	4140.72540	33	40	-	M 16	80	-	1	FWR 405
BT 40 / PG 25 x 120 H	4140.72560	33	40	-	M 16	120	-	1	FWR 405
BT 40 / PG 25 x 160 H	4140.72580	33	40	-	M 16	160	-	2	FWR 405/405
BT 50 / PG 25 x 120 H	4150.72560	33	40	50	M 24	120	53	1	FWR 505
BT 50 / PG 25 x 160 H	4150.72580	33	40	50	M 24	160	91	2	FWR 505/405

1



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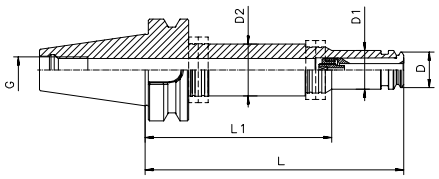
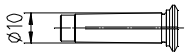


MATCHING powRgrip® COLLETS

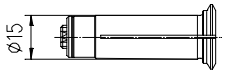
Clamping Diameter [mm]	[Zoll]	Ø [Zoll]	PG 10 Art. No.	PG 15 Art. No.	PG 25 Art. No.
2.000	0.0787		1710.02000	-	-
3.000	0.1181		1710.03000	1715.03000	1725.03000
3.175	0.1250	1/8"	1710.03181	1715.03181	1725.03181
4.000	0.1575		1710.04000	1715.04000	1725.04000
4.763	0.1875	3/16"	1710.04761	1715.04761	1725.04761
5.000	0.1969		1710.05000	1715.05000	1725.05000
6.000	0.2362		1710.06000	1715.06000	1725.06000
6.350	0.2500	1/4"	1715.06351	1715.06351	1725.06351
7.938	0.3125	5/16"	-	1715.07941	1725.07941
8.000	0.3150		-	1715.08000	1725.08000
9.525	0.3750	3/8"	-	1715.09521	1725.09521
10.000	0.3937		-	1715.10000	1725.10000
12.000	0.4724		-	-	1725.12000
12.700	0.5000	1/2"	-	-	1725.12701
14.000	0.5512		-	-	1725.14000
15.875	0.6250	5/8"	-	-	1725.15881
16.000	0.6300		-	-	1725.16000
18.000	0.7087		-	-	1725.18000
19.050	0.7500	3/4"	-	-	1725.19051
20.000	0.7874		-	-	1725.20000

Supplied with: PG collet with set screw

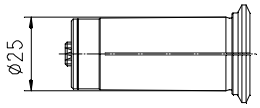
PG 10

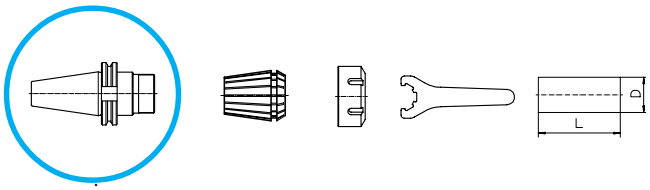


PG 15



PG 25

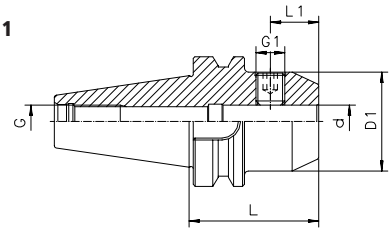




BT/WD
MAS 403

END MILL HOLDERS (WELDON)

1



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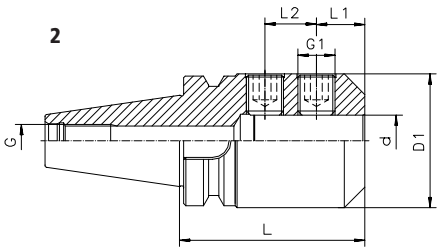


Type	Part No.	d [mm]	D1 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
BT 30/WD 6 x 050	2130.30620	6	25	M12	M 6	50	17.5	-	1
BT 30/WD 8 x 050	2130.30820	8	28	M12	M 8	50	17.5	-	1
BT 30/WD 10 x 050	2130.31020	10	35	M12	M10	50	19.5	-	1
BT 30/WD 12 x 050	2130.31220	12	42	M12	M12	50	22.0	-	1
BT 30/WD 14 x 050	2130.31420	14	44	M12	M12	50	22.0	-	1
BT 30/WD 16 x 063	2130.31630	16	48	M12	M14	63	23.5	-	1
BT 30/WD 18 x 063	2130.31830	18	50	M12	M14	63	23.5	-	1
BT 30/WD 20 x 063	2130.32030	20	52	M12	M16	63	24.5	-	1
BT 40/WD 6 x 050	2140.30620	6	25	M16	M 6	50	17.5	-	1
BT 40/WD 8 x 050	2140.30820	8	28	M16	M 8	50	17.5	-	1
BT 40/WD 10 x 063	2140.31030	10	35	M16	M10	63	19.5	-	1
BT 40/WD 12 x 063	2140.31230	12	42	M16	M12	63	22.0	-	1
BT 40/WD 14 x 063	2140.31430	14	44	M16	M12	63	22.0	-	1
BT 40/WD 16 x 063	2140.31630	16	48	M16	M14	63	23.5	-	1
BT 40/WD 18 x 063	2140.31830	18	50	M16	M14	63	23.5	-	1
BT 40/WD 20 x 063	2140.32030	20	52	M16	M16	63	24.5	-	1
BT 40/WD 25 x 090	2140.32550	25	65	M16	M18x2	90	23.5	25	2
BT 40/WD 32 x 100	2140.33260	32	72	M16	M20x2	100	23.5	28	2

Supplied with: End mill holder and lock screw

Edition 10/2004

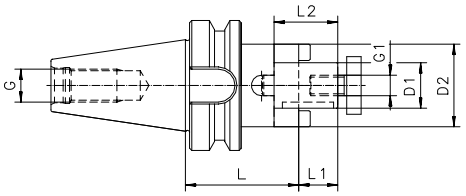
BT/KFD
MAS 403

UNIVERSAL SHELL MILL / FACE MILL HOLDERS

Type	Part No.	D1 [mm]	D2 [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
BT 30/KFD 16 x 045	2130.41620	16	32	M12	M 8	45	17	27	1
BT 30/KFD 22 x 047	2130.42220	22	40	M12	M10	47	19	31	1
BT 30/KFD 27 x 049	2130.42720	27	48	M12	M12	49	21	33	2
BT 30/KFD 32 x 053	2130.43230	32	58	M12	M16	53	24	38	2
BT 40/KFD 16 x 055	2140.41630	16	32	M16	M 8	55	17	27	1
BT 40/KFD 22 x 055	2140.42230	22	40	M16	M10	55	19	31	1
BT 40/KFD 27 x 055	2140.42730	27	48	M16	M12	55	21	33	1
BT 40/KFD 32 x 060	2140.43240	32	58	M16	M16	60	24	38	1
BT 40/KFD 40 x 060	2140.44040	40	70	M16	M20	60	27	41	2

Supplied with: Universal shell mill / face mill holder, lock screw, feather key and drive ring.

1



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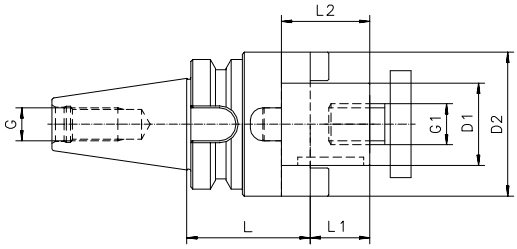
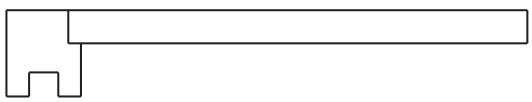
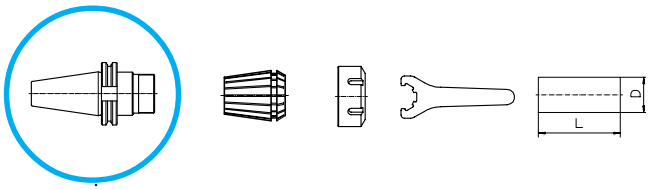


MATCHING SPANNERS

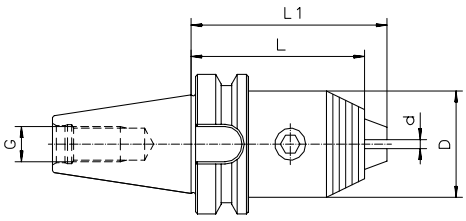
Type	Part No.
FDS 16	7711.16000
FDS 22	7711.22000
FDS 27	7711.27000
FDS 32	7711.32000
FDS 40	7711.40000





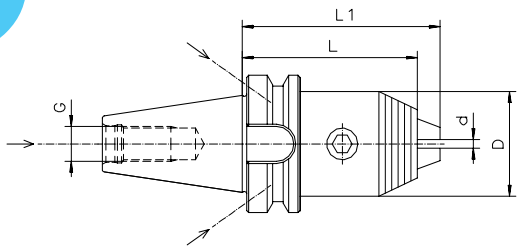
BT/KBF
MAS 403

DRILL CHUCKS



Type	Form A Part No.	Form AD+B Part No.	d [mm]	D [mm]	G	L [mm]	L1 max. [mm]	Drawing
BT 30/KBF 1 - 13 mm	2130.50100	–	1-13	50	M12	95	101	1
BT 40/KBF 1 - 13 mm	–	2140.50103	1-13	50	M16	98	104	2
BT 50/KBF 1 - 13 mm	–	2150.50103	1-13	50	M24	100	100	2

Supplied with: Drill chuck and Allen-key



Clamping Range	1 - 13 mm
Maximum Runout	0.03 mm
Maximum Tightening Torque	20 Nm
Clamping Force (@20 Nm Tightening Torque)	80 Nm
Maximum rpm	up to 35'000 min^{-1}

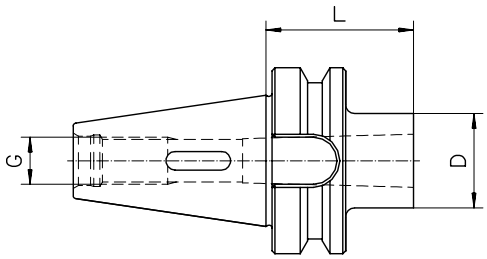
Edition 10/2004

BT/MK
MAS 403 A+AD

EXTENSION SLEEVES

Type	Part No.	D [mm]	G	L [mm]
BT 40/MK 1 x 050	2140.80110	25	M16	50
BT 40/MK 2 x 050	2140.80210	32	M16	50
BT 40/MK 3 x 070	2140.80320	40	M16	70
BT 40/MK 4 x 095	2140.80430	48	M16	95

Supplied with: Extension sleeve



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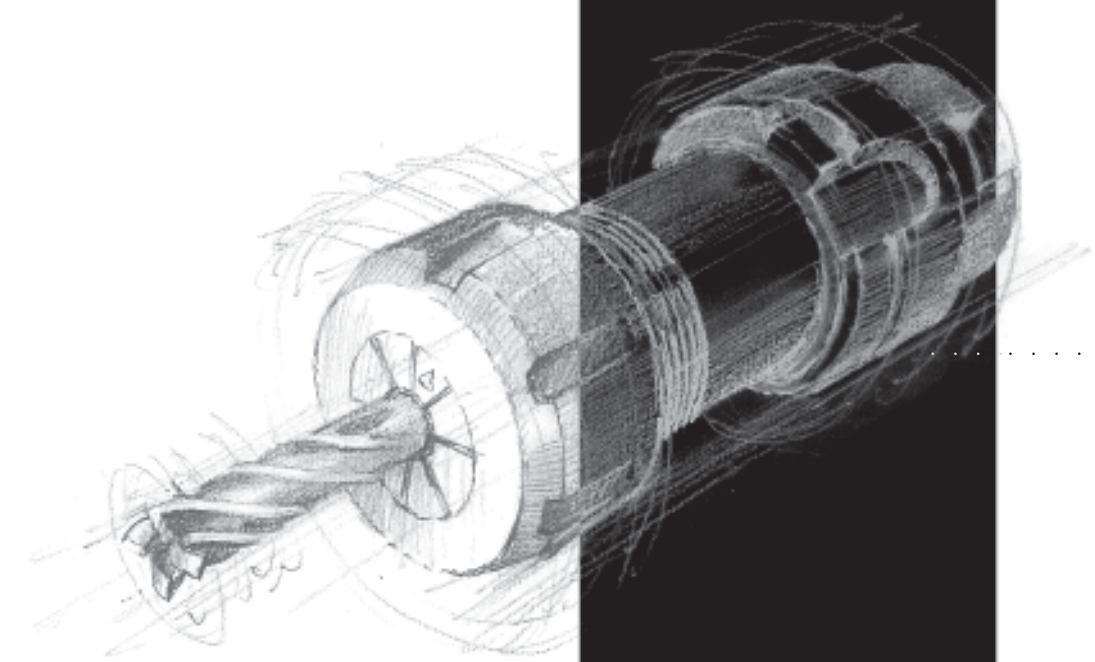
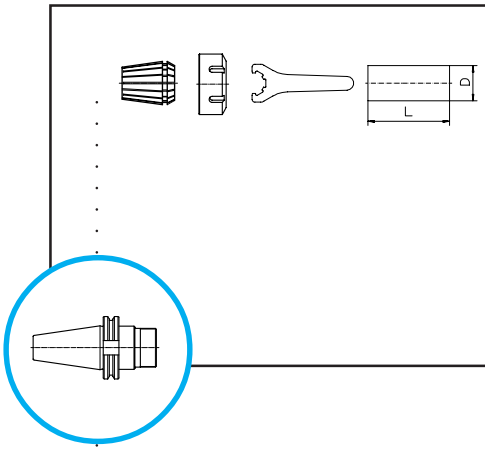


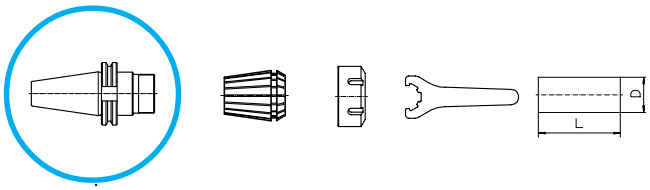

D
L

REGO-FIX®
Swiss Precision Tools

HSK-Shank Toolholders

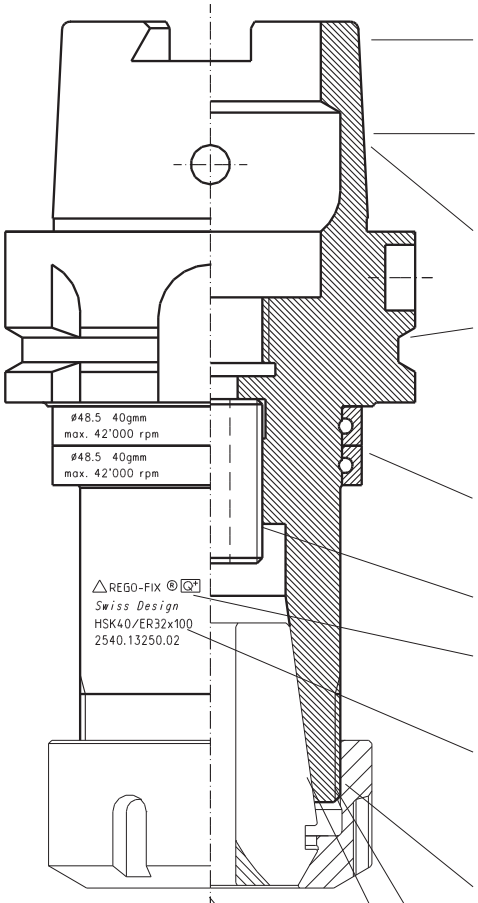
Contents

Edition 10/2004



HSK
DIN 69893

FEATURES UND BENEFITS



Quality: Made to ISO 9001; DIN STD 69893
⇨ *Product consistency and worldwide acceptance*

Material: High tensile strength case-hardened steel
⇨ *Reduced wear and increased life*

High Precision: Hollow taper accuracy to AT3 tolerances
⇨ *Better spindle-to-holder fit and accuracy*

Q⁺ Balancing:
Form A: G 6.3 @ 15'000 min $^{-1}$, HSK-A 32: G 2.5 @ 18'000 min $^{-1}$,
Form E: G 2.5 @ 25'000 min $^{-1}$
⇨ *Ideal for all applications including high-speed*

Hi-Q Balancing System: Ready to accept Hi-Q balancing rings.
⇨ *System balanceable to 42'000min^{-1}*

Thread: For back-up screw

Marking: Type and size markings easy to read
⇨ *Reduced tool selection errors*

Product Traceability: Lot number marked on toolholders
⇨ *Quality control and accountability*

Matched Tooling System for Best Fit: ER-Collet, toolholder, clamping nut and spanner all from **REGO-FIX®**
⇨ *Whole system stands for highest precision and longest tool life*

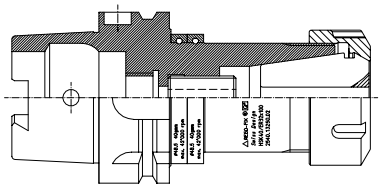
Finish: Special thread design
⇨ *Easier threading*

Surface Finish: max. Ra 0.25
⇨ *High clamping force*

Runout: O.D. to I.D. max. 0.003 mm
⇨ *Better machining results*

HSK
DIN 69893

HSK-COLLETHOLDERS PER DIN STD 69893



Toolholders with HSK taper per DIN STD 69893 are used on modern CNC milling machines of the latest generation.

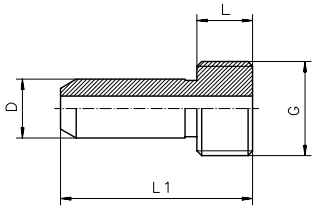
For coolant through tools HSK-toolholders can be equipped with a coolant tube (KSR) that ducts the coolant directly to the cutting tool, hereby avoiding coolant to enter and soil the HSK taper area.

REGO-FIX® Q⁺ HSK-A toolholders are balanced by design to G 6.3 @ 15,000 min^{-1}, HSK-A 32 toolholders are balanced to G 2.5 @ 18'000 min^{-1}, HSK-E toolholders are balanced to G 2.5 @ 25'000 min^{-1}.

Type H colletholders are ready to accept Hi-Q balancing rings. The balancing rings allow precision balancing to 42'000 min^{-1}.

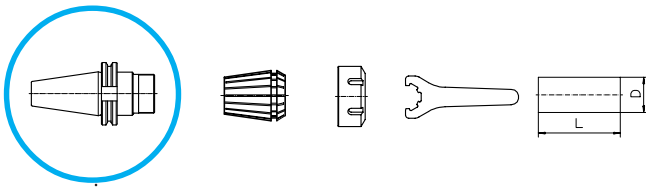
For highest precision and best results the whole system counts. For that reason all **REGO-FIX®** components (collets, clamping nuts and toolholders) are carefully matched to fit together. This guarantees lowest T.I.R. and maximum balancing. For best manufacturing results and longest tool life, please use **REGO-FIX®** toolholders together with **REGO-FIX®** collets and clamping nuts only.

For highest clamping force, as required for tapping with GB collets or ET1 collets we recommend **REGO-FIX®** friction bearing nuts. **REGO-FIX®** end mill holders and universal shell mill/face mill holders are manufactured to the same exacting standards as all other **REGO-FIX®** products.



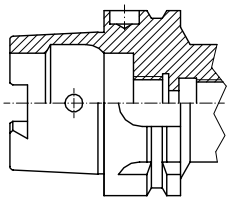
For all HSK-A toolholders following coolant tubes (KSR) can be used:

Type	Part No.	For HSK-Type	G	D [mm]	L [mm]	L1 [mm]	Spanner	Part No.
KSR 32	7211.32000	HSK 32	M 10 x 1.0	6.0	5.5	25.7	SKR 32	7212.32000
KSR 40	7211.40000	HSK 40	M 12 x 1.0	8.0	7.5	29.2	SKR 40	7212.40000
KSR 50	7211.50000	HSK 50	M 16 x 1.0	10.0	9.5	32.7	SKR 50	7212.50000
KSR 63	7211.63000	HSK 63	M 18 x 1.0	12.0	11.5	36.2	SKR 63	7212.63000
KSR 100	7211.00000	HSK 100	M 24 x 1.0	16.0	15.5	43.6	SKR 100	7212.00000



HSK

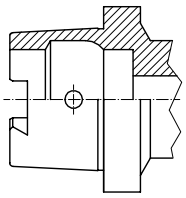
FORM AND CHARACTERISTICS



FORM A*:

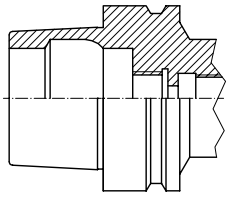
- Standard type for machining centers and milling machines
- For automatic tool change
- Coolant supply through center via coolant tube
- Drive keys at the end of HSK taper
- Hole for data carrier DIN STD 69873 in the flange

* exept for HSK-A 32 all Form A holders are equipped with side holes for manual tool change, they can also be used as form C holders



FORM C:

- For transfer lines, special machines and modular tooling systems
- For manual tool change
- Coolant supply through center
- Drive keys at the end of HSK taper



FORM E:

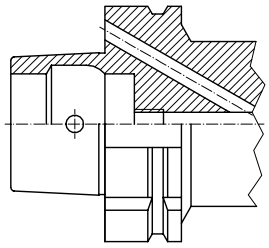
- For high-speed applications
- For automatic tool change
- Coolant supply through center via coolant tube is possible
- Without any drive keys for absolute symmetry

HSK

FORM AND CHARACTERISTICS

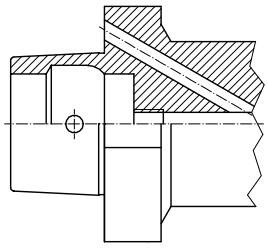
FORM B:

- For machining centers, milling and turning machines
- With enlarged flange size for rigid machining
- For automatic tool change
- Coolant supply through the flange
- Drive keys at the flange
- Hole for data carrier DIN STD 69873 at the flange



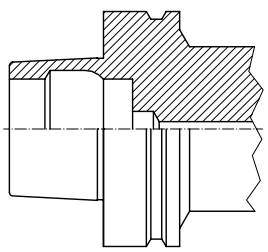
FORM D:

- For special machines
- With enlarged flange size for rigid machining
- For manual tool change
- Coolant supply through the flange
- Drive keys at the flange

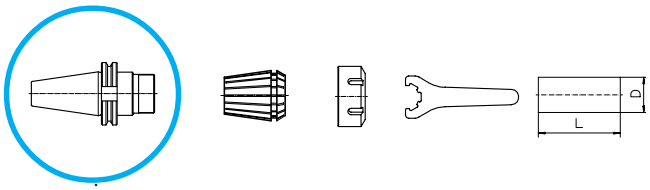


FORM F:

- For high-speed applications mainly in woodworking industries
- With enlarged flange size for rigid machining
- For automatic tool change
- Coolant supply through center via coolant tube is possible
- Without any drive keys for absolute symmetry



