

SAFETY & PRODUCTIVITY

ACCESSORIES FOR SAFETY AND PRODUCTIVITY IMPROVEMENT

PRODUCTIVITY AND SAFETY IMPROVEMENTS IN CNC MACHINE-TOOLS

INDEX

INTRODUCTION	4
BLOCKING SYSTEMS FOR SAFE TOOL CHANGE IN DRIVEN TOOL HOLDERS FOR SWISS-TYPE LATHES.....	5
BLOCKING SYSTEMS FOR STAR.....	7
<i>SP-BS-01-00 + SP-BS-03-00 (Blocking system for tool holder 331-50-00)</i>	<i>7</i>
<i>SP-BS-01-01 + SP-BS-03-01 (Blocking system for tool holder 7.072.950).....</i>	<i>8</i>
<i>SP-BS-01-02 + SP-BS-03-00 (Blocking system for tool holder 571-55-00)</i>	<i>9</i>
<i>SP-BS-01-03 + SP-BS-03-02 (Blocking system for tool holder OR1-61).....</i>	<i>10</i>
<i>SP-BS-01-04 + SP-BS-03-03 (Blocking system for tool holder 571-61-00)</i>	<i>11</i>
<i>SP-BS-01-06 + SP-BS-03-05 (Blocking system for tool holder 101-68-00)</i>	<i>12</i>
<i>SP-BS-01-05 + SP-BS-03-04 (Blocking system for Standard 3 x ER-16 non-cartridge radial tool holder SR-20 family)</i>	<i>13</i>
BLOCKING SYSTEMS FOR CITIZEN.....	14
<i>SP-BS-21-00 + SP-BS-31-00 (Blocking system for tool holder GSC-807)</i>	<i>14</i>
<i>SP-BS-31-00 + SP-BS-33-00 (Blocking system for tool holder GSC-807)</i>	<i>15</i>
<i>SP-BS-21-01 + SP-BS-23-01 (Blocking system for tool holder MSC-507)</i>	<i>16</i>
<i>SP-BS-21-02 + SP-BS-23-02 (Blocking system for tool holder GSC-1110/1310).....</i>	<i>17</i>
BLOCKING SYSTEMS FOR TORNOS	18
<i>SP-BS-41-00 + SP-BS-43-00 (Blocking system for tool holder 306164)</i>	<i>18</i>
<i>SP-BS-41-00-B + SP-BS-43-00-B (Blocking system for tool holder MADAULA P0000094 equivalent to 306164)</i>	<i>19</i>
COOLANT DISTRIBUTION RINGS FOR FIXED AND DRIVEN TOOL HOLDERS IN CNC LATHES:	20
COOLANT RINGS FOR STAR	21
<i>SP-BS-04-00 (Coolant ring for tool holder 331-50-00, 7.072.950 & 571-55-00).....</i>	<i>21</i>
<i>SP-BS-04-02 (Coolant ring for tool holder OR1-61).....</i>	<i>23</i>
<i>SP-BS-04-03 (Coolant ring for tool holder 571-61-00).....</i>	<i>24</i>
COOLANT RINGS FOR CITIZEN	25
<i>SP-BS-24-00 (Coolant ring for tool holder GSC-807, GSC-1110/1310 & MSC-507)</i>	<i>25</i>
TOOLING FOR COOLANT DISTRIBUTION RINGS	26
<i>SP-BS-05-00 (Wrench for locking/unlocking ball nozzle).....</i>	<i>26</i>
<i>SP-BS-05-01 (Pin for orienting the ball nozzle).....</i>	<i>27</i>
SPINDLE/SUBSPINDLE BLOCKING SYSTEMS FOR SAFE COLLET CHANGE OR ADJUSTMENT IN SWISS-TYPE LATHES:.....	28
SPINDLE/SUBSPINDLE BLOCKING FOR STAR	30
<i>SP-SB-01-00 (Spindle blocking system for STAR SR-20J).....</i>	<i>30</i>
<i>SP-SB-01-01 (Subspindle blocking system for STAR SR-20J)</i>	<i>31</i>
<i>SP-SB-01-02 (Spindle blocking system for STAR SB-20R).....</i>	<i>32</i>
<i>SP-SB-01-03 (Subspindle blocking system for STAR SB-20R)</i>	<i>33</i>
EXTENSION TUBE FROM ER MINI TYPE NUT TO HEXAGON WITH RING END WRENCH FOR SAFE TOOL CHANGE	34
EXTENSION TUBES ER MINI REGO TO HEXAGONAL	35
<i>SP-ET-01 (Extension tube from ER-11M to Hex. 13).....</i>	<i>35</i>
<i>SP-ET-02 (Extension tube from ER-16M to Hex. 19).....</i>	<i>36</i>
<i>SP-ET-03 (Extension tube from ER-20M to Hex. 24).....</i>	<i>37</i>
WRENCHES FOR TIGHTENING THE EXTENSION TUBE FROM ER MINI NUT TO HEXAGONAL.....	38
<i>SP-FK-01 (Ring end wrench for Hex. 13).....</i>	<i>38</i>
<i>SP-FK-02 (Ring end wrench for Hex. 19).....</i>	<i>39</i>
<i>SP-FK-03 (Ring end wrench for Hex. 24).....</i>	<i>40</i>

