



TC (V-Notch) Steep Taper Toolholders

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DIN 69871

ER *SYSTEM*

- 6.01 Features and Benefits
- 6.02 Information
- 6.05 TC/ER and TC/Zero-Z®

powRgrip *SYSTEM*

- 6.03 Features and Benefits
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- 6.06 TC/PG





Swiss Precision Tools

Features | Benefits

Swiss Quality

Made in Switzerland to ISO 9001/ISO 14001.

1

Marking

Type and part number (reduces selection error).

2

Traceability

Lot numbers are marked on all products for traceability throughout the entire manufacturing process.

3

Original REGO-FIX®

Our extensive experience results in a well-engineered system. Original only with the REGO-FIX® quality symbol Δ . Guarantees the best quality.

T.I.R. < 0.0001" (3 μ m)

I.D. to O.D.

Taper Accuracy AT3

Better spindle-to-holder fit and accuracy.

Surface Finish max. Ra 0.25

Higher clamping force and higher transferable torque.

Q+® Balancing

100% balanced to G 2.5 @ 22'000 min⁻¹.

Hi-Q® Balancing System

Ready to accept Hi-Q® balancing rings which will allow for the offset of the imbalance introduced by the cutting tool up to 80'000 min⁻¹.

Hi-Q® Clamping Nut Included

Guarantees highest clamping force and best balancing by design.

Vibration Dampening

For best machining results.

ID Chip Hole

Per DIN 69873 with 10 mm diameter.



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TC/ER Toolholder

Applications

These toolholders are designed for use on CNC machining centers with an automatic tool changer. They are universally suitable for drilling, machining, reaming, tapping and grinding. The vibration dampening of these systems reduce spindle wear and extend tool life.

Balancing

REGO-FIX® Q+® System TC/ER toolholders are balanced by design to G 2.5 @ 22'000 min⁻¹. Type H toolholders are ready to accept Hi-Q® balancing rings which allow precision balancing of the system up to 80'000 min⁻¹ depending on the balancing rings used.

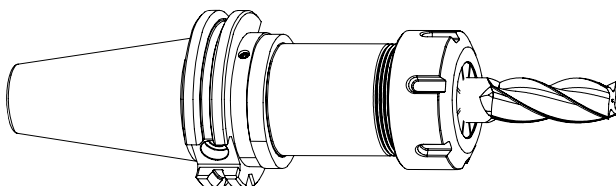
Special Applications

When additional clamping force is needed, e.g. when tapping with ER-GB or milling we recommend to use our friction bearing clamping nuts, Hi-Q®/ERB and Hi-Q®/ERBC.

Matched Tooling System for Best Fit

For highest precision and best results the whole system counts. For that reason REGO-FIX® components are carefully matched for optimum fit and accuracy. This guarantees the best run-out and balance.

For the influence of run-out on tool life see the graph page 2.03



TC/Zero-Z Toolholder

Applications

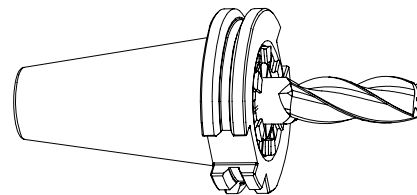
These toolholders are specially designed for mill-turning machines, multitasking machines and small vertical machining centers. They have the well known REGO-FIX® surface finish, precision and due to their short projection and superior rigidity, Zero-Z® toolholders have the shortest possible projection to increase the Z-axis travel of the machine and to allow larger work-pieces to be machined.

Balancing

REGO-FIX® Q+® System TC/Zero-Z toolholders are balanced by design to G 2.5 @ 22'000 min⁻¹.

Special Features

The use of the Hi-Q/ERAX clamping nut offers the highest transferable torque. This clamping nut has been specially designed for applications where space is at a premium. Slippage of the wrench is prevented by a patented locking design.



We recommend tightening the clamping nuts with a torque wrench. The maximum torque should not be more than 25% above the recommended tightening torque.

Recommended tightening torque see page 14.03/14.04



Swiss
Precision
Tools

PG

TC Toolholders

Features | Benefits

PGU or PGC required for toolholder assembly.
See page 13.07 for machine details.



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- 1
- 2
- 3

Swiss Quality

Made in Switzerland to ISO 9001/ISO 14001.

1 Marking

Type and part number (reduces selection errors).

2 Traceability

Lot numbers are marked on all products for traceability throughout the entire manufacturing process.

3 Original REGO-FIX®

Original only with the REGO-FIX® quality symbol Δ .
Guarantees the best quality.

T.I.R. of the Whole System <0.0001" (3 μ m)

Highest clamping force and lowest runout.

Taper Accuracy AT3

Better spindle-to-holder fit and accuracy.