Edition 10/2004



HSK-A/ER
DIN 69893

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	3411.00000	3416.00000	3420.00000	3425.00000	3432.00000	3440.00000	–	4- 4	■		▼		●			
	Hi-Q/ERC	3411.20300 - 3411.20700	3416.20000	3420.20000	3425.20000	3432.20000	3440.20000	–	4- 6 4- 8			▼	●	●			
	Hi-Q/ERB	–	3416.30000	3420.30000	3425.30000	3432.30000	3440.30000	–	4-10		▬	▼		●			
	Hi-Q/ERBC	–	3416.40000	3420.40000	3425.40000	3432.40000	3440.40000	–	4-10		▬	▼	●	●			
	GS / E	7112.11000	7112.16000	7112.20000	7111.25000	7111.32000	7111.40000	–	12-1								
	CM/ER	–	3116.90000	3120.90000	3125.90000	3132.90000	3140.90000	–	12-4								■
	E	–	7111.16000	7111.20000	7111.25000	7111.32000	7111.40000	–	12-1								

Hi-Q Balancing Rings		Part No.	Page
	FWR 225	7490.22500	12-12
	FWR 285	7490.28500	12-12
	FWR 325	7490.32500	12-12
	FWR 405	7490.40500	12-12
	FWR 505	7490.50500	12-12

** Suggested tightening torque of set screws = 0.9 Nm*
** Torque screwdriver (TSD), page 12-12*
** max. rpm for Hi-Q balancing rings = 42'000 min^{-1}.*

Collet		ER 11/ET1-12 Clamping [mm]	Range Page	ER 16/ET1-16 Clamping [mm]	Range Page	ER 20/ET1-20 Clamping [mm]	Range Page	ER 25/ET1-25 Clamping [mm]	Range Page	ER 32/ET1-32 Clamping [mm]	Range Page	ER 40/ET1-40 Clamping [mm]	Range Page	ER 50 Clamping [mm]	Range Page
	ER	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	–	–
	ER-UP	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	–	–
	ER-GB	2.8 ... 6.0	3-4	4.0 ... 9.0	3- 4	4.0 ... 11.2	3- 4	4.0 ... 16.0	3- 4	4.0 ... 20.0	3- 4	6.0 ... 22.0	3- 4	–	–
	ET1	1.4 ... 3.55	3- 8	1.4 ... 6.3	3- 8	2.2 ... 7.0	3- 8	2.5 ... 10.0	3- 8	4.5 ... 12.5	3- 8	6.0 ... 16.0	3- 8	–	–

Edition 10/2004

HSK-A/ER
DIN 69893

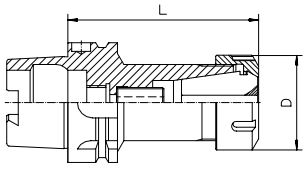
COLLETHOLDERS

Type	Part No.	D [mm]	L [mm]	Drawing	Balancing Rings Level 1 Level 2
HSK-A 32/ER 11 x 050	2532.11110	19	50	1	–
HSK-A 32/ER 16 x 060	2532.11620	28	60	1	–
HSK-A 32/ER 20 x 060	2532.12020	34	60	1	–
HSK-A 32/ER 25 x 065	2532.12520	42	65	1	–
HSK-A 40/ER 16 x 080 H	4540.11640	28	80	3	FWR 225
HSK-A 40/ER 25 x 080 H	4540.12540	42	80	3	FWR 325
HSK-A 50/ER 16 x 100 H	4550.11650	28	100	3	FWR 325
HSK-A 50/ER 25 x 080 H	4550.12540	42	80	3	FWR 325
HSK-A 50/ER 32 x 100 H	4550.13250	50	100	3	FWR 405
HSK-A 63/ER 16 x 100 H	4563.11650	28	100	3	FWR 325
HSK-A 63/ER 16 x 160 H	4563.11680	28	160	4	FWR 325 FWR 225
HSK-A 63/ER 25 x 080 H	4563.12540	42	80	3	FWR 325
HSK-A 63/ER 32 x 100 H	4563.13250	50	100	3	FWR 405
HSK-A 63/ER 40 x 120 H	4563.14060	63	120	3	FWR 505
HSK-A 100/ER 32 x 100 H	4500.13250	50	100	3	FWR 405
HSK-A 100/ER 40 x 120	2500.14060	63	120	2	–

Supplied with: Colletholder, clamping nut and back-up screw

The matching coolant tubes (KSR) are on page 8-2

1 Without side hole



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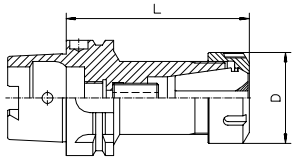

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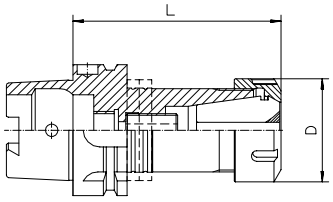

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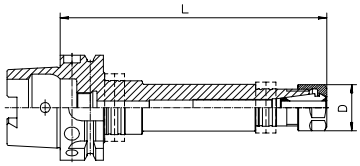
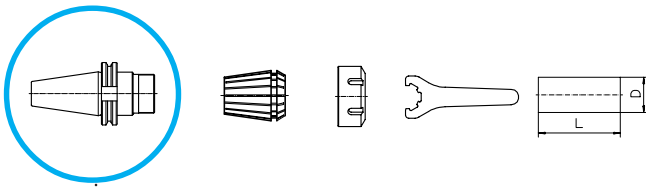


Edition 10/2004



powRgrip® -System

powRgrip® Clamping Units PGU and PGC with accesorries

Type	Part No.	Description	Dimensions W x D x H	Weight
PGU 6100 E	7610.30000	Automatic Clamping Unit - Main Voltage 230 V	490 x 490 x 730 mm	75 kg
PGU 6100 A	7610.30100	Automatic Clamping Unit - Main Voltage 100/110 V	490 x 490 x 730 mm	75 kg
APG 10	7611.10000	Clamping Insert for PG 10, Taper Cleaner included	–	–
APG 15	7611.15000	Clamping Insert for PG 15, Taper Cleaner included	–	–
APG 25	7611.25000	Clamping Insert for PG 25, Taper Cleaner included	–	–
PGC 1000	7621.10000	Manual Clamping Unit for PG 10, Taper Cleaner incl.	–	7 kg
PGC 1500	7621.15000	Manual Clamping Unit for PG 15, Taper Cleaner incl.	–	12 kg
PGC 2500	7621.25000	Manual Clamping Unit for PG 25, Taper Cleaner incl.	–	12 kg
PGS 1	7625.00100	Stand No. 1	–	4 kg
PGP 300 M	7629.00300	Hand Pump, 300 bar	–	6 kg

- ***Highest transmittable torque, superior runout and vibration dampening***
- ***Tool change in less than 10 seconds***
- ***Clamps tool shanks down to Ø 3.0 mm (0.1181"), PG 10 down to Ø 2.0 mm (0.0787")***
- ***Balanceable - Just add REGO-FIX® balancing rings***
- ***For use with coolant through tooling***
- ***Tool presetting feature***

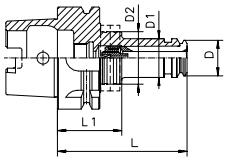
For further information about the powRgrip®-System please ask for the latest brochure

HSK/PG
DIN 69893

powRgrip® - COLLETHOLDERS

Type	Part No.	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	Drawing	Balancing rings Plane 1 Plane 2
HSK-A 40 / PG 15 x 080 H	4540.71540	22	24	28	80	49	1	FWR 285
HSK-A 40 / PG 25 x 100 H	4540.72550	33	40	40	100	35	1	FWR 405
HSK-E 40 / PG 10 x 080 H	4540.71044	16	16	22	80	34	1	FWR 225
HSK-E 40 / PG 10 x 120 H	4540.71064	16	16	22	120	41	1	FWR 225
HSK-E 40 / PG 10 x 160 H	4540.71084	16	16	28	160	48	1	FWR 285
HSK-E 40 / PG 15 x 080 H	4540.71544	22	24	28	80	48	1	FWR 285
HSK-E 40 / PG 25 x 100 H	4540.72554	33	40	34	100	35	1	FWR 405
HSK-E 50 / PG 10 x 080 H	4550.71044	16	16	28	80	40	1	FWR 285
HSK-E 50 / PG 10 x 160 H	4550.71084	16	16	28	160	40	1	FWR 285
HSK-E 50 / PG 15 x 080 H	4550.71544	22	24	28	80	40	1	FWR 285
HSK-E 50 / PG 25 x 100 H	4550.72554	33	40	40	160	-	1	FWR 405
HSK-A 63 / PG 10 x 080 H	4563.71040	16	16	32	80	40	1	FWR 325
HSK-A 63 / PG 10 x 160 H	4563.71080	16	16	32	160	40	1	FWR 325
HSK-A 63 / PG 10 x 200 H	4563.71090	16	16	32	200	40	1	FWR 325
HSK-A 63 / PG 15 x 080 H	4563.71540	22	24	32	80	40	1	FWR 325
HSK-A 63 / PG 15 x 120 H	4563.71560	22	24	32	120	74	1	FWR 325
HSK-A 63 / PG 15 x 160 H	4563.71580	22	24	32	160	116	2	FWR 285/325
HSK-A 63 / PG 25 x 100 H	4563.72550	33	40	40	100	-	1	FWR 405
HSK-A 63 / PG 25 x 120 H	4563.7256	33	40	-	120	-	1	FWR 405
HSK-A 63 / PG 25 x 160 H	4563.72580	33	40	-	160	-	2	FWR 405/405
HSK-F 63 / PG 25 x 100 H	4563.72555	33	40	-	100	-	1	FWR 405
HSK-A 100 / PG 25 x 100 H	4500.72550	33	40	50	100	45	1	FWR 405
HSK-A 100 / PG 25 x 160 H	4500.72580	33	40	50	160	45	2	FR 505/405
HSK-A 100 / PG 25 x 200 H	4500.72590	33	40	50	200	45	2	FR 505/405

1



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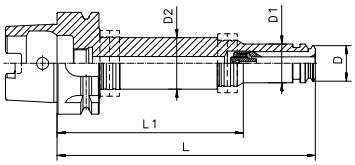
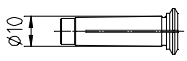


MATCHING powRgrip® COLLETS

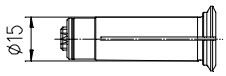
Clamping Diameter [mm]	[inch]	Ø [inch]	PG 10 Part No.	PG 15 Part No.	PG 25 Part No.
2.000	0.0787		1710.02000	-	-
3.000	0.1181		1710.03000	1715.03000	1725.03000
3.175	0.1250	1/8"	1710.03181	1715.03181	1725.03181
4.000	0.1575		1710.04000	1715.04000	1725.04000
4.763	0.1875	3/16"	1710.04761	1715.04761	1725.04761
5.000	0.1969		1710.05000	1715.05000	1725.05000
6.000	0.2362		1710.06000	1715.06000	1725.06000
6.350	0.2500	1/4"	1715.06351	1715.06351	1725.06351
7.938	0.3125	5/16"	-	1715.07941	1725.07941
8.000	0.3150		-	1715.08000	1725.08000
9.525	0.3750	3/8"	-	1715.09521	1725.09521
10.000	0.3937		-	1715.10000	1725.10000
12.000	0.4724		-	-	1725.12000
12.700	0.5000	1/2"	-	-	1725.12701
14.000	0.5512		-	-	1725.14000
15.875	0.6250	5/8"	-	-	1725.15881
16.000	0.6300		-	-	1725.16000
18.000	0.7087		-	-	1725.18000
19.050	0.7500	3/4"	-	-	1725.19051
20.000	0.7874		-	-	1725.20000

Supplied with: PG collet with set screw

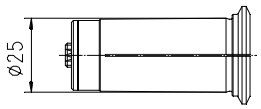
PG 10

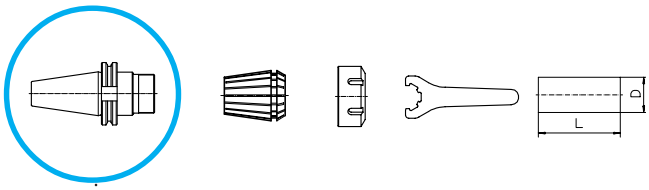


PG 15



PG 25

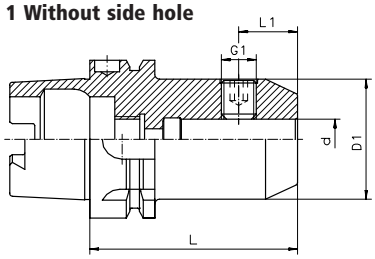




HSK-A/WD
DIN 69893

END MILL HOLDERS (WELDON)

1 Without side hole



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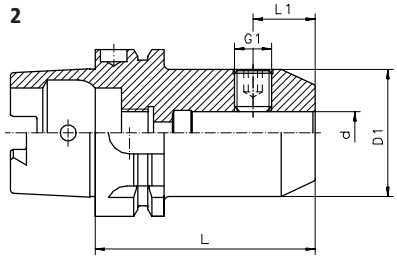

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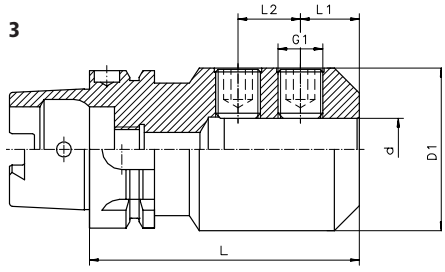


Type	Part No.	d [mm]	D1 [mm]	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
HSK-A 32/WD 6 x 055	2532.30620	6	25	M 6	55	17.5	–	1
HSK-A 32/WD 8 x 055	2532.30820	8	28	M 8	55	17.5	–	1
HSK-A 32/WD 10 x 060	2532.31030	10	35	M10	60	19.5	–	1
HSK-A 32/WD 12 x 065	2532.31230	12	42	M12	65	22.0	–	1
HSK-A 50/WD 6 x 065	2550.30630	6	25	M 6	65	17.5	–	2
HSK-A 50/WD 8 x 065	2550.30830	8	28	M 8	65	17.5	–	2
HSK-A 50/WD 10 x 065	2550.31030	10	35	M10	65	19.5	–	2
HSK-A 50/WD 12 x 080	2550.31250	12	42	M12	80	22.0	–	2
HSK-A 50/WD 14 x 080	2550.31450	14	44	M12	80	22.0	–	2
HSK-A 50/WD 16 x 080	2550.31650	16	48	M14	80	23.5	–	2
HSK-A 50/WD 18 x 080	2550.31850	18	50	M14	80	23.5	–	2
HSK-A 50/WD 20 x 080	2550.32050	20	52	M16	80	24.5	–	2
HSK-A 63/WD 6 x 065	2563.30630	6	25	M 6	65	17.5	–	2
HSK-A 63/WD 8 x 065	2563.30830	8	28	M 8	65	17.5	–	2
HSK-A 63/WD 10 x 065	2563.31030	10	35	M10	65	19.5	–	2
HSK-A 63/WD 12 x 080	2563.31250	12	42	M12	80	22.0	–	2
HSK-A 63/WD 14 x 080	2563.31450	14	44	M12	80	22.0	–	2
HSK-A 63/WD 16 x 080	2563.31650	16	48	M14	80	23.5	–	2
HSK-A 63/WD 18 x 080	2563.31850	18	50	M14	80	23.5	–	2
HSK-A 63/WD 20 x 080	2563.32050	20	52	M16	80	24.5	–	2
HSK-A 63/WD 25 x 110	2563.32560	25	65	M18x2	110	23.5	25	3
HSK-A 63/WD 32 x 110	2563.33260	32	72	M20x2	110	23.5	28	3
HSK-A 100/WD 6 x 080	2500.30650	6	25	M 6	80	17.5	–	2
HSK-A 100/WD 8 x 080	2500.30850	8	28	M 8	80	17.5	–	2
HSK-A 100/WD 10 x 080	2500.31050	10	35	M10	80	19.5	–	2
HSK-A 100/WD 12 x 080	2500.31250	12	42	M12	80	22.0	–	2
HSK-A 100/WD 14 x 080	2500.31450	14	44	M12	80	22.0	–	2
HSK-A 100/WD 16 x 100	2500.31660	16	48	M14	100	23.5	–	2
HSK-A 100/WD 18 x 100	2500.31860	18	50	M14	100	23.5	–	2
HSK-A 100/WD 20 x 100	2500.32060	20	52	M16	100	23.5	–	2
HSK-A 100/WD 25 x 100	2500.32560	25	65	M18x2	100	23.5	25	3
HSK-A 100/WD 32 x 100	2500.33260	32	72	M20x2	100	23.5	28	3
HSK-A 100/WD 40 x 110	2500.34060	40	90	M20x2	110	29.5	32	3

Supplied with: End mill holder and lock screw.

The matching coolant tubes (KSR) are on page 8-2

Edition 10/2004

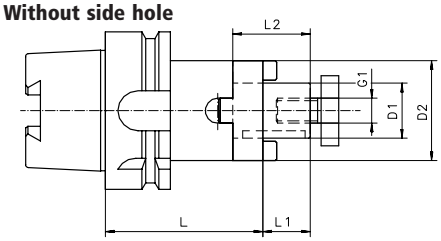
HSK-A/KFD
DIN 69893

UNIVERSAL SHELL MILL / FACE MILL HOLDERS

Type	Part No.	D1 [mm]	D2 [mm]	G1	L [mm]	L1 [mm]	L2 [mm]	Drawing
HSK-A 32/KFD 16 x 045	2532.41620	16	38	M 8	45	17	27	1
HSK-A 32/KFD 22 x 040	2532.42210	22	38	M10	40	19	31	1
HSK-A 50/KFD 16 x 050	2550.41630	16	32	M 8	50	17	27	2
HSK-A 50/KFD 22 x 050	2550.42230	22	40	M10	50	19	31	2
HSK-A 50/KFD 27 x 065	2550.42740	27	48	M12	65	21	33	3
HSK-A 63/KFD 16 x 060	2563.41640	16	32	M 8	60	17	27	2
HSK-A 63/KFD 22 x 060	2563.42240	22	40	M10	60	19	31	2
HSK-A 63/KFD 27 x 060	2563.42740	27	48	M12	60	21	33	2
HSK-A 63/KFD 32 x 060	2563.43240	32	58	M16	60	24	38	2
HSK-A 63/KFD 40 x 070	2563.44050	40	70	M20	70	27	41	3
HSK-A 100/KFD 16 x 060	2500.41640	16	32	M 8	60	17	27	2
HSK-A 100/KFD 22 x 060	2500.42240	22	40	M10	60	19	31	2
HSK-A 100/KFD 27 x 060	2500.42740	27	48	M12	60	21	33	2
HSK-A 100/KFD 32 x 060	2500.43240	32	58	M16	60	24	38	2
HSK-A 100/KFD 40 x 070	2500.44050	40	70	M20	70	27	41	2
HSK-A 100/KFD 50 x 080	2500.45060	50	90	M24	80	30	46	3

Supplied with: Universal shell mill / face mill holder, lock screw, feather key and drive ring.

1 Without side hole



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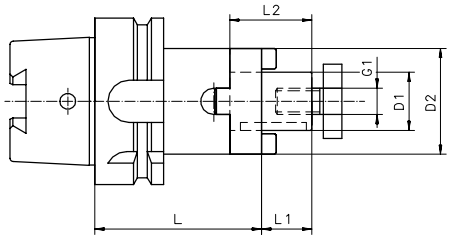

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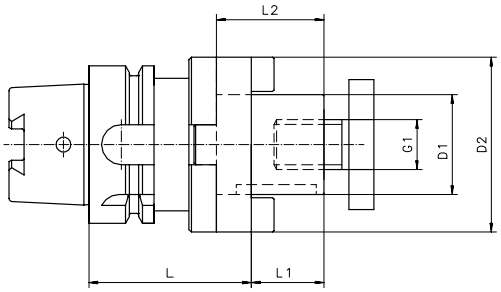
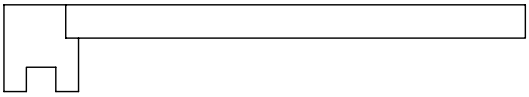
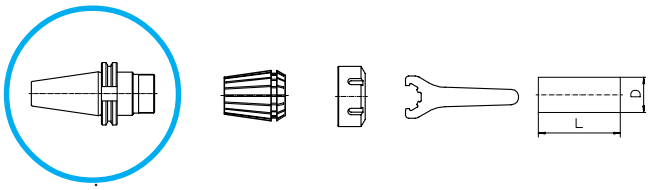


The matching coolant tubes (KSR) are on page 8-2

MATCHING SPANNERS

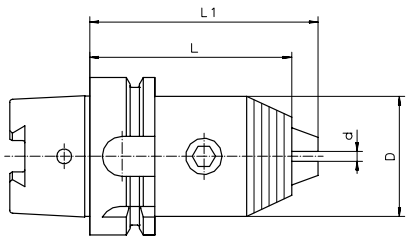
Type	Part No.
FDS 16	7711.16000
FDS 22	7711.22000
FDS 27	7711.27000
FDS 32	7711.32000
FDS 40	7711.40000
FDS 50	7711.50000





HSK-A/KBF
DIN 69893

DRILL CHUCKS



Type	Part No.	d [mm]	D [mm]	L [mm]	L1 [mm]
HSK-A 63/KBF 1 - 13 mm	2563.50100	1-13	50	104	110

Supplied with: Drill chuck and Allen-key

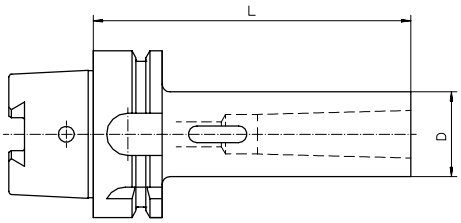
Clamping Range	1 - 13 mm
Maximum Runout	0.03 mm
Maximum Tightening Torque	20 Nm
Clamping Force (@20 Nm Tightening Torque)	80 Nm
Maximum rpm	up to 35'000 min^{-1}

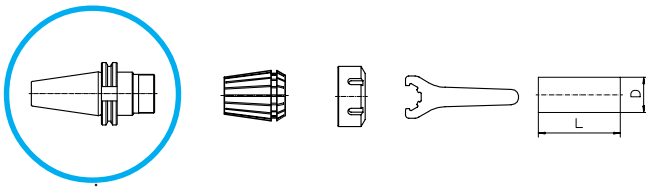
HSK-A/MK
DIN 69893

EXTENSION SLEEVES

Type	Part No.	D [mm]	L [mm]
HSK-A 63/MK 1 x 100	2563.80140	25	100
HSK-A 63/MK 2 x 120	2563.80250	32	120
HSK-A 63/MK 3 x 140	2563.80360	40	140
HSK-A 63/MK 4 x 160	2563.80470	48	160

Supplied with: Extension sleeve





HSK-C/ER
DIN 69893

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	–	3416.00000	3420.00000	3425.00000	3432.00000	3440.00000	–	4- 4	■		▲		●			
	Hi-Q/ERC	–	3416.20000	3420.20000	3425.20000	3432.20000	3440.20000	–	4- 6			▲	●	●			
	Hi-Q/ERB	–	3416.30000	3420.30000	3425.30000	3432.30000	3440.30000	–	4-10		■	▲		●			
	Hi-Q/ERBC	–	3416.40000	3420.40000	3425.40000	3432.40000	3440.40000	–	4-10		■	▲	●	●			
	GS / E	-	7112.16000	7112.20000	7111.25000	7111.32000	7111.40000	–	12-1								
	CM/ER	–	3116.90000	3120.90000	3125.90000	3132.90000	3140.90000	–	12-4								●
	E	–	7111.16000	7111.20000	7111.25000	7111.32000	7111.40000	–	12-1								