ADAPTOR FROM ER MINI TYPE NUT TO HEXAGON WITH RING END WRENCH FOR SAFE TOOL CHANGE AND OPTIMIZED MACHINING WITH DISC CUTTERS.....	41
<i>Application 1: General application for safe tool change.....</i>	<i>42</i>
<i>Application 2: Optimized machining with disc milling cutters or T-slot milling cutters.</i>	<i>43</i>
ADAPTORS	44
<i>SP-AN-02-00 (Adaptor from ER-16M to Hex. 25)</i>	<i>44</i>
WRENCHES FOR TIGHTENING THE ADAPTOR FROM ER MINI NUT TO HEXAGONAL (FOR SAFE TOOL CHANGE APPLICATION) ...	45
<i>SP-FK-04-00 (Ring end wrench for Hex. 25).....</i>	<i>45</i>
TOOL PROTECTION FOR COLLET TOOL HOLDERS WITH ER MINI NUT	46
<i>SP-TP-01 (Tool protector ER-11M)</i>	<i>48</i>
<i>SP-TP-02 (Tool protector ER-16M)</i>	<i>49</i>
<i>SP-TP-03 (Tool protector ER-20M)</i>	<i>50</i>
PROTECTIVE COVERS FOR ER-COLLET TOOL HOLDERS.....	51
<i>SP-PC-01 (Protective cover in white polyamide)</i>	<i>52</i>
<i>SP-PC-03 (Protective cover in anodized aluminum)</i>	<i>53</i>
MANUAL TOOL FOR ACCURATE BENDING OF COOLANT TUBES	54
<i>SP-BT-01-00 (Bending tool for tubes OD:8 mm).....</i>	<i>55</i>
<i>SP-BT-01-01 (Bending tool for tubes OD:6 mm).....</i>	<i>56</i>

INTRODUCTION

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, tool protectors, extension tubes for ER Mini nuts, etc.

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.

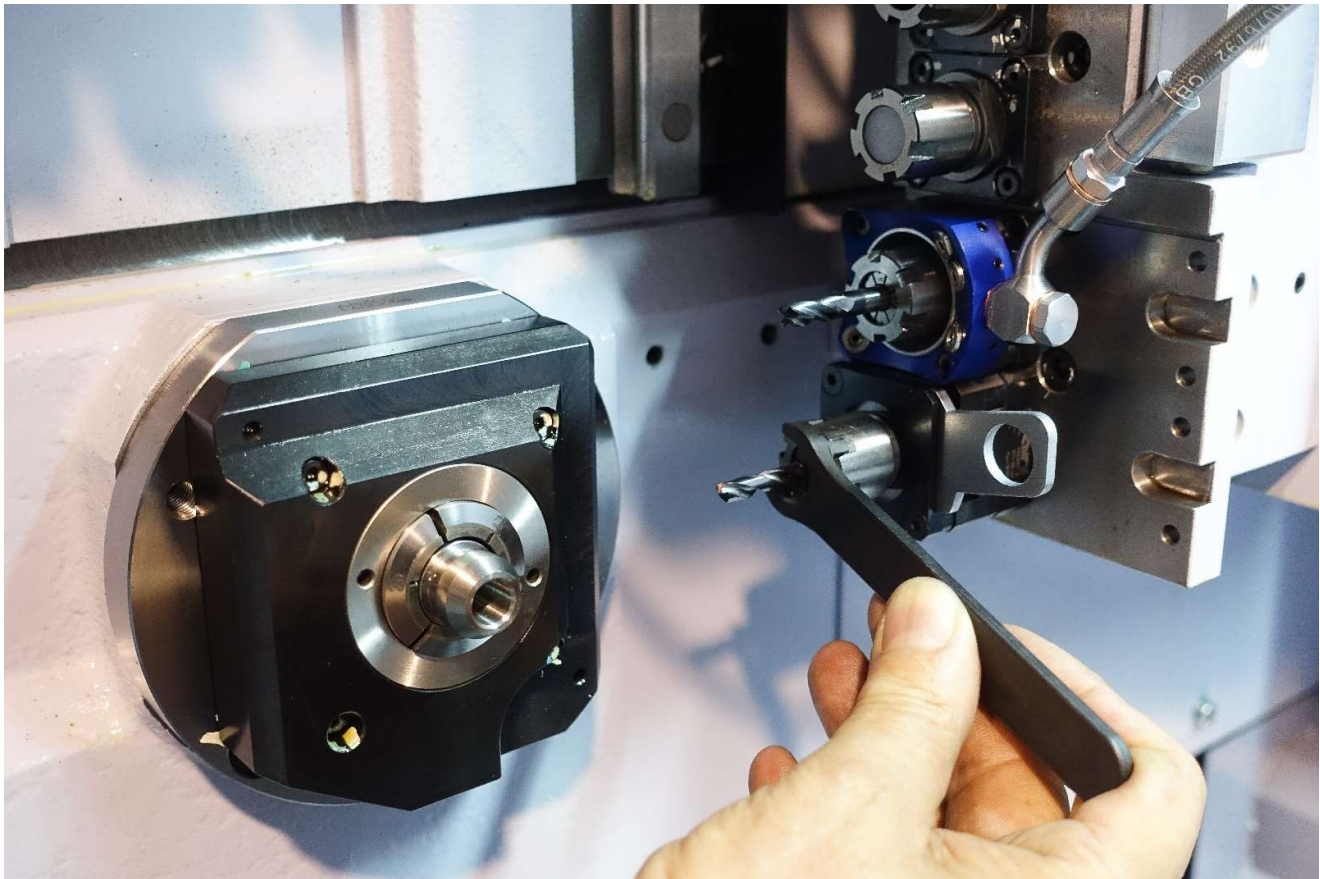


Minimize the risk of accidents,
improve productivity and
precision

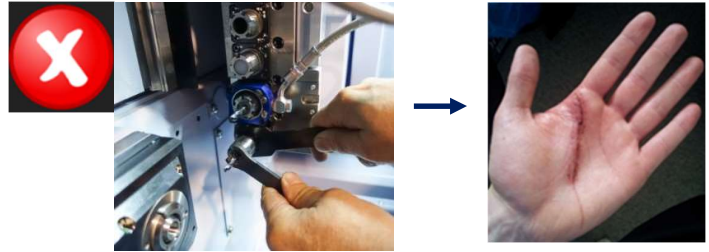
BLOCKING SYSTEMS FOR SAFE TOOL CHANGE IN DRIVEN TOOL HOLDERS FOR SWISS-TYPE LATHES

Improves drastically the safety of the tool change operation reducing radically the risk of injuries.
Makes the tool-change operation quicker and easier to apply the necessary torque when tightening the collet nut.