Surface Finish max. Ra 0.25

Higher clamping force and higher transferable torque.

Q+® Balancing

100% balanced to G 2.5 @ 22'000 min⁻¹. Ideal for High Speed Cutting (HSC) and High Performance Cutting (HPC).

Hi-Q® Balancing System

Ready to accept Hi-Q® balancing rings which will allow for the offset of the imbalance introduced by the cutting tool up to 80'000 min⁻¹.

Minimal Outside Dimensions

Slim design provides more processing flexibility.

Fast

Tool clamping with hydraulic press in less than 10 seconds.

Excellent at Small Diameters

Clamping of small diameter tools from \varnothing 0.2 mm and higher.

Presetable Tooling System

Repeatability < 0.0004" (10 μ m)

TC/PG Toolholder

Applications

These toolholders are designed for use on CNC machining centers with automatic tool changers. They are especially suited for High Speed Cutting (HSC) and High Performance Cutting (HPC) operations where processing reaches the machine limits. The vibration dampening of these systems reduce spindle wear and extend tool life.

Balancing

REGO-FIX® Q+® System TC/PG toolholders are balanced by design to G 2.5 @ 22'000 min⁻¹. Type H toolholders are ready to accept Hi-Q® balancing rings which allow precision balancing of the system up to 80'000 min⁻¹ depending on the balancing rings used.

Coolant Through

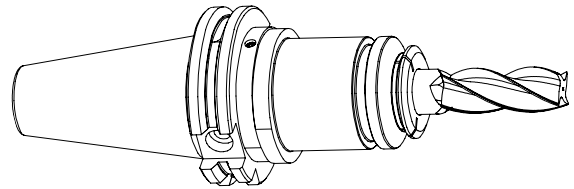
For use with coolant through tools.

Peripheral Cooling

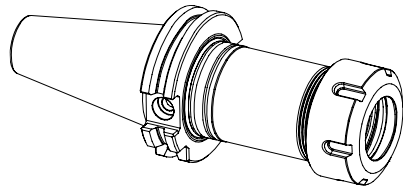
PG-CF collets for peripheral cooling with non-coolant through tools.

Matched Tooling System for Best Fit

For highest precision and best results the whole system counts. For that reason REGO-FIX® components are carefully matched to fit together. This guarantees best run-out and balancing.



5 Year
WARRANTY
20,000
CYCLES



ER Toolholders

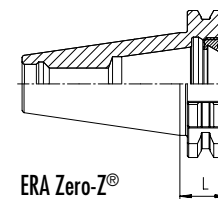
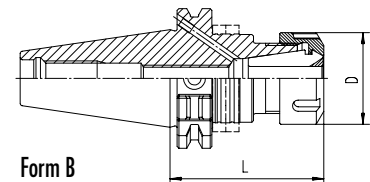
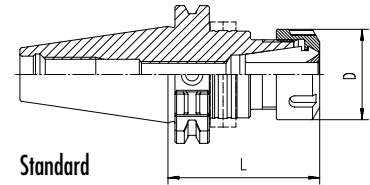
TC/ER
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DIN 69871

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Type	Standard Part No.	Form B Part No.	D [mm]	L [mm]	Balancing Rings	Wrenches
TC 30 / E R 16 x 070 H	4230.11630	4230.11633	28	70	FWR 285	7112.16010
TC 30 / ER 16 x 100 H	4230.11650	4230.11653	28	100	FWR 285	7112.16010
TC 30 / ER 25 x 060 H	4230.12520	4230.12523	42	60	FWR 325	7111.25000
TC 30 / ER 32 x 065*	2230.13220	2230.13223	50	65	–	7111.32000
TC 40 / ER 11 x 100 H	4240.11150	4240.11153	19	100	FWR 325	7112.11010
TC 40 / ER 16 x 070 H	4240.11630	4240.11633	28	70	FWR 405	7112.16010
TC 40 / ER 16 x 100 H	4240.11650	4240.11653	28	100	FWR 405	7112.16010
TC 40 / ER 16 x 160 H	4240.11680	4240.11683	28	160	FWR 405/225	7112.16010
TC 40 / ER 25 x 070 H	4240.12530	4240.12533	42	70	FWR 405	7111.25000
TC 40 / ER 25 x 100 H	4240.12550	4240.12553	42	100	FWR 405	7111.25000
TC 40 / ER 25 x 160 H	4240.12580	4240.12583	42	160	FWR 405/325	7111.25000
TC 40 / ERA 32 x 019*	2240.13207	–	–	19	–	7117.32000
TC 40 / ER 32 x 070 H	4240.13230	4240.13233	50	70	FWR 405	7111.32000
TC 40 / ER 32 x 100 H	4240.13250	4240.13253	50	100	FWR 405	7111.32000
TC 40 / ER 32 x 160 H	4240.13280	4240.13283	50	160	FWR 405/405	7111.32000
TC 40 / ER 40 x 080*	2240.14040	2240.14043	63	80	–	7111.40000
TC 40 / ER 40 x 100 H	4240.14050	4240.14053	63	100	FWR 505	7111.40000
TC 40 / ER 40 x 160 H	4240.14080	4240.14083	63	160	FWR 505/505	7111.40000
TC 50 / ER 16 x 100 H	4250.11650	4250.11653	28	100	FWR 505	7112.16010
TC 50 / ER 16 x 160 H	4250.11680	4250.11683	28	160	FWR 505/225	7112.16010
TC 50 / ER 32 x 100 H	4250.13250	4250.13253	50	100	FWR 505	7111.32000
TC 50 / ER 32 x 160 H	4250.13280	4250.13283	50	160	FWR 505/405	7111.32000
TC 50 / ER 40 x 100 H	4250.14050	4250.14053	63	100	FWR 505	7111.40000
TC 50 / ER 40 x 160 H	4250.14080	4250.14083	63	160	FWR 505/505	7111.40000
TC 50 / ER 50 x 100*	2250.15050	–	78	100	–	7111.50000

