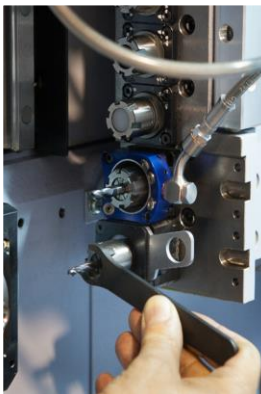




1. COMPLETE DISTRIBUTION SYSTEM WITH QUICK CONNECTIONS FOR MACHINING WITH MEDIUM AND HIGH-PRESSURE COOLANT

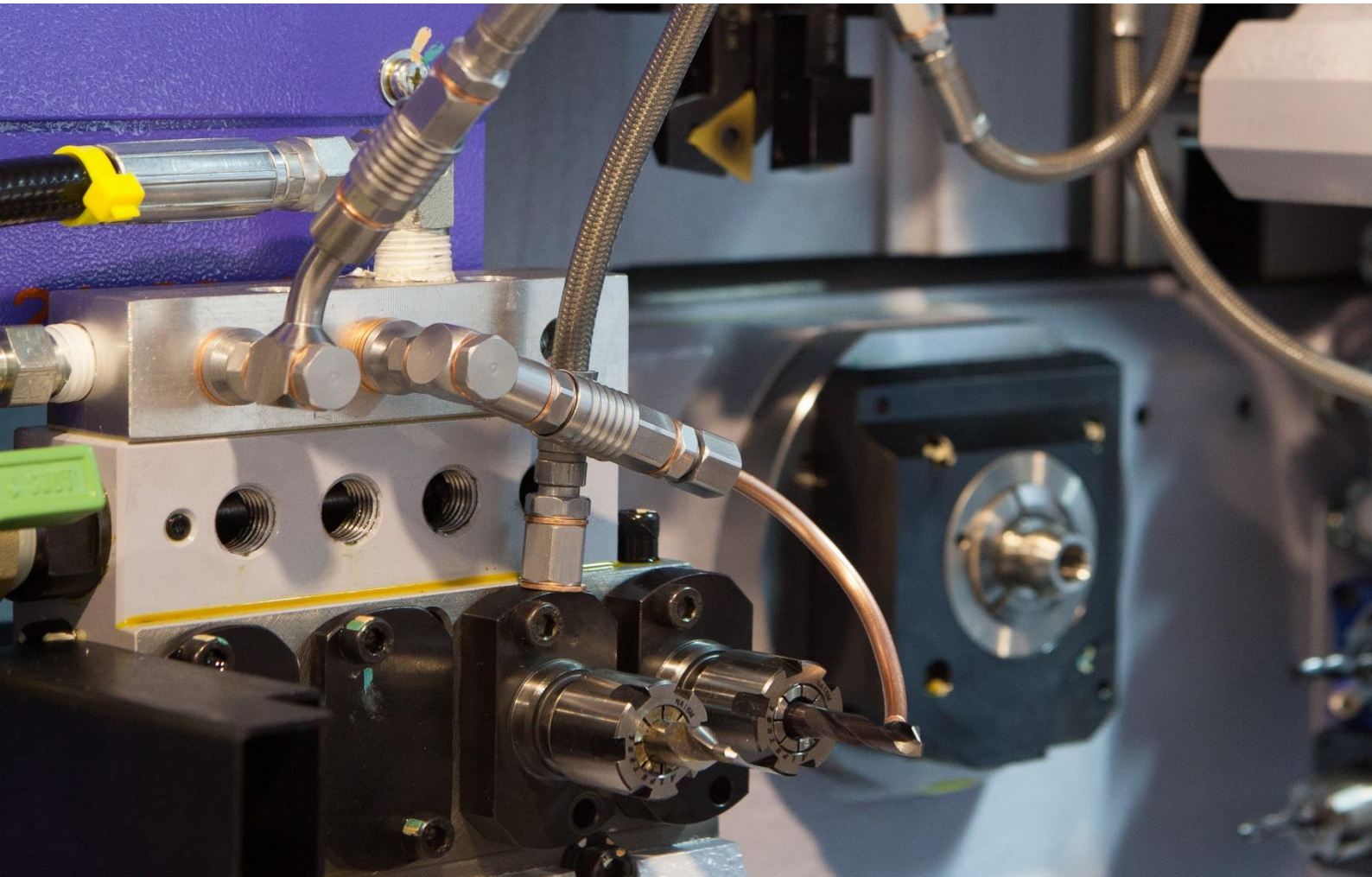


2. ARTICULATED STEEL FLEXIBLE DISTRIBUTION TUBES FOR MACHINING WITH LOW, MEDIUM AND HIGH-PRESSURE COOLANT



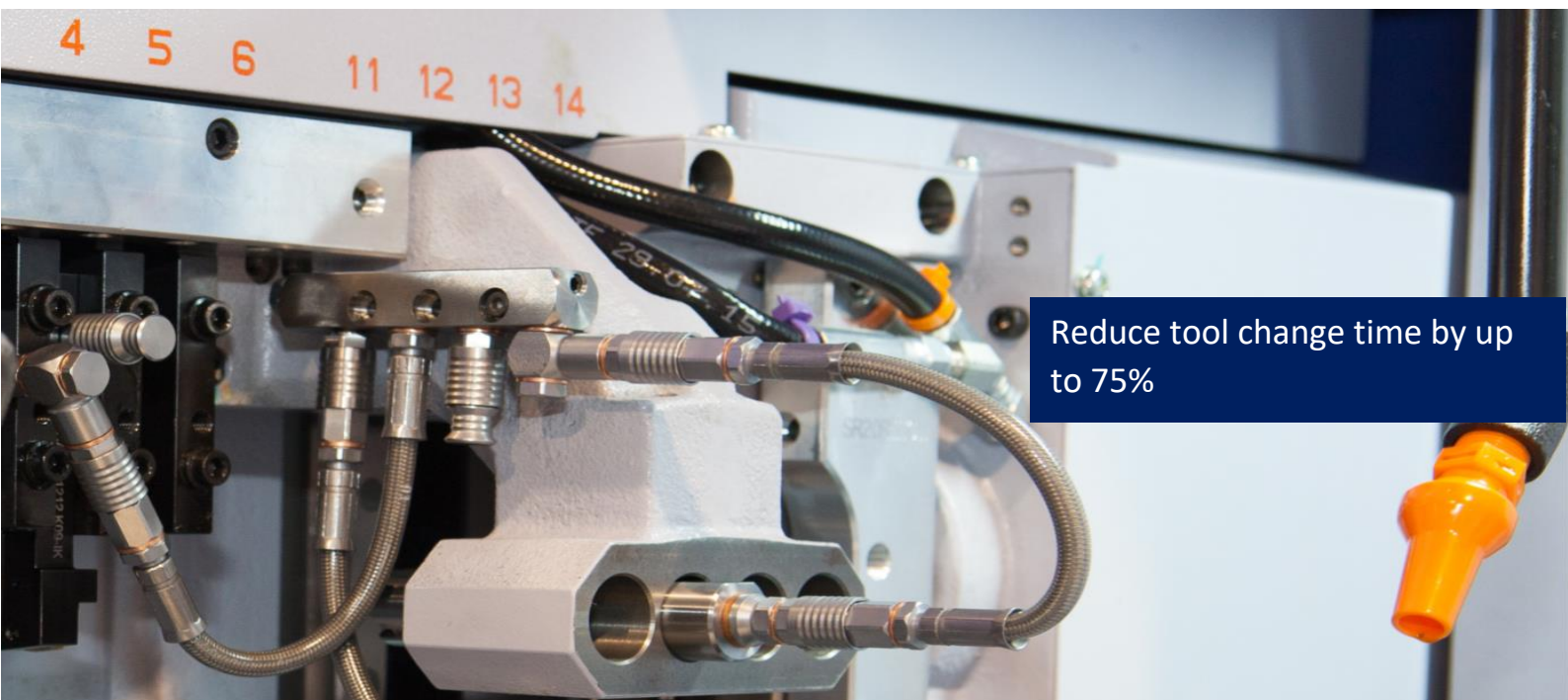
3. ACCESSORIES FOR SAFETY AND PRODUCTIVITY IMPROVEMENT

1. COMPLETE DISTRIBUTION SYSTEM WITH
QUICK CONNECTIONS FOR MACHINING
WITH MEDIUM AND HIGH-PRESSURE
COOLANT



DISTRIBUTION SYSTEM WITH QUICK CONNECTION INCLUDING 2 PROGRAMS OF DIFFERENT DIMENSIONS FOR MACHINING WITH COOLANT AT MEDIUM AND HIGH-PRESSURE FOR CNC LATHES

Ultra-compact quick connectors, locking and connecting plugs, flexible and rigid distribution tubes, distribution blocks, connectors, adaptors and spacers, ball and tube nozzles. A complete ecosystem of modular components to reduce time for tool set-up, tool change and optimize the way coolant is delivered all the way to the cutting edge.