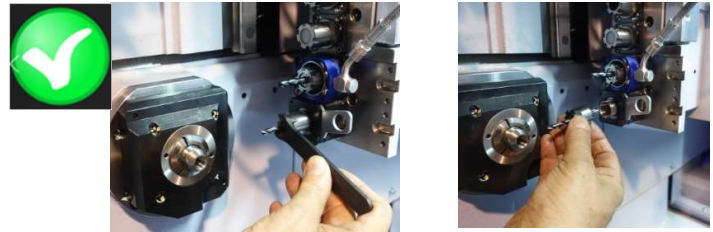
Material: Steel



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



SCS Blocking systems for safe tool change in driven tool holders reduces the risk of accidents drastically*.



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.

*Patent pending

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 Coolant distribution ring.

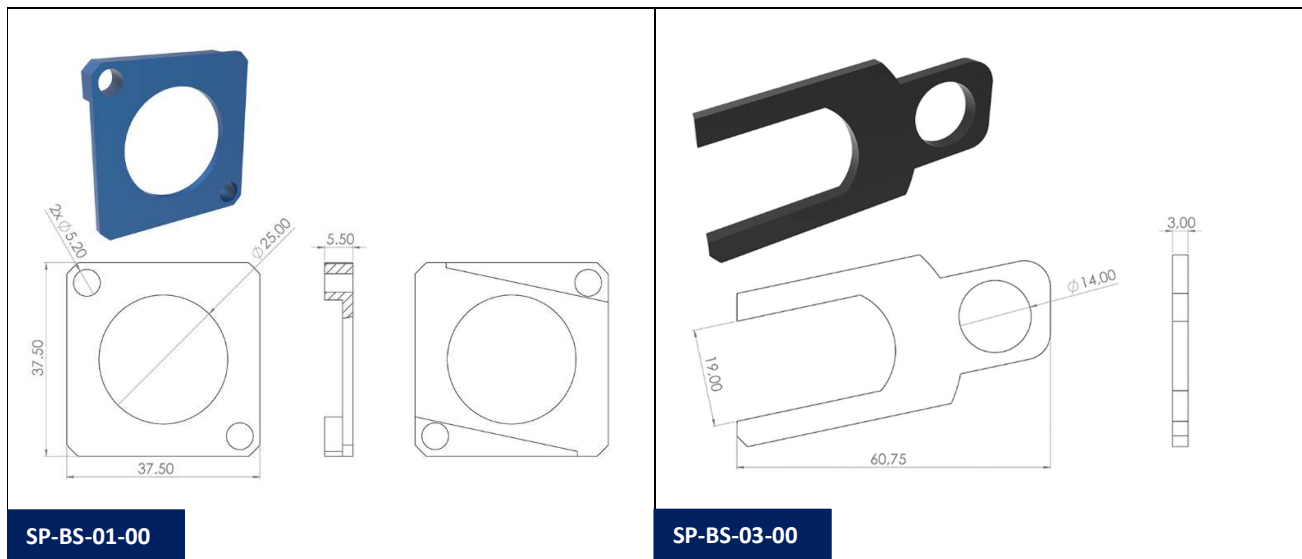


BLOCKING SYSTEMS FOR STAR

SP-BS-01-00 + SP-BS-03-00 (Blocking system for tool holder 331-50-00)

Allows to install coolant ring SP-BS-04-00.

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: ECAS-12/20, SB-12/20R, SR-20J/JN/SR-20RIII, SR-20RII, SR-20RIV, SR-32J/JN, SR-32JII-A, SR-32JII-B, SV-12, SV-20, SV-32, SV-32JII, SV-38R, SW-20, SX 38 Type A/B. Includes fixation screws. Does not include locking key ER-16 ref. SP-BS-03-00.
SP-BS-03-00	Blocking key for ER-16 collet for SP-BS-01-00/02