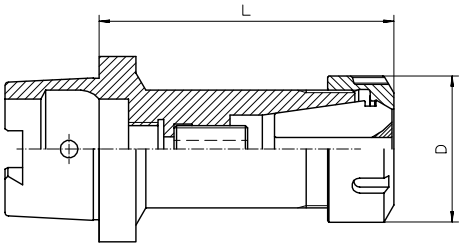
Collet		ER 11/ET1-12 Clamping [mm]	Range	Page	ER 16/ET1-16 Clamping [mm]	Range	Page	ER 20/ET1-20 Clamping [mm]	Range	Page	ER 25/ET1-25 Clamping [mm]	Range	Page	ER 32/ET1-32 Clamping [mm]	Range	Page	ER 40/ET1-40 Clamping [mm]	Range	Page	ER 50 Clamping [mm]	Range	Page
	ER	–			0.5 ... 10.0		2-10	0.5 ... 13.0		2-12	0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	–		–
	ER-UP	–			0.5 ... 10.0		2-10	0.5 ... 13.0		2-12	0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	–		–
	ER-GB	–			4.0 ... 9.0		3- 4	4.0 ... 11.2		3- 4	4.0 ... 16.0		3- 4	4.0 ... 20.0		3- 4	6.0 ... 22.0		3- 4	–		–
	ET1	–			1.4 ... 6.3		3- 8	2.2 ... 7.0		3- 8	2.5 ... 10.0		3- 8	4.5 ... 12.5		3- 8	6.0 ... 16.0		3- 8	–		–

Edition 10/2004

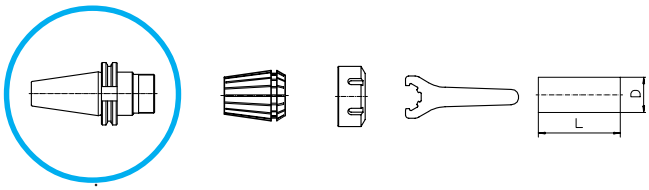
HSK-C/ER
DIN 69893

COLLETHOLDERS

Type	Part No.	D [mm]	L [mm]
HSK-C 32/ER 16 x 060	2532.11622	28	60
HSK-C 32/ER 20 x 065	2532.12022	34	65
HSK-C 32/ER 25 x 070	2532.12532	42	70
HSK-C 40/ER 20 x 060	2540.12022	34	60
HSK-C 40/ER 25 x 070	2540.12532	42	70
HSK-C 40/ER 32 x 075	2540.13232	50	75
HSK-C 50/ER 25 x 070	2550.12532	42	70
HSK-C 50/ER 32 x 075	2550.13232	50	75
HSK-C 50/ER 40 x 080	2550.14042	63	80
HSK-C 63/ER 32 x 075	2563.13232	50	75
HSK-C 63/ER 40 x 080	2563.14042	63	80



Supplied with: Colletholder, clamping nut and back-up screw



HSK-E/ER
DIN 69893

MATCHING PRODUCTS FOR MINI THREAD

Clamping Nut		ER 8	ER 11	ER 16	ER 20	ER 25	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ERM	–	–	3516.00000	3520.00000	3525.00000	4-12			●		●	●		
	Hi-Q/ERMC	–	–	3516.20000	3520.20000	3525.20000	4-12			●	●	●	●		
	EM	–	–	7113.16000	7113.20000	7113.25000	12-1								
	ER MS	–	–	3216.50000	3220.50000	–	4-16			●			●		
	EMS	–	–	7114.16000	7114.20000	–	12-1								

MATCHING PRODUCTS FOR STANDARD THREAD

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For CoolantThrough Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	–	3416.00000	3420.00000	3425.00000	3432.00000	3440.00000	–	4- 4	■		●		●			
	Hi-Q/ERC	–	3416.20000	3420.20000	3425.20000	3432.20000	3440.20000	–	4- 6			●	●	●			
	Hi-Q/ERB	–	3416.30000	3420.30000	3425.30000	3432.30000	3440.30000	–	4-10		●	●		●			
	Hi-Q/ERBC	–	3416.40000	3420.40000	3425.40000	3432.40000	3440.40000	–	4-10		●	●	●	●			
	GS / E	-	7112.16000	7112.20000	7111.25000	7111.32000	7111.40000	–	12-1								
	CM/ER	–	3116.90000	3120.90000	3125.90000	3132.90000	3140.90000	–	12-4								
	E	–	7111.16000	7111.20000	7111.25000	7111.32000	7111.40000	–	12-1								

Hi-Q Balancing Rings		Part No.	Page
	FWR 225	7490.22500	12-12
	FWR 285	7490.28500	12-12
	FWR 325	7490.32500	12-12

** Suggested tightening torque of set screw = 0.9 Nm*
** Torque screwdriver (TDS), page 12-12*
** max. rpm for Hi-Q balancing rings = 42'000 min^{-1}.*

Edition 10/2004

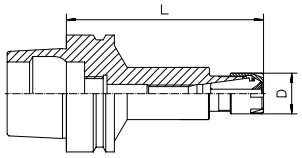
HSK-E/ER
DIN 69893

COLLETHOLDERS

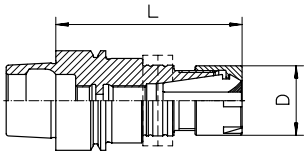
Type	Form A + AD Part No.	D [mm]	L [mm]	Drawing	Balancing Rings Plane 1
HSK-E 25/ER 16M x 043	2525.11618	22	43	1	–
HSK-E 32/ER 16M x 060	2532.11628	22	60	1	–
HSK-E 32/ER 20M x 060	2532.12028	28	60	1	–
HSK-E 40/ER 16 x 060 H	4540.11624	28	60	4	FWR 225
HSK-E 40/ER 20M x 075 H	4540.12038	28	75	2	FWR 285
HSK-E 40/ER 25M x 080 H	4540.12548	35	80	2	FWR 325
HSK-E 50/ER 16 x 100 H	4550.11654	28	100	3	FWR 325
HSK-E 50/ER 20 x 070 H	4550.12034	34	70	3	FWR 325
HSK-E 50/ER 25 x 080 H	4550.12544	42	80	3	FWR 325
HSK-E 50/ER 32 x 100 H	4550.13254	50	100	3	FWR 405
HSK-E 63/ER 32 x 090	2563.13244	50	90	3	–
HSK-E 63/ER 40 x 120	2563.14064	63	120	3	–

Supplied with: Colletholder, clamping nut and back-up screw

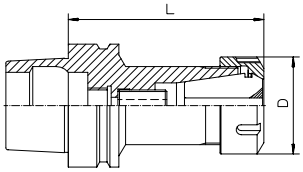
1 Mini-thread



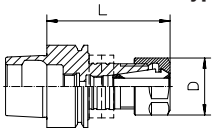
2 Mini-thread type H



3 Standard thread

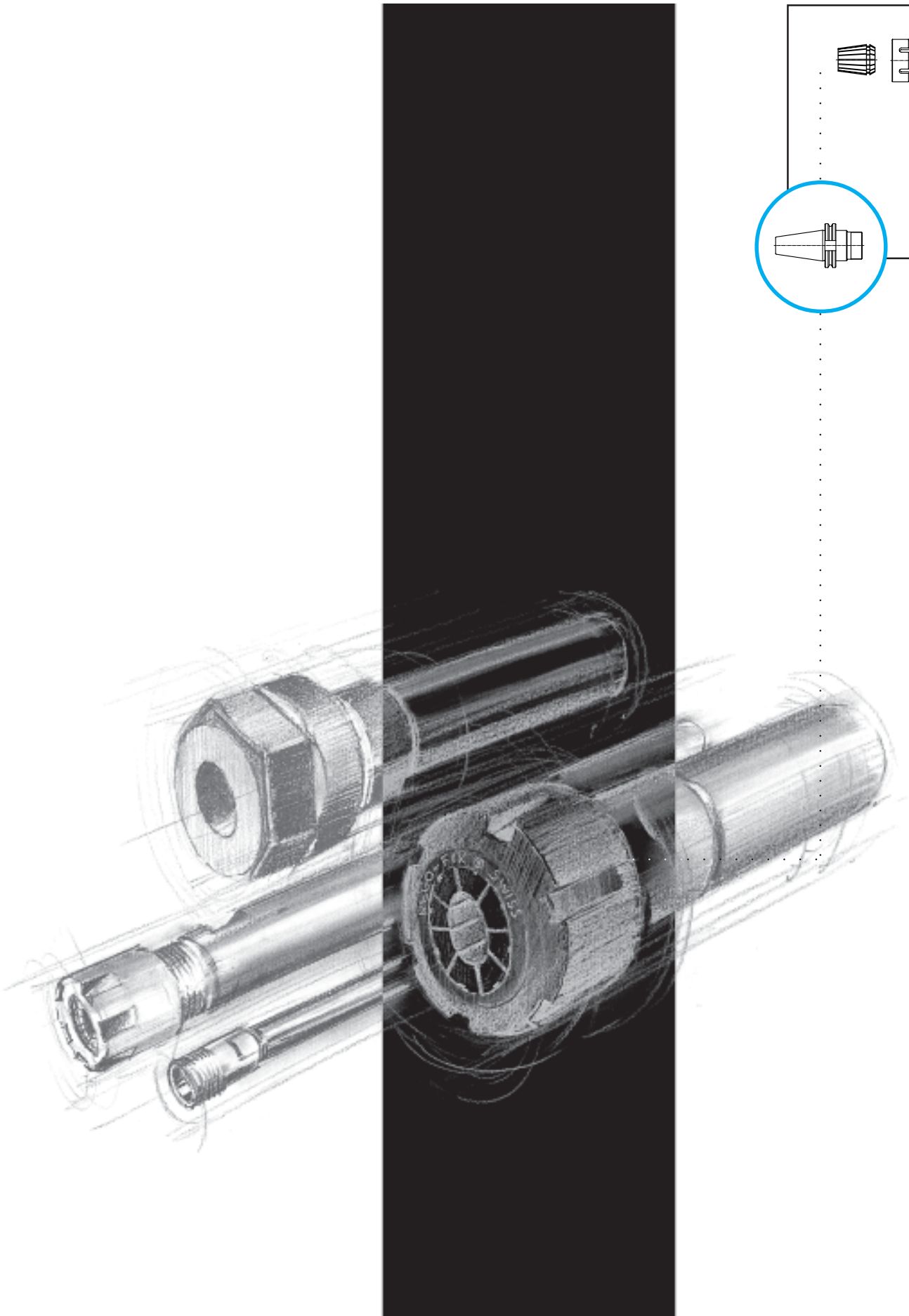


4 Standard thread type H



MATCHING PRODUCTS

Collet		ER 11/ET1-12 Clamping [mm]	Range Page	ER 16/ET1-16 Clamping [mm]	Range Page	ER 20/ET1-20 Clamping [mm]	Range Page	ER 25/ET1-25 Clamping [mm]	Range Page	ER 32/ET1-32 Clamping [mm]	Range Page	ER 40/ET1-40 Clamping [mm]	Range Page	ER 50 Clamping [mm]	Range Page
	ER	–		0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	–	–
	ER-UP	–		0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14	1.0 ... 20.0	2-16	2.0 ... 30.0	2-18	–	–
	ER-GB	–		4.0 ... 9.0	3- 4	4.0 ... 11.2	3- 4	4.0 ... 16.0	3- 4	4.0 ... 20.0	3- 4	6.0 ... 22.0	3- 4	–	–
	ET1	–		2.0 ... 6.3	3- 8	2.2 ... 7.0	3- 8	2.5 ... 10.0	3- 8	4.5 ... 12.5	3- 8	6.0 ... 16.0	3- 8	–	–

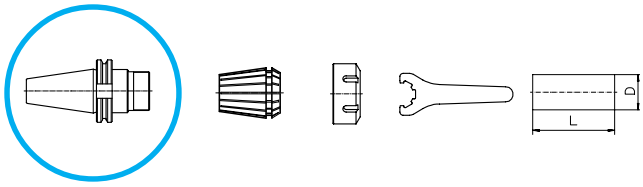

D
L

REGO-FIX®
Swiss Precision Tools

Cylindrical Shank Toolholders

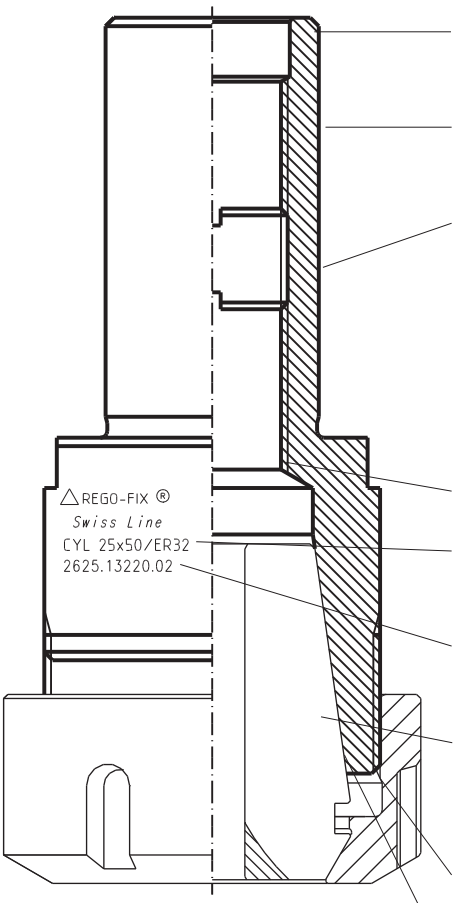
Contents

Edition 10/2004



CYL

FEATURES AND BENEFITS



Quality: Swiss-made to ISO 9001; DIN STD 6499
⇨ *Product consistency and worldwide acceptance*

Material: High tensile strength case-hardened steel
⇨ *Reduced wear and increased life*

High Precision: Maximum runout 0.005 mm
⇨ *Better cutting results*

Wide Product Range: Size ERM 8 - ER 40. Different types with
- Flat
- Double-ended collet holder
- Different lengths and applications

Thread: For back-up screw

Marking: Type and size markings easy to read
⇨ *Reduced tool selection errors*

Product Traceability: Lot number marked on toolholders
⇨ *Quality control and accountability*

Matched Tooling System for Best Fit: ER collet, toolholder, clamping nut and spanner all from **REGO-FIX®**
⇨ *Whole system stands for highest precision and longest tool life*

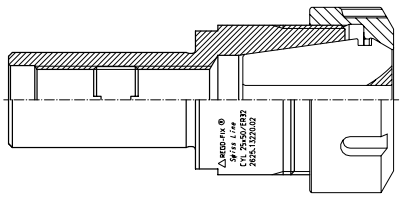
Finish: Special thread design
⇨ *Easier threading*

Surface Finish: Max. Ra 0.25
⇨ *High clamping force*

Edition 10/2004

CYL

CYLINDRIC COLLETHOLDERS



These **REGO-FIX®** colletholders are designed for various automatic machines and can be utilized in conjunction with other holders to extend cutting tools.
For highest precision and best results the whole system counts. For that reason all **REGO-FIX®** components (collets, clamping nuts and toolholders) are carefully matched to fit together. This guarantees lowest T.I.R. and maximum balancing.

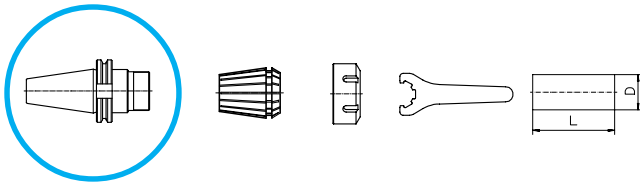
CYL/ER: The short versions are particulary used on capstan lathes where a short overhang is often required.

CYL/ER M: This type is suited for automatic screw machines, machining centers and conventional machines. The shank diameter is in accordance with type F collets but is adjustable in length. The clamping sleeve KF (see page 12-8) is matched to the taper of the F collet. With the CYL/ER M different length cutting tools can be adjusted to the same length. These toolholders accept collets of ER, ER-UP, ER-GB and ET1 type.

CYL/ER MF: These colletholders with clamping flat are particularly designed for CNC-machines such as Citizen, Manurhin, Star and Tornos-Bechler.

CYD/ER MF: These double colletholders with clamping flat have been designed for CNC-machines such as Citizen, Manurhin, Star and Tornos-Bechler and offer the possibility to hold two cutting tools on the same colletholder.

CYL/ER NC: These colletholders are particularly suitable on CNC-turning machines, but can be used on conventional machines as well.



CYL / ER

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	3411.00000	3416.00000	3420.00000	3425.00000	3432.00000	3440.00000	–	4- 4	■							
	Hi-Q/ERC	3411.20300 - 3411.20700	3416.20000	3420.20000	3425.20000	3432.20000	3440.20000	–	4- 6 4- 8								
	Hi-Q/ERB	–	3416.30000	3420.30000	3425.30000	3432.30000	3440.30000	–	4-10								
	Hi-Q/ERBC	–	3416.40000	3420.40000	3425.40000	3432.40000	3440.40000	–	4-10								
	GS / E	7112.11000	7112.16000	7112.20000	7111.25000	7111.32000	7111.40000	–	12-1								
	CM/ER	–	3116.90000	3120.90000	3125.90000	3132.90000	3140.90000	–	12-4								
	E	–	7111.16000	7111.20000	7111.25000	7111.32000	7111.40000	–	12-1								

Collet		ER 11/ET1-12 Clamping [mm]	Range	Page	ER 16/ET1-16 Clamping [mm]	Range	Page	ER 20/ET1-20 Clamping [mm]	Range	Page	ER 25/ET1-25 Clamping [mm]	Range	Page	ER 32/ET1-32 Clamping [mm]	Range	Page	ER 40/ET1-40 Clamping [mm]	Range	Page	ER 50 Clamping [mm]	Range	Page
	ER	0.5 ... 7.0		2- 8	0.5 ... 10.0		2-10	0.5 ... 13.0		2-12	0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	–		–
	ER-UP	0.5 ... 7.0		2- 8	0.5 ... 10.0		2-10	0.5 ... 13.0		2-12	0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	–		–
	ER-GB	2.8 ... 6.0		3- 4	4.0 ... 9.0		3- 4	4.0 ... 11.2		3- 4	4.0 ... 16.0		3- 4	4.0 ... 20.0		3- 4	6.0 ... 22.0		3- 4	–		–
	ET 1	1.4 ... 3.55		3- 8	1.4 ... 6.3		3- 8	2.2 ... 7.0		3- 8	2.5 ... 10.0		3- 8	4.5 ... 12.5		3- 8	6.0 ... 16.0		3- 8	–		–

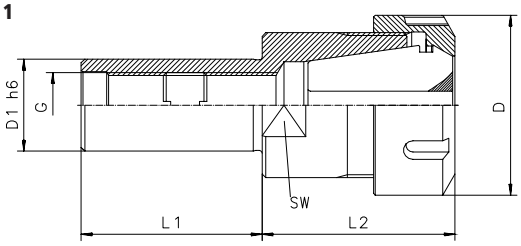
Edition 10/2004

CYL / ER

COLLETHOLDERS

Type	Part No.	D [mm]	D1 h6 [mm]	G	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	SW [mm]	Drawing
CYL 1/2" x 070/ER 11	2613.11141	19	12.7	M6	70	28.5	48	–	12	3
CYL 1/2" x 100/ER 16	2613.11661	28	12.7	M6	100	36.0	74	–	19	3
CYL 1/2" x 100/ER 20	2613.12061	34	12.7	M6	100	44.5	78	–	22	3
CYL 14 x 060/ER 16	2614.11630	28	14	M6	60	36.5	–	40	19	4
CYL 16 x 060/ER 16	2616.11630	28	16	M 8x1	60	36.5	–	40	19	4
CYL 5/8" x 060/ER 16	2616.11631	28	15.875	M 8x1	60	36.5	–	–	19	1
CYL 5/8" x 100/ER 20	2616.12061	34	15.875	M 8x1	100	44.5	70	–	22	3
CYL 3/4" x 050/ER 16	2619.11621	28	19.05	M12x1	50	30.5	–	–	19	2
CYL 3/4" x 100/ER 16	2619.11661	28	19.05	M12x1	100	30.5	–	–	19	2
CYL 3/4" x 060/ER 20	2619.12031	34	19.05	M12x1	60	36.5	–	–	22	1
CYL 3/4" x 050/ER 25	2619.12521	42	19.05	M12x1	50	47.0	–	–	27	1
CYL 20 x 050/ER 16	2620.11620	28	20	M12x1	50	30.5	–	–	19	2
CYL 20 x 100/ER 16	2620.11660	28	20	M12x1	100	30.5	–	–	19	2
CYL 20 x 030/ER 20	2620.12010	34	20	M12x1	30	36.5	–	–	22	1
CYL 20 x 060/ER 20	2620.12030	34	20	M12x1	60	36.5	–	–	22	1
CYL 20 x 050/ER 25	2620.12520	42	20	M12x1	50	47.0	–	–	27	1
CYL 20 x 100/ER 25	2620.12560	42	20	M12x1	100	47.0	–	–	27	1
CYL 20 x 050/ER 32	2620.13220	50	20	M12x1	50	54.0	–	–	36	1
CYL 20 x 100/ER 32	2620.13260	50	20	M12x1	100	54.0	–	–	36	1
CYL 1"x 100/ER 20	2625.12061	34	25.40	M14x1	100	39.5	–	–	22	2
CYL 1"x 050/ER 25	2625.12521	42	25.40	M18x1.5	50	47.0	–	–	27	1
CYL 1"x 100/ER 25	2625.12561	42	25.40	M18x1.5	100	47.0	–	–	27	1
CYL 1"x 050/ER 32	2625.13221	50	25.40	M18x1.5	50	53.0	–	–	36	1
CYL 1"x 050/ER 40	2625.14021	63	25.40	M18x1.5	50	60.0	–	–	45	1
CYL 25 x 050/ER 25	2625.12520	42	25	M18x1.5	50	47.0	–	–	27	1
CYL 25 x 100/ER 25	2625.12560	42	25	M18x1.5	100	47.0	–	–	27	1
CYL 25 x 050/ER 32	2625.13220	50	25	M18x1.5	50	54.0	–	–	36	1
CYL 25 x 050/ER 40	2625.14020	63	25	M18x1.5	50	60.0	–	–	45	1
CYL 30 x 050/ER 25	2630.12520	42	30	M18x1.5	50	42.0	–	–	27	1
CYL 30 x 050/ER 32	2630.13220	50	30	M22x1.5	50	53.0	–	–	36	1
CYL 1 1/4"x 060/ER 32	2632.13231	50	31.75	M22x1.5	60	53.0	–	–	36	1

1



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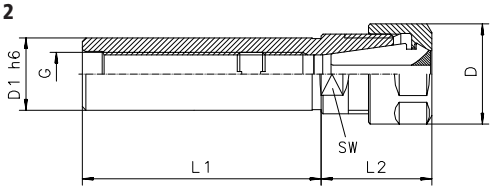

