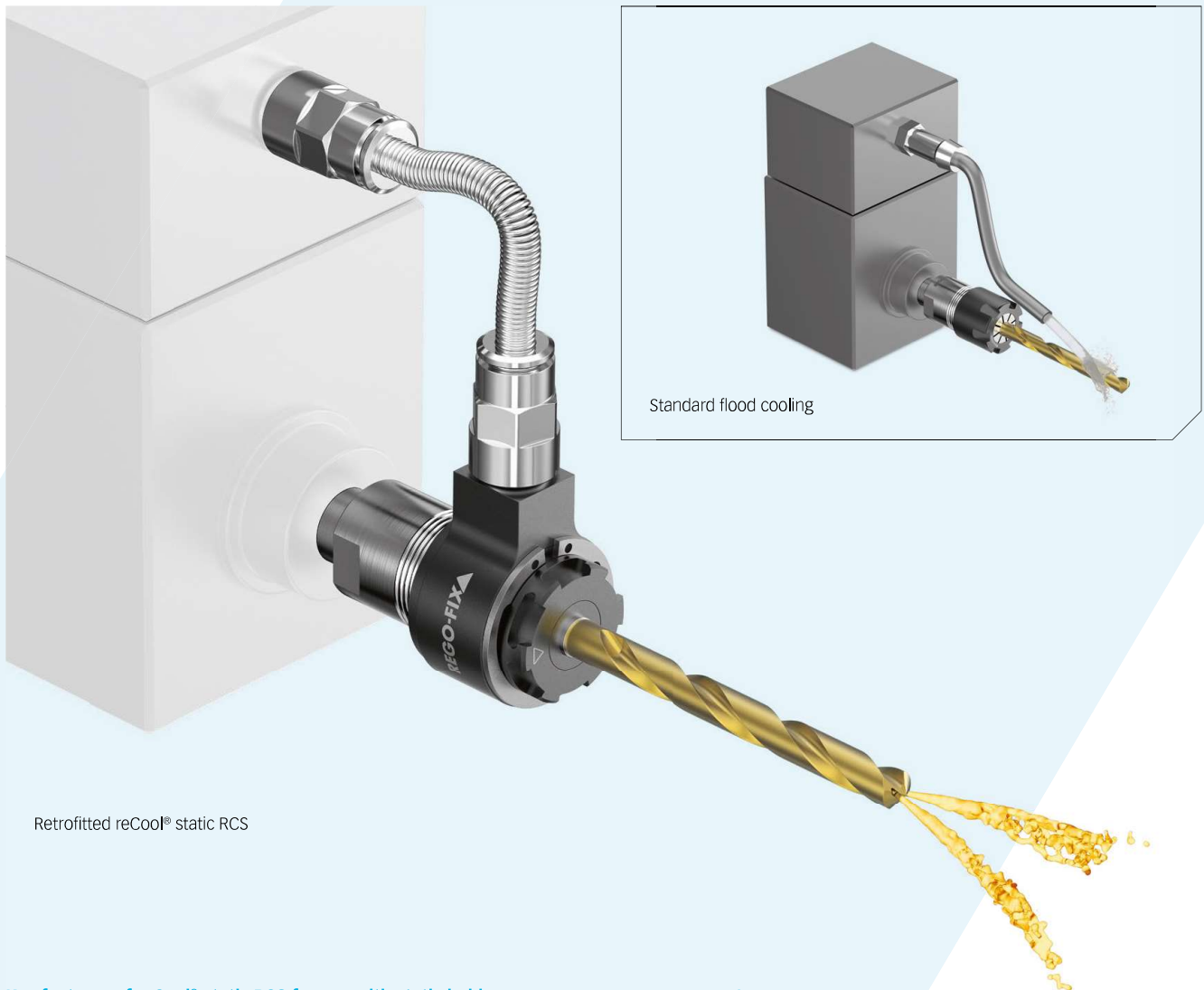


## reCool RCS

Snel en eenvoudig ombouw van uitwendige koeling naar inwendige koeling.