Reduce tool change time by up to 75%

Coolant distribution system (cutting oil and emulsion) totally flexible and modular, able to withstand pressures of 220 Bar and ideal for use with high pressure coolant equipment

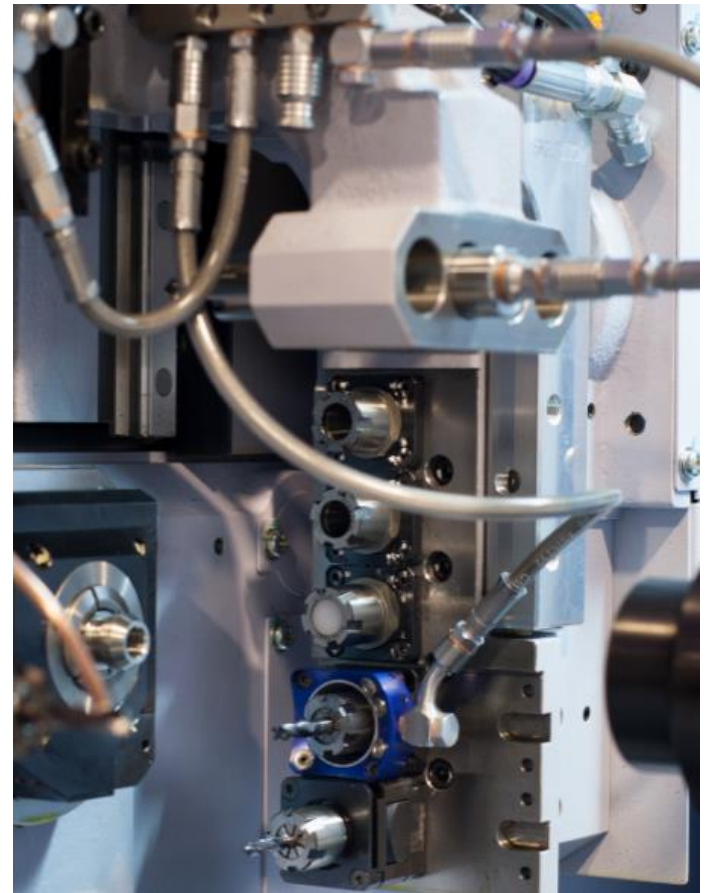
FAST, FLEXIBLE AND SAFE TOOL ASSEMBLY



SCS coolant distribution systems are designed to capitalize on all the advantages offered by high pressure cooling. It allows for fast, flexible, safe and interference-free preparations for the machining of parts while ensuring the correct orientation and amount of flow rate of coolant directly to the cutting edge of the tool.

ADVANTAGES:

1. Quick and precise preparations - The flow of coolant is directed to the required point and with the necessary flow. Time reduction in preparation and better machining conditions are easily achieved.
2. Allows for optimal distribution of the coolant to the different tool holders without the performance depending on the operator who makes the preparation.
3. Guarantees that after a tool change, the coolant outlets remain in the same position and do not change even if performed by different machine operators.



Increased tool life and efficiency - Better surface quality, and higher productivity.

(Ideal for sliding-head lathes)

4. Maximum safety in performing tools changes mounted in rotary tool holders, thus avoiding possible injuries - The patented system of SCS allows to block the tool holders while keeping both hands free and making it possible to loosen the collet nut with just one hand.
5. Ease of adaptation - quick couplings and adaptors to different types of threads for tool holders or distribution blocks.
6. Flexible and reinforced tubes - Protected to withstand the impact of hot chips and with pressures of up to 220 Bar.

PRODUCT RANGE:

2 different manufacturing programs according to the required flow and internal machine available space:

- MICRO: 3.8 mm through hole for coolant supply.
- NANO: 2.3 mm through hole for coolant supply.

Pressure (Bar)	MICRO (l/min)	NANO (l/min)
2	9.5	3.5
8	19.0	7.0
15	26.0	9.6
20	30.1	11.0
30	36.9	13.5
50	47.6	17.5
80	60.3	22.1
100	67.4	24.7
150	82.5	30.2

Both programs can be connected with each other and with the Articulated Steel Flexible Distribution Tubes DECA, HECTO, MEGA and GIGA programs.

It allows to work with emulsion or cutting oil.

Resistant to pressures of up to 220 bar (3,190 psi).

Manufactured with the utmost precision in steel and with ZnNi treatment to guarantee its durability.

Item	MICRO Program	NANO Program
Minimum internal diameter of the program	3.8 mm	2.3 mm
Main program thread	M8x1	M6x1
Manufacturing material of components	Steel ZnNi	Steel ZnNi
Assembly wrench	SW11	SW8
Ideal for square tool shank dimension	16x16, 20x20, 25x25	8x8, 10x10, 12x12
Ideal for cylindrical tool shank dimension	Diameter ≥ 16 mm	Diameter < 16 mm
Ideal for collet holder dimension	ER-16 or bigger	ER-11 or smaller
External diameter of flexible distribution tube	8 mm	6.5 mm
Minimum bending radius of flexible distribution tube	30 mm	15 mm
External diameter of copper tube	4 mm	3 mm
Quick connector dimensions	OD: 13.5 mm L: 17 mm	OD: 9.8 mm L: 11.4 mm

MICRO PROGRAM

The inner diameter of the MICRO program is 3.8 mm and is ideal for installation with ER-16 collet tool holders, cylindrical shank tool holders (OD \geq 16 mm) or with square shank tool holders from 16x16 mm size.

Quick connection fittings:

Quick connection fittings with very compact dimensions O.D.: 13.5 mm, I.D.: 3.8 mm, Length: 17 mm.

Material: Steel ZnNi

Maximum pressure: 220 Bar (3.190 PSI)

Ref.	Description
MI-QC-01-00	Quick connection fitting MICRO with M8x1(M) on one end.
MI-QC-01-01	Quick connection fitting MICRO with M8x1 keg(M) on one end.
MI-QC-01-02	Quick connection fitting MICRO with BSP 1/8"(M) on one end.



Distribution tubes:

Set of distribution tubes in Teflon covered in braided stainless steel AISI 304.OD: 8 mm. ID: 3.8 mm.

Material: Steel ZnNi

Minimum bending radius: 30 mm

Maximum pressure: 220 Bar (3.190 PSI)

Ref.	Description
MI-DT-01-00	M8x1(M), flexible tube ID:3.8 mm 4" (102 mm), M8x1(M)
MI-DT-01-01	M8x1(M), flexible tube ID:3.8 mm 8" (203 mm), M8x1(M)
MI-DT-01-02	M8x1(M), flexible tube ID:3.8 mm 12" (305 mm), M8x1(M)
MI-DT-01-03	M8x1(M), flexible tube ID:3.8 mm 16" (406 mm), M8x1(M)
MI-DT-01-04	BSP 1/8"(M), flexible tube ID:.8 mm 4" (102 mm), BSP 1/8"(M)
MI-DT-01-05	BSP 1/8"(M), flexible tube ID:3.8 mm 8" (203 mm), BSP 1/8"(M)
MI-DT-01-06	BSP 1/8"(M), flexible tube ID:3.8 mm 12" (305 mm), BSP 1/8"(M)
MI-DT-01-07	BSP 1/8"(M), flexible tube ID:3.8 mm 16" (406 mm), BSP 1/8"(M)



Copper distribution tubes O.D.: 4 mm, I.D.: 2 mm, with M8x1(M) thread on each end and coupling to the copper tube with sealing ring I.D. 4 mm.

Maximum pressure: 220 Bar (3.190 PSI)

Ref.	Description
MI-DT-02-00	M8x1(M) with sealing ring, copper tube OD:4 mm and L:4" (102 mm), open end tube.
MI-DT-02-01	M8x1(M) with sealing ring, copper tube OD: 4 mm and L:8" (203 mm), open end tube.
MI-DT-02-02	M8x1(M) with sealing ring, copper tube OD: 4 mm and L:12" (305 mm), open end tube.
MI-DT-02-03	M8x1(M) with sealing ring, copper tube OD: 4 mm and L:16" (406 mm), open end tube.



Standard coolant distribution blocks:

Compact and space saving design. Inlet M8x1(F) and outlets M8x1(F).

Material: Steel ZnNi

Ref.	Description
MI-DB-01-00	15x15x85 mm block with through coolant and M8x1(F) inlet in each end and 4 outlets in M8x1(F) in one of the faces. Fastening to the machine with 3 holes for M5 screw. Reversible mounting position.



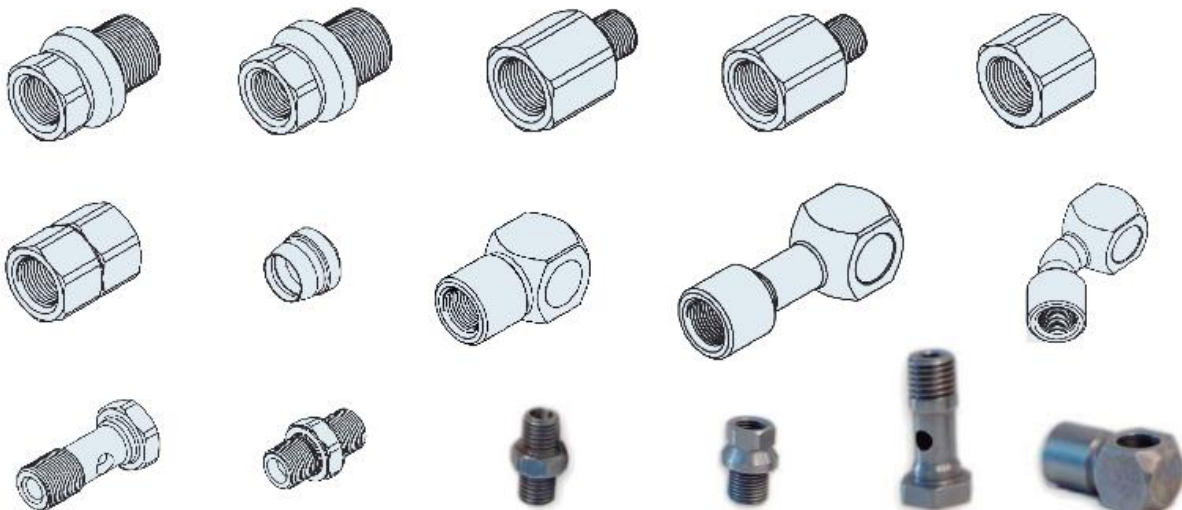
Connectors and adaptors:

To adapt connection tubes and quick connectors.