Supplied with: clamping nut

*Not for use with balancing rings.

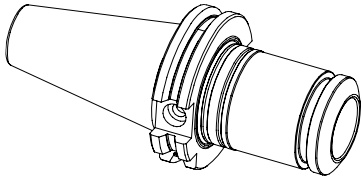


Related Items

Collets (Std & UP)	See Section 2.00
Collets (Tapping)	See Section 3.00
Nuts	See Section 4.00
Torque Wrench	See Section 13.00

For drawings with detailed dimensions see:

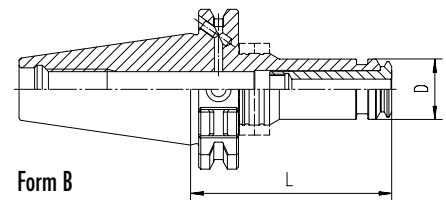
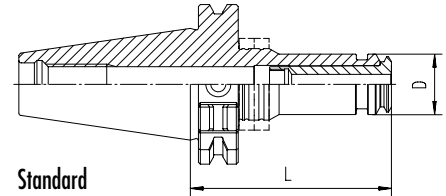
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powRgrip® Toolholders

Type	Standard Part No.	Form B Part No.	D [mm]	L [mm]	Balancing Rings
TC 30 / PG 10 x 060*	2230.71020	—	16	60	—
TC 30 / PG 10 x 073 H	4230.71030	—	16	73	FWR 285
TC 30 / PG 15 x 060*	2230.71520	—	24	60	—
TC 30 / PG 15 x 080 H	4230.71540	—	24	80	FWR 285
TC 30 / PG 25 x 080*	2230.72540	—	40	80	—
TC 40 / PG 10 x 080 H	4240.71040	4240.71043	16	80	FWR 285
TC 40 / PG 10 x 120 H	4240.71060	4240.71063	16	120	FWR 285
TC 40 / PG 10 x 160 H	4240.71080	4240.71083	16	160	FWR 325
TC 40 / PG 15 x 072*	2240.71530	2240.71533	24	72	—
TC 40 / PG 15 x 080 H	4240.71540	4240.71543	24	80	FWR 285
TC 40 / PG 15 x 120 H	4240.71560	4240.71563	24	120	FWR 325
TC 40 / PG 15 x 160 H	4240.71580	4240.71583	24	160	FWR 325/285
TC 40 / PG 25 x 072*	2240.72530	2240.72533	40	72	—
TC 40 / PG 25 x 080 H	4240.72540	4240.72543	40	80	FWR 405
TC 40 / PG 25 x 120 H	4240.72560	4240.72563	40	120	FWR 405
TC 40 / PG 25 x 160 H	4240.72580	4240.72583	40	160	FWR 405/405
TC 40 / PG 32 x 080*	2240.73240	2240.73243	50	80	—
TC 50 / PG 25 x 081*	2250.72540	2250.72543	40	81	—
TC 50 / PG 25 x 100 H	4250.72550	4250.72553	40	100	FWR 505
TC 50 / PG 25 x 160 H	4250.72580	4250.72583	40	160	FWR 505/405
TC 50 / PG 32 x 080*	2250.73240	2250.73243	50	80	—

*Not for use with balancing rings.



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Related Items

Collets (Std & CF)	See Section 2.00
Collets (Tapping)	See Section 3.00
Extensions (PG)	See Section 10.00
Accessories	See Section 13.00

For drawings with detailed dimensions see:
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