Retrofitted reCool® static RCS

### Key features of reCool® static RCS for use with static holders

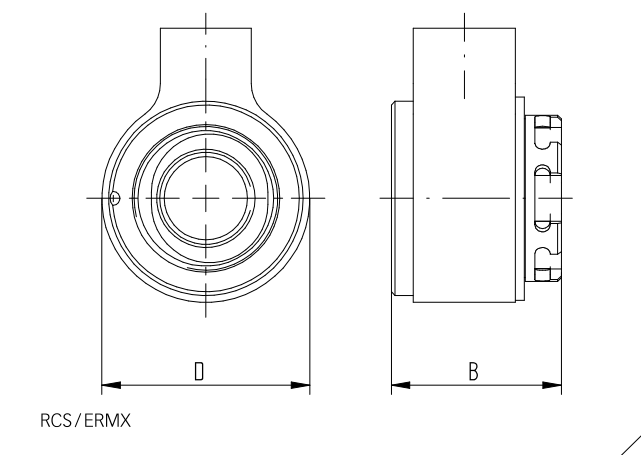
- // Cost-friendly conversion of existing static tooling systems to through coolant in only two minutes
- // For ER collets (DIN 6499/ISO 15488) in stationary toolholders with external fine threads
- // Coolant pressures of up to 150 bar / 2100 PSI\*
- // RCS/ERMx for emulsion and oil coolants
- // Low-maintenance design
- // For coolant through tools (with sealing disks DS) and for peripheral cooling (with coolant flush disks KS)
- // Not for use with sealed collets DM

\* With high-pressure hoses RHS-HP. 100 bar / 1400 PSI with standard hose  
Accessories are not included in delivery.

### Advantages of internal cooling with reCool®

- // Optimized coolant supply to the cutting edge: increases tool life and reduces cycletime
- // Best chip removal
- // No scattering or spray losses

Type	Part no.	Dimensions [mm]		Thread	Accessory	Included in set RCR	
		B	D		Wrench	Type	Qty.
<b>Set RCS (for emulsion- and oil-based coolants)</b>						RCS/ERMX 16/20	1
SET RCS/ERMX 16	3716.50000	22.5	27.5	M 19 x 1	E 16 MX	SET RHS-100	1
SET RCS/ERMX 20	3720.50000	24	34.5	M 24 x 1	E 20 MX	SET RVG-100 1/8" - 0°	2
<b>RCS/ERMX nut (for emulsion- and oil-based coolants)</b>						SET RVA-100 1/8" - 90°	2
RCS/ERMX 16	3716.59000	22.5	27.5	M 19 x 1	E 16 MX		
RCS/ERMX 20	3720.59000	24	34.5	M 24 x 1	E 20 MX		

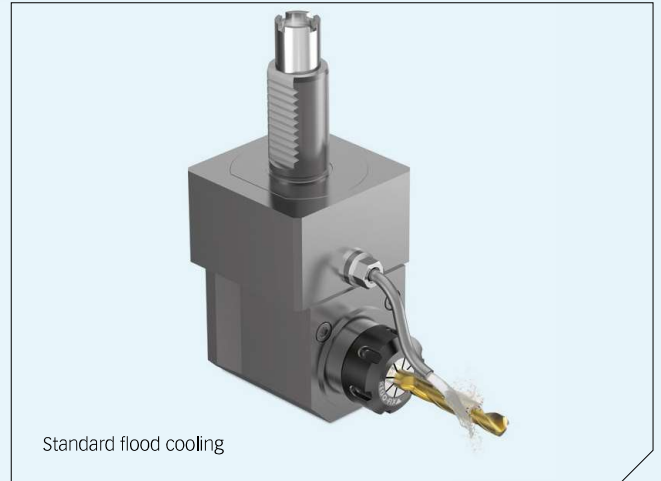


## reCool® sets overview

# reCool® RCS and reCool® RCR sets



# Low-cost retrofitting to internal cooling



Retrofitted with reCool® rotary RCR/ER, RCR/ERM

## Key features of reCool® rotary RCR for use with spindles

- // Cost-friendly conversion of existing driven tooling systems to through coolant in only two minutes
- // For ER and ERM thread in driven tools and turning machines and for ER collets to DIN 6499 / ISO 15488
- // Speeds up to 12.000 rpm\*
- // Coolant pressures up to 150 bar with high-pressure hose, standard hose max. 100 bar / 1400 PSI
- // Low-maintenance coolant lubricated bearings
- // For coolant through tools (with sealing disks DS/ER) and for peripheral cooling (with coolant flush disks KS/ER)
- // RCR/ER(M) for emulsion and oil coolants
- // Not for use with sealed collets DM