SP-BS-01-00 + SP-BS-03-00

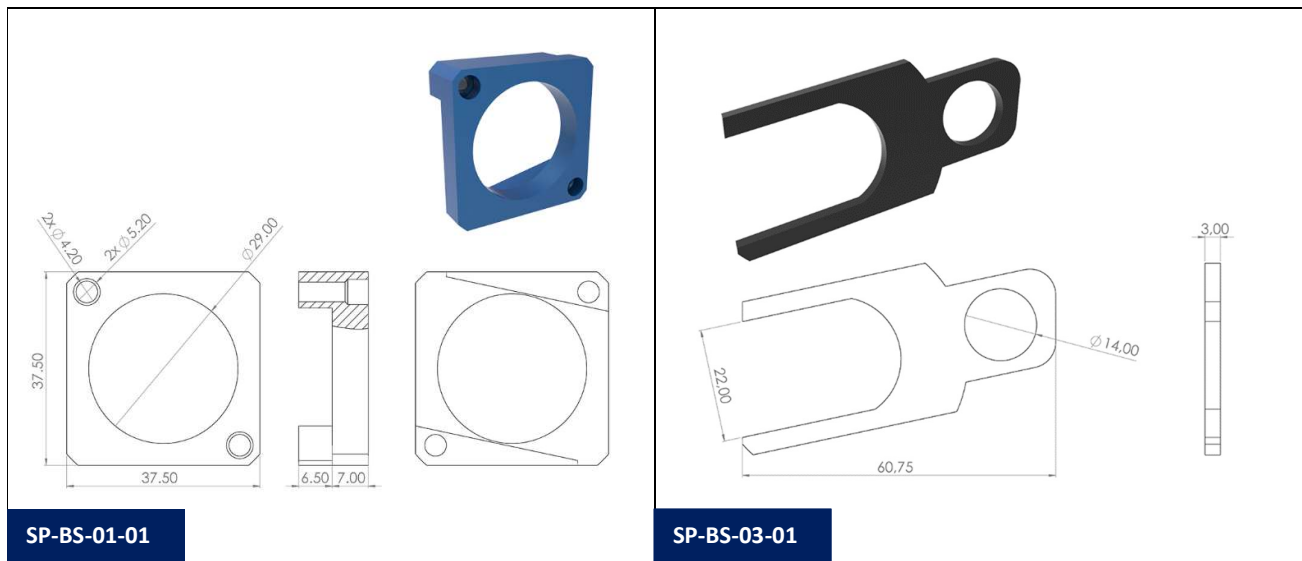


SP-BS-01-00 + SP-BS-03-00 Mounted on a STAR 331-50-00 rotary tool holder

SP-BS-01-01 + SP-BS-03-01 (Blocking system for tool holder 7.072.950)

Allows to install coolant ring SP-BS-04-00.

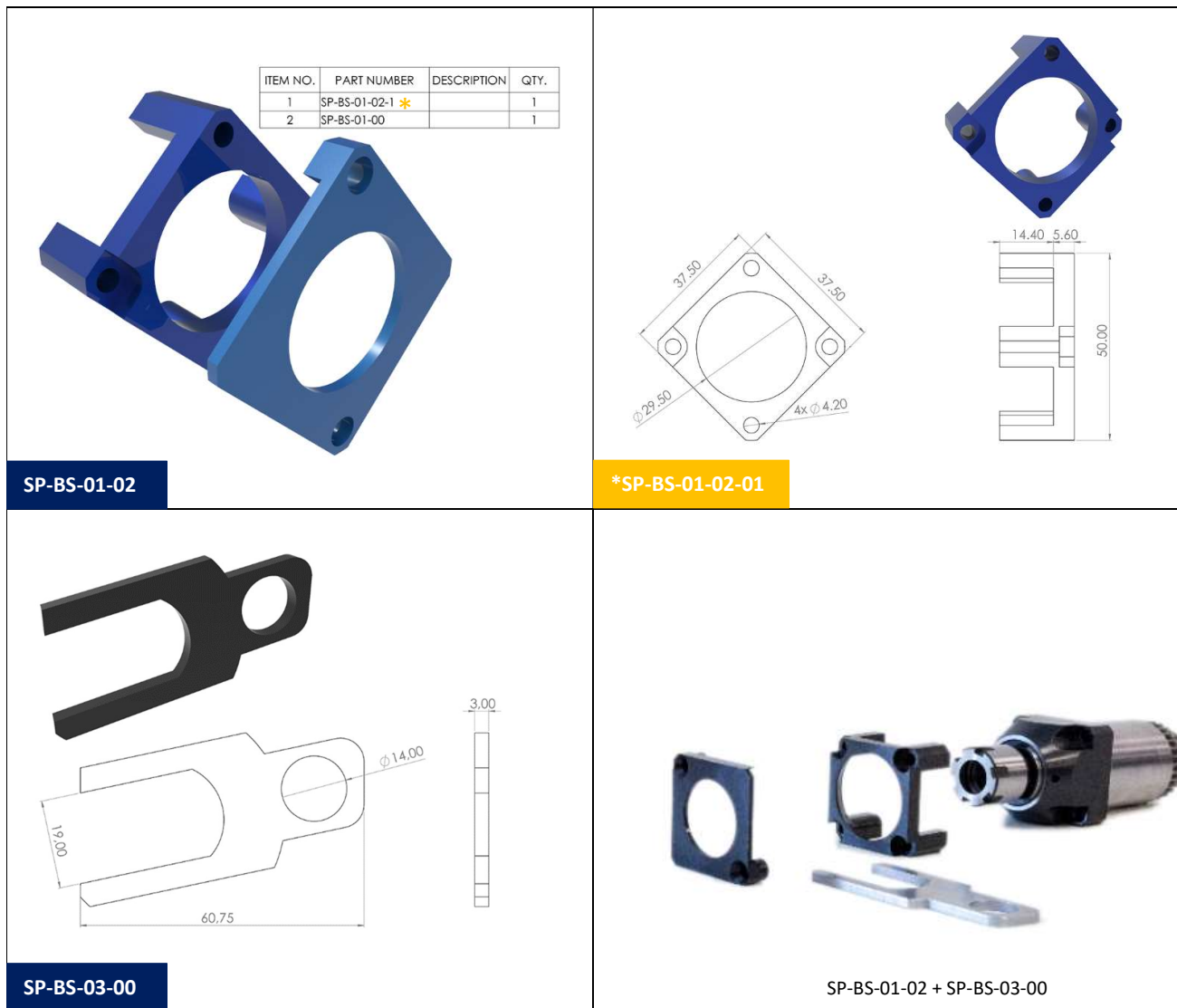
Ref.	Description
SP-BS-01-01	Blocking system for mounting in radial rotary tool holder ref. 7.072.950 with ER-20 collet in STAR lathes: SR-20J/JN/SR-20RIII, SR-20RII, SR-20RIV, SR-32J/JN, SR-32JII-A, SR-32JII-B, SV-12, SV-20, SV-32, SV-32JII, SW-20. Includes fixation screws. Does not include locking key ER-20 ref. SP-BS-03-01.
SP-BS-03-01	Blocking key for ER-20 collet for SP-BS-01-01



SP-BS-01-02 + SP-BS-03-00 (Blocking system for tool holder 571-55-00)

Allows to install coolant ring SP-BS-04-00.