Material: Steel ZnNi

- Adaptors: M8x1 to M10, M6, M5, BSP 1/8", etc.
- Banjos: short, long, curved.
- Spacers: 10, 15 and 20 mm.
- Sealing ring for copper tube

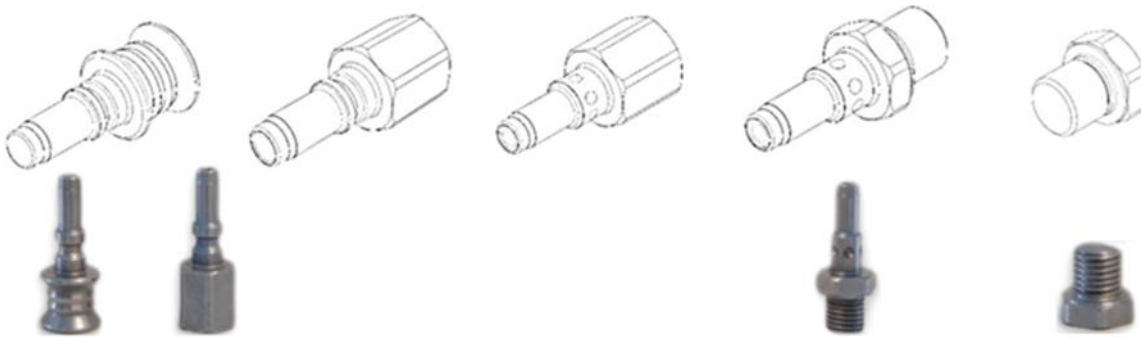
Ref.	Description
MI-CA-01-00	M8x1(F) to BSP 1/8"(M)
MI-CA-01-01	M8x1(F) to M10x1(M)
MI-CA-01-02	M8x1(F) to M8x1(M)
MI-CA-01-03	M8x1(F) to M8x1(F)
MI-CA-01-04	Nut for sealing ring ID:4 mm E11
MI-CA-01-05	M8x1(F) to M5x0.8(M)
MI-CA-01-06	M8x1(F) to M6x1(M)
MI-CA-01-07	M8x1(M) to sealing ring ID:4 mm E11
MI-CA-01-08	M8x1(F) to M8x1 keg(M)
MI-CA-01-09	BSP 1/8"(F) a M8x1(M)
MI-CA-01-10	BSP 1/8"(F) a BSP 1/8"(M)
MI-CA-02-00	Sealing ring ID:4 mm.
MI-CA-03-00	Spacer H:10 mm M8x1(M) - M8x1(F)
MI-CA-03-01	Spacer H:15 mm M8x1(M) - M8x1(F)
MI-CA-03-02	Spacer H:20 mm M8x1(M) - M8x1(F)
MI-CA-03-03	Spacer H:10 mm BSP 1/8"(M) - BSP 1/8"(F)
MI-CA-03-04	Spacer H:15 mm BSP 1/8"(M) - BSP 1/8"(F)
MI-CA-03-05	Spacer H:20 mm BSP 1/8"(M) - BSP 1/8"(F)
MI-CA-04-00	Short banjo M8x1(F) (does not include banjo bolt)
MI-CA-04-01	Short banjo M8x1(M) (does not include banjo bolt)
MI-CA-04-02	Long straight banjo M8x1(F) (does not include banjo bolt)
MI-CA-04-03	Long curved banjo M8x1(F) (does not include banjo bolt)
MI-CA-04-04	Banjo bolt M8x1(M)
MI-CA-04-05	Banjo bolt double length M8x1(M) to connect 2 Banjos
MI-CA-04-06	Short banjo BSP 1/8"(F) (does not include banjo bolt)
MI-CA-04-07	Long straight banjo BSP 1/8"(F) (does not include banjo bolt)
MI-CA-04-09	Long curved banjo BSP 1/8"(F) (does not include banjo bolt)
MI-CA-04-10	Banjo bolt BSP 1/8"(M)



Locking and connecting plugs:

Plugs and locking plugs to connect to the quick connectors. Material: Steel ZnNi

Ref.	Description
MI-CC-01-00	Sealing plug with quick connection fitting MICRO
MI-CC-01-01	Quick connection fitting MICRO to M8x1(F)
MI-CC-01-02	Non-rotating (positioning) quick connection fitting MICRO to M8x1(F)
MI-CC-01-03	Non-rotating (positioning) quick connection fitting MICRO to M8x1(M)
MI-CC-01-04	Sealing plug M8x1(M)
MI-CC-01-05	Quick connection fitting MICRO to BSP 1/8"(F)
MI-CC-01-06	Non-rotating (positioning) quick connection fitting MICRO to BSP 1/8"(F)



Sealing gasket:

Guarantees the tightness between the different connecting elements and according to the required diameters. Common to MICRO and NANO program.

Material: Copper.

Ref.	Description
UN-SG-01-00	Sealing gasket in copper for M5 (10 units)
UN-SG-01-01	Sealing gasket in copper for M6 (10 units)
UN-SG-01-02	Sealing gasket in copper for M8 (10 units)
UN-SG-01-03	Sealing gasket in copper for M10 and BSP 1/8" (10 units)

Ball nozzles and Tube nozzles:

Nozzles for coolant distribution with different I.D. and with and without tube outlet.

Locking nut and M8x1(M) fitting. Material: Steel ZnNi.

Ball nozzle and tube nozzle. Material: Stainless Steel 18-8.

Ref.	Description
MI-NZ-01-00	Fitting M8x1(M) with ball-type nozzle coolant outlet. ID coolant through hole: 1 mm
MI-NZ-01-01	Fitting M8x1(M) with ball-type nozzle coolant outlet. ID coolant through hole: 1.5 mm
MI-NZ-01-02	Fitting M8x1(M) with ball-type nozzle coolant outlet. ID coolant through hole: 2 mm
MI-NZ-02-00	Fitting M8x1(M) with tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1 mm
MI-NZ-02-01	Fitting M8x1(M) with tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1.5 mm
MI-NZ-02-02	Fitting M8x1(M) with tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 2 mm
MI-NZ-03-00	Fitting M8x1(M) with 45° angled tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1 mm
MI-NZ-03-01	Fitting M8x1(M) with 45° angled tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1.5 mm
MI-NZ-03-02	Fitting M8x1(M) with 45° angled tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 2 mm

Fastening keys for the coolant distribution fittings:

Special wrench for MICRO program assembly. 11 mm between flats.

Ref.	Description
MI-FK-01-00	Wrench for assembly on the universal hexagon used in the MICRO program. SW11



Starter kit:

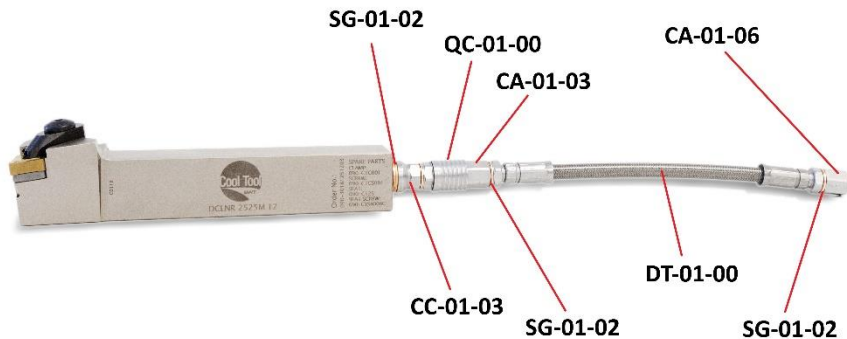
Set of components to start and become familiar with the SCS Coolant Distribution System MICRO program. Basic set of components delivered in a basic kit for the most typical applications.