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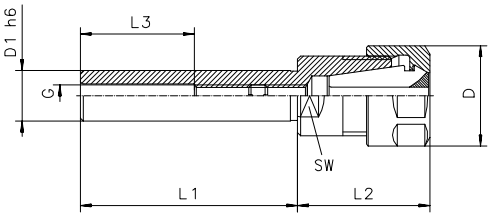

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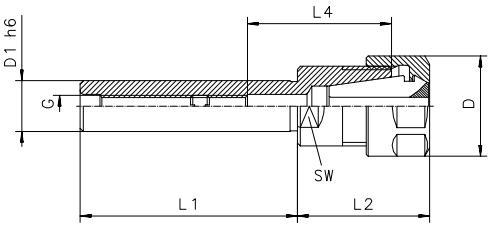
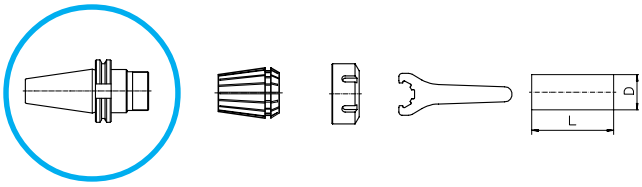


Supplied with: Colletholder, clamping nut and back-up screw



CYL/ER M

MATCHING PRODUCTS

Clamping Nut		ER 8	ER 11	ER 16	ER 20	ER 25	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System*	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ERM	3508.00000	3511.00000	3516.00000	3520.00000	3525.00000	4-12			▲		●	■		
	Hi-Q/ERMC	–	3511.20300 - 3511.20700	3516.20000	3520.20000	3525.20000	4-12 4-14			▲	●	●	■		
	EM	7113.08000	7113.11000	7113.16000	7113.20000	7113.25000	12-1								
	ER MS	3208.50000	3211.50000	3216.50000	3220.50000	–	4-16			▲			■		
	EMS	7114.08000	7114.11000	7114.16000	7114.20000	–	12-1								

*** Note: "Collet Locking System" not available for Hi-Q/ERM8**

Collet		ER 8 Clamping [mm]	ER 8 Range Page	ER 11/ET1-12 Clamping [mm]	ER 11/ET1-12 Range Page	ER 16/ET1-16 Clamping [mm]	ER 16/ET1-16 Range Page	ER 20/ET1-20 Clamping [mm]	ER 20/ET1-20 Range Page	ER 25/ET1-25 Clamping [mm]	ER 25/ET1-25 Range Page
	ER	0.5 ... 5.0	2- 6	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14
	ER-UP	0.5 ... 5.0	2- 6	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14
	ER-GB	–	–	2.8 ... 6.0	3-4	4.0 ... 9.0	3- 4	4.0 ... 11.2	3- 4	4.0 ... 16.0	3- 4
	ET 1	–	–	1.4 ... 3.55	3- 8	1.4 ... 6.3	3- 8	2.2 .. 7.0	3- 8	2.5 ... 10.0	3- 8

Edition 10/2004

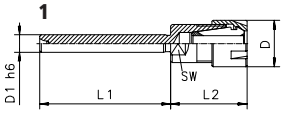
CYL/ER M

COLLETHOLDERS

Type	Part No.	D [mm]	D1 h6 [mm]	D2 [mm]	G	SW[mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	For Manurhin	For Tornos-Bechler	Drawing
CYL 06 x 045/ER 11 M	2606.21120	16	6	–	–	11	45	26.5	–	–			1
CYL 07 x 045/ER 11 M	2607.21120	16	7	–	–	11	45	26.5	–	–			1
CYL 08 x 080/ER 8 M	2608.20850	12	8	3	–	8	80	26.0	30	–			2
CYL 08 x 056/ER 11 M	2608.21130	16	8	4	–	11	56	26.5	46	–	✓		2
CYL 3/8" x 070/ER 8 M	2609.20841	12	9.52	–	M 5	8	70	23.0	–	–			3
CYL 10 x 060/ER 16 M	2610.21630	22	10	5.2	–	17	60	38.5	50	–			2
CYL 12 x 080/ER 8 M	2612.20850	12	12	5.2	–	10	80	17.0	30	–			2
CYL 12 x 080/ER 16 M	2612.21650	22	12	7	–	17	80	38.5	50	–			2
CYL 1/2" x 140/ER 11 M	2613.21191	16	12.7	–	M 6	11	140	29.5	–	52			4
CYL 1/2" x 140/ER 16 M	2613.21691	22	12.7	–	M 6	17	140	37.0	–	50			4
CYL 15 x 100/ER 20 M	2615.22060	28	15	8.5	–	22	100	42.5	60	–			2
CYL 16 x 150/ER 11 M	2616.21190	16	16	–	M 8x1	14	150	21.0	–	–			3
CYL 16 x 100/ER 20 M	2616.22060	28	16	8.5	–	22	100	42.5	60	–			2
CYL 5/8" x 150/ER 11 M	2616.21191	16	15.87	–	M 8x1	14	150	22.5	–	–			3
CYL 3/4" x 155/ER 16 M	2619.21691	22	19.05	–	M12x1	17	155	26.5	–	–			3
CYL 3/4" x 100/ER 25 M	2619.22561	35	19.05	–	M12x1	27	100	47.0	–	–			3
CYL 20 x 155/ER 16 M	2620.21690	22	20	–	M12x1	17	155	26.5	–	–		✓	3
CYL 25 x 155/ER 20 M	2625.22090	28	25	–	M14x1	22	155	26.5	–	–		✓	3
CYL 1" x 155/ER 20 M	2625.22091	28	25.5	–	M14x1	22	155	26.5	–	–	✓		3

Supplied with: Colletholder, clamping nut and back-up screw
(Back-up screw only with type according to drawing No. 3 and 4)

1



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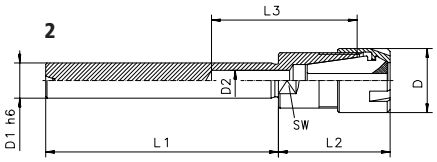

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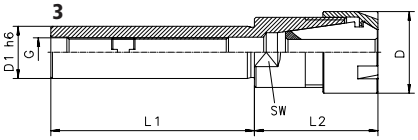

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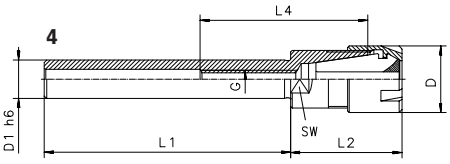

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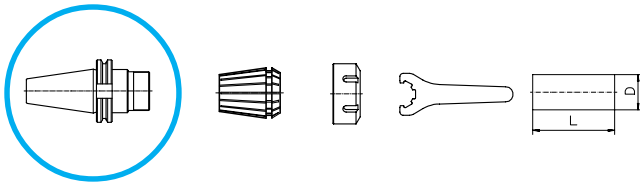


CYL/ER MF

MATCHING PRODUCTS

Clamping Nut		ER 8	ER 11	ER 16	ER 20	ER 25	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ERM	–	3511.00000	3516.00000	3520.00000	3525.00000	4-12			●		●	●		
	Hi-Q/ERMC	–	3511.20300 - 3511.20700	3516.20000	3520.20000	3525.20000	4-12 4-14			●	●	●	●		
	EM	–	7113.11000	7113.16000	7113.20000	7113.25000	12-1								
	ER MS	–	3211.50000	3216.50000	3220.50000	–	4-12			●			●		
	EMS	–	7114.11000	7114.16000	7114.20000	–	12-1								

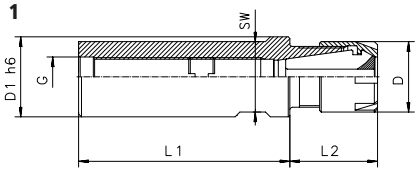
Collet		ER 8 Clamping [mm]	ER 8 Range Page	ER 11/ET1-12 Clamping [mm]	ER 11/ET1-12 Range Page	ER 16/ET1-16 Clamping [mm]	ER 16/ET1-16 Range Page	ER 20/ET1-20 Clamping [mm]	ER 20/ET1-20 Range Page	ER 25/ET1-25 Clamping [mm]	ER 25/ET1-25 Range Page
	ER	–	–	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14
	ER-UP	–	–	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14
	ER-GB	–	–	2.8 ... 6.0	3-4	4.0 ... 9.0	3- 4	4.0 ... 11.2	3- 4	4.0 ... 16.0	3- 4
	ET 1	–	–	1.4 ... 3.55	3- 8	1.4 ... 6.3	3- 8	2.2 ... 7.0	3- 8	2.5 ... 10.0	3- 8

CYL/ER MF

COLLETHOLDERS

Type	Part No.	D [mm]	D1 h6 [mm]	G [mm]	L1 [mm]	L2 [mm]	SW [mm]	For Citizen	For Manurhin	For Schütte	For Star	For Tornos-Bechler	Drawing
CYL 5/8" x 043/ER 8 MF	2616.20811	12	15.875	M5	43	15	14	✓					1
CYL 16 x 038/ER 11 MF	2616.21112	16	16	M 8x1	38	20	14				✓		2
CYL 16 x 140/ER 11 MF	2616.21192	16	16	M 8x1	140	20	14						2
CYL 16 x 035/ER 16 MF	2616.21612	22	16	M 8x1	35	28	17				✓		4
CYL 3/4" x 115/ER 11 MF	2619.21173	16	19.05	M 8x1	115	20	17	✓					1
CYL 3/4"x 038/ER 16 MF	2619.21613	22	19.05	M12x1	38	28	17	✓					2
CYL 3/4"x 050/ER 16 MF	2619.21623	22	19.05	M12x1	50	28	17	✓					2
CYL 3/4"x 070/ER 16 MF	2619.21643	22	19.05	M12x1	70	28	17	✓					2
CYL 3/4"x 120/ER 16 MF	2619.21683	22	19.05	M12x1	120	28	17	✓					2
CYL 3/4"x 140/ER 16 MF	2619.21693	22	19.05	M12x1	140	28	17	✓					2
CYL 20 x 050/ER 16 MF	2620.21622	22	20	M12x1	50	28	17	✓	✓				2
CYL 20 x 070/ER 16 MF	2620.21642	22	20	M12x1	70	28	17	✓					2
CYL 20 x 120/ER 16 MF	2620.21682	22	20	M12x1	120	28	17	✓					2
CYL 20 x 140/ER 16 MF	2620.21692	22	20	M12x1	140	28	17	✓	✓				2
CYL 22 x 038/ER 16 MF	2622.21612	22	22	M12x1	38	28	19				✓		2
CYL 22 x 070/ER 16 MF	2622.21642	22	22	M12x1	70	28	19				✓		2
CYL 22 x 100/ER 16 MF	2622.21662	22	22	M12x1	100	28	19				✓		2
CYL 22 x 080/ER 20 MF	2622.22052	28	22	M12x1	80	39	21				✓		4
CYL 22 x 070/ER 25 MF	2622.22542	35	22	M12x1	70	47	27				✓		4
CYL 25 x 065/ER 16 MF	2625.21642	22	25	M12x1	65	28	22						3
CYL 25 x 100/ER 20 MF	2625.22062	28	25	M14x1	100	28	22					✓	3
CYL 25 x 154/ER 20 MF	2625.22002	28	25	M14x1	154	28	22					✓	3
CYL 25 x 075/ER 25 MF	2625.22552	35	25	M14x1	75	47	27		✓				5
CYL 25 x 145/ER 25 MF	2625.22592	35	25	M14x1	145	36	27		✓			✓	5
CYL 1"x 065/ER 16 MF	2625.21643	22	25.4	M12x1	65	28	22		✓				2
CYL 1"x 075/ER 16 MF	2625.21653	22	25.4	M12x1	75	28	22	✓					2
CYL 1"x 100/ER 16 MF	2625.21663	22	25.4	M12x1	100	28	22	✓					2
CYL 1"x 100/ER 20 MF	2625.22063	28	25.4	M14x1	100	28	22	✓	✓				2
CYL 1"x 140/ER 20 MF	2625.22093	28	25.4	M14x1	140	28	22	✓					2
CYL 32 x 070/ER 25 MF	2632.22542	35	32	M18x1	70	30	27			✓			2

1



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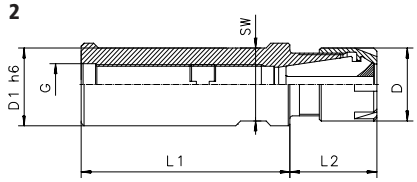

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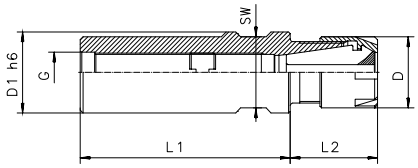

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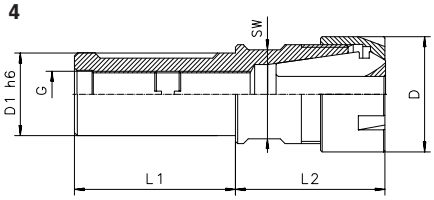

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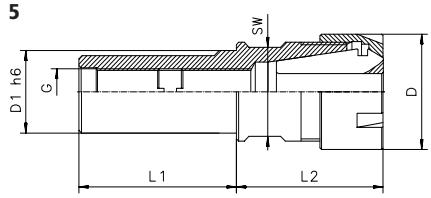
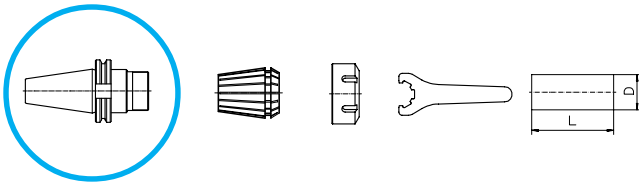


Supplied with: Colletholder, clamping nut and back-up screw



CYD/ER MF

MATCHING PRODUCTS

Clamping Nut		ER 8	ER 11	ER 16	ER 20	ER 25	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ERM	3508.00000	3511.00000	3516.00000	3520.00000	–	4-12			●		●	●		
	Hi-Q/ERMC	–	3511.20300 - 3511.20700	3516.20000	3520.20000	–	4-12 4-14			●	●	●	●		
	EM	7113.08000	7113.11000	7113.16000	7113.20000	–	12-1								
	ER MS	–	3211.50000	3216.50000	3220.50000	–	4-14			●			●		
	EMS	–	7114.11000	7114.16000	7114.20000	–	12-1								

Note: "Collet Locking System" not available for Hi-Q/ERM8

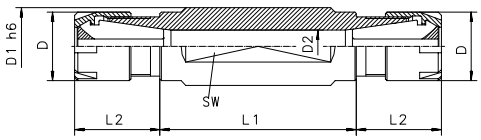
Collet		ER 8 Clamping [mm]	Range Page	ER 11/ET1-12 Clamping [mm]	Range Page	ER 16/ET1-16 Clamping [mm]	Range Page	ER 20/ET1-20 Clamping [mm]	Range Page	ER 25/ET1-25 Clamping [mm]	Range Page
	ER	0.5 ... 5.0	–	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	–	–
	ER-UP	0.5 ... 5.0	–	0.5 ... 7.0	2- 8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	–	–
	ER-GB	–	–	2.8 ... 6.0	3-4	4.0 ... 9.0	3- 4	4.0 ... 11.2	3- 4	–	–
	ET 1	–	–	1.4 ... 3.55	3- 8	1.4 ... 6.3	3- 8	2.2 ... 7.0	3- 8	–	–

Edition 10/2004

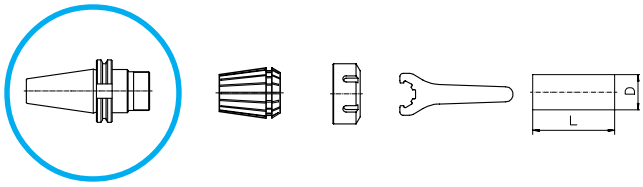
CYD/ER MF

COLLETHOLDERS

Type	Part No.	D [mm]	D1 h6 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	SW [mm]	For Citizen	For Manurhin	For Star
CYD 5/8" x 015/ER 8 MF	2616.20805	12	15.875	5.2	15	15	14	✓		
CYD 5/8" x 025/ER 8 MF	2616.20895	12	15.875	5.2	25	15	14	✓		
CYD 16 x 050/ER 11 MF	2616.21124	16	16	7.5	50	20	14		✓	
CYD 3/4" x 040/ER 11 MF	2619.21143	16	19.05	7.5	40	20	17	✓		
CYD 3/4"x 070/ER 11 MF	2619.21145	16	19.05	7.5	70	20	17	✓		
CYD 3/4" x 090/ER 11 MF	2619.21165	16	19.05	7.5	90	20	19	✓		
CYD 3/4"x 055/ER 16 MF	2619.21635	22	19.05	10.5	55	26	17	✓		
CYD 20 x 030/ER 11 MF	2620.21114	16	20	7.5	30	20	17	✓		
CYD 20 x 050/ER 11 MF	2620.21124	16	20	7.5	50	20	17	✓		
CYD 20 x 055/ER 16 MF	2620.21634	22	20	10.5	55	26	17	✓		
CYD 22 x 055/ER 16 MF	2622.21634	22	22	10.5	55	28	19			✓
CYD 22 x 075/ER 16 MF	2622.21654	22	22	10.5	75	28	19			✓
CYD 25 x 062/ER 16 MF	2625.21634	22	25	10.5	62	28	22		✓	
CYD 1"x 062/ER 16 MF	2625.21635	22	25.4	10.5	62	28	22		✓	
CYD 32 x 055/ER 20 MF	2632.22034	28	32	13.5	55	28	27			✓
CYD 32 x 075/ER 20 MF	2632.22054	28	32	13.5	75	28	27			✓



Supplied with: Colletholder and two clamping nuts



CYL/ER NC

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	–	–	–	3425.00000	3432.00000	3440.00000	–	4- 4	■							
	Hi-Q/ERC	–	–	–	3425.20000	3432.20000	3440.20000	–	4- 6								
	Hi-Q/ERB	–	–	–	3425.30000	3432.30000	3440.30000	–	4-10								
	Hi-Q/ERBC	–	–	–	3425.40000	3432.40000	3440.40000	–	4-10								
	E	–	–	–	7111.25000	7111.32000	7111.40000	–	12-1								
	CM/ER	–	–	–	3125.90000	3132.90000	3140.90000	–	12-4								
	E	–	–	–	7111.25000	7111.32000	7111.40000	–	12-1								

Collet		ER 11/ET1-12 Clamping [mm]	Range	Page	ER 16/ET1-16 Clamping [mm]	Range	Page	ER 20/ET1-20 Clamping [mm]	Range	Page	ER 25/ET1-25 Clamping [mm]	Range	Page	ER 32/ET1-32 Clamping [mm]	Range	Page	ER 40/ET1-40 Clamping [mm]	Range	Page	ER 50 Clamping [mm]	Range	Page
	ER	–	–		–	–		–	–		0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	–	–	
	ER-UP	–	–		–	–		–	–		0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	–	–	
	ER-GB	–	–		–	–		–	–		4.0 ... 16.0		3- 4	4.0 ... 20.0		3- 4	6.0 ... 22.0		3- 4	–	–	
	ET 1	–	–		–	–		–	–		2.5 ... 10.0		3-8	4.5 ... 12.5		3-8	6.0 ... 16.0		3-8	–	–	

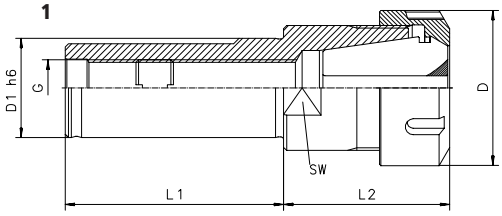
CYL/ER NC

COLLETHOLDERS

Type	Part No.	D [mm]	D1 h6 [mm]	G	L1 [mm]	L2 [mm]	SW [mm]	Drawing
CYL 32 x 060/ER 25 NC	2632.12532	42	32	M18x1.5	60	32	–	2
CYL 32 x 060/ER 32 NC	2632.13232	50	32	M22x1.5	60	38	–	1
CYL 40 x 080/ER 32 NC	2640.13252	50	40	M22x1.5	80	33	36	2
CYL 40 x 075/ER 40 NC	2640.14052	63	40	M22x1.5	75	55	44	1

Supplied with: Colletholder, clamping nut and back-up screw

1



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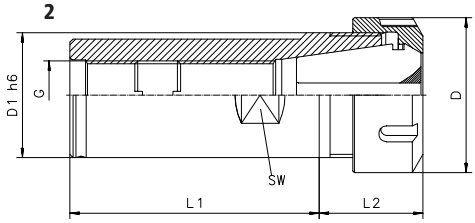

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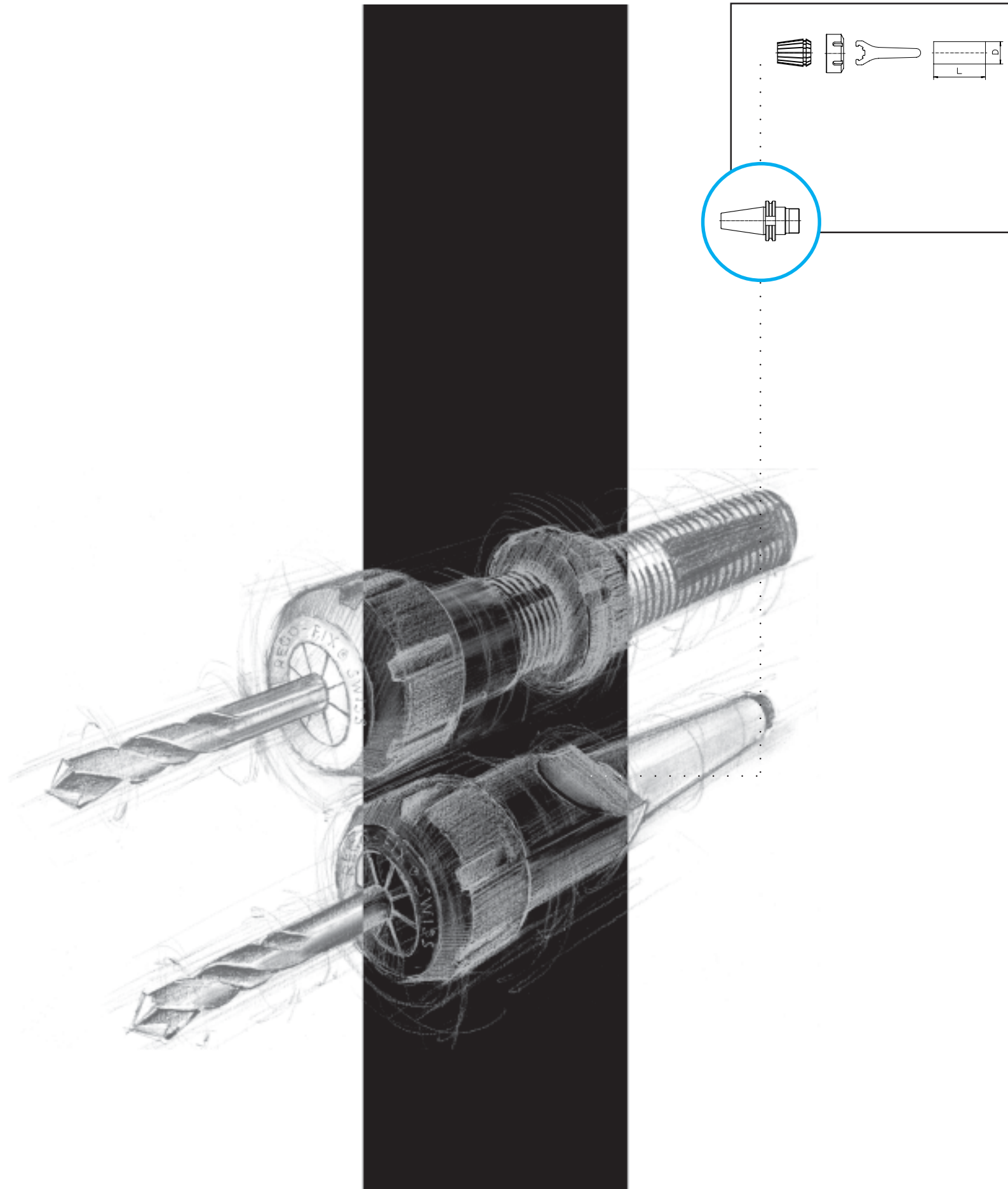
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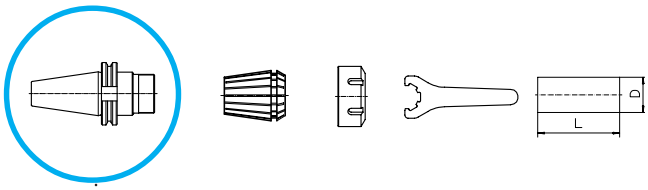
REGO-FIX®
Swiss Precision Tools

Other Colletholders

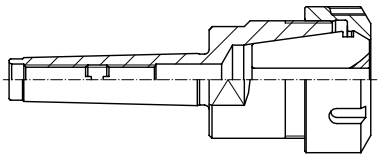
Contents

Edition 10/2004



MK/ER

MORSE TAPER COLLETHOLDERS PER DIN STD 228-A



Morse taper colletholders are designed for drawbar thread application. They can be used on milling or combined drilling-milling machines as well as on boring machines. For drilling machines we supply the corresponding tangs (ATL) on request.