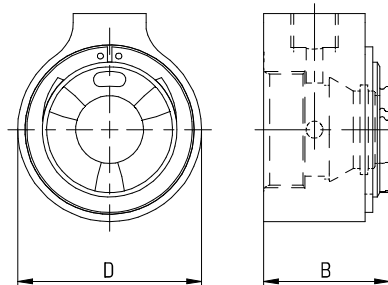
\* 6.000 rpm with RCR/ER 40.  
Accessories are not included in delivery.

## Advantages of internal cooling with reCool®

- // Optimized coolant supply to the cutting edge: increases tool life and reduces cycle time
- // Best chip removal
- // No scattering or spray losses

Type	Part no.	Dimensions [mm]		Thread	Accessory Wrench	Included in set RCR/ER	
		B	D			Type	Qty.
<b>Set RCR/ER (for emulsion- and oil-based coolants)</b>						RCR/ER 11–40	1
SET RCR/ER 11	3711.10000	16.6	21.75	M 14 x 0.75	E 11 AX	SET RHS-100	1
SET RCR/ER 16	3716.10000	24.5	34	M 22 x 1.5	E 16 AX	SET RVG-100 1/8"–0°	2
SET RCR/ER 20	3720.10000	26	40	M 25 x 1.5	E 20 AX	SET RVA-100 1/8"–90°	2
SET RCR/ER 25	3725.10000	27	50	M 32 x 1.5	E 25 AX		
SET RCR/ER 32	3732.10000	29.5	62.5	M 40 x 1.5	E 32 AX		
SET RCR/ER 40	3740.10000	32.5	72.5	M 50 x 1.5	E 40 AX		

Type	Part no.	Dimensions [mm]		Thread	Accessory Wrench
		B	D		
<b>RCR/ER nut (for emulsion- and oil-based coolants)</b>					
RCR/ER 11	3711.19000	16.6	21.75	M 14 x 0.75	E 11 AX
RCR/ER 16	3716.19000	24.5	34	M 22 x 1.5	E 16 AX
RCR/ER 20	3720.19000	26	40	M 25 x 1.5	E 20 AX
RCR/ER 25	3725.19000	27	50	M 32 x 1.5	E 25 AX
RCR/ER 32	3732.19000	29.5	62.5	M 40 x 1.5	E 32 AX
RCR/ER 40	3740.19000	32.5	72.5	M 50 x 1.5	E 40 AX



RCR/ER, RCR/ERM

Type	Part no.	Dimensions [mm]		Thread	Accessory Wrench	Included in set RCR/ERM	
		B	D			Type	Qty.
<b>Set RCR/ERM (for emulsion- and oil-based coolants)</b>						RCR/ERM 11–25	1
SET RCR/ERM 11	3711.30000	16.6	21.75	M 13 x 0.75	E 11 AX	SET RHS-100	1
SET RCR/ERM 16	3716.30000	24.5	31	M 19 x 1	E 16 AX	SET RVG-100 1/8"–0°	2
SET RCR/ERM 20	3720.30000	26	38	M 24 x 1	E 20 AX	SET RVA-100 1/8"–90°	2
SET RCR/ERM 25	3725.30000	27	46	M 30 x 1	E 25 AX		

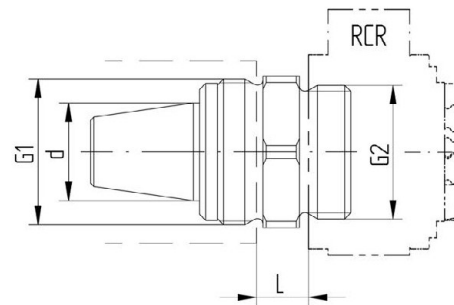
Type	Part no.	Dimensions [mm]		Thread	Accessory Wrench
		B	D		
<b>RCR/ERM nut (for emulsion- and oil-based coolants)</b>					
RCR/ERM 11	3711.39000	16.6	21.75	M 13 x 0.75	E 11 AX
RCR/ERM 16	3716.39000	24.5	31	M 19 x 1	E 16 AX
RCR/ERM 20	3720.39000	26	38	M 24 x 1	E 20 AX
RCR/ERM 25	3725.39000	27	46	M 30 x 1	E 25 AX