Ref.	Description
MI-SK-01-00	<p>Basic Kit Drilling/Boring MICRO: For collet tool holder or round shank tool</p> <p>Quick Connection fittings: 1 unit MI-QC-01-00 Quick connection fitting MICRO with M8x1(M) on one end.</p> <p>Distribution tubes: 1 unit MI-DT-01-01 M8x1(M), flexible tube 8" (203 mm), M8x1(M) 1 unit MI-DT-01-02 M8x1(M), flexible tube 12" (305 mm), M8x1(M)</p> <p>Standard coolant distribution block: 1 unit MI-DB-01-00 15x15x85 mm block with through coolant and G ¼"(F) inlet in one end and 4 outlets in M8x1(F) in one of the faces. Fastening to the machine with 3 holes for M5 screw. Reversible mounting position.</p> <p>Connectors and adaptors: 1 unit MI-CA-01-00 M8x1(F) to BSP 1/8"(M) 1 unit MI-CA-01-01 M8x1(F) to M10x1(M) 1 unit MI-CA-04-00 Short banjo M8x1(F) 1 unit MI-CA-04-03 Banjo bolt M8x1(M)</p> <p>Locking and connecting plugs: 1 unit MI-CC-01-00 Sealing plug with quick connection fitting 1 unit MI-CC-01-01 Quick connection fitting to M8x1(F) 3 units MI-CC-01-04 Sealing plug M8x1(M)</p> <p>Sealing gasket: 2 units UN-SG-01-02 Sealing gasket in copper for M8 (10 units) 1 unit UN-SG-01-03 Sealing gasket in copper for M10 and BSP 1/8" (10 units)</p> <p>Fastening keys for the coolant distribution fittings: 2 units MI-FK-01-00 Wrench for assembly on the universal hexagon used in the MICRO program. SW11</p>

Ref.	Description
MI-SK-01-01	<p>Basic Kit Turning/Grooving/Cut off MICRO: For square shank tool holders</p> <p>Quick Connection fittings: 1 unit MI-QC-01-00 Quick connection fitting MICRO with M8x1(M) on one end.</p> <p>Distribution tubes: 1 unit MI-DT-01-01 M8x1(M), flexible tube 8" (203 mm), M8x1(M) 1 unit MI-DT-01-02 M8x1(M), flexible tube 12" (305 mm), M8x1(M)</p> <p>Standard coolant distribution block: 1 unit MI-DB-01-00 15x15x85 mm block with through coolant and G ¼"(F) inlet in one end and 4 outlets in M8x1(F) in one of the faces. Fastening to the machine with 3 holes for M5 screw. Reversible mounting position.</p> <p>Connectors and adaptors: 1 unit MI-CA-01-06 M8x1(F) to M6x1(M) 1 unit MI-CA-03-00 Spacer H:10 mm M8x1(M) -M8x1(F) 1 unit MI-CA-03-01 Spacer H:15 mm M8x1(M) - M8x1(F) 1 unit MI-CA-03-02 Spacer H:20 mm M8x1(M) - M8x1(F) 1 unit MI-CA-04-00 Short banjo M8x1(F) 1 unit MI-CA-04-03 Banjo bolt M8x1(M)</p> <p>Locking and connecting plugs: 1 unit MI-CC-01-00 Sealing plug with quick connection fitting MICRO 1 unit MI-CC-01-01 Quick connection fitting MICRO to M8x1(F) 3 unit CC-01-04 Sealing plug M8x1(M)</p> <p>Sealing gasket: 1 unit UN-SG-01-01 2 unit SG-01-02 Sealing gasket in copper for M6 (10 units) 2 unit UN-SG-01-02 Sealing gasket in copper for M8 (10 units)</p> <p>Fastening keys for the coolant distribution fittings: 2 units MI-FK-01-00 Wrench for assembly on the universal hexagon used in the MICRO program. SW11</p>

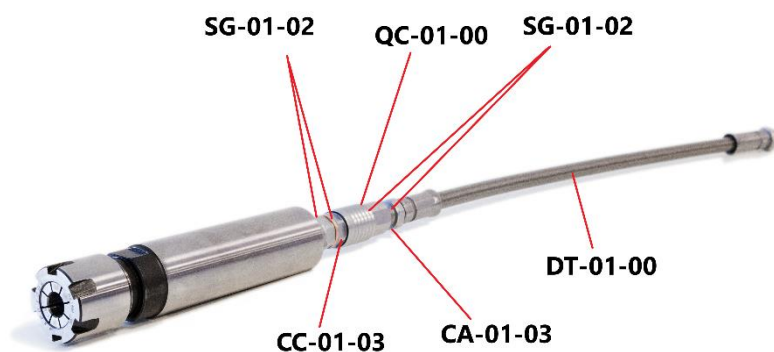
ASSEMBLY EXAMPLES:

Turning tool holder with quick connection and flexible tube of 102 mm.



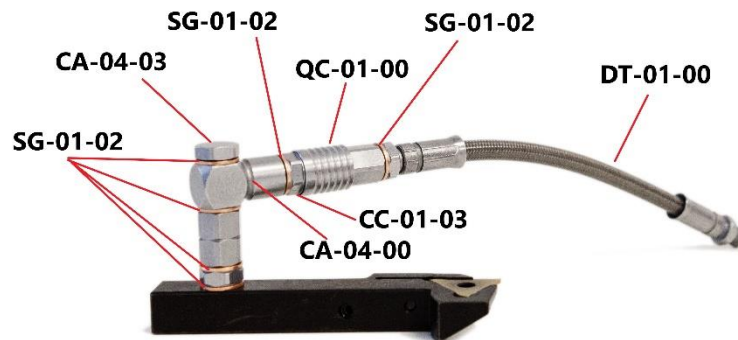
- UN-SG-01-02: Sealing gasket in copper for M8
- MI-CC-01-03: Quick connection fitting M8x1(M)
- MI-QC-01-00: Micro-type quick connector
- MI-CA-01-03: Adaptor M8x1(F) to M8x1(F)
- MI-DT-01-00: Flexible distribution tube 102 mm M8x1(M) in each end
- MI-CA-01-06: Adaptor M8x1(F) to M6x1(M)

Collet sleeve with quick connection and flexible tube 102 mm.



- UN-SG-01-02: Sealing gasket for M8
- MI-CC-01-03: Quick connection fitting M8x1(M)
- MI-QC-01-00: Quick connector Micro
- MI-CA-01-03: Adaptor M8x1(F) to M8x1(F)
- MI-DT-01-00: Flexible distribution tube 102 mm M8x1(M) in each end

Tool holder with banjo, quick connection and flexible tube 102 mm.



- UN-SG-01-02: Sealing gasket for M8
- MI-CC-01-03: Quick connection fitting M8x1(M)
- MI-QC-01-00: Quick connector Micro
- MI-CA-04-03: Banjo bolt M8x1(M)
- MI-CA-04-00: Short banjo M8x1(F)
- MI-DT-01-00: Flexible distribution tube 102 mm M8x1(M) in each end

NANO PROGRAM

The inner diameter of the NANO program is 2.3 mm and is ideal for installation with ER-11 collet tool holders, small cylindrical shank tool holders (OD < 16 mm) or with square shank tool holders 12x12 mm, 10x10 mm or 8x8 mm.

Quick connection fittings:

Quick connection fittings with ultra-compact dimensions OD:13.5 mm, ID:3.8 mm, Length:17 mm.

Material: Steel ZnNi

Maximum pressure:220 Bar (3.190 PSI)

Ref.	Description
NA-QC-01-00	Quick connection fitting NANO with M6x1(M) on one end.
NA-QC-01-01	Quick connection fitting NANO with M8 keg(M) on one end.



Distribution tubes:

Set of distribution tubes in Teflon covered in braided stainless steel AISI 304. OD:6.5 mm. ID:2.3 mm.
M6x1(M) thread in each extreme. Material: Steel ZnNi
Minimum bending radius: 15 mm
Maximum pressure: 220 Bar (3.190 PSI)

Ref.	Description
NA-DT-01-00	M6x1(M), flexible tube OD:6.5 mm, L:4" (102 mm), M6x1(M)
NA-DT-01-01	M6x1(M), flexible tube OD:6.5 mm, L:8" (203 mm), M6x1(M)
NA-DT-01-02	M6x1(M), flexible tube OD:6.5 mm, L:12" (305 mm), M6x1(M)
NA-DT-01-03	M6x1(M), flexible tube OD:6.5 mm, L:16" (406 mm), M6x1(M)



Copper distribution tubes OD:3 mm, ID:1 mm, with M6x1(M) thread on one end and coupling to the copper tube with sealing ring ID:3 mm.
Maximum pressure: 220 Bar (3.190 PSI)

Ref.	Description
NA-DT-02-00	M6x1(M) with sealing ring, copper tube OD:3 mm and L:4" (102 mm), open end tube.
NA-DT-02-01	M6x1(M) with sealing ring, copper tube OD:3 mm and L:8" (203 mm), open end tube.
NA-DT-02-02	M6x1(M) with sealing ring, copper tube OD:3 mm and L:12" (305 mm), open end tube.
NA-DT-02-03	M6x1(M) with sealing ring, copper tube OD:3 mm and L:16" (406 mm), open end tube.



Standard coolant distribution blocks:

Compact and space saving design. Inlet M6x1(F) and outlets M6x1(F).

Material: Steel ZnNi

Ref.	Description
NA-DB-01-00	12x12x70 mm block with through coolant and M6x1(F) inlet in one end and 4 outlets in M6x1(F) in one of the faces. Fastening to the machine with 3 holes for M5 screw. Reversible mounting position.

Connectors and adaptors:

To adapt connection tubes and quick connectors.