Ref.	Description
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: ECAS-12/20, ECAS-32T, SB-12/20R, SR-20J/JN/SR-20RIII, SR-20RII, SR-20RIV, SV-38R, SW-20, SX 38 Type A/B. Includes fixation screws. Does not include locking key ER-16 ref. SP-BS-03-00.
SP-BS-03-00	Blocking key for ER-16 collet for SP-BS-01-00/02



SP-BS-01-03 + SP-BS-03-02 (Blocking system for tool holder OR1-61)

Allows to install coolant ring SP-BS-04-02.

Ref.	Description
SP-BS-01-03	Blocking system for mounting in back side tool holders ref. OR1-61 with ER-16 collet in STAR lathes: SB-12/20R, SR-32JII-A, SR-32JII-B, SR-38 (Type A/B), SV-20R, SW-12RII, SW-20. Includes fixation screws. Does not include locking key ER-16 ref. SP-BS-03-02.
SP-BS-03-02	Blocking key for ER-16 collet for SP-BS-01-03



SP-BS-01-03

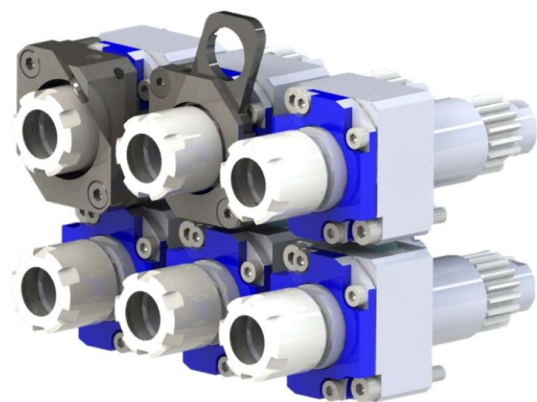
SP-BS-03-02



SP-BS-01-03 + SP-BS-03-02



SP-BS-01-03 + SP-BS-03-02 Mounted on a STAR OR1-61 rotary tool holder

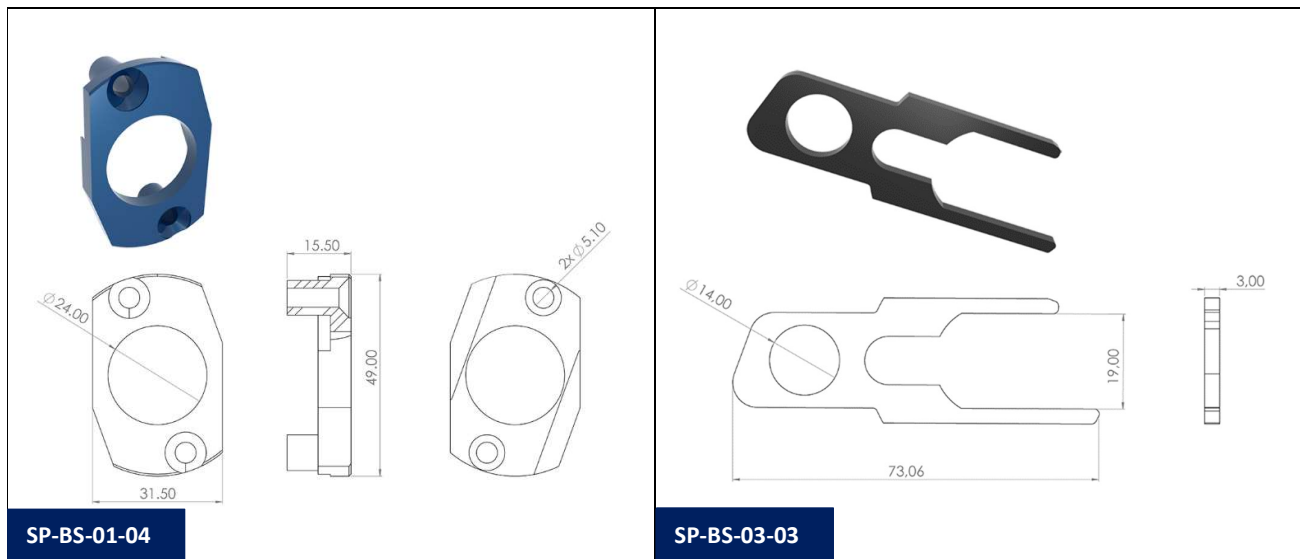


Back tool post of a STAR SW-12RII with SP-BS-01-03 + SP-BS-03-02 mounted on OR1-61 rotary tool holder

SP-BS-01-04 + SP-BS-03-03 (Blocking system for tool holder 571-61-00)

Allows to install coolant ring SP-BS-04-03.