# Matching accessories for your reCool®

Type	Part no.	Dimensions [mm]		Thread G1	Thread G2	Accessory
		d	L			Wrench
<b>reCool® adapter</b>						
RC-ADP 16	3799.81600	16	8.7	M 24 x 1	M 22 x 1.5	E 16 P
RC-ADP 20	3799.82000	20	8.2	M 28 x 1.5	M 25 x 1.5	E 20 P
RC-ADP 25	3799.82500	25	7.9	M 32 x 1.5	M 32 x 1.5	E 25
RC-ADP 32	3799.83200	32	8.7	M 40 x 1.5	M 40 x 1.5	E 32
RC-ADP 40	3799.84000	40	9.6	M 50 x 1.5	M 50 x 1.5	E 40

**reCool® adapter** The reCool® adapter RC-ADP easily converts inner-threaded driven tools to outer-threaded ones which enables the use of the reCool® rotary coolant supply system RCR with different types of driven tooling.

**How to use?** Just screw the adapter with advised tightening torque into the driven tool, use the correctly installed reCool® rotary coolant supply system RCR and clamp the tool.



RC-ADP

Expert advice

reCool® is only applicable with the use of our sealing DS/ER and Coolant flush disks KS/ER. Please note, that neither DS/ER nor KS/ER are included in the reCool® sets.

*Please refer to page 244 for sealing disks and to page 252 for coolant flush disks.*

Type	Part no.	Length [mm]
<b>High-pressure hoses (≤150 bar) with threaded 1/8" ends</b>		
SET RHS-HP L100	3799.97100	100
SET RHS-HP L200	3799.97200	200
SET RHS-HP L300	3799.97300	300
SET RHS-HP L400	3799.97400	400
SET RHS-HP L500	3799.97500	500
SET RHS-HP L600	3799.97600	600
SET RHS-HP L700	3799.97700	700

<b>Standard hose set (≤100 bar) incl. steel spiral</b>		
SET RHS-100	3799.95000	400*

\*The length can be shortened individually between 50 - 400 mm

<b>Fitting sets (2 pieces each)</b>		
SET RVG-100 1/8" -0°	3799.96180	-
SET RVA-100 1/8" -90°	3799.96189	-
SET RVG-100 M8 x 1 -0°	3799.96810	-

<b>Thread adapter</b>		
RGA 1/8" BSP - 1/8" NPT	3799.98180	-

Type	Part no.	Ø [mm]	Length [mm]
<b>Ball adapters RBA (1/8" BSP)</b>			
RBA 10	3799.93100	10	-
RBA 11	3799.93110	11	-
RBA 12	3799.93120	12	-
RBA 13	3799.93130	13	-
RBA 14	3799.93140	14	-
RBA 15	3799.93150	15	-
RBA 16	3799.93160	16	-

<b>Aluminum ring adapters RRA (1/8" BSP)</b>			
RRA 10	3799.94100	10	-
RRA 11	3799.94110	11	-
RRA 12	3799.94120	12	-
RRA 13	3799.94130	13	-
RRA 14	3799.94140	14	-
RRA 15	3799.94150	15	-
RRA 16	3799.94160	16	-



Expert advice

The ball adapter **RBA** is used when the driven tool has a ball connection. The fitting can then be used on the hose.

The aluminum ring adapter **RRA** can be used when the driven tool cooling connection uses the "press-in" principle.



# Use conditions RCR reCool®

reCool® is used exclusively for clamping tools with ER collets (DIN 6499 / ISO 15488). Only original collets, sealing and cooling disks REGO-FIX® are recommended to be used.