Material: Steel ZnNi

Ref.	Description
NA-CA-01-00	M6x1(F) to BSP 1/8"(M)
NA-CA-01-01	M6x1(F) to M10x1(M)
NA-CA-01-02	M6x1(F) to M6x1(M)
NA-CA-01-03	M6x1(F) to M6x1(F)
NA-CA-01-04	Nut for sealing ring ID:3 mm SW8
NA-CA-01-05	M6x1(F) to M5x0.8(M)
NA-CA-01-06	M6x1(F) to M8x1(M)
NA-CA-01-07	M6x1(M) to sealing ring ID:3 mm SW8
NA-CA-01-08	M6x1(F) to M6x1 keg(M)
NA-CA-02-00	Sealing ring ID:3 mm.
NA-CA-03-00	Spacer H:8 mm M6x1(M)-M6x1(F)
NA-CA-03-01	Spacer H:13 mm M6x1(M)-M6x1(F)
NA-CA-04-00	Short banjo M6x1(F) (does not include banjo bolt ref. NA-CA-04-09)
NA-CA-04-01	Short banjo M6x1(M) (does not include banjo bolt ref. NA-CA-04-09)
NA-CA-04-02	Long straight banjo M6x1(F) (does not include banjo bolt ref. NA-CA-04-09)
NA-CA-04-03	Long curved banjo M6x1(F) (does not include banjo bolt ref. NA-CA-04-09)
NA-CA-04-04	Banjo bolt M6x1(M)
NA-CA-04-05	Banjo bolt double length M6x1(M) to connect 2 Banjos

Locking and connecting plugs:

Plugs and locking plugs to connect to the quick connectors.

Material: Steel ZnNi

Ref.	Description
NA-CC-01-00	Sealing plug with quick connection fitting NANO
NA-CC-01-01	Quick connection fitting NANO to M6x1(F)
NA-CC-01-02	Non-rotating (positioning) quick connection fitting NANO to M6x1(F)
NA-CC-01-03	Non-rotating (positioning) quick connection fitting NANO to M6x1(M)
NA-CC-01-04	Sealing plug M6x1(M)

Sealing gasket:

Guarantees the tightness between the different connecting elements and according to the required diameters. Common to MICRO and NANO program.

Material: Copper.

Ref.	Description
UN-SG-01-00	Sealing gasket in copper for M5 (10 units)
UN-SG-01-01	Sealing gasket in copper for M6 (10 units)
UN-SG-01-02	Sealing gasket in copper for M8 (10 units)
UN-SG-01-03	Sealing gasket in copper for M10 and BSP 1/8" (10 units)



Ball nozzles and Tube nozzles:

Nozzles for coolant distribution with different I.D. and with and without tube outlet.

Locking nut and M6x1(M) fitting. Material: Steel ZnNi

Ball nozzle and tube nozzle. Material: Stainless Steel 18-8.

Ref.	Description
NA-NZ-01-00	Fitting M6x1(M) with ball-type nozzle coolant outlet. ID coolant through hole: 1 mm
NA-NZ-01-01	Fitting M6x1(M) with ball-type nozzle coolant outlet. ID coolant through hole: 1.5 mm
NA-NZ-01-02	Fitting M6x1(M) with ball-type nozzle coolant outlet. ID coolant through hole: 2 mm
NA-NZ-02-00	Fitting M6x1(M) with tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1 mm
NA-NZ-02-01	Fitting M6x1(M) with tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1.5 mm
NA-NZ-02-02	Fitting M6x1(M) with tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 2 mm
NA-NZ-03-00	Fitting M6x1(M) with 45° angled tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1 mm
NA-NZ-03-01	Fitting M6x1(M) with 45° angled tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 1.5 mm
NA-NZ-03-02	Fitting M6x1(M) with 45° angled tube-type nozzle coolant outlet mounted in a swiveling ball. ID coolant through hole: 2 mm

Fastening keys for the coolant distribution fittings:

Special wrench for NANO program assembly. 8 mm between flats.

Ref.	Description
NA-FK-01-00	Wrench for assembly on the universal hexagon used in the NANO program. SW8

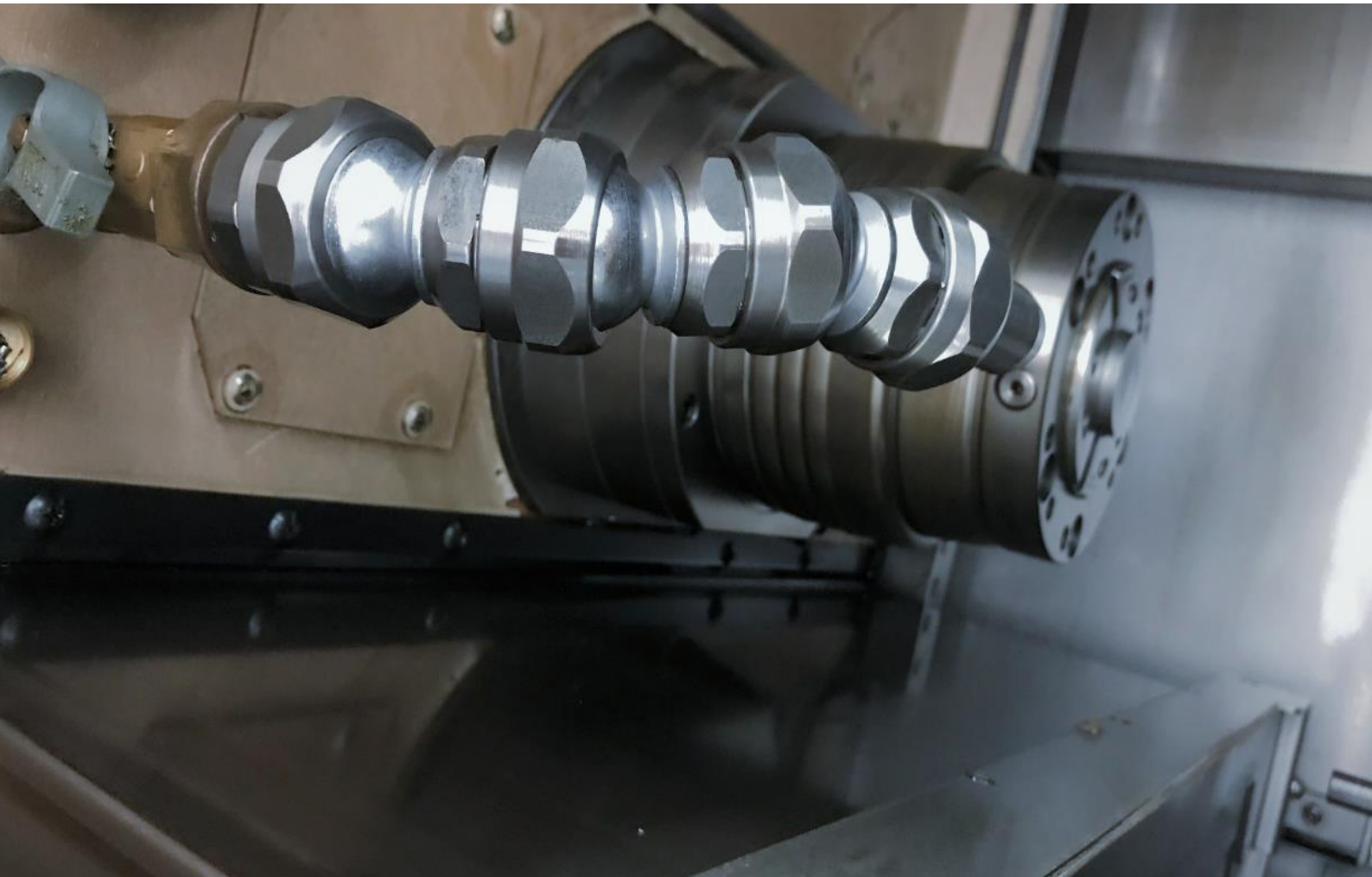
Starter kit:

Set of components to start and become familiar with the SCS Coolant Distribution System NANO program. Basic set of components delivered in a basic kit for the most typical applications.

Ref.	Description
NA-SK-01-00	<p>Basic Kit Drilling/Boring NANO: For collet tool holder or round shank tool</p> <p>Quick Connection fittings: 1 unit NA-QC-01-01 Quick connection fitting NANO with M6x1(M) in one end.</p> <p>Distribution tubes: 1 unit NA-DT-01-05 M6x1(M), flexible tube 8" (203 mm), M6x1(M) 1 unit NA-DT-01-06 M6x1(M), flexible tube 12" (305 mm), M6x1(M)</p> <p>Standard coolant distribution block: 1 unit NA-DB-01-01 12x12x70 mm block with through coolant and M6x1(F) inlet on one end and 4 outlets in M6x1(F) in one of the faces. Fastening to the machine with 3 holes for M5 screw. Reversible mounting position.</p> <p>Connectors and adaptors: 1 unit NA-CA-01-09 M6x1(F) to BSP 1/8"(M) 1 unit NA-CA-01-15 M6x1(F) to M8x1(M) 1 unit NA-CA-04-05 Short banjo M6x1(F) 1 unit NA-CA-04-09 Banjo bolt M6x1(M)</p> <p>Locking and connecting plugs: 1 unit NA-CC-01-00 Sealing plug with quick connection fitting NANO 1 unit NA-CC-01-06 Quick connection fitting NANO to M6x1(F) 3 units CC-01-04 Sealing plug M6x1(M)</p> <p>Sealing gasket: 2 units UNA-SG-01-01 Sealing gasket in copper for M6 (10 units) 1 unit UNA-SG-01-02 Sealing gasket in copper for M8 (10 units) 1 unit SG-01-03 Sealing gasket in copper for M10 and BSP 1/8" (10 units)</p> <p>Fastening keys for the coolant distribution fittings: 2 unit NA-FK-01-01 Wrench for assembly on the universal hexagon used in the NANO program. SW8 (8 mm between flats)</p>