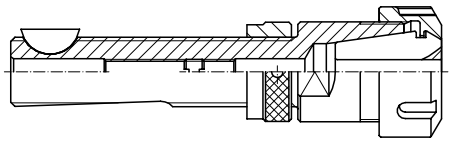
For highest precision and best results the whole system counts. For that reason all **REGO-FIX®** components (collets, clamping nuts and toolholders) are carefully matched to fit together. This guarantees lowest T.I.R. and maximum balancing. For best manufacturing results and longest tool life, please use **REGO-FIX®** toolholders together with **REGO-FIX®** collets and clamping nuts only.

For highest clamping force, as required for tapping with GB collets or ET1 collets we recommend **REGO-FIX®** friction bearing nuts.

Edition 10/2004

SH/ER

AUTOMOTIVE SHANK COLLETHOLDERS WITH TRAPEZOIDAL THREAD PER DIN STD 6327-C

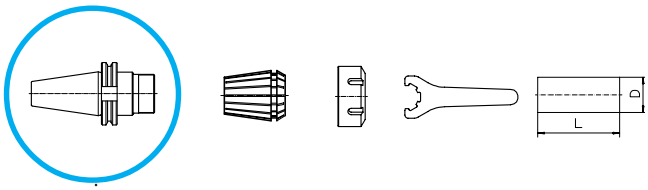


Automotive shank colletholders with trapezoidal thread are supplied with a setting nut. With this type of **REGO-FIX®** colletholder, various collets can be used.

A quick-change setting nut according to system BILZ is available as an option. This option must be ordered separately and is supplied at extra charge.

For highest precision and best results the whole system counts. For that reason all **REGO-FIX®** components (collets, clamping nuts and tool holders) are carefully matched to fit together. This guarantees lowest T.I.R. and maximum balancing. For best manufacturing results and longest tool life, please use **REGO-FIX®** toolholders together with **REGO-FIX®** collets and clamping nuts only.

For highest clamping force, as required for tapping with GB collets or ET1 collets we recommend **REGO-FIX®** friction bearing nuts.



MK/ER
DIN 228-A

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	–	3416.00000	3420.00000	3425.00000	3432.00000	3440.00000	3450.00000	4- 4	■		▲		●			
	Hi-Q/ERC	–	3416.20000	3420.20000	3425.20000	3432.20000	3440.20000	–	4- 6			▲	●	●			
	Hi-Q/ERB	–	3416.30000	3420.30000	3425.30000	3432.30000	3440.30000	3450.30000	4-10		●	▲		●			
	Hi-Q/ERBC	–	3416.40000	3420.40000	3425.40000	3432.40000	3440.40000	–	4-10		●	▲	●	●			
	GS / E	–	7112.16000	7112.20000	7111.25000	7111.32000	7111.40000	7111.50000	12-1								
	CM/ER	–	3116.90000	3120.90000	3125.90000	3132.90000	3140.90000	–	12-4								▮
	E	–	7111.16000	7111.20000	7111.25000	7111.32000	7111.40000	7111.50000	12-1								

10

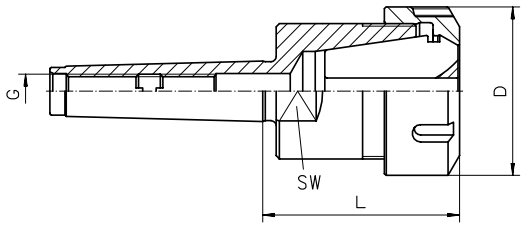
Collet		ER 11/ET1-12 Clamping [mm]	Range	Page	ER 16/ET1-16 Clamping [mm]	Range	Page	ER 20/ET1-20 Clamping [mm]	Range	Page	ER 25/ET1-25 Clamping [mm]	Range	Page	ER 32/ET1-32 Clamping [mm]	Range	Page	ER 40/ET1-40 Clamping [mm]	Range	Page	ER 50 Clamping [mm]	Range	Page
	ER	–	–		0.5 ... 10.0		2-10	0.5 ... 13.0		2-12	0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	4.0 ... 34.0		2-20
	ER-UP	–	–		0.5 ... 10.0		2-10	0.5 ... 13.0		2-12	0.5 ... 16.0		2-14	1.0 ... 20.0		2-16	2.0 ... 30.0		2-18	4.0 ... 34.0		2-20
	ER-GB	–	–		4.0 ... 9.0		3- 4	4.0 ... 11.2		3- 4	4.0 ... 16.0		3- 4	4.0 ... 20.0		3- 4	6.0 ... 22.0		3- 4	–		–
	ET 1	–	–		1.4 ... 6.3		3- 8	2.2 ... 7.0		3- 8	2.5 ... 10.0		3- 8	4.5 ... 12.5		3- 8	6.0 ... 16.0		3- 8	–		–

Edition 10/2004

MK/ER
DIN 228-A

COLLETHOLDERS

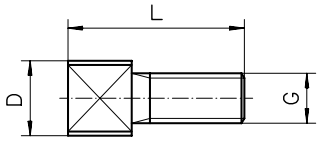
Type	Part No.	D [mm]	G	L [mm]	SW [mm]
MK 1/ER 16 x 041	2701.11600	28	M 6	41.0	17
MK 2/ER 20 x 049	2702.12000	34	M10	48.5	22
MK 2/ER 25 x 052	2702.12500	42	M10	52.0	24
MK 2/ER 32 x 060	2702.13200	50	M10	60.0	36
MK 3/ER 25 x 052	2703.12500	42	M12	52.0	24
MK 3/ER 32 x 070	2703.13200	50	M12	70.0	24
MK 4/ER 32 x 060	2704.13200	50	M16	61.5	32
MK 4/ER 40 x 082	2704.14000	63	M16	81.5	32
MK 5/ER 40 x 064	2705.14000	63	M20	63.5	45
MK 5/ER 50 x 086	2705.15900	78	M20	85.5	45

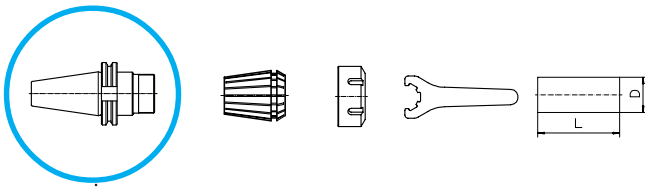


Supplied with: Colletholder, clamping nut and back-up screw

MATCHING TANGS ATL

Type	Part No.	G	L [mm]	D [mm]
ATL 6/MK 1	7221.01000	M 6	21.5	8.5
ATL 10/MK 2	7221.02000	M 10	30.5	13.5
ATL 12/MK 3	7221.03000	M 12	35.0	18.5
ATL 16/MK 4	7221.04000	M 16	41.0	24.5
ATL 20/MK 5	7221.05000	M 20	52.0	35.0





SH/ER
DIN 6327-C

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ER	3411.00000	3416.00000	3420.00000	3425.00000	–	–	–	4- 4	■		▲		●			
	Hi-Q/ERC	3411.20300 - 3411.20700	3416.20000	3420.20000	3425.20000	–	–	–	4- 6 4- 8			▲	●	●			
	Hi-Q/ERB	–	3416.30000	3420.30000	3425.30000	–	–	–	4-10		●	▲		●			
	Hi-Q/ERBC	–	3416.40000	3420.40000	3425.40000	–	–	–	4-10		●	▲	●	●			
	GS / E	7112.11000	7112.16000	7112.20000	7111.25000	–	–	–	12-1								
	CM/ER	–	3116.90000	3120.90000	3125.90000	–	–	–	12-4								●
	E	–	7111.16000	7111.20000	7111.25000	–	–	–	12-1								

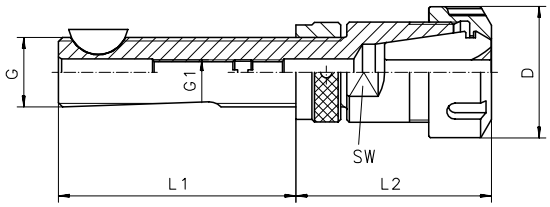
Collet		ER 11/ET1-12 Clamping [mm]	Range Page	ER 16/ET1-16 Clamping [mm]	Range Page	ER 20/ET1-20 Clamping [mm]	Range Page	ER 25/ET1-25 Clamping [mm]	Range Page	ER 32/ET1-32 Clamping [mm]	Range Page	ER 40/ET1-40 Clamping [mm]	Range Page	ER 50 Clamping [mm]	Range Page
	ER	0.5 ... 7.0	2-8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14	–	–	–	–	–	–
	ER-UP	0.5 ... 7.0	2-8	0.5 ... 10.0	2-10	0.5 ... 13.0	2-12	0.5 ... 16.0	2-14	–	–	–	–	–	–
	ER-GB	2.8 ... 6.0	3-4	4.0 ... 9.0	3-4	4.0 ... 11.2	3-4	4.0 ... 16.0	3-4	–	–	–	–	–	–
	ET 1	1.4 ... 3.55	3-8	1.4 ... 6.3	3-8	2.2 ... 7.0	3-8	2.5 ... 10.0	3-8	–	–	–	–	–	–

SH/ER
DIN 6327-C

COLLETHOLDERS

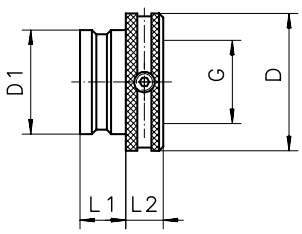
Type	Part No.	D [mm]	G	G1	L1 [mm]	L2 [mm]	SW [mm]
SH 12 x 050/ER 11	2612.11104	19	Tr 12x1.5	M 5	50	46.6	12
SH 16 x 073/ER 16	2616.11604	28	Tr 16x1.5	M 6	73	53.5	19
SH 20 x 076/ER 20	2620.12004	34	Tr 20x2.0	M 8	76	59.5	22
SH 28 x 083/ER 25	2628.12504	42	Tr 28x2.0	M 18x1.5	83	57.0	28

Supplied with: Colletholder, clamping nut, back-up screw, setting nut and Woodruff-key

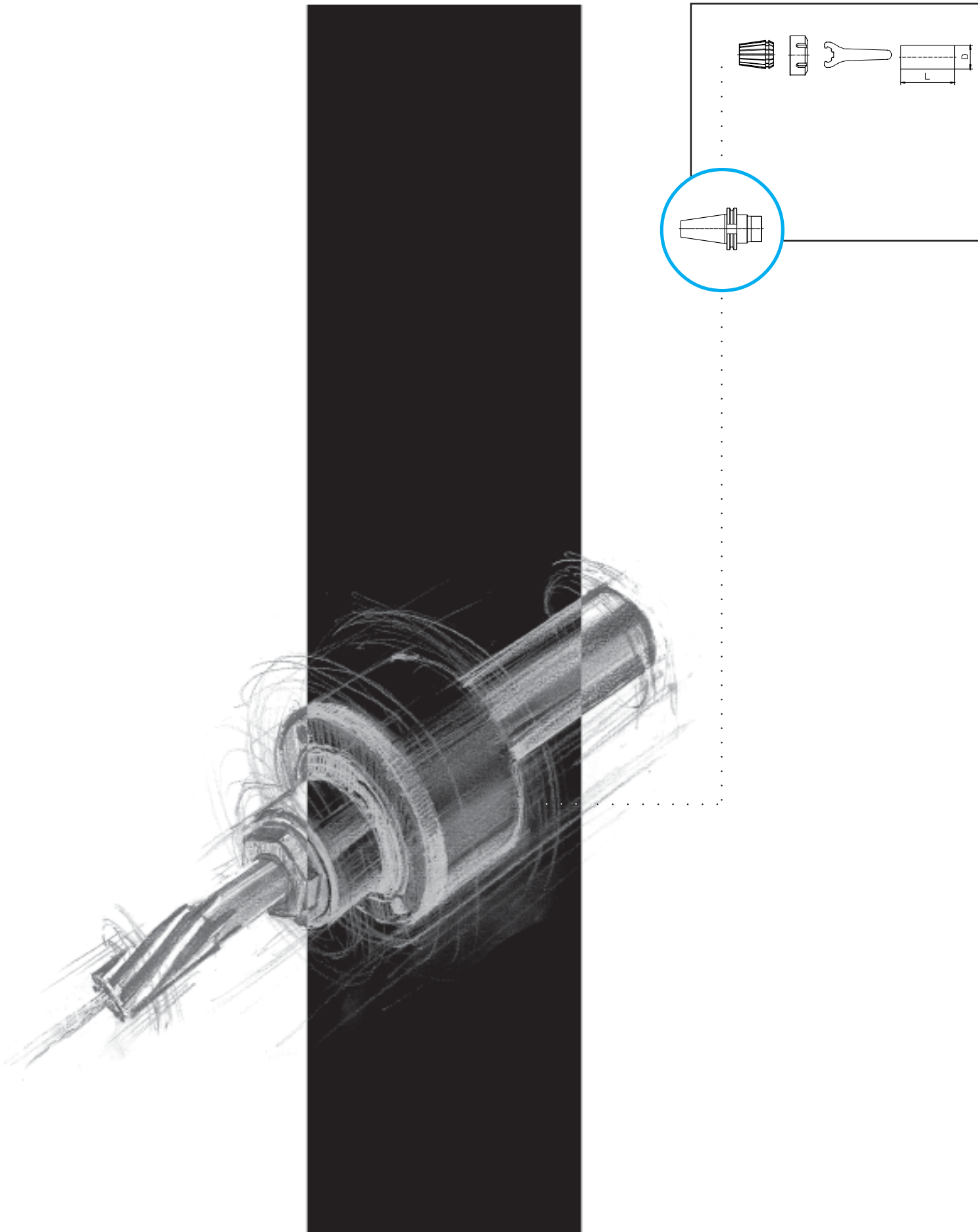


MATCHING QUICK-CHANGE SETTING NUTS SYSTEM BILZ

Type	Part No.	G	D [mm]	D1 [mm]	L1 [mm]	L2 [mm]
SSM 12	7238.12000	Tr 12x1.5	22	16.4	9.0	9.0
SSM 16	7238.16000	Tr 16x1.5	26	19.9	9.5	9.0
SSM 20	7238.20000	Tr 20x2.0	33	25.4	11.0	9.0
SSM 28	7238.28000	Tr 28x2.0	42	33.9	12.0	10.0



Edition 10/2004

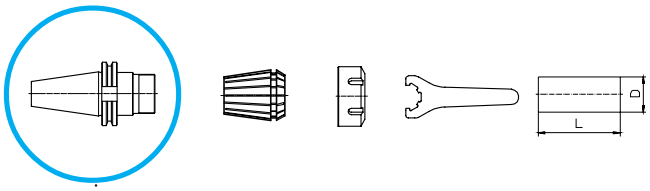

D
L

REGO-FIX®
Swiss Precision Tools

Floating Chucks

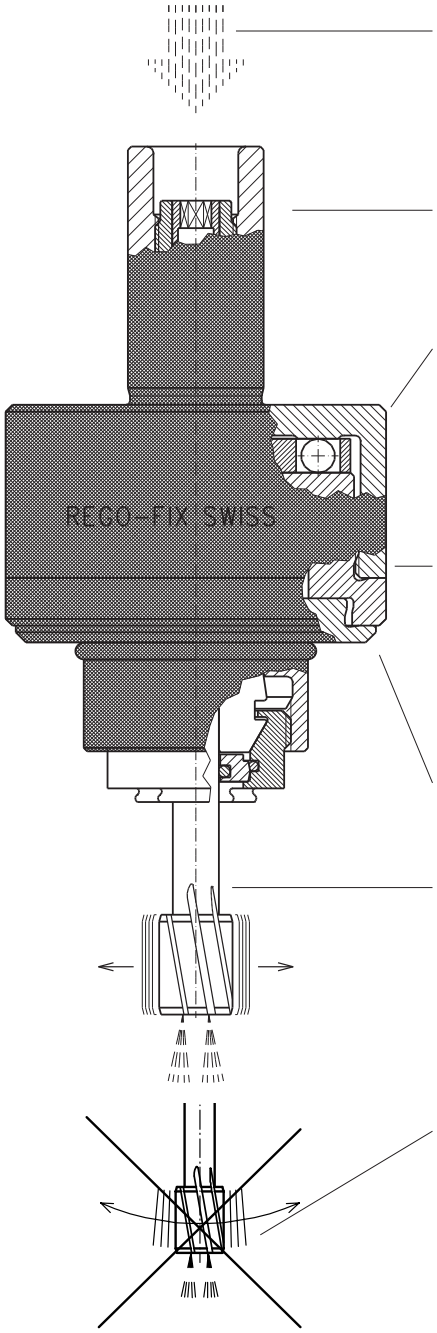
Contents

Edition 10/2004



PH/ER, PHC/ER
MPH/ER

FEATURES AND BENEFITS



Coolant Through Tools (only PHC):
➪ *Better cooling and lubrication*
➪ *Prolonged tool life*
➪ *Improved chip removal*

Adjustable Floating Resistance: Continuously adjustable between auto-centering and free floating
➪ *No restriction of the floating movement*

Combined Ball and Friction Bearing:
Low load applications
➪ *Ball bearing for easy floating*
High load applications
➪ *Friction bearing to withstand the high pressure*

Vertical and Horizontal Application: Adjustable self-centering keeps the tool at the center of the floating chuck, even in the horizontal position
➪ *Prevents chatter marks*
➪ *Extends tool life*

Double Sealing Against Dirt: Protection against dirt penetration
➪ *Prevents coolant and chips from entering the floating chuck*

Adjustment for Tool Weight:
➪ *Optimal setup by adjustment of floating resistance*

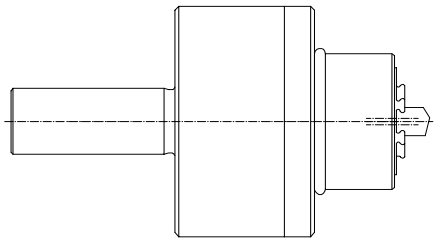
Matched Tooling System for Best Fit: ER collet, toolholders, clamping nut and spanner
➪ *Whole system stands for highest precision and longest tool life*

Excellent Quality of Hole:
➪ *Only parallel floatation of tool possible*

PH/ER, PHC/ER
MPH/ER

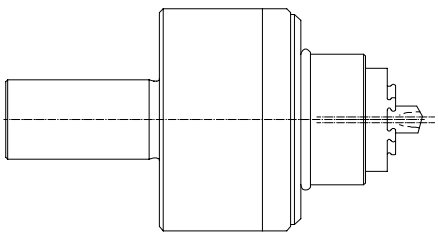
PH/ER AND MPH/ER FLOATING CHUCKS

REGO-FIX® floating chucks are excellent tools for reaming and tapping. Their design is such that the tool is self-centering in the vertical and horizontal position. The float is always parallel to the rotational axis and the rotation is both clockwise and counter clockwise. The self-centering feature allows very precise positioning of the reaming or tapping tool. This is especially important in horizontal applications, where on ordinary floating chucks the weight of the tool tends to dislocate the tool from the rotational axis. **REGO-FIX®** floating chucks are a very universal and economical solution to your reaming and tapping applications.



PHC/ER FLOATING CHUCKS FOR COOLANT-THROUGH TOOLS

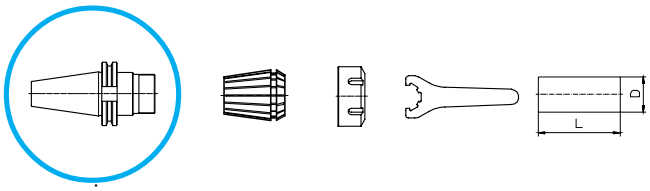
REGO-FIX® Floating Chucks PHC/ER for coolant through tools are especially designed for internal cooling and have the same advantages as the PH/ER Floating Chucks.



Note: In case coolant through tools are used please order AXC clamping nuts.