Ref.	Description
SP-BS-01-04	Blocking system for mounting in back side tool holders ref. 571-61-00 with ER-16 collet in STAR lathes: ECAS12/20, SB-12/20R, SR-20J/JN, SR-20RIII, SR-20RII, SR-20RIV, SR-32J/JN, SR-32JII-A, SW-12RII. Includes fixation screws. Does not include locking key ER-16 ref. SP-BS-03-03.
SP-BS-03-03	Blocking key for ER-16 collet for SP-BS-01-04

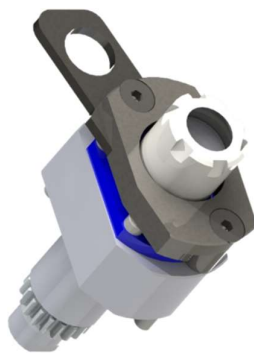


SP-BS-01-04

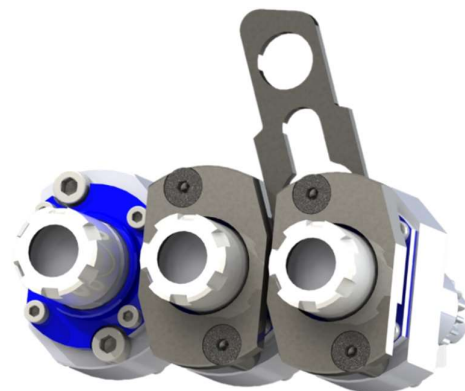
SP-BS-03-03



SP-BS-01-04 + SP-BS-03-03



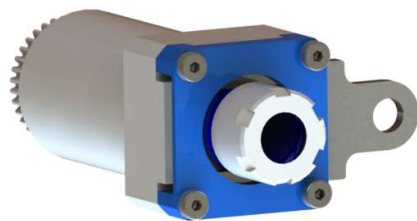
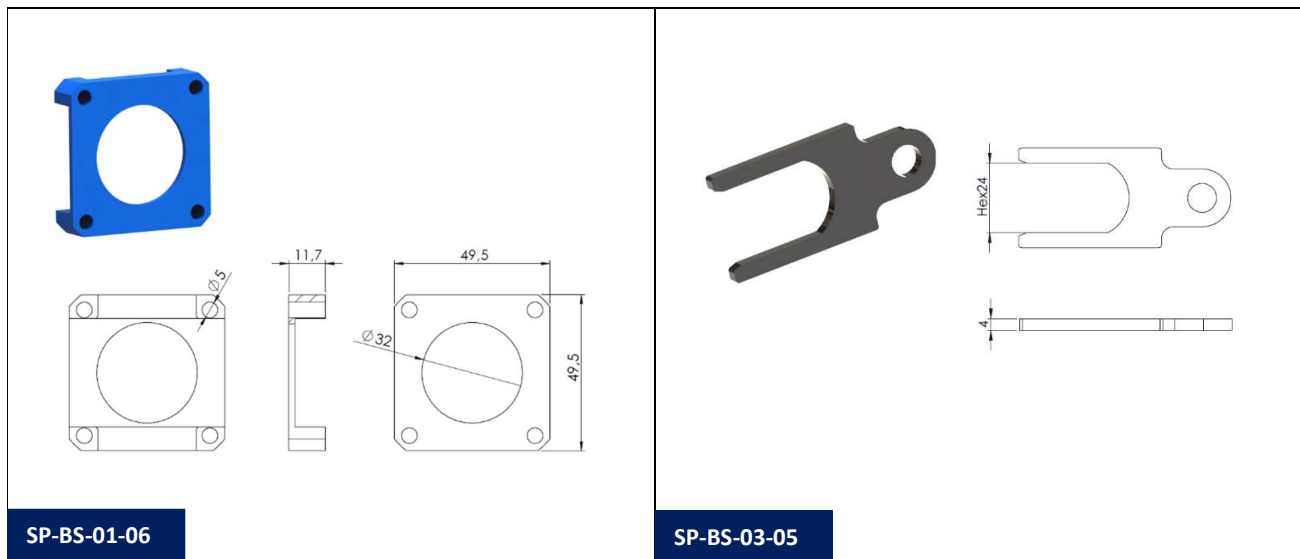
SP-BS-01-04 + SP-BS-03-03 Mounted on a STAR 571-61-00 rotary tool holder



Back tool post of a STAR SB-20R with SP-BS-01-04 + SP-BS-03-03 mounted on 571-61-00 rotary tool holder

SP-BS-01-06 + SP-BS-03-05 (Blocking system for tool holder 101-68-00)