Ref.	Description
NA-SK-01-01	<p>Basic Kit Turning/Grooving/Cut off NANO: For square shank tool holders</p> <p>Quick Connection fittings: 1 unit NA-QC-01-01 Quick connection fitting NANO with M6x1(M) on one end.</p> <p>Distribution tubes: 1 unit NA-DT-01-05 M6x1(M), flexible tube 8" (203 mm), M6x1(M) 1 unit NA-DT-01-06 M6x1(M), flexible tube 12" (305 mm), M6x1(M)</p> <p>Standard coolant distribution block: 1 unit NA-DB-01-01 12x12x70 mm block with through coolant and M6x1(F) inlet on one end and 4 outlets in M6x1(F) in one of the faces. Fastening to the machine with 3 holes for M5 screw. Reversible mounting position.</p> <p>Connectors and adaptors: 1 unit NA-CA-01-14 M6x1(H) to M5x0.8(M) 1 unit NA-CA-01-15 M6x1(H) to M8x1(M) 1 unit NA-CA-03-03 Spacer H:8 mm M6x1(M)-M6x1(F) 1 unit NA-CA-03-04 Spacer H:13 mm M6x1(M)-M6x1(F) 1 unit NA-CA-04-05 Short banjo M6x1(F) 1 unit NA-CA-04-09 Banjo bolt M6x1(M)</p> <p>Locking and connecting plugs: 1 unit NA-CC-01-00 Sealing plug with quick connection fitting NANO 1 unit NA-CC-01-06 Quick connection fitting NANO to M6x1(F) 3 units CC-01-04 Sealing plug M6x1(M)</p> <p>Sealing gasket: 1 units UNA-SG-01-00 Sealing gasket in copper for M5 (10 units) 2 units UNA-SG-01-01 Sealing gasket in copper for M6 (10 units) 1 unit UNA-SG-01-02 Sealing gasket in copper for M8 (10 units)</p> <p>Fastening keys for the coolant distribution fittings: 2 unit NA-FK-01-01 Wrench for assembly on the universal hexagon used in the NANO program. SW8 (8 mm between flats)</p>

2. ARTICULATED STEEL FLEXIBLE
DISTRIBUTION TUBES FOR MACHINING
WITH LOW, MEDIUM AND HIGH-PRESSURE
COOLANT



COOLANT DISTRIBUTION SYSTEM WITH ARTICULATED FLEXIBLE TUBES IN NiZn STEEL WITH 4 DIFFERENT PROGRAMS (DIMENSIONS) FOR LOW, MEDIUM AND HIGH PRESSURE

Modular articulated system for the supply of refrigerant at low, medium or high-pressure. Ideal for both fixed-head and Swiss-type CNC lathes, vertical and horizontal machining centers, grinding or transfer machines

4 manufacturing programs according to the required flow:

- DECA: 3 mm through hole for coolant supply.
- HECTO: 6 mm through hole for coolant supply.
- MEGA: 10.5 mm through hole for coolant supply.
- GIGA: 16 mm through hole for coolant supply.

Pressure (Bar)	DECA (l/min)	HECTO (l/min)	MEGA (l/min)	GIGA (l/min)
2	6	24	73	169
8	12	48	145	338
15	16	65	199	463
20	19	75	230	534
30	23	92	282	654
50	30	119	364	844
80	38	150	460	1068
100	42	168	---	---
150	51	---	---	---

The different programs can be connected with each other and with the MICRO and NANO programs.

Exclusive operation of the mechanism that allows to position and use it with low pressures without the need of tightening of the nuts, even in this mode of operation a total water tightness is maintained. For high-pressure work, it must be blocked to ensure stiffness.

It withstands the vibration and pressure of the refrigerant without losing the position. It can be orientated and fixed without the need to use mounting keys.

It allows to work with emulsion or cutting oil.

Resistant to pressures of up to 80 bar (1,160 psi) in the programs GIGA and MEGA, 100 bar (1,450 psi) in the program HECTO and 150 bar (2,175 psi) in the program DECA.

Manufactured with the utmost precision in steel and with ZnNi treatment to guarantee its durability.

DECA (3 mm) PROGRAM

The internal through hole of the DECA program is 3 mm and is ideal for the distribution of refrigerant (oil or emulsion) in small-sized machines such as Swiss-type CNC lathes, fixed-head CNC lathes, driven tools or as distribution branches of bigger programs (HECTO, MEGA or GIGA).

Maximum pressure: 150 Bar (2,175 psi)

Initial connection:

Connection elements with the machine-tool or other SCS coolant distribution programs. ID:3 mm.

Material: Steel ZnNi

Ref.	Description
DE-IC-01-00	M8x1(M) to articulated connection DECA.
DE-IC-01-01	M5x0.8(M) to articulated connection DECA.
DE-IC-01-02	M6x1(M) to articulated connection DECA.
DE-IC-01-03	M10x1(M) to articulated connection DECA.
DE-IC-01-04	BSP 1/8"(M) to articulated connection DECA.
DE-IC-01-05	BSP 1/4"(M) to articulated connection DECA.



Articulated connection:

Basic articulated elements which connect to each other. Swiveling $\pm 25^\circ$. ID:3 mm.

Material: Steel ZnNi

Ref.	Description
DE-AC-01-00	Articulated connection DECA L:12.5 mm
DE-AC-01-01	Articulated connection DECA L:27.5 mm
DE-AC-01-02	Articulated connection DECA L:42.5 mm
DE-AC-01-03	Articulated connection DECA L:57.5 mm
DE-AC-01-04	Articulated connection DECA L:72.5 mm
DE-AC-02-00	Articulated connection to 90° DECA



Distributors and adaptors:

Coolant distribution components, expansion of articulated lines and adaption to other SCS coolant distribution systems.

Material: Steel ZnNi

Ref.	Description
DE-DA-01-00	"Y" distributor to articulated connection DECA

Coolant nozzles:

Coolant distribution components, expansion of articulated lines and adaption to other SCS coolant distribution systems.

Material: Steel ZnNi

Ref.	Description
DE-NZ-01-00	Straight nozzle. DI:3 mm & L:10
DE-NZ-01-01	Straight nozzle DI:2 mm & L:10
DE-NZ-02-00	Nozzle 45°. DI:3 mm & L:15
DE-NZ-03-00	Nozzle 90°. DI:3 mm & L:15
DE-NZ-03-01	Nozzle 2 outlets at 90° . DI:3 mm & L:15



Fastening keys for the articulated system:

Special fastening wrenches for fastening the DECA articulated system.

Ref.	Description
DE-FK-01-00	Wrenches for fastening the 2 hexagons used in the DECA program. SW8 & SW9.

Starter kit:

Set of components to start and become familiar with the SCS Articulated Coolant Distribution System DECA program. Basic set of components delivered in a basic kit for the most typical applications.

Ref.	Description
DE-SK-01-00	<p>Kit Single Outlet DECA: For general cooling with a single outlet L=135 mm.</p> <p>Initial Connection: 1 unit DE-IC-01-00 M8x1(M) to articulated connection DECA.</p> <p>Articulated connection: 5 unit DE-AC-01-00 Articulated connection DECA L:12.5 mm 1 unit DE-AC-01-02 Articulated connection DECA L:42.5 mm</p> <p>Coolant nozzles: 1 unit DE-NZ-01-00 Straight nozzle. DI:3 mm & L:20 mm</p> <p>Fastening keys for the articulated system: Wrenches for fastening the 2 hexagons used in the DECA program. SW8 & SW9.</p>

HECTO (6 mm) PROGRAM

The internal through hole of the HECTO program is 6 mm and is ideal for the distribution of air and refrigerant (oil or emulsion) in small-sized machines such as Swiss-type CNC lathes, fixed-head CNC lathes, tapping centers, grinding machines or as distribution branches of bigger programs (MEGA or GIGA).
Maximum pressure: 100 Bar (1,450 psi)

Initial connection:

Connection elements with the machine-tool or other SCS coolant distribution programs. ID:6 mm.
Material: Steel ZnNi

Ref.	Description
HE-IC-01-00	BSP 1/4"(M) to articulated connection HECTO.
HE-IC-01-01	BSP 3/8"(M) to articulated connection HECTO.



Articulated connection:

Basic articulated elements which connect to each other. Swiveling $\pm 25^\circ$. ID:6 mm.
Material: Steel ZnNi

Ref.	Description
HE-AC-01-00	Articulated connection HECTO L:20.5 mm
HE-AC-01-01	Articulated connection HECTO L:45.5 mm
HE-AC-01-02	Articulated connection HECTO L:70.5 mm
HE-AC-01-03	Articulated connection HECTO L:95.5 mm
HE-AC-01-04	Articulated connection HECTO L:120.5 mm
HE-AC-02-00	Articulated connection to 90° HECTO



Distributors and adaptors:

Coolant distribution components, expansion of articulated lines and adaption to other SCS coolant distribution systems.

Material: Steel ZnNi

Ref.	Description
HE-DA-01-00	"Y" distributor to articulated connection HECTO

Coolant nozzles:

Coolant distribution components, expansion of articulated lines and adaption to other SCS coolant distribution systems.