Edition 10/2004

FLOATING CHUCKS



PH/ER

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	ER AX	3311.60000	–	–	–	–	–	–	4-18								
	E AX	7117.11000	–	–	–	–	–	–	12-1								

Collet		ER 11/ET1-12 Clamping [mm]	Range Page	ER 16/ET1-16 Clamping [mm]	Range Page	ER 20/ET1-20 Clamping [mm]	Range Page	ER 25/ET1-25 Clamping [mm]	Range Page	ER 32/ET1-32 Clamping [mm]	Range Page	ER 40/ET1-40 Clamping [mm]	Range Page	ER 50 Clamping [mm]	Range Page
	ER	0.5 ... 7.0	2- 8	–	–	–	–	–	–	–	–	–	–	–	–
	ER-UP	0.5 ... 7.0	2- 8	–	–	–	–	–	–	–	–	–	–	–	–
	ER-GB	2.8 ... 6.0	3- 4	–	–	–	–	–	–	–	–	–	–	–	–
	ET 1	2.0 ... 3.55	3- 8	–	–	–	–	–	–	–	–	–	–	–	–

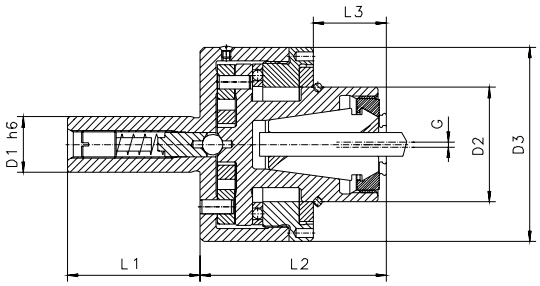
11

Edition 10/2004

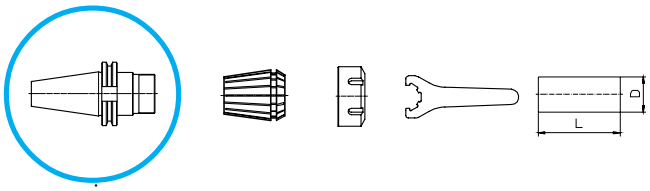
PH/ER

FLOATING CHUCKS

Type	Part No.	D1 h6 [mm]	D2 [mm]	D3 [mm]	G float [mm]	L1 [mm]	L2 [mm]	L3 [mm]
PH 5/8"/ER 11	2616.91102	15.88	22	38	0.8	34	36	14
PH 16/ER 11	2616.91100	16	22	38	0.8	34	36	14
PH 3/4"/ER 11	2619.91102	19.05	22	38	0.8	34	36	14
PH 20/ER 11	2620.91100	20	22	38	0.8	34	36	14
PH 22/ER 11	2622.91100	22	22	38	0.8	34	36	14



Supplied with: Floating holder, clamping nut and spanner



PHC / ER

MATCHING PRODUCTS

Clamping Nut		ER 11	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	ER AX	–	–	3320.60000	–	3332.60000	–	–	4-18			▼					
	ER AXC	–	–	3320.70000	–	3332.70000	–	–	4-18			▼	●				
	E AX	–	–	7117.20000	–	7117.32000	–	–	12-1								

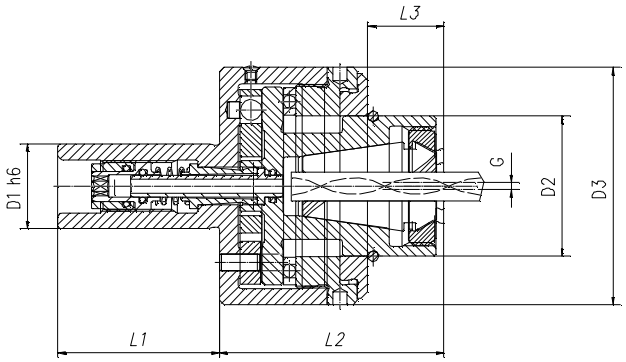
Collet		ER 11/ET1-12 Clamping [mm]	Range	Page	ER 16/ET1-16 Clamping [mm]	Range	Page	ER 20/ET1-20 Clamping [mm]	Range	Page	ER 25/ET1-25 Clamping [mm]	Range	Page	ER 32/ET1-32 Clamping [mm]	Range	Page	ER 40/ET1-40 Clamping [mm]	Range	Page	ER 50 Clamping [mm]	Range	Page
	ER	–	–		–	–		0.5 ... 13.0		2-12	–	–		1.0 ... 20.0		2-16	–	–		–	–	
	ER-UP	–	–		–	–		0.5 ... 13.0		2-12	–	–		1.0 ... 20.0		2-16	–	–		–	–	
	ER-GB	–	–		–	–		4.0 ... 11.2		3- 4	–	–		4.0 ... 20.0		3- 4	–	–		–	–	
	ET 1	–	–		–	–		2.2 ... 7.0		3- 8	–	–		4.5 ... 12.5		3- 8	–	–		–	–	

Edition 10/2004

PHC / ER

FLOATING CHUCKS FOR COOLANT THROUGH TOOLS

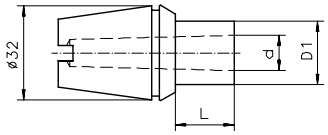
Type	Part No.	D1 h6 [mm]	D2 [mm]	D3 [mm]	G float	L1 [mm]	L2 [mm]	L3 [mm]
PHC 5/8"/ER 20	2616.92004	15.88	33	56	1.0	38	53.5	18.5
PHC 16/ER 20	2616.92003	16	33	56	1.0	38	53.5	18.5
PHC 3/4"/ER 20	2619.92004	19.05	33	56	1.0	38	53.5	18.5
PHC 20/ER 20	2620.92003	20	33	56	1.0	38	53.5	18.5
PHC 22/ER 20	2622.92003	22	33	56	1.0	38	53.5	18.5
PHC 25/ER 20	2625.92003	25	33	56	1.0	38	53.5	18.5
PHC 1"/ER 20	2625.92004	25.40	33	56	1.0	38	53.5	18.5
PHC 3/4"/ER 32	2619.93204	19.05	46	70	1.5	46	64.5	20.5
PHC 20/ER 32	2620.93203	20	46	70	1.5	46	64.5	20.5
PHC 22/ER 32	2622.93203	22	46	70	1.5	46	64.5	20.5
PHC 25/ER 32	2625.93203	25	46	70	1.5	46	64.5	20.5
PHC 1"/ER 32	2625.93204	25.40	46	70	1.5	46	64.5	20.5
PHC 32/ER 32	2632.93203	32	46	70	1.5	46	64.5	20.5
PHC 1-1/4"/ER 32	2632.93204	31.75	46	70	1.5	46	64.5	20.5
PHC 1-3/4"/ER 32	2644.93204	44.45	46	70	1.5	46	64.5	20.5

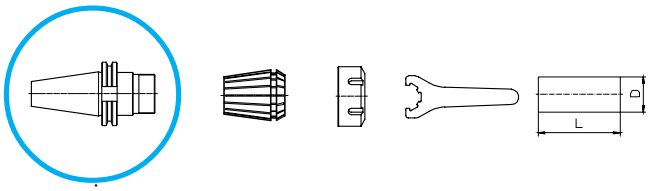


Supplied with: Floating holder, clamping nut, spanner and adjusting key

MATCHING REDUCTIONS ER 32 TO MORSE TAPER

Type	Morse	Part No.	d	L [mm]	D1 [mm]
ER 32/MK 1	Morse 1	7141.32001	MK 1	20	21.5
ER 32/MK 2	Morse 2	7141.32002	MK 2	33	21.5





MPH/ER

MATCHING PRODUCTS

Clamping Nut		ER 8	ER 11	ER 16	ER 20	ER 25	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ERM	–	3511.00000	–	–	–	4-12			▲			■		
	EM	–	7113.11000	–	–	–	12-1								
	ER MS	–	3211.50000	–	–	–	4-16			▲			■		
	EMS	–	7114.11000	–	–	–	12-1								

Collet		ER 8 Clamping [mm]	Range	Page	ER 11/ET1-12 Clamping [mm]	Range	Page	ER 16/ET1-16 Clamping [mm]	Range	Page	ER 20/ET1-20 Clamping [mm]	Range	Page	ER 25/ET1-25 Clamping [mm]	Range	Page
	ER	–	–		0.5 ... 7.0		2- 8	–	–		–	–		–	–	
	ER-UP	–	–		0.5 ... 7.0		2- 8	–	–		–	–		–	–	
	ER-GB	–	–		2.8 ... 6.0		3- 4	–	–		–	–		–	–	
	ET 1	–	–		2.0 ... 3.55		3- 8	–	–		–	–		–	–	

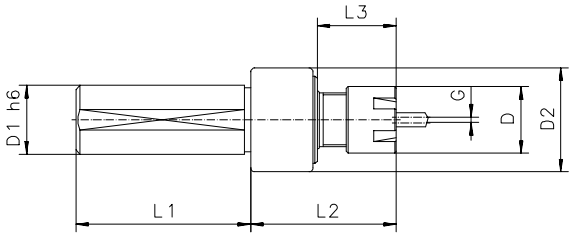
11

Edition 10/2004

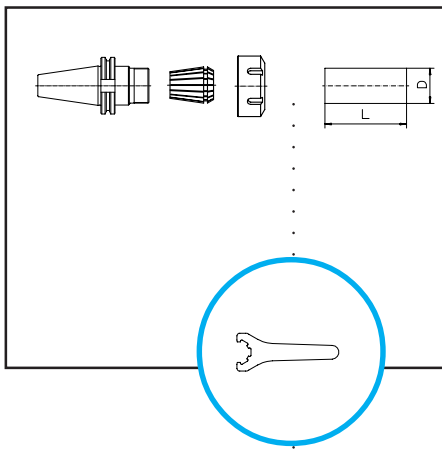
MPH/ER

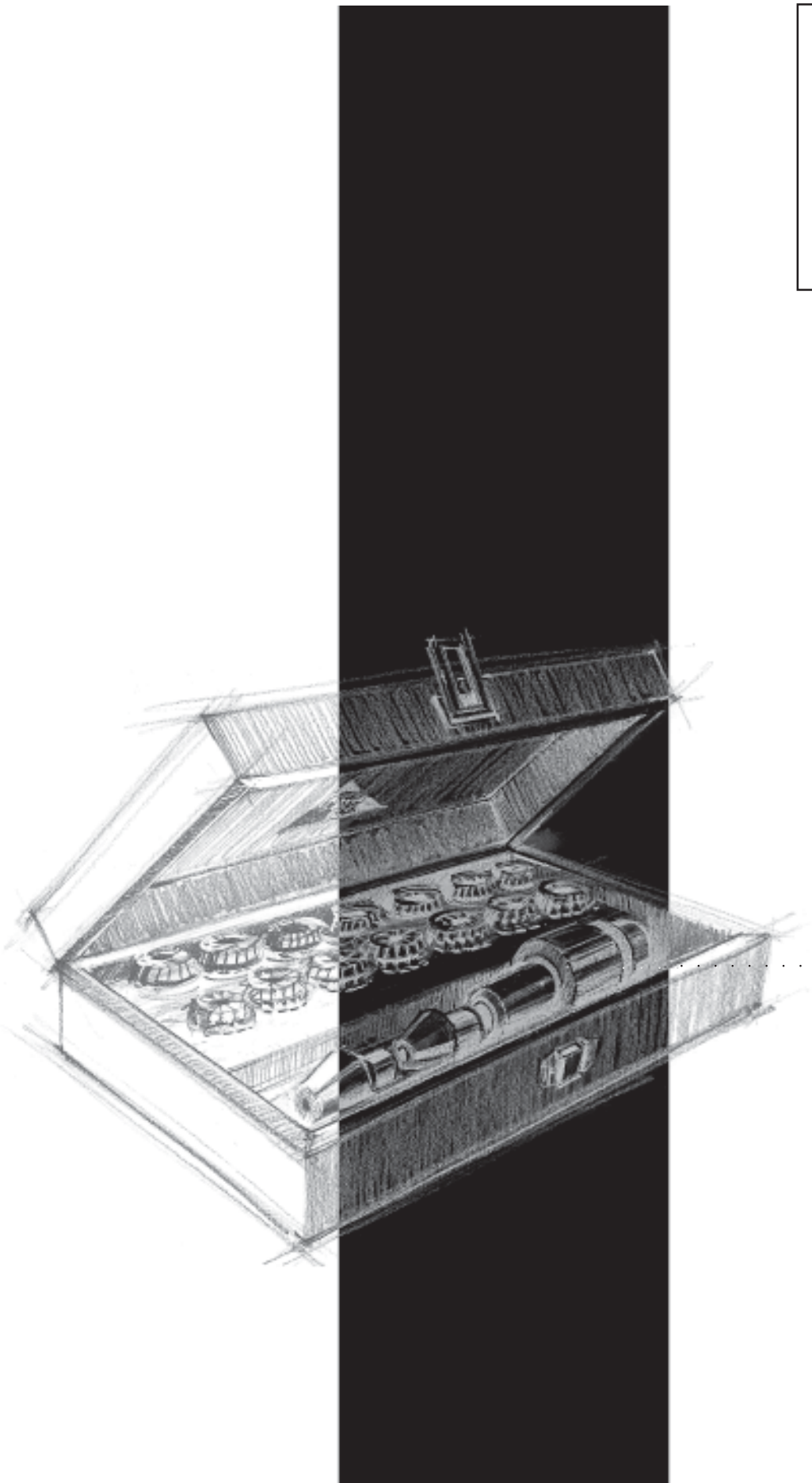
MINI-FLOATING CHUCKS

Type	Part No.	D [mm]	D1 h6 [mm]	D2 [mm]	G float	L1 [mm]	L2 [mm]	L3 [mm]
MPH 8/ER 11 M	2608.91107	16	8.00	25	0.5	42	35	19
MPH 10/ER 11 M	2610.91107	16	10.00	25	0.5	42	35	19
MPH 3/4"/ER 11 M	2619.91108	16	19.05	25	0.5	70	35	19
MPH 20/ER 11 M	2620.91107	16	20.00	25	0.5	42	35	19
MPH 22/ER 11 M	2622.91107	16	22.00	25	0.5	42	35	19
MPH 25/ER 11 M	2625.91107	16	25.00	25	0.5	42	35	19
MPH 1"/ER 11 M	2625.91108	16	25.40	25	0.5	42	35	19



Supplied with: Floating chuck, clamping nut and spanner



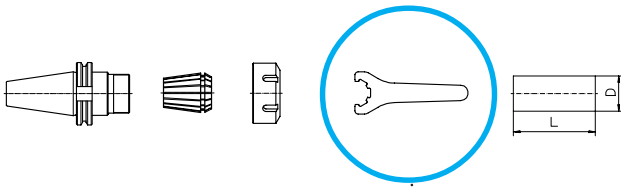


Edition 3/2001

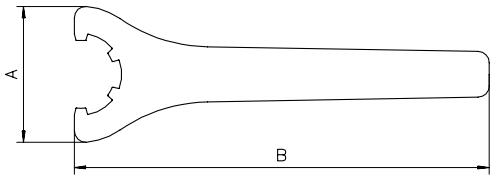
Accessories

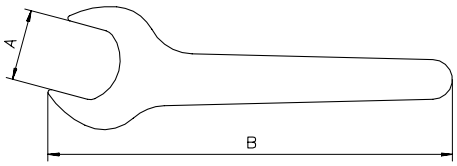
Contents

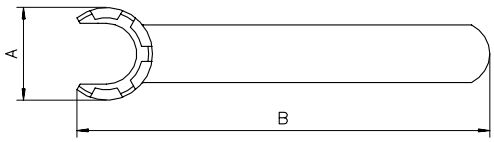
Edition 10/2004

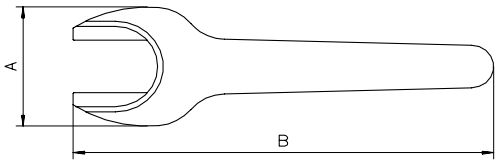


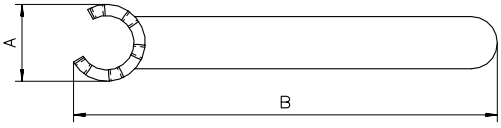
SPANNERS











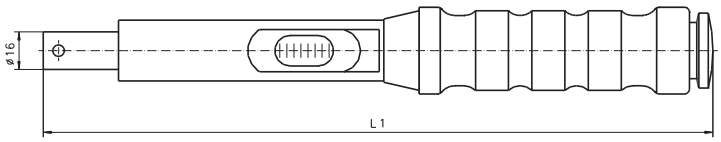
SPANNERS

Spanners	Part No.	Size	A [mm]	B [mm]	For Hi-Q/ER	For Hi-Q/ERC	For Hi-Q/ERB	For Hi-Q/ERBC	For Hi-Q/ERM	For Hi-Q/ERMC	For ER MS	For Hi-Q/ER AX	For Hi-Q/ER AXC	For CM/ER
TYPE	***E***													
E 16	7111.16000	ER 16	50.0	160										✓
E 20	7111.20000	ER 20	55.0	180										✓
E 25	7111.25000	ER 25	65.0	210	✓	✓	✓	✓						✓
E 32	7111.32000	ER 32	75.0	250	✓	✓	✓	✓						✓
E 40	7111.40000	ER 40	90.0	290	✓	✓	✓	✓						✓
E 50	7111.50000	ER 50	110.0	350	✓		✓							✓
TYPE	***GS***													
GS 17	7112.11000	ER 11	17.0	95	✓	✓								
GS 25	7112.16000	ER 16	25.0	144	✓	✓	✓	✓						
GS 30	7112.20000	ER 20	30.0	172	✓	✓	✓	✓						
TYPE	***EM***													
E 8 M	7113.08000	ER 8	12.4	74					✓					
E 11 M	7113.11000	ER 11	16.8	95					✓	✓				
E 16 M	7113.16000	ER 16	22.5	117					✓	✓				
E 20 M	7113.20000	ER 20	29.0	129					✓	✓				
E 25 M	7113.25000	ER 25	36.0	141					✓	✓				
TYPE	***EMS***													
E 8 MS	7114.08000	ER 8	19.2	76							✓			
E 11 MS	7114.11000	ER 11	22.0	100							✓			
E 16 MS	7114.16000	ER 16	33.0	130							✓			
E 20 MS	7114.20000	ER 20	42.0	140							✓			
TYPE	***E AX***													
E 11 AX	7117.11000	ER 11	16.5	108								✓		
E 16 AX	7117.16000	ER 16	22.5	131								✓	✓	
E 20 AX	7117.20000	ER 20	26.0	148								✓	✓	
E 25 AX	7117.25000	ER 25	29.5	162								✓	✓	
E 32 AX	7117.32000	ER 32	37.5	196								✓	✓	
E 40 AX	7117.40000	ER 40	47.5	220								✓	✓	

TORQUE WRENCHES AND WRENCH HEADS

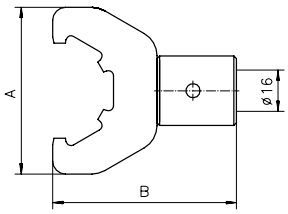
TORQUE WRENCHES

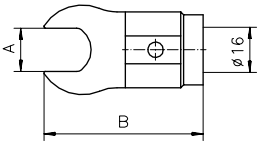
Type	Part No.	Range [Nm]	Range [ft.lbs]	L1 [mm]
TORCO-FIX I	7150.05050	5 ... 50	5 ... 37.5	335
TORCO-FIX II	7150.20200	20 ... 200	20 ... 150	465
TORCO-FIX III	7150.60300	60 ... 300	50 ... 220	565

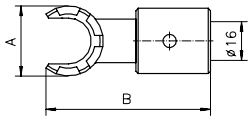


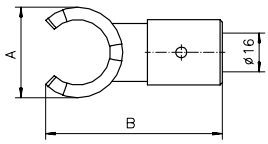
MATCHING WRENCH HEADS

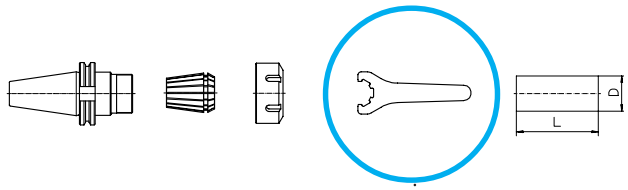
Wrench Heads	Part No.	Size	A [mm]	B [mm]	For Hi-Q/ER	For Hi-Q/ERC	For Hi-Q/ERB	For Hi-Q/ERBC	For Hi-Q/ERM	For Hi-Q/ERMC	For Hi-Q ER/AX	For Hi-Q ER/AXC	For CM/ER	For TORCO-FIX I	For TORCO-FIX II	For TORCO-FIX III
TYPE A-E																
A-E 16	7151.16000	ER 16	50.0	62.0									✓		✓	
A-E 20	7151.20000	ER 20	55.0	62.0									✓		✓	
A-E 25	7151.25000	ER 25	65.0	72.0	✓	✓	✓	✓					✓		✓	✓
A-E 32	7151.32000	ER 32	75.0	72.0	✓	✓	✓	✓					✓		✓	✓
A-E 40	7151.40000	ER 40	90.0	82.0	✓	✓	✓	✓					✓			✓
A-E 50	7151.50000	ER 50	110.0	94.0	✓		✓	✓								✓
TYPE A-GS																
A-GS 17	7152.11000	ER 11	17.0	60.0	✓	✓								✓		
A-GS 25	7152.16250	ER 16	25.0	63.5	✓	✓	✓	✓				✓			✓	
A-GS 30	7152.20000	ER 20	30.0	65.5	✓	✓	✓	✓							✓	
TYPE A-EM																
A-E 8 M	7153.08000	ER 8	12.4	53.0					✓					✓		
A-E 11 M	7153.11000	ER 11	16.8	54.0					✓	✓				✓		
A-E 16 M	7153.16000	ER 16	22.5	56.0					✓	✓				✓	✓	
A-E 20 M	7153.20000	ER 20	29.0	68.0					✓	✓				✓	✓	
A-E 25 M	7153.25000	ER 25	36.0	70.0					✓	✓				✓	✓	
TYPE A-EAX																
A-E11 AX	7157.11000	ER 11	16.5	56.0							✓			✓		
A-E16 AX	7157.16000	ER 16	22.5	58.0							✓	✓		✓	✓	
A-E20 AX	7157.20000	ER 20	26.0	59.0							✓	✓			✓	
A-E25 AX	7157.25000	ER 25	29.5	70.0							✓	✓			✓	
A-E32 AX	7157.32000	ER 32	37.5	73.0							✓	✓			✓	✓
A-E40 AX	7157.40000	ER 40	47.5	77.0							✓	✓			✓	✓











WMB

TOOL HOLDING FIXTURE WMB

Inserts	Part No.	Fits These Tapers
ISO		
WMB/SK 30	7811.30100	CAT/BT/TC/ISO 30
WMB/SK 40	7811.40100	CAT/BT/TC/ISO 40
WMB/SK 50	7811.50100	CAT/BT/TC/ISO 50

Supplied with: Tool holding fixture with inserts and clamping unit

Inserts	Part No.	Fits These Tapers
HSK		
WMB/HSK 25	7811.25800	HSK 25
WMB/HSK 32	7811.32800	HSK 32
WMB/HSK 40	7811.40800	HSK 40
WMB/HSK 50	7811.50800	HSK 50
WMB/HSK 63	7811.63800	HSK 63
WMB/HSK 100 A+C	7811.00300	HSK-A/HSK-C 100 *

Supplied with: Tool holding fixture with clamping inserts and spanner

*** Supplied with:** Tool holding fixture with inserts and clamping unit

Supplied with: Tool holding fixture with insert and clamping unit

CM/ER

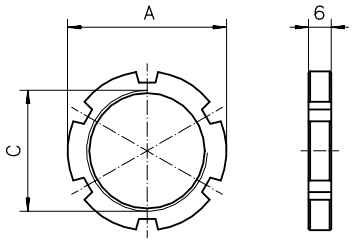
CM/ER COUNTER NUTS FOR CLAMPING NUTS PER DIN STD 6499

The counter nut CM/ER has been specially created for high-speed machine spindles.

This counter nut CM/ER secures the clamping nut against accidental loosening due to a sudden stop or reversal of the machine spindle.

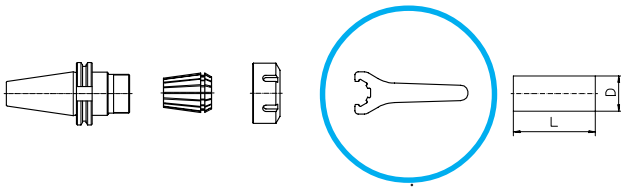
When using counter nuts it is important to make sure that the thread of the colletholder is long enough!