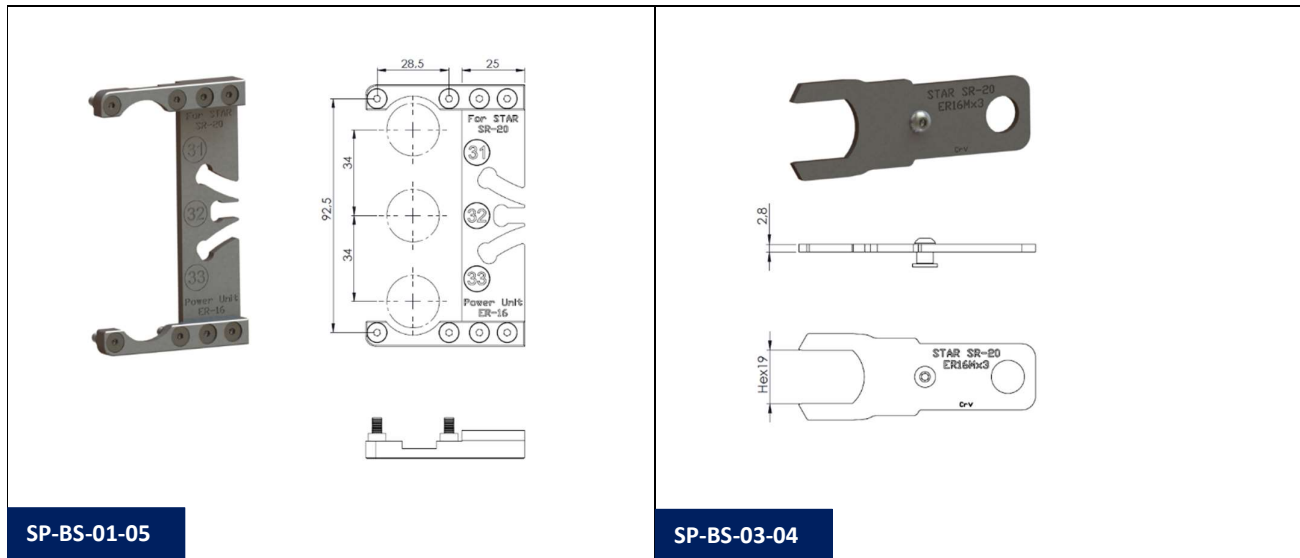
Ref.	Description
SP-BS-01-06	Blocking system for mounting in radial rotary tool holder ref. 101-68-00 with ER-20 collet in STAR lathe SR-38 Type A/B. Includes fixation screws. Does not include locking key ER-20 ref. SP-BS-03-05.
SP-BS-03-05	Blocking key for ER-20 collet for SP-BS-01-06



SP-BS-01-06 + SP-BS-03-05 mounted on rotary tool holder ref. 101-68-00 for STAR SR-38.

SP-BS-01-05 + SP-BS-03-04 (Blocking system for Standard 3 x ER-16 non-cartridge radial tool holder SR-20 family)

Ref.	Description
SP-BS-01-05	Blocking system for mounting in standard triple radial rotary tool holder (non-cartridge type) with ER-16 collet in main tool post of STAR lathes: SR-20J/JN/SR-20RIII, SR-20RII, SR-20RIV, SR-20J-II (3xER-16 version). Includes fixation screws. Does not include locking key ER-16 ref. SP-BS-03-04. Note: SP-BS-01-05 interferes with SP-BS-01-00 with 331-50-00 tool holder if mounted in the adjacent position. We suggest installing instead SP-BS-01-02 with tool holder 571-50-00.
SP-BS-03-04	Blocking key for ER-16 collet for SP-BS-01-05



SP-BS-01-05

SP-BS-03-04



SP-BS-01-05 + SP-BS-03-04



SP-BS-01-05 + SP-BS-03-04 blocking the middle non-cartridge type rotary tool holder in the main tool post STAR SR-20



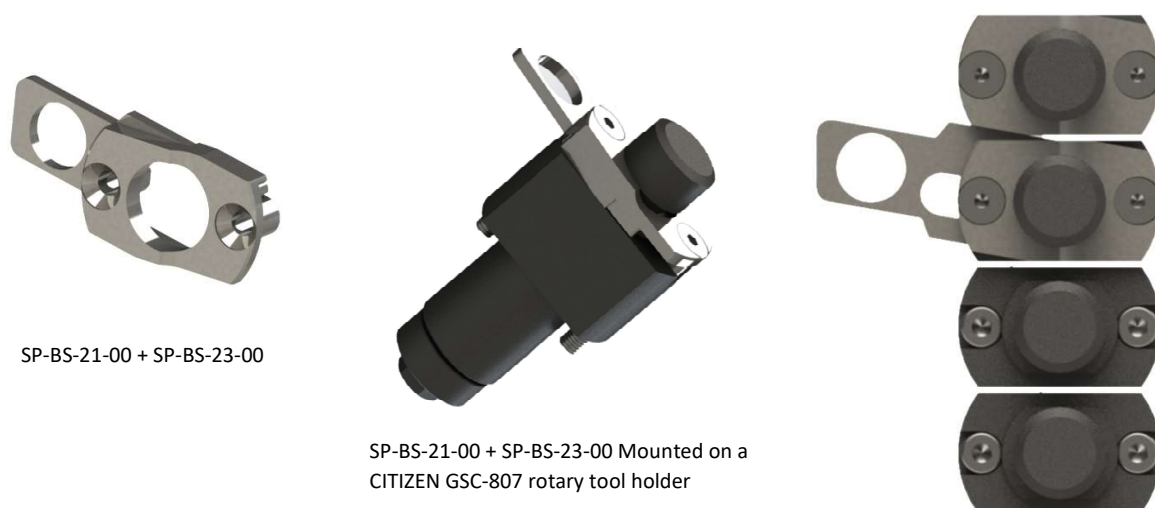
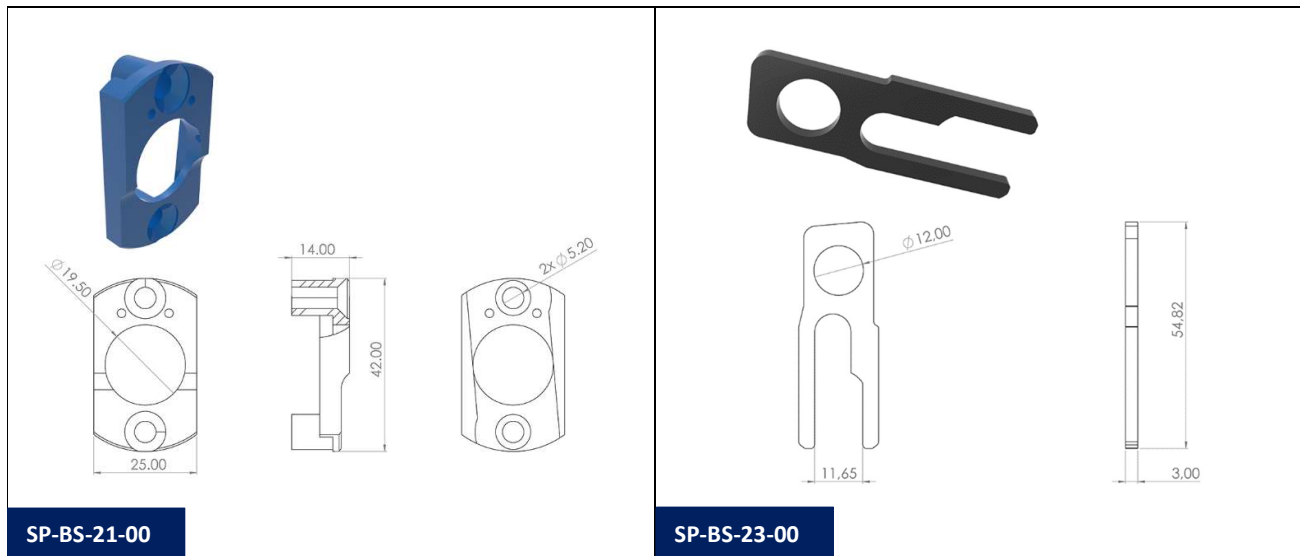
SP-BS-01-05 + SP-BS-03-04 blocking the lower non-cartridge rotary tool holder in the main tool post STAR SR-20.