Material: Steel ZnNi

Ref.	Description
HE-NZ-01-00	Straight nozzle. DI:6 mm & L:20
HE-NZ-01-01	Straight nozzle. DI:3 mm & L:20
HE-NZ-01-02	Straight nozzle. DI:2 mm x 3 & L:20
HE-NZ-01-03	Straight nozzle. DI:3 mm x 2 & L:20
HE-NZ-02-00	Nozzle 45°. DI:6 mm & L:25
HE-NZ-03-00	Nozzle 90°. DI:6 mm & L:25
HE-NZ-03-01	Nozzle 4 outlets at 90°. DI:3 mm & L:30



Fastening keys for the articulated system:

Special fastening wrenches for fastening the HECTO articulated system.

Ref.	Description
HE-FK-01-00	Wrenches for fastening the 2 hexagons used in the HECTO program. SW13 & SW15.

Starter kit:

Set of components to start and become familiar with the SCS Articulated Coolant Distribution System DECA program. Basic set of components delivered in a basic kit for the most typical applications.

Ref.	Description
HE-SK-01-00	<p>Kit Single Outlet HECTO: For general cooling with a single outlet L=220 mm.</p> <p>Initial Connection: 1 unit HE-IC-01-00 BSP 1/8”(M) to articulated connection HECTO.</p> <p>Articulated connection: 5 units HE-AC-01-00 Articulated connection HECTO L:20.5 mm 1 unit HE-AC-01-02 Articulated connection HECTO L:70.5 mm</p> <p>Coolant nozzles: 1 unit HE-NZ-01-00 Straight nozzle. DI:6 mm & L:25 mm</p> <p>Fastening wrenches for the articulated system: Wrenches for fastening the 2 hexagons used in the HECTO program. SW13 & SW15.</p>

MEGA (10.5 mm) PROGRAM

The internal through hole of the MEGA program is 10.5 mm and is ideal for the distribution of air and refrigerant (oil or emulsion) in medium and large-sized machines such as CNC lathes, machining centers, grinding machines or as distribution branches of the biggest program (GIGA).

Maximum pressure: 80 Bar (1,160 psi)

Initial connection:

Connection elements with the machine-tool or other SCS coolant distribution programs. ID:10.5 mm.

Material: Steel ZnNi

Ref.	Description
ME-IC-01-00	BSP 3/8"(M) to articulated connection MEGA.
ME-IC-01-01	BSP 1/2"(M) to articulated connection MEGA.



Articulated connection:

Basic articulated elements which connect to each other. Swiveling $\pm 25^\circ$. ID:10.5 mm.

Material: Steel ZnNi

Ref.	Description
ME-AC-01-00	Articulated connection MEGA L:28.5 mm
ME-AC-01-01	Articulated connection MEGA L:78.5 mm
ME-AC-01-02	Articulated connection MEGA L:128.5 mm
ME-AC-01-03	Articulated connection MEGA L:178.5 mm
ME-AC-01-04	Articulated connection MEGA L:228.5 mm
ME-AC-02-00	Articulated connection to 90° MEGA



Distributors and adaptors:

Coolant distribution components, expansion of articulated lines and adaption to other SCS coolant distribution systems.

Material: Steel ZnNi

Ref.	Description
ME-DA-01-00	"Y" distributor to articulated connection MEGA

Coolant nozzles:

Coolant distribution components, expansion of articulated lines and adaption to other SCS coolant distribution systems.

Material: Steel ZnNi

Ref.	Description
ME-NZ-01-00	Straight nozzle. DI:10.5 mm & L:27 mm
ME-NZ-01-01	Straight nozzle. DI:7 mm & L:27
ME-NZ-01-02	Straight nozzle. DI:4 mm x 3 & L:27
ME-NZ-01-03	Straight nozzle. DI:3 mm x 4 & L:27
ME-NZ-02-00	Nozzle 45°. DI:10.5 mm & L:30 mm
ME-NZ-03-00	Nozzle 90°. DI:10.5 mm & L:30 mm
ME-NZ-03-01	Nozzle 6 outlets at 90°. DI:4 mm & L:48 mm

Fastening keys for the articulated system:

Special fastening wrenches for fastening the MEGA articulated system.

Ref.	Description
ME-FK-01-00	Wrenches for fastening the 2 hexagons used in the MEGA program. SW21 & SW24.

Starter kit:

Set of components to start and become familiar with the SCS Articulated Coolant Distribution System MEGA program. Basic set of components delivered in a basic kit for the most typical applications.

Ref.	Description
ME-SK-01-00	<p>Kit Single Outlet MEGA: For general cooling with a single outlet L=260 mm.</p> <p>Initial Connection: 1 unit ME-IC-01-00 BSP 3/8”(M) to articulated connection MEGA.</p> <p>Articulated connection: 5 units ME-AC-01-00 Articulated connection MEGA L:28.5 mm 1 unit ME-AC-01-02 Articulated connection MEGA L:78.5 mm</p> <p>Coolant nozzles: 1 unit ME-NZ-01-00 Straight nozzle. DI:10.5 mm & L:27 mm</p> <p>Fastening keys for the articulated system: Wrenches for fastening the 2 hexagons used in the MEGA program. SW21 & SW24.</p>

GIGA (16 mm) PROGRAM

The internal through hole of the GIGA program is 16 mm and is ideal for the distribution of air and refrigerant (oil or emulsion) in medium and large-sized machines such as CNC lathes, machining centers or grinding machines.

Maximum pressure: 80 Bar (1,160 psi)

Initial connection:

Connection elements with the machine-tool or other SCS coolant distribution programs. ID:16 mm.

Material: Steel ZnNi

Ref.	Description
GI-IC-01-00	BSP 1/2"(M) to articulated connection GIGA.
GI-IC-01-01	BSP 3/4"(M) to articulated connection GIGA.



Articulated connection:

Basic articulated elements which connect to each other. Swiveling $\pm 25^\circ$. ID:16 mm.

Material: Steel ZnNi

Ref.	Description
GI-AC-01-00	Articulated connection GIGA L:37 mm
GI-AC-01-01	Articulated connection GIGA L:87 mm
GI-AC-01-02	Articulated connection GIGA L:137 mm
GI-AC-01-03	Articulated connection GIGA L:187 mm
GI-AC-01-04	Articulated connection GIGA L:237 mm
GI-AC-02-00	Articulated connection to 90° GIGA



Distributors and adaptors:

Coolant distribution components, expansion of articulated lines and adaption to other SCS coolant distribution systems.

Material: Steel ZnNi

Ref.	Description
GI-DA-01-00	"Y" distributor to articulated connection GIGA

Coolant nozzles:

Nozzles with several designs adapted to meet different coolant delivery requirements.

Material: Steel ZnNi

Ref.	Description
GI-NZ-01-00	Straight nozzle. DI:16 mm & L:38.5 mm
GI-NZ-01-01	Straight nozzle. DI:10 mm & L:38.5
GI-NZ-02-00	Nozzle 45°. DI:16 mm & L:38.5 mm
GI-NZ-03-00	Nozzle 90°. DI:16 mm & L:38.5 mm
GI-NZ-03-01	Nozzle 6 outlets at 90°. DI:16 mm & L:38.5 mm



Fastening keys for the articulated system:

Special fastening wrenches for fastening the GIGA articulated system.

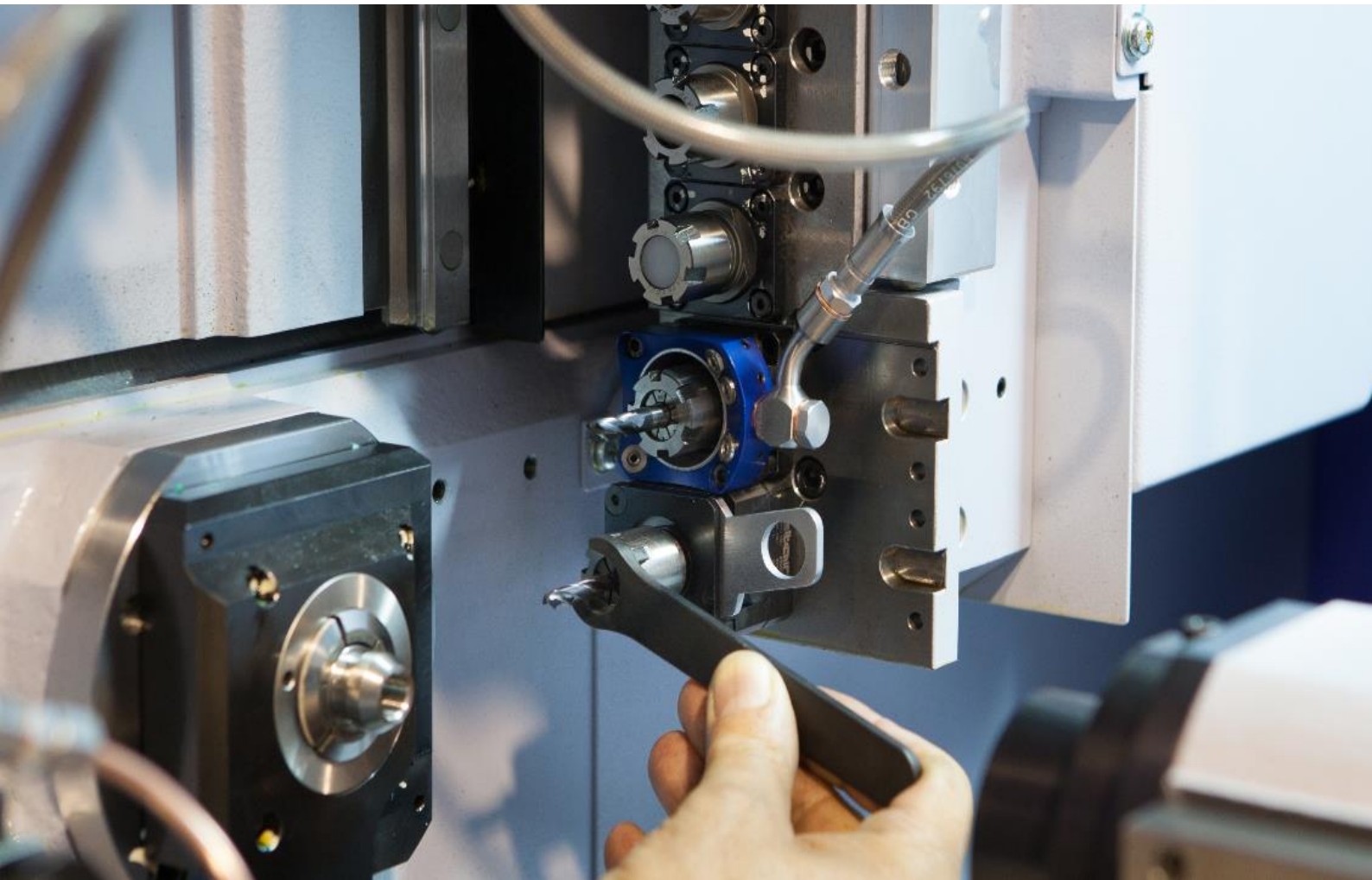
Ref.	Description
GI-FK-01-00	Wrenches for fastening the 2 hexagons used in the GIGA program. SW30 & SW35.