Type	Part No.	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut	A [mm]	C
CM/ER 16	3116.90000								●	32	M 22 x 1.5
CM/ER 20	3120.90000								●	35	M 25 x 1.5
CM/ER 25	3125.90000								●	42	M 32 x 1.5
CM/ER 32	3132.90000								●	50	M 40 x 1.5
CM/ER 40	3140.90000								●	63	M 50 x 1.5



MATCHING PRODUCTS

Size	Clamping Nuts	Page	Clamping Nuts	Page	Clamping Nuts	Page	Clamping Nuts	Page	Spanner		Part No.	Page
ER 16	Hi-Q/ER	4- 4	Hi-Q/ERC	4- 6	Hi-Q/ERB	4-10	Hi-Q/ERBC	4-10		GS 25	7112.16000	12- 1
ER 20	Hi-Q/ER	4- 4	Hi-Q/ERC	4- 6	Hi-Q/ERB	4-10	Hi-Q/ERBC	4-10		GS 30	7112.20000	12- 1
ER 25	Hi-Q/ER	4- 4	Hi-Q/ERC	4- 6	Hi-Q/ERB	4-10	Hi-Q/ERBC	4-10		E 25	7111.25000	12- 1
ER 32	Hi-Q/ER	4- 4	Hi-Q/ERC	4- 6	Hi-Q/ERB	4-10	Hi-Q/ERBC	4-10		E 32	7111.32000	12- 1
ER 40	Hi-Q/ER	4- 4	Hi-Q/ERC	4- 6	Hi-Q/ERB	4-10	Hi-Q/ERBC	4-10		E 40	7111.40000	12- 1



ZWT/ER

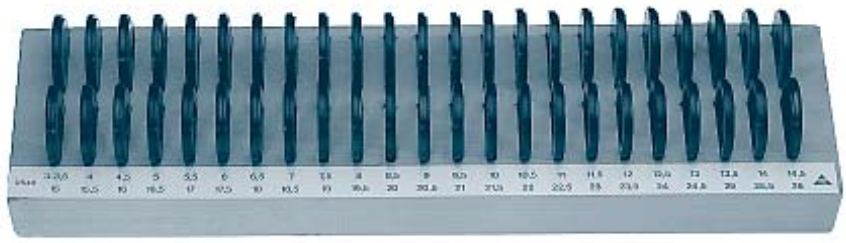
ZWT/ER WOODEN TRAYS FOR COLLET SETS

The **REGO-FIX®** wooden trays are of the finest quality and very solid. The collet bore diameter are marked on the tray. The wooden trays are supplied in fitted cardboard boxes.

WOODEN TRAY ZWT

Type	Part No.	For Number of Collets
ZWT/ 8	7121.08000	9
ZWT/11	7121.11000	13
ZWT/16	7121.16000	10
ZWT/20	7121.20000	12
ZWT/25	7121.25000	15
ZWT/32	7121.32000	18
ZWT/40	7121.40000	23
ZWT/50	7121.50000	12

DSR/ER

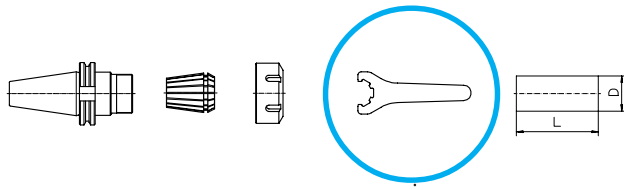


DSR/ER WOODEN TRAYS FOR SEALING DISK SETS

The **REGO-FIX®** wooden trays are of the finest quality and very solid. The disc bore diameter are marked on the tray. The wooden trays are supplied in fitted cardboard boxes.

WOODEN TRAY DSR

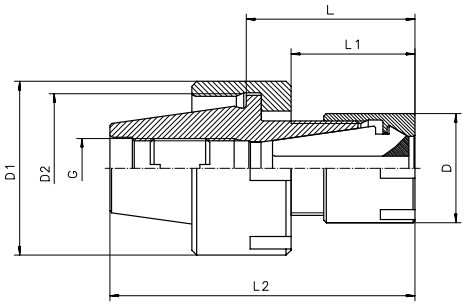
Type	Part No.	For Number of Sealing Disks
DSR/16	7122.16000	14
DSR/20	7122.20000	20
DSR/25	7122.25000	26
DSR/32	7122.32000	34
DSR/40	7122.40000	46



ERM/ERM

ERM/ERM COLLET REDUCTION

Type	Part No.	D [mm]	D1 [mm]	D2 [mm]	G [mm]	L [mm]	L1 [mm]	L2 [mm]	For TORNOS
ER 20 M/ER 16 M	7161.20160	22	28	M24x1	M10x1	30	23	52.5	✓
ER 25 M/ER 16 M	7161.25160	22	35	M30x1	M12x1	34	25	61.5	✓



Supplied with: Collet reduction and two clamping nuts

MATCHING ELEMENTS

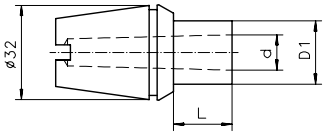
Clamping Nuts		ER 8	ER 11	ER 16	ER 20	ER 25	Page	Standard	With Friction Bearing	Balanced	For Coolant Through Tools	Collet Locking System	Mini-Nut	Nut with External Thread	Counter Nut
	Hi-Q/ERM	–	–	3516.00000	–	–	4-12			▲		●	■		
	Hi-Q/ERMC	–	–	3516.20000	–	–	4-12			▲	●	●	■		
	EM	–	–	7113.16000	–	–	12-1								
	ER MS	–	–	3216.50000	–	–	4-16			▲			■		
	EMS	–	–	7114.16000	–	–	12-1								

Collet		ER 8 Clamping [mm]	ER 8 Range Page	ER 11/ET1-12 Clamping [mm]	ER 11/ET1-12 Range Page	ER 16/ET1-16 Clamping [mm]	ER 16/ET1-16 Range Page	ER 20/ET1-20 Clamping [mm]	ER 20/ET1-20 Range Page	ER 25/ET1-25 Clamping [mm]	ER 25/ET1-25 Range Page
	ER	–	–	–	–	0.5 ... 10.0	2-10	–	–	–	–
	ER-UP	–	–	–	–	0.5 ... 10.0	2-10	–	–	–	–
	ER-GB	–	–	–	–	4.0 ... 9.0	3- 4	–	–	–	–
	ET 1	–	–	–	–	1.4 ... 6.3	3- 8	–	–	–	–

RED/ER-MK
KF/B2

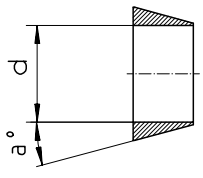
REDUCTIONS ER 32/MK

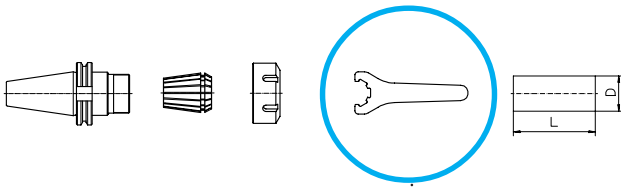
Type	Morse	Part No.	d	L [mm]	D1 [mm]
ER 32/MK 1	Morse 1	7141.32001	MK1	20	21.5
ER 32/MK 2	Morse 2	7141.32002	MK2	33	21.5



CLAMPING SLEEVES

Type	Part No.	To holder	a	d [mm]	Petermann P4/P7	Petermann P7	Petermann P16 Bechler A10	Star FNC 25	Strohm M125 Strohm M225	Tornos M4/T4	Tornos R10/ Tornos M7/MS7	Tornos R16/R20/ Tornos RR20	Tornos M20/25/28 Tornos MR28/32
KF/B2 F 07-15	7231.07000	CYL 7	15°	7		✓							
KF/B2 F 07-16	7231.07100	CYL 7	16°	7						✓			
KF/B2 F 08-16	7231.08100	CYL 8	16°	8							✓		
KF/B2 F 10-20	7231.10200	CYL 10	20°	10			✓						
KF/B2 F 12-16	7231.12100	CYL 12	16°	12								✓	
KF/B2 F 15-16	7231.15100	CYL 15	16°	15					✓				
KF/B2 F 16-15	7231.16000	CYL 16	15°	16	✓								
KF/B2 F 16-16	7231.16100	CYL 16	16°	16									✓
KF/B2 F 18-15	7231.18000	CYL 18	15°	18				✓					





BMT 200

BALANCING MACHINE BMT 200

Compact, Portable Machine
no foundation necessary

Balancing with REGO-FIX® Hi-Q Balancing Rings
and most other balancing methods

User Dialog in Several Languages
input via touch screen

Display of DIN Quality Level
(G-Value)

Unbalance Reduction Ratio
approx. 95%

Variable Balancing Speed

Automatic Positioning with Laserpointer

Rotation Weight
(toolholder) max 8 kg (BMT 200 / 40),
12 kg (BMT 200 / 50)

MATCHING PRODUCTS

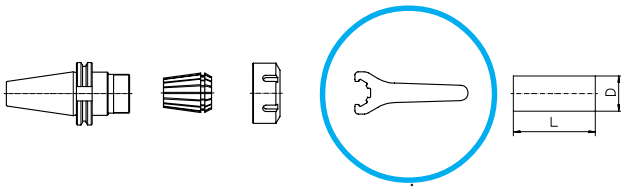
Torque Screwdriver	Part No.	Description
TSD 0,9 Nm	7159.09000	TORX 8 for Balancing Rings

Edition 10/2004

BMT 200/40

BALANCING MACHINE BMT 200/40 AND ACCESSORIES

Type	Part No.	Description
BMT 200 / 40-1	7411.10000	1 Plane Balancing Machine with Spindle Ø50
BMT 200 / 40-2	7411.20000	2 Plane Balancing Machine with Spindle Ø50
Ø 50 / SK 30	7420.30000	SK 30 Adaptor
Ø 50 / SK 40	7420.40000	SK 40 Adaptor
Ø 50 / HSK 32 MP	7421.32000	HSK 32 Adaptor for Manual Pullback
Ø 50 / HSK 40 MP	7421.40000	HSK 40 Adaptor for Manual Pullback
Ø 50 / HSK 50 MP	7421.50000	HSK 50 Adaptor for Manual Pullback
Ø 50 / HSK 63 MP	7421.63000	HSK 63 Adaptor for Manual Pullback
ACM 40 SK / HSK	7429.40000	Module for Auto - Chucking BMT 200 / 40 / Ø 50
Ø 50 / SK 30 AP	7420.30100	SK 30 Chucking Device for Automatic Pullback
Ø 50 / SK 40 AP	7420.40100	SK 40 Chucking Device for Automatic Pullback
Ø 50 / HSK 32 AP	7421.32100	HSK 32 Chucking Device for Automatic Pullback
Ø 50 / HSK 40 AP	7421.40100	HSK 40 Chucking Device for Automatic Pullback
Ø 50 / HSK 50 AP	7421.50100	HSK 50 Chucking Device for Automatic Pullback
Ø 50 / HSK 63 AP	7421.63100	HSK 63 Chucking Device for Automatic Pullback



BMT 200/50

BALANCING MACHINE BMT 200 AND ACCESSORIES

Type	Part No.	Description
BMT 200 / 50-1	7412.10000	1 Plane Balancing Machine with SK 50 Spindle
BMT 200 / 50-2	7412.20000	2 Plane Balancing Machine with SK 50 Spindle
SK 50 / SK 30	7424.30000	SK 30 Reduction
SK 50 / SK 40	7424.40000	SK 40 Reduction
SK 50 / SK 45	7424.45000	SK 45 Reduction
SK 50 / HSK 32 MP	7425.32000	HSK 32 Reduction for Manual Pullback
SK 50 / HSK 40 MP	7425.40000	HSK 40 Reduction for Manual Pullback
SK 50 / HSK 50 MP	7425.50000	HSK 50 Reduction for Manual Pullback
SK 50 / HSK 63 MP	7425.63000	HSK 63 Reduction for Manual Pullback
SK 50 / HSK 80 MP	7425.80000	HSK 80 Reduction for Manual Pullback
ACM 50 SK / HSK	7429.50000	Module for Auto - Chucking BMT 200 / 50 / SK 50
SK 50 / SK 40 AP	7424.30100	SK 30 Chucking Device for Automatic Pullback
SK 50 / SK 40 AP	7424.40100	SK 40 Chucking Device for Automatic Pullback
SK 50 / SK 45 AP	7424.45100	SK 45 Chucking Device for Automatic Pullback
SK 50 / HSK 32 AP	7425.32100	HSK 32 Chucking Device for Automatic Pullback
SK 50 / HSK 40 AP	7425.40100	HSK 40 Chucking Device for Automatic Pullback
SK 50 / HSK 50 AP	7425.50100	HSK 50 Chucking Device for Automatic Pullback
SK 50 / HSK 63 AP	7425.63100	HSK 63 Chucking Device for Automatic Pullback
SK 50 / HSK 80 AP	7425.80100	HSK 80 Chucking Device for Automatic Pullback
Ø 100 / HSK 100	7426.00000	HSK 100 Adaptor for Manual Pullback incl. Spanner

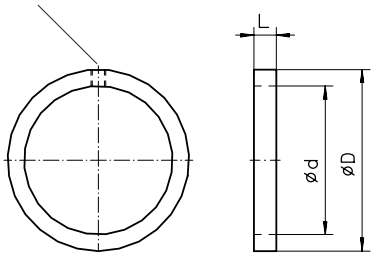
FWR Hi-Q Balancing Rings

Hi-Q BALANCING RINGS

Type	Part No.	d [mm]	D [mm]	L [mm]	Balancing Capacity [gmm]
FWR 225	7490.22500	22.5	30.5	6.0	16.00
FWR 285	7490.28500	28.5	36.5	6.0	22.00
FWR 325	7490.32500	32.5	40.5	6.0	28.00
FWR 405	7490.40500	40.5	48.5	6.0	40.00
FWR 505	7490.50500	50.5	60.5	7.0	85.00

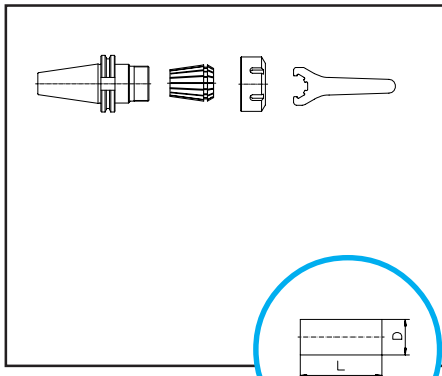
Suggested tightening torque for setscrew = 0.9 Nm
Torque screwdriver (TSD), see page below
Max. rpm for Hi-Q balancing rings = 42'000 min^{-1}

Setscrew



MATCHING PRODUCTS

Torque Screwdriver	Part No.	Description
TSD 0,9 Nm	7159.09000	TORX 8 for Balancing Rings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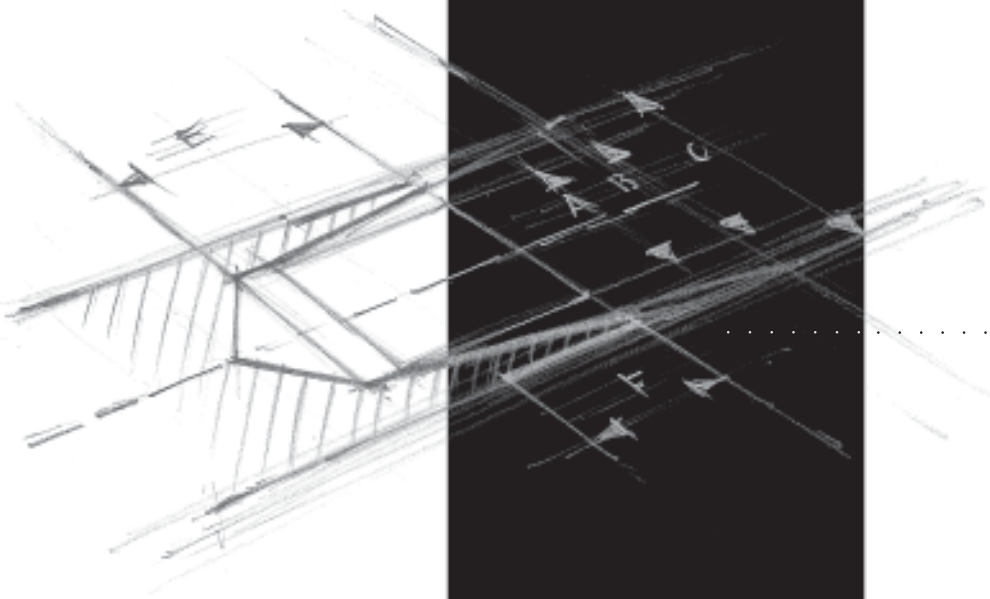
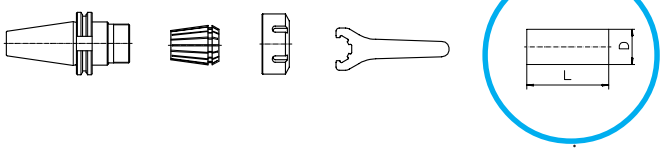

A
B
C

Technical Information

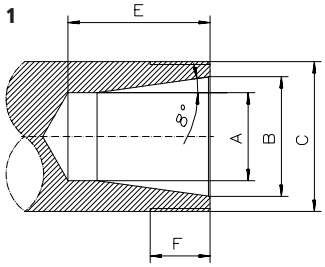
Contents



ER COLLET CAVITY DIMENSIONS

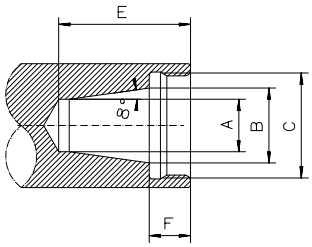
DIMENSIONS FOR COLLET CAVITIES IN MACHINE SPINDLES AND MATCHING CLAMPING NUTS

1



Size	Clamping Range	Hi-Q/ER	Hi-Q/ERC	Hi-Q/ERB	Hi-Q/ERBC	Hi-Q/ERM	Hi-Q/ERMC	ER MS	ER AX	ER AXC	A [mm]	B [mm]	C [mm]	E [mm]	F [mm]	Drawing
ER 11	0.5 ... 7.0	✓	✓								7.5	11	M14x0.75	17.0	10.0	1
ER 16	0.5 ... 10.0	✓	✓	✓	✓						10.5	16	M22x1.50	22.0	13.0	1
ER 20	0.5 ... 13.0	✓	✓	✓	✓						13.5	20	M25x1.50	26.5	13.5	1
ER 25	0.5 ... 16.0	✓	✓	✓	✓						18.0	25	M32x1.50	29.0	14.0	1
ER 32	1.0 ... 20.0	✓	✓	✓	✓						23.5	32	M40x1.50	34.0	16.0	1
ER 40	2.0 ... 30.0	✓	✓	✓	✓						30.5	40	M50x1.50	38.0	17.0	1
ER 50	4.0 ... 34.0	✓	✓	✓	✓						38.0	50	M64x2.00	48.0	24.0	1
ER 8	0.5 ... 5.0					✓		✓			5.2	8	M10x0.75	13.0	8.0	1
ER 11	0.5 ... 7.0					✓	✓	✓			7.5	11	M13x0.75	17.0	8.5	1
ER 16	0.5 ... 10.0					✓	✓	✓			10.5	16	M19x1.00	22.0	13.0	1
ER 20	0.5 ... 13.0					✓	✓	✓			13.5	20	M24x1.00	26.5	13.5	1
ER 25	0.5 ... 16.0					✓	✓	✓			18.0	25	M30x1.00	29.0	14.0	1
ER 11	0.5 ... 7.0								✓		7.5	11	M18x1.00	23.0	7.0	2
ER 16	0.5 ... 10.0								✓	✓	10.5	16	M24x1.00	32.0	10.0	2
ER 20	0.5 ... 13.0								✓	✓	13.5	20	M28x1.50	37.5	11.0	2
ER 25	0.5 ... 16.0								✓	✓	18.0	25	M32x1.50	41.0	12.0	2
ER 32	1.0 ... 20.0								✓	✓	23.5	32	M40x1.50	48.0	14.0	2
ER 40	2.0 ... 30.0								✓	✓	30.5	40	M50x1.50	54	16	2

2

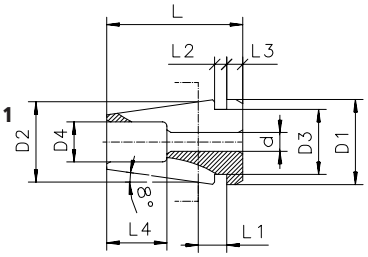


Edition 10/2004

ER-COLLETS

COLLETS TYPE ER PER DIN STD 6499-B

Size	d [mm]	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	Drawing
ER 8	0.5 ... 2.5	8.5	8.0	6.5	4.0	13.6	2.98	1.2	1.5	6.0	1
ER 8	3.0 ... 5.0	8.5	8.0	6.5	–	13.6	2.98	1.2	1.5	–	2
ER 11	0.5 ... 2.5	11.5	11.0	9.5	5.0	18.0	3.80	2.0	2.5	9.0	3
ER 11	3.0 ... 7.0	11.5	11.0	9.5	–	18.0	3.80	2.0	2.5	–	4
ER 16	0.5 ... 4.5	17.0	16.0	13.8	7.5	27.5	6.26	2.7	4.0	10.0	3
ER 16	5.0 ... 10.0	17.0	16.0	13.8	–	27.5	6.26	2.7	4.0	–	4
ER 20	0.5 ... 6.5	21.0	20.0	17.4	9.0	31.5	6.36	2.8	4.8	13.0	3
ER 20	7.0 ... 13.0	21.0	20.0	17.4	–	31.5	6.36	2.8	4.8	–	4
ER 25	0.5 ... 7.5	26.0	25.0	22.0	12.0	34.0	6.66	3.1	5.0	15.0	3
ER 25	8.0 ... 16.0	26.0	25.0	22.0	–	34.0	6.66	3.1	5.0	–	4
ER 32	1.0 ... 3.5	33.0	32.0	29.2	15.0	40.0	7.16	3.6	5.5	20.0	3
ER 32	4.0 ... 7.5	33.0	32.0	29.2	15.0	40.0	7.16	3.6	5.5	15.0	3
ER 32	8.0 ... 20.0	33.0	32.0	29.2	–	40.0	7.16	3.6	5.5	–	4
ER 40	2.0 ... 3.5	41.0	40	36.2	20.0	46.0	7.66	4.1	7.0	21.0	3
ER 40	4.0 ... 8.5	41.0	40	36.2	20.0	46.0	7.66	4.1	7.0	18.0	3
ER 40	9.0 ... 30.0	41.0	40	36.2	–	46.0	7.66	4.1	7.0	–	4
ER 50	4.0 ... 10.0	52.0	50	46.0	20.0	60.0	12.60	5.5	8.5	32.0	3
ER 50	12.0 ... 34.0	52.0	50	46.0	–	60.0	12.60	5.5	8.5	–	4

1


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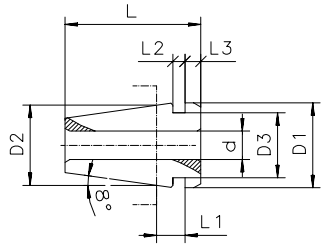

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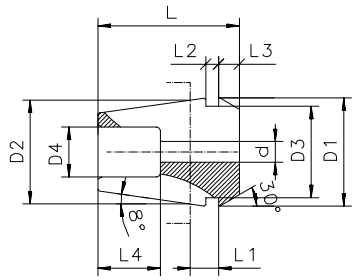

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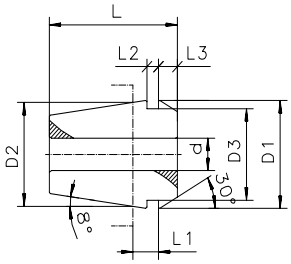
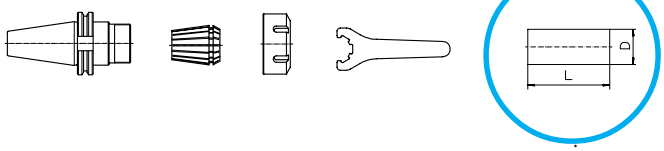


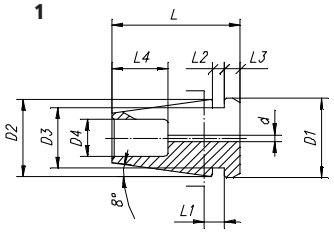
All ER collets per DIN STD 6499-B have a clamping range!



