



EM 01 / 00 - R
EM 02 / 00 - R

EM 03 / 00 - R
EM 03 / 01 - R

EM 04 / 01 - R
EM 04 / 03 - R

EM 05 / 03 - R
EM 05 / 04 - R

EMUGE

Quick-change reducing adapters EM - R

Operating instruction

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Warning signs, symbols

This operating instruction uses the following symbols:



Attention

Marks special instructions, rules and prohibitions which are important in order to avoid any damage.

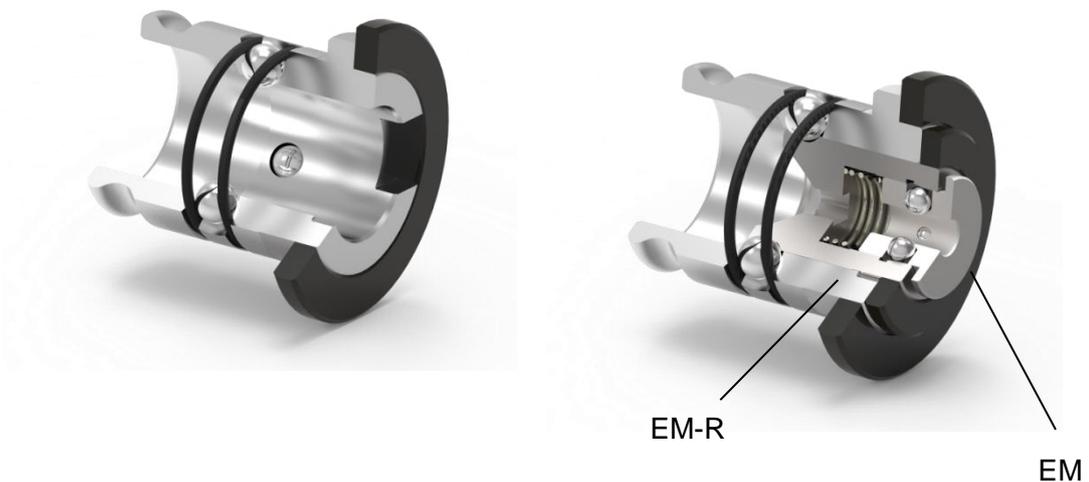
► Please observe these instructions!



Note

Marks application instructions and other useful information.

Sectional view:



Quick-change reducing adapter EM-R

1 Application range, safety instructions and technical data

1.1 Application range, determined use

Application of the quick-change reducing adapters:

- Adaptation of quick-change adapters.
The available reductions are listed in Table 1, page 6
- These quick-change reducing adapters are designed to be used in the following EMUGE holders:

KSN	KSN/HD		
SFM	SFM/NP	SFM-L	SFM-L-DZ
- The quick-change reducing adapters can be used for producing right- and left-hand threads as well as for all machining directions.

The adaptation of the quick-change adapters is executed via a quick-change clamping system. The quick-change adapter is clamped in a ball groove in the reducing adapter. The quick-change adapter is fixed in the reducing adapter through the adaptation in the quick-change tap holder and cannot be removed.

The required size depends on:

- a) the quick-change tap holder size
- b) the quick-change adapter size to be used

For more information see chapter 1.4, page 6

The non-determined use exempts the manufacturer from any liability.

1.2 Safety instructions and hints

For all works, i.e. putting into operation, production and maintenance, please observe the details given in the operating instructions.

All relevant safety regulations as well as local instructions are to be observed when working.

Below please find some basic rules:



Attention



- ▶ Please wear gloves during tool change to avoid injury.
- ▶ Basically change the tool yourself to avoid the sudden start of the spindle caused by mis-operating.