## Technical data

The following parameters apply to reCool® rotation:

Max. Rotation speed:	12,000 rpm (6000 rpm with ER40)
Max. coolant pressure:	150 bar / 2175 PSI* (with high pressure hose)
Min. coolant pressure:	depending on the rotational speed (see table)

	≤ 3,000 min <sup>-1</sup>	≤ 6,000 min <sup>-1</sup>	≤ 9,000 min <sup>-1</sup>	≤ 12,000 min <sup>-1</sup>
RCR/ER 11	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ER 16	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ER 20	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ER 25	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ER 32	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ER 40	5 bar / 73 PSI	7.5 bar / 109 PSI	–	–
RCR/ERM 11	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ERM 16	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ERM 20	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI
RCR/ERM 25	5 bar / 73 PSI	7.5 bar / 109 PSI	10 bar / 145 PSI	15 bar / 218 PSI

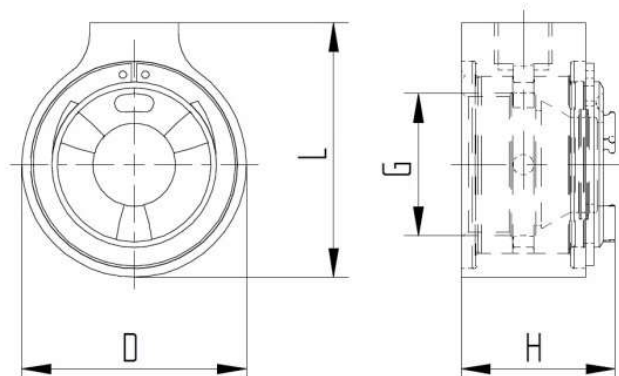
Cooling medium: Emulsion or oil up to viscosity ≤ ISO VG 46 (46 mm<sup>2</sup>/s 40°C) and filtered 20 μm

Working temperature: 10° C to 60° C

**\*The supplied hose and fittings are designed and tested for maximum coolant pressure of 100 bar / 1450 PSI. For higher coolant pressures the High-pressure hose is mandatory.**

## Dimensions

Type	Clamping range [mm]	D [mm]	L [mm]	H [mm]	G
RCR/ER 11	3.00 – 6.00	21.75	29.50	16.50	M14 x 0.75
RCR/ER 16	3.00 – 10.00	34.00	39.50	24.50	M22 x 1.5
RCR/ER 20	3.00 – 13.00	40.00	44.50	26.00	M25 x 1.5
RCR/ER 25	3.00 – 16.00	50.00	53.50	27.00	M32 x 1.5
RCR/ER 32	3.00 – 20.00	62.50	64.75	29.50	M40 x 1.5
RCR/ER 40	3.00 – 26.00	72.50	74.75	32.50	M50 x 1.5
RCR/ERM 11	3.00 – 6.00	21.75	29.50	16.50	M13 x 0.75
RCR/ERM 16	3.00 – 10.00	31.00	36.50	24.50	M19 x 1
RCR/ERM 20	3.00 – 13.00	38.00	43.00	26.00	M24 x 1
RCR/ERM 25	3.00 – 17.00	46.00	50.50	27.00	M30 x 1





# Cleaning instructions

reCool® is designed with a wear resistant coating, eliminating the need for extensive maintenance. The only time cleaning is needed is when the RCR system no longer rotates lightly by hand.



Mark the position of the inner part to outer ring.



Remove the retaining ring with pliers.



Now slide out inner part.



Remove the disk.



Clean all parts intensively with a standard industrial cleaning agent.



Lightly oil the bearing surfaces with thin lubricating oil.



Put the parts in the correct position together.



Mount this retaining ring.



Pay attention that it snaps into place.

**!** reCool® parts may not be swapped out. Original configuration must be maintained.

**!** Never let the reCool® system run dry.

**!** When starting the machine, make sure that coolant flows out of the tool or the coolant flush disk before rotating the reCool® System.

**!** A coolant pressure below minimum may lead to inadequate cooling/lubrication and therefore could damage the reCool® bearings.

**!** Inadequate coolant pressure results in considerable impairment in cooling the tool and chip removal.

**!** Stop screws with coolant through bores must be replaced!

**!** If the stop screw is not sealed nor replaced, there is danger that the coolant may get inside the gears which may result in damages of the driven tool.

**!** For best cooling do not exploit the clamping range of the collet. E.g. clamp a Ø 6mm tool shank in Ø 6.0 – 5.0 mm collet.

**!** Do not use metallic sealed ER-DM collets with reCool, because the coolant cannot reach the tool.