ER-MB

ER-MB MICROBORE COLLETS

1



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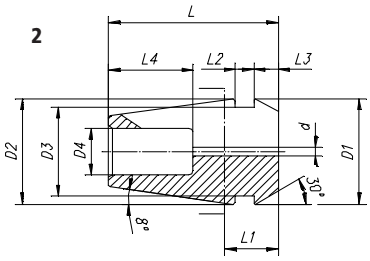
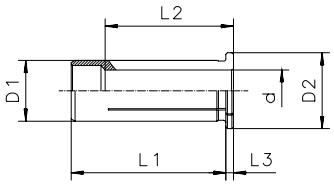


Size	d [mm]	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	Drawing
ER 8-MB	0.2 ... 0.9	8.5	8.0	6.5	4.0	13.5	1.2	1.2	1.5	6.0	1
ER 11-MB	0.2 ... 0.9	11.5	11.0	9.5	5.0	18.0	2.0	2.0	2.5	9.0	2

The collets type ER-MB per DIN 6499 are only available in the above mentioned types. They have no multiple clamping capacity. Only the nominal diameter h7 can be clamped!

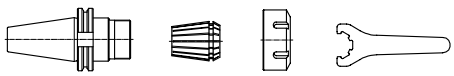


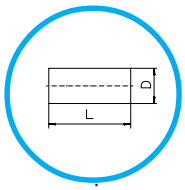
HS REDUCTION SLEEVES

Type	d [mm]	d ["]	D1 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
HS 12							
HS 12 / Ø 3.00	3.000		12	16	40	29	4.0
HS 12 / Ø 1/8"	3.175	1/8"	12	16	40	29	4.0
HS 12 / Ø 4.00	4.000		12	16	40	29	4.0
HS 12 / Ø 3/16"	4.763	3/16"	12	16	40	29	4.0
HS 12 / Ø 5.00	5.000		12	16	40	29	4.0
HS 12 / Ø 6.00	6.000		12	16	40	36	4.0
HS 12 / Ø 1/4"	6.350	1/4"	12	16	40	36	4.0
HS 12 / Ø 7.00	7.000		12	16	40	37	4.0
HS 12 / Ø 5/16"	7.938	5/16"	12	16	40	37	4.0
HS 12 / Ø 8.00	8.000		12	16	40	37	4.0
HS 12 / Ø 9.00	9.000		12	16	40	37	4.0
HS 12 / Ø 3/8"	9.525	3/8"	12	16	40	40	4.0
HS 12 / Ø 10.00	10.000		12	16	40	40	4.0
HS 20							
HS 20 / Ø 3.00	3.000		20	25	50	28	4.0
HS 20 / Ø 1/8"	3.175	1/8"	20	25	50	28	4.0
HS 20 / Ø 4.00	4.000		20	25	50	28	4.0
HS 20 / Ø 3/16"	4.763	3/16"	20	25	50	28	4.0
HS 20 / Ø 5.00	5.000		20	25	50	28	4.0
HS 20 / Ø 6.00	6.000		20	25	50	36	4.0
HS 20 / Ø 1/4"	6.350	1/4"	20	25	50	36	4.0
HS 20 / Ø 7.00	7.000		20	25	50	38	4.0
HS 20 / Ø 5/16"	7.938	5/16"	20	25	50	37	4.0
HS 20 / Ø 8.00	8.000		20	25	50	37	4.0
HS 20 / Ø 9.00	9.000		20	25	50	38	4.0
HS 20 / Ø 3/8"	9.525	3/8"	20	25	50	38	4.0
HS 20 / Ø 10.00	10.000		20	25	50	40	4.0
HS 20 / Ø 11.00	11.000		20	25	50	40	4.0
HS 20 / Ø 12.00	12.000		20	25	50	45	4.0
HS 20 / Ø 1/2"	12.700	1/2"	20	25	50	45	4.0
HS 20 / Ø 13.00	13.000		20	25	50	45	4.0
HS 20 / Ø 14.00	14.000		20	25	50	45	4.0
HS 20 / Ø 15.00	15.000		20	25	50	45	4.0
HS 20 / Ø 5/8"	15.875	5/8"	20	25	50	48	4.0
HS 20 / Ø 16.00	16.000		20	25	50	48	4.0

Type	d [mm]	d ["]	D1 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
HS 25							
HS 25 / Ø 3.00	3.000		25	30	56	29	4.0
HS 25 / Ø 1/8"	3.175	1/8"	25	30	56	29	4.0
HS 25 / Ø 4.00	4.000		25	30	56	29	4.0
HS 25 / Ø 3/16"	4.763	3/16"	25	30	56	29	4.0
HS 25 / Ø 5.00	5.000		25	30	56	29	4.0
HS 25 / Ø 6.00	6.000		25	30	56	37	4.0
HS 25 / Ø 1/4"	6.350	1/4"	25	30	56	37	4.0
HS 25 / Ø 7.00	7.000		25	30	56	37	4.0
HS 25 / Ø 5/16"	7.938	5/16"	25	30	56	37	4.0
HS 25 / Ø 8.00	8.000		25	30	56	37	4.0
HS 25 / Ø 9.00	9.000		25	30	56	38	4.0
HS 25 / Ø 3/8"	9.525	3/8"	25	30	56	38	4.0
HS 25 / Ø 10.00	10.000		25	30	56	40	4.0
HS 25 / Ø 12.00	12.000		25	30	56	46	4.0
HS 25 / Ø 1/2"	12.700	1/2"	25	30	56	46	4.0
HS 25 / Ø 14.00	14.000		25	30	56	47	4.0
HS 25 / Ø 5/8"	15.875	5/8"	25	30	56	48	4.0
HS 25 / Ø 16.00	16.000		25	30	56	48	4.0
HS 25 / Ø 18.00	18.000		25	30	56	48	4.0
HS 25 / Ø 3/4"	19.050	3/4"	25	30	56	48	4.0
HS 25 / Ø 20.00	20.000		25	30	56	50	4.0
HS 32							
HS 32 / Ø 6.00	6.000		32	36	60	36	4.0
HS 32 / Ø 1/4"	6.350	1/4"	32	36	60	36	4.0
HS 32 / Ø 7.00	7.000		32	36	60	37	4.0
HS 32 / Ø 5/16"	7.938	5/16"	32	36	60	36	4.0
HS 32 / Ø 8.00	8.000		32	36	60	36	4.0
HS 32 / Ø 9.00	9.000		32	36	60	37	4.0
HS 32 / Ø 3/8"	9.525	3/8"	32	36	60	37	4.0
HS 32 / Ø 10.00	10.000		32	36	60	40	4.0
HS 32 / Ø 11.00	11.000		32	36	60	40	4.0
HS 32 / Ø 12.00	12.000		32	36	60	45	4.0
HS 32 / Ø 1/2"	12.700	1/2"	32	36	60	45	4.0
HS 32 / Ø 13.00	13.00		32	36	60	45	4.0
HS 32 / Ø 14.00	14.000		32	36	60	46	4.0
HS 32 / Ø 15.00	15.000		32	36	60	46	4.0
HS 32 / Ø 5/8"	15.875	5/8"	32	36	60	46	4.0
HS 32 / Ø 16.00	16.000		32	36	60	48	4.0
HS 32 / Ø 17.00	17.000		32	36	60	48	4.0
HS 32 / Ø 18.00	18.000		32	36	60	49	4.0
HS 32 / Ø 19.00	19.000		32	36	60	49	4.0
HS 32 / Ø 3/4"	19.050	3/4"	32	36	60	50	4.0
HS 32 / Ø 20.00	20.000		32	36	60	50	4.0
HS 32 / Ø 22.00	22.000		32	36	60	50	4.0
HS 32 / Ø 25.00	25.000		32	36	60	56	4.0
HS 32 / Ø 1"	25.400	1"	32	36	60	56	4.0

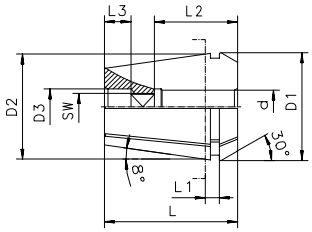
The above mentioned dimensions reflect the newest DIN 69882-7 recommendation. There may be differencies in the actual dimensions of HS reductions sleeves of previous production runs. Differences are in the length L1 of HS12 of 44 mm instead of the 40 mm and L1 of HS20 of 51 mm instead of 50 mm as mentioned in above tables. Other possible differences are the head thickness L3 of HS12 of 2.0 mm, HS20 of 2.5 mm and HS32 of 3.0 mm instead of the 4.0 mm.





ER-GB

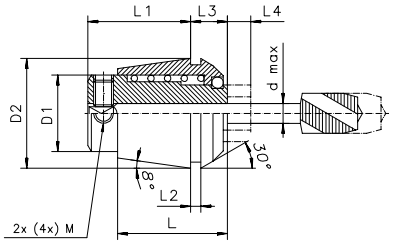
ER-GB TAPPING COLLETS PER DIN STD 6499



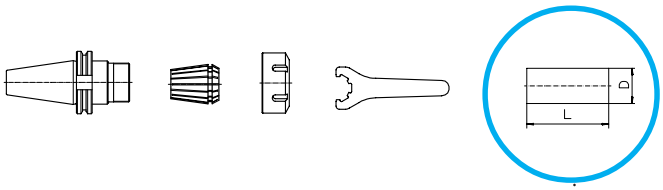
d [mm]	SW [mm]	L2 [mm]	D3 [mm]	ER 11-GB L =18.0 L1= 2.0 D1=11.3 D2=11.0 L3 [mm]	ER 16-GB L =27.5 L1= 2.7 D1=16.8 D2=16.0 L3 [mm]	ER 20-GB L =31.5 L1= 2.8 D1=20.8 D2=20.0 L3 [mm]	ER 25-GB L =34.0 L1= 3.1 D1=25.8 D2=25.0 L3 [mm]	ER 32-GB L =40.0 L1= 3.6 D1=32.8 D2=32.0 L3 [mm]	ER 40-GB L =46.0 L1= 4.1 D1=40.8 D2=40.0 L3 [mm]
2.8	2.1	12	–	–	–	–	–	–	–
3.5	2.7	14	–	–	–	–	–	–	–
4.0	3.0	14	–	–	–	–	–	–	–
4.0	3.15/3.2	18	4.5	–	5.5	9.5	12	18	–
4.5	3.4	ER 11=14 ER 16-32=18	ER 11= – ER 16-32=5.0	–	5.5	9.5	12	18	–
5.0	4.0	18	5.5	–	5.5	9.5	12	18	–
5.5	4.3	18	6.0	–	5.5	9.5	12	18	–
5.5	4.5	18	6.0	–	5.5	9.5	12	18	–
6.0	4.5	18	6.5	–	4.5	8.5	11	18	23
6.0	4.9	ER 11=14 ER 16-40=18	ER 11= – ER 16-40=6.5	–	4.5	8.5	11	17	23
6.2	5.0	18	6.7	–	4.5	8.5	11	17	23
6.3	5.0	18	6.8	–	4.5	8.5	11	17	23
7.0	5.5	18	7.5	–	3.5	7.5	10	16	22
7.1	5.6	18	7.6	–	3.5	7.5	10	16	22
8.0	6.2/6.3	22	8.6	–	–	2.5	5	11	17
8.5	6.5	22	9.0	–	–	2.5	5	11	17
9.0	7.0/7.1	22	9.6	–	–	2.5	4	10	16
10.0	8.0	25	10.5	–	–	–	–	7	13
10.5	8.0	25	11.0	–	–	–	–	7	13
11.0	9.0	25	11.5	–	–	–	–	6	12
11.2	9.0	25	11.7	–	–	–	–	6	12
12.0	9.0	25	12.5	–	–	–	–	6	12
12.5	10.0	25	13.0	–	–	–	–	5	11
14.0	11.0/11.2	25	14.7	–	–	–	–	4	10
15.0	12.0	25	15.5	–	–	–	–	4	10
16.0	12.0	25	16.5	–	–	–	–	3	9
17.0	13.0	25	17.5	–	–	–	–	3	9
18.0	14.5	25	18.5	–	–	–	–	3	8
20.0	16.0	28	20.5	–	–	–	–	3	4
22.0	18.0	28	22.5	–	–	–	–	–	4

ET1

PCM ET1 TAPPING COLLETS PER DIN STD 6499

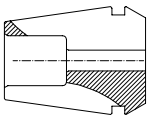
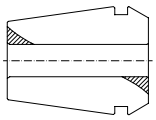


Type	Range	d [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	M [mm]
ET1-12	M 0.5 ... M 4	3.55	7	11.5	18	16.5	2.5	5	5.5	2 x M 2.5
ET1-16	M 0.7 ... M 6	6.30	11	17.0	22	20.0	2.8	7	7.0	2 x M 4 4 x M 4
ET1-20	M 1 ... M 8 (M 10)	7.10	14	21.0	24	23.0	2.8	8	7	2 x M 4 4 x M 4 4 x M 5
ET1-25	M 1 ... M 10 (M12)	10.00	19	26.0	26	24.0	3.0	10	8.0	2 x M 5 4 x M 5 4 x M 6
ET1-32	M 4 ... M 12 (M 16)	12.50	23	33.0	33	32.0	3.0	11	10.0	2 x M 5 4 x M 5 4 x M 6 4 x M 8
ET1-40	M 6 ... M 16 (M 20)	17.00	28	41.0	42	42.0	3.0	12	13.0	4 x M 6 4 x M 6



COLLET CLASSIFICATION

CLASSIFICATION OF COLLETS

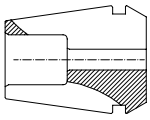
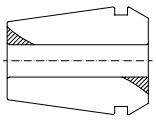
Collet Types	Collets with Counter Bore [mm]	Collets without Counter Bore [mm]
		
ER 8	Ø 1.0 ... 2.5	Ø 3.0 ... 5.0
ER 11	Ø 1.0 ... 2.5	Ø 3.0 ... 7.0
ER 16	Ø 1.0 ... 4.5	Ø 5.0 ... 10.0
ER 20	Ø 1.0 ... 6.5	Ø 7.0 ... 13.0
ER 25	Ø 1.0 ... 7.5	Ø 8.0 ... 16.0
ER 32	Ø 2.0 ... 7.5	Ø 8.0 ... 20.0
ER 40	Ø 3.0 ... 8.5	Ø 9.0 ... 26.0
ER 50	Ø 4.0 ... 10.0	Ø 12.0 ... 34.0
ER-GB 11-40	all Ø	–
ER-MB 8-11	all Ø	–

Please note that the smaller the bore (i.d.) the lower the tightening torque necessary to hold the tool securely!

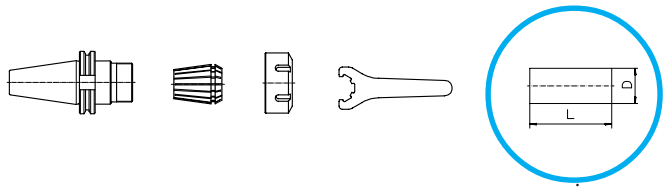
The collets are divided into two categories, long bore and short bore. Please select the appropriate symbol based on collet type (e.g. ER16) and clamping diameter from the table above. Then read the appropriate tightening torque from the table on page 13- 8 under this symbol and the respective clamping nut type.

CLAMPING NUTS
TIGHTENING TORQUE

MAXIMUM TIGHTENING TORQUE

	Collets with Counter Bore	Collets Without Counter Bore
Clamping Nut Types		
Hi-Q/ER und Hi-Q/ERC 11	18 Nm	30 Nm
Hi-Q/ER und Hi-Q/ERC 16	50 Nm	70 Nm
Hi-Q/ER und Hi-Q/ERC 20	40 Nm	100 Nm
Hi-Q/ER und Hi-Q/ERC 25	130 Nm	130 Nm
Hi-Q/ER und Hi-Q/ERC 32	170 Nm	170 Nm
Hi-Q/ER und Hi-Q/ERC 40	220 Nm	220 Nm
Hi-Q/ER 50	300 Nm	300 Nm
Hi-Q/ERB und Hi-Q/ERBC 16	50 Nm	70 Nm
Hi-Q/ERB und Hi-Q/ERBC 20	30 Nm	100 Nm
Hi-Q/ERB und Hi-Q/ERBC 25	90 Nm	130 Nm
Hi-Q/ERB und Hi-Q/ERBC 32	130 Nm	170 Nm
Hi-Q/ERB und Hi-Q/ERBC 40	220 Nm	220 Nm
Hi-Q/ERB 50	300 Nm	300 Nm
Hi-Q/ERM 8	6 Nm	6 Nm
Hi-Q/ERM und Hi-Q/ERMC 11	15 Nm	20 Nm
Hi-Q/ERM und Hi-Q/ERMC 16	30 Nm	30 Nm
Hi-Q/ERM und Hi-Q/ERMC 20	35 Nm	35 Nm
Hi-Q/ERM und Hi-Q/ERMC 25	40 Nm	40 Nm

The tightening torques in this table have been derived from test data collected in our labs on REGO-FIX® ER tooling systems. Caution: Higher tightening torques may permanently deform the collet cavity of the toolholder. We recommend to use a tightening torque of 80% of the maximum tightening torque given in this table.



DIMENSIONS OF TAPS

SHANK DIAMETER OF TAPS

Thread [mm]	Thread [inch]	ISO 529 [Ø]	ISO 529 [□]	ISO 2283 [Ø]	ISO 2283 [□]	DIN 371 [Ø]	DIN 371 [□]	DIN 357 DIN 376 [Ø]	DIN 357 DIN 376 [□]	DIN 352 [Ø]	DIN 352 [□]	JIS B 4430 1998 [Ø]	JIS B 4430 1998 [□]	ASME B 94.9 1999 [Ø]	ASME B 94.9 1999 [□]
M 1.0		2.50	2.00	–	–	2.50	2.10	–	–	2.50	2.10	3.00	2.50	–	–
M 1.1		2.50	2.00	–	–	2.50	2.10	–	–	2.50	2.10	3.00	2.50	–	–
M 1.2		2.50	2.00	–	–	2.50	2.10	–	–	2.50	2.10	3.00	2.50	–	–
M 1.4		2.50	2.00	–	–	2.50	2.10	–	–	2.50	2.10	3.00	2.50	–	–
M 1.6	1/16	2.50	2.00	–	–	2.50	2.10	–	–	2.50	2.10	3.00	2.50	0.141	0.110
M 1.7		–	–	–	–	2.50	2.10	–	–	2.50	2.10	3.00	2.50	–	–
M 1.8		2.50	2.00	–	–	2.50	2.10	–	–	2.50	2.10	3.00	2.50	0.141	0.110
M 2.0		2.50	2.00	–	–	2.80	2.10	–	–	2.80	2.10	3.00	2.50	0.141	0.110
M 2.2		2.80	2.24	–	–	2.80	2.10	–	–	2.80	2.10	3.00	2.50	0.141	0.110
M 2.3		–	–	–	–	2.80	2.10	–	–	2.80	2.10	3.00	2.50	–	–
M 2.5	3/32	2.80	2.24	–	–	2.80	2.10	–	–	2.80	2.10	3.00	2.50	0.141	0.110
M 2.6		–	–	–	–	2.80	2.10	–	–	2.80	2.10	3.00	2.50	–	–
M 3.0	1/8	3.15	2.50	2.24	1.80	3.50	2.70	2.20	–	3.50	2.70	4.00	3.20	0.141	0.110
M 3.5		3.55	2.80	2.50	2.00	4.00	3.00	2.50	2.10	4.00	3.00	4.00	3.20	0.141	0.110
M 4.0	5/32	4.00	3.15	3.15	2.50	4.50	3.40	2.80	2.10	4.50	3.40	5.00	4.00	0.168	0.131
M 4.5	3/16	4.50	3.55	3.55	2.80	6.00	4.90	3.50	2.70	6.00	4.90	5.00	4.00	0.194	0.152
M 5.0		5.00	4.00	4.00	3.15	6.00	4.90	3.50	2.70	6.00	4.90	5.50	4.50	0.194	0.152
M 6.0	1/4	6.30	5.00	4.50	3.55	6.00	4.90	4.50	3.40	6.00	4.90	6.00	4.50	0.255	0.191
M 7.0	5/16	7.10	5.60	5.60	4.50	7.00	5.50	5.50	4.30	6.00	4.90	6.20	5.00	0.318	0.238
M 8.0		8.00	6.30	6.30	5.00	8.00	6.20	6.00	4.90	6.00	4.90	6.20	5.00	0.318	0.238
M 9.0		9.00	7.10	7.10	5.60	9.00	7.00	7.00	5.50	7.00	5.50	7.00	5.50	–	–
M 10.0	3/8	10.00	8.00	8.00	6.30	10.00	8.00	7.00	5.50	7.00	5.50	7.00	5.50	0.381	0.286
M 11.0		8.00	6.30	8.00	6.30	–	–	8.00	6.20	8.00	6.20	8.00	6.00	–	–
M 12.0	1/2	9.00	7.10	9.00	7.10	–	–	9.00	7.00	9.00	7.00	8.50	6.50	0.367	0.275
M 14.0	9/16	11.20	9.00	11.20	9.00	–	–	11.00	9.00	11.00	9.00	10.50	8.00	0.429	0.322
M 16.0	5/8	12.50	10.00	12.50	10.00	–	–	12.00	9.00	12.00	9.00	12.50	10.00	0.480	0.360
M 18.0	11/16	14.00	11.20	14.00	11.20	–	–	14.00	11.00	14.00	11.00	14.00	11.00	0.542	0.406
M 20.0	13/16	14.00	11.20	14.00	11.20	–	–	16.00	12.00	16.00	12.00	15.00	12.00	0.652	0.489
M 22.0	7/8	16.00	12.50	16.00	12.50	–	–	18.00	14.50	18.00	14.50	17.00	13.00	0.697	0.523
M 24.0	15/16	18.00	14.00	18.00	14.00	–	–	18.00	14.50	18.00	14.50	19.00	15.00	0.760	0.570
M 27.0	11/16	20.00	16.00	–	–	–	–	20.00	16.00	20.00	16.00	20.00	15.00	0.896	0.672
M 30.0	13/16	20.00	16.00	–	–	–	–	22.00	18.00	22.00	18.00	23.00	17.00	1.021	0.766

Edition 10/2004