Starter kit:

Set of components to start and become familiar with the SCS Articulated Coolant Distribution System GIGA program. Basic set of components delivered in a basic kit for the most typical applications.

Ref.	Description
GI-SK-01-00	<p>Kit Single Outlet GIGA: For general cooling with a single outlet L=330 mm.</p> <p>Initial Connection: 1 unit GI-IC-01-00 BSP 3/4" (M) to articulated connection GIGA.</p> <p>Articulated connection: 5 units GI-AC-01-00 Articulated connection GIGA L:37 mm 1 unit GI-AC-01-02 Articulated connection GIGA L:87 mm</p> <p>Coolant nozzles: 1 unit GI-NZ-01-00 Straight nozzle. DI:16 mm & L:38.5 mm</p> <p>Fastening keys for the articulated system: Wrenches for fastening the 2 hexagons used in the GIGA program. SW30 & SW35.</p>

3. ACCESORIES FOR SAFETY AND PRODUCTIVITY IMPROVEMENT



ACCESSORIES FOR SAFETY AND PRODUCTIVITY IMPROVEMENT IN THE PREPARATION AND OPERATION OF CNC LATHES

Protective covers for tool holders ER-collets, locking systems for safe tool change in driven tool holders, coolant distribution rings for fixed and driven tool holders.

A set of different components that help improve productivity in the CNC lathe operation and safety while performing a tool change or machine set-up.



Minimize the risk of accidents,
improve productivity and
precision

Locking systems for safe tool change in driven tool holders*.



The traditional system for tool change in driven tool holders is not safe.



Manual tool change is not safe, and it is easy that the operator suffers from small cuts to severe injuries.

- ✘ Both hands needed to unlock the collet nut of the driven tool.
- ✘ Uncomfortable position of the operator, often unable to maintain stability and hold, having to literally enter the machine.
- ✘ High risk of cutting with the edge of tools mounted on other blocks of the machine.
- ✘ Possibility of severe injuries in case one of the unlocking keys disengages and the operator loses balance.

The SCS Safe Tool Change system minimizes the risk of injury and greatly reduces tool change time.

- ✓ By inserting a locking key into the slot of the tool changing device the driven tool holder becomes blocked.
- ✓ Only one hand is needed to unlock the collet nut.
- ✓ The operator can be in a much more comfortable position and use the hand that is free to hold himself in position, have better stability and therefore avoid losing balance.
- ✓ The Safe Tool Change device remains installed in the machine without altering its operation and serves as the basis for the SCS refrigerant distribution systems.



*Patent pending

Blocking systems for safe tool change in driven tool holders for CNC lathes:

Improves drastically the safety of machine-tool operators and avoids potential injuries in the tool change or adjustment of tools in rotary tool holders (collet type).

Material: Steel ZnNi

Ref.	Description
SP-BS-01-00	Blocking system for mounting in radial rotary tool holder ref. 331-50-00 with ER-16 collet in STAR lathes. Does not include locking key ER-16 ref. SP-BS-03-00.
SP-BS-01-01	Blocking system for mounting in radial rotary tool holder ref. 7.072.950 with ER-20 collet in STAR lathes. Does not include locking key ER-20 ref. SP-BS-03-01.
SP-BS-01-02	Blocking system for mounting in radial rotary tool holder ref. 571-55-00 or ref. 7.073.789 with ER-16 collet in STAR lathes. Does not include locking key ER-16 ref. SP-BS-03-00.
SP-BS-01-03	Blocking system for mounting in back side tool holders ref. 0R1-61 with ER-16 collet in STAR lathes. Does not include locking key ER-16 ref. SP-BS-03-00.
SP-BS-03-00	Blocking key for ER-16 collet
SP-BS-03-01	Blocking key for ER-20 collet



Coolant distribution rings for fixed and driven tool holders in CNC lathes:

The coolant flow can be easily and efficiently oriented towards the cutting edge of the tools mounted in the driven tool holders.

To be assembled on top of the Blocking system for safe tool change ref. SP-BS-01-XX or independently.

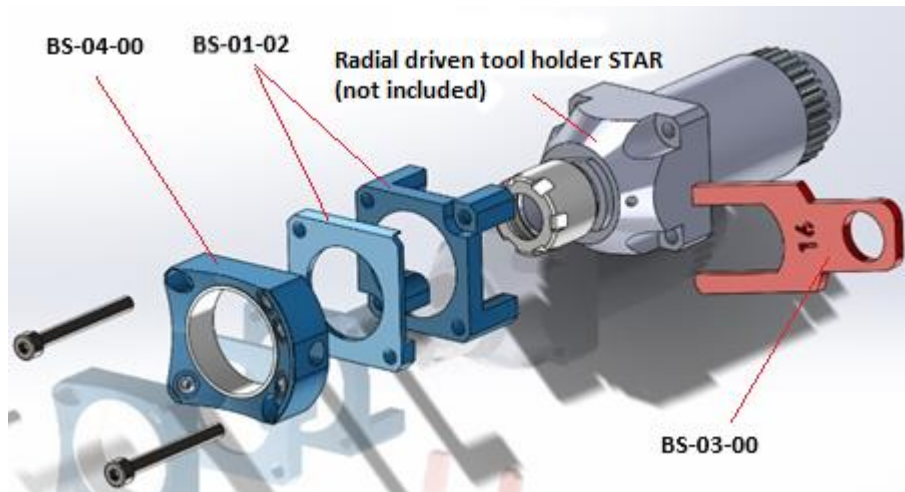
Material: Steel ZnNi

Ref.	Description
SP-BS-04-00	Coolant distribution ring with inlet M8x1(F) and 3 orientable ball-type nozzle outlets with ID:1 mm. To be mounted in STAR lathes: 1. Radial driven tool holder ref. 331-50-00 with ER-16 collet. 2. Radial driven tool holder ref. 571-55-00 or ref. 7.073.789 with ER-16 collet. Requires Blocking system ref. SP-BS-01-02 as a base for assembly
SP-BS-04-01	Coolant distribution ring with inlet M8x1(F) and 3 orientable ball-type nozzle outlets with ID:1 mm. To be mounted in STAR lathes: Radial driven tool holder ref. 7.072.950 with ER-20 collet.
SP-BS-04-02	Coolant distribution ring with inlet M8x1(F) and 3 orientable ball-type nozzle outlets with ID:1 mm. To be mounted in STAR lathes: Back post driven tool holder ref. OR1-61 with ER-16 collet.



EXAMPLE OF ASSEMBLY:

Blocking systems for safe tool change and coolant distribution ring for driven tool holders.



- SP-BS-04-00: Coolant distribution ring with inlet M8x1(F) and 3 orientable ball-type nozzle outlets
- SP-BS-01-02: Blocking system for radial driven tool holder ref. 571-55-00 or ref. 7.073.789 with ER-16 Collet for STAR lathe
- SP-BS-03-00: Blocking key for ER-16 collet

Protective covers for ER-collet tool holders:

Protects against undesired coolant, chips or dirt ingress into driven or fixed tool holders with ER-collet clamping system, especially when mounted in the machine and not in use.

Material: White polyamide.

Ref.	Description
SP-PC-01-00	Protective cover for tool holder with collet type ER-11
SP-PC-01-01	Protective cover for tool holder with collet type ER-16
SP-PC-01-02	Protective cover for tool holder with collet type ER-20
SP-PC-01-03	Protective cover for tool holder with collet type ER-25
SP-PC-01-04	Protective cover for tool holder with collet type ER-32