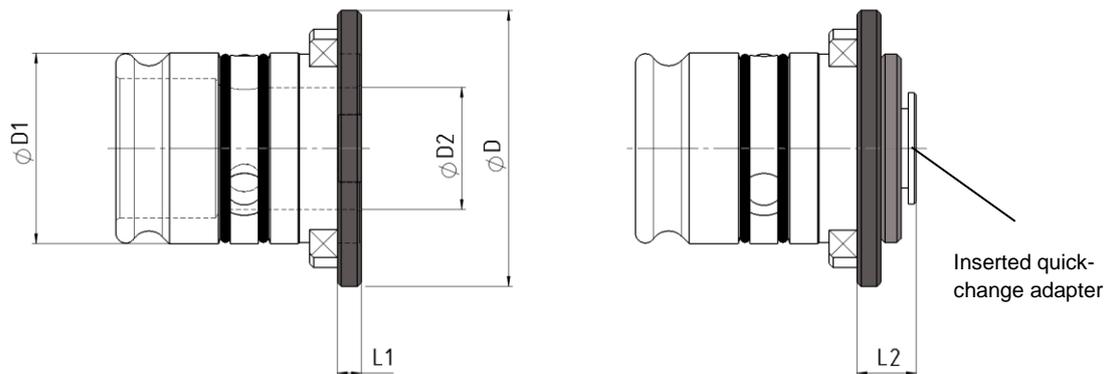
- ▶ Hold the tool when loosening the tool clamping to avoid it falling down and damaging the tool and the work piece.
- ▶ There are maximum values for cutting speeds and feeds for every kind of machining. Please observe such data.
- ▶ Please observe the maximum tool dimensions.
- ▶ Furthermore, the instructions of the tool manufacturers are valid!

1.3 Proprietary rights

The entire contents of these operating instructions are subject to German proprietary rights legislation.

Any form of multiplication, processing, broadcasting, passing on to third parties - also in the form of extracts - and any kind of use outside the boundaries of proprietary rights requires the written consent of EMUGE GmbH&Co.KG.

1.4 Dimensions and technical data



Picture 1: Dimensions of the quick-change reducing adapters EM-R

Table 1: Technical data of the quick-change reducing adapters EM-R

Type	Adapter size	Holding of quick-change adapter size	ØD [mm]	ØD ₁ [mm]	ØD ₂ [mm]	L ₁ [mm]	L ₂ [mm]
EM01/00-R	01	00	30	19	13	4	11
EM02/00-R	02	01	40	26	19	7	14
EM03/00-R	03	00	48	31	13	5	12
EM03/01-R	03	01	48	31	19	5	12
EM04/01-R	04	01	70	48	19	6	13
EM04/03-R	04	03	70	48	31	6	17
EM05/03-R	05	03	92	60	31	13	24
EM05/04-R	05	04	92	60	48	13	27

For further dimensions please refer to the EMUGE main catalogue.

Note referring to the description:

i.e. quick-change reducing adapter type EM03/ 01-R:
size of the tap holder / size of the quick-change adapter

- can be used in all quick-change tap holder size 03
- all quick-change adapters size 01 may be used.

Example for the choice of the correct quick-change reducing adapter:

If you have a quick-change tap holder type KSN4 and a quick-change adapter EM01.

KSN 4 ⇒ Adapter size 04
EM 01 ⇒ Quick-change adapters size 01

⇒ You would need a quick-change reducing adapter type EM04/01-R

2 Putting the quick-change reducing adapters into operation

2.1 Unpacking

- Take the quick-change reducing adapter from the plastic case.
- Clean the quick-change reducing adapter with a duster to remove any conservation oil.

Note

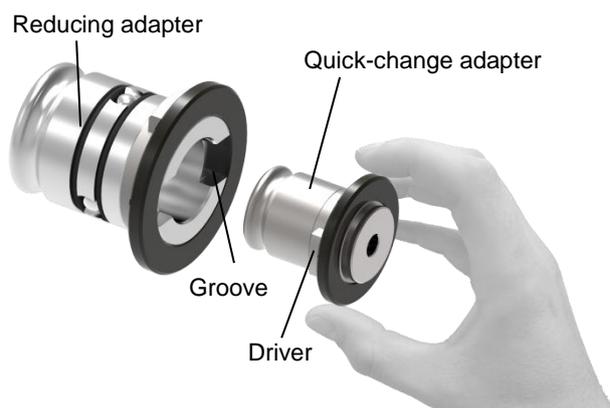
- ▶ Do not use any aggressive solvents.
- ▶ Do not use fibrous materials i.e. steel wool.