BLOCKING SYSTEMS FOR CITIZEN

SP-BS-21-00 + SP-BS-31-00 (Blocking system for tool holder GSC-807)

Allows to install coolant ring SP-BS-24-00.

Ref.	Description
SP-BS-21-00	Blocking system for mounting in radial rotary tool holder in main gang ref. GSC-807 with ER-11 collet in CITIZEN lathe K12/16E. Includes fixation screws. Does not include locking key ER-11 ref. SP-BS-23-00.
SP-BS-23-00	Blocking key for ER-11 collet for SP-BS-21-00



SP-BS-21-00 + SP-BS-23-00

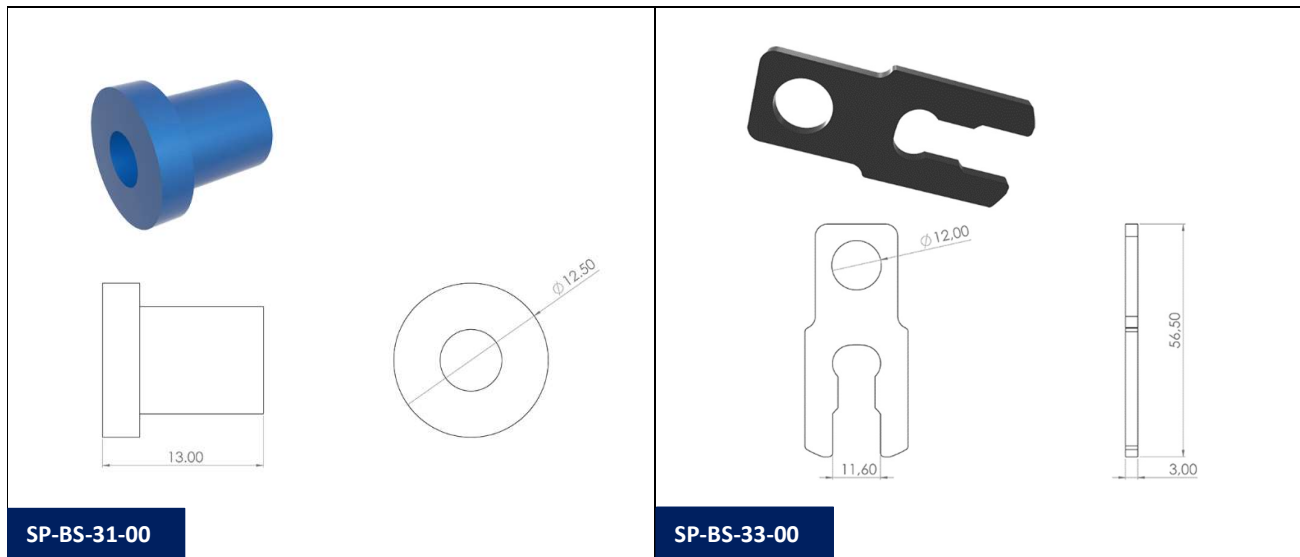
SP-BS-21-00 + SP-BS-23-00 Mounted on a CITIZEN GSC-807 rotary tool holder

Main tool post of a CITIZEN K12/16E with SP-BS-21-00 + SP-BS-23-00 mounted on GSC-807 rotary tool holder

SP-BS-31-00 + SP-BS-33-00 (Blocking system for tool holder GSC-807)

Does not allow to install coolant ring SP-BS-24-00.

Ref.	Description
SP-BS-31-00	Blocking system with lock pin for mounting in radial rotary tool holder in main gang ref. GSC-807 with ER-11 collet in CITIZEN lathe K12/16E. Includes fixation screw. Does not include locking key ER-11 ref. SP-BS-33-00.
SP-BS-33-00	Blocking key for ER-11 collet for SP-BS-31-00



SP-BS-31-00 + SP-BS-33-00



SP-BS-31-00 + SP-BS-33-00 Mounted on a CITIZEN GSC-807 rotary tool holder