The quick-change reducing adapter is now ready for operation

2.2 Insert quick-change adapter

Attention

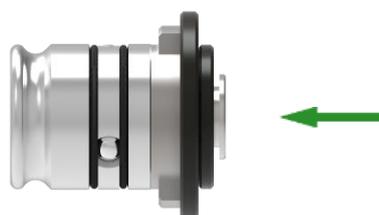
- ▶ Choose the appropriate quick-change adapter for the required tap/cold-forming tap!
- ▶ The quick-change adapter may only be inserted if the quick-change reducing adapter is **not** fixed in the quick-change tap holder!



Push quick-change adapter into quick-change reducing adapter until it engages

Vorsicht

Watch position of driver and groove!



Vorsicht

⇒ quick-change adapter has engaged in the quick-change reducing adapter but is not fixed.

Insert the quick-change reducing adapter into the quick-change tap holder as described in the operating instruction of the used tap holder.



Note

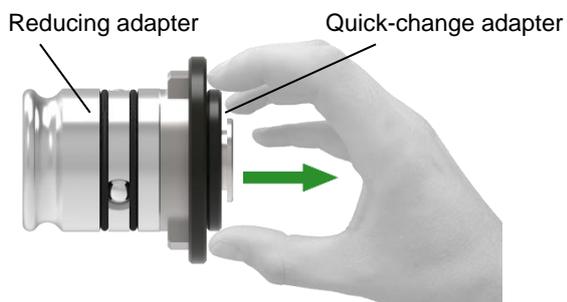
Change of the tap/cold-forming tap is also possible in the quick-change reducing adapter via the guiding bush of the quick-change adapter.

2.3 Detach quick-change adapter



Attention

- ▶ The quick-change adapters may only be loosened if the quick-change reducing adapter is **not** fixed in the quick-change tap holder.



Pull out quick-change adapter



3 Maintenance

3.1 Maintenance schedule

What?	When?	Who?
External cleaning	Periodically, depending on the degree of dirt.	Operator

3.2 External cleaning

Clean the quick-change adapter at periodic intervals depending on how dirty the adapter is.



Note

- ▶ Do not use any aggressive solvents.
- ▶ Do not use fibrous materials i.e. steel wool.

4 Storage when not in use

If the quick-change adapter is taken out of service, please go through the following working steps:

1. Clean the quick-change adapter with a duster, see chapter 3.2
2. Spray the quick-change adapter with a preservation oil to avoid rusting and to preserve the easy running of the adapter



Attention

Before storage all evidence of coolant-lubricant and machining residues must be removed!

5 Application and choice of other quick-change adapters

Type	Description	Recommended Applications
EM..	Rigid type	Through hole threads
EM../MQL	Rigid type, for minimum-quantity lubrication (MQL)	Through hole threads
EM..-E-Lock	Rigid type, locking of the tool is secured by form-fitting	Clamping of carbide tools High coolant-lubricant pressures High-speed machining
EM..-U	With adjustable overload clutch	Blind hole threads
EM..-U/IKZ	With adjustable overload clutch, and internal coolant supply through channels along the tap/cold-forming tap shank.	Blind hole threads
EM..-L	With length adjustment	On multi-spindle heads and transfer lines
EM..-UL	With adjustable overload clutch and length adjustment	Blind hole threads on multi-spindle heads
EM..-Z	Rigid type with adaptation for collets according to DIN ISO 15488	Clamping of carbide tools High coolant-lubricant pressures High-speed machining
EM..-Z/MQL	Rigid type with adaptation for collets according to DIN ISO 15488, for minimum-quantity lubrication, with adjustment screw for presetting the tap/cold-forming tap length	Clamping of carbide tools High-speed machining
EM..L/ER/IKZ	With length adjustment and adaptation for collets according to DIN ISO 15488	On multi-spindle heads and transfer lines Clamping of carbide tools High coolant-lubricant pressures High-speed machining
EM..-PGR	Rigid type with adaptation for collets according to type PGR (GB)	Clamping of carbide tools High coolant-lubricant pressures High-speed machining
EM..-SE	Rigid type with adaptation for dies according to DIN 223	External threads

All quick-change adapters, unless stated otherwise, can be used for internal coolant supply when the taps/cold-forming taps are designed accordingly.

Notes:

EMUGE quick-change adapter EM - R
Operating instruction

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Please keep this for future use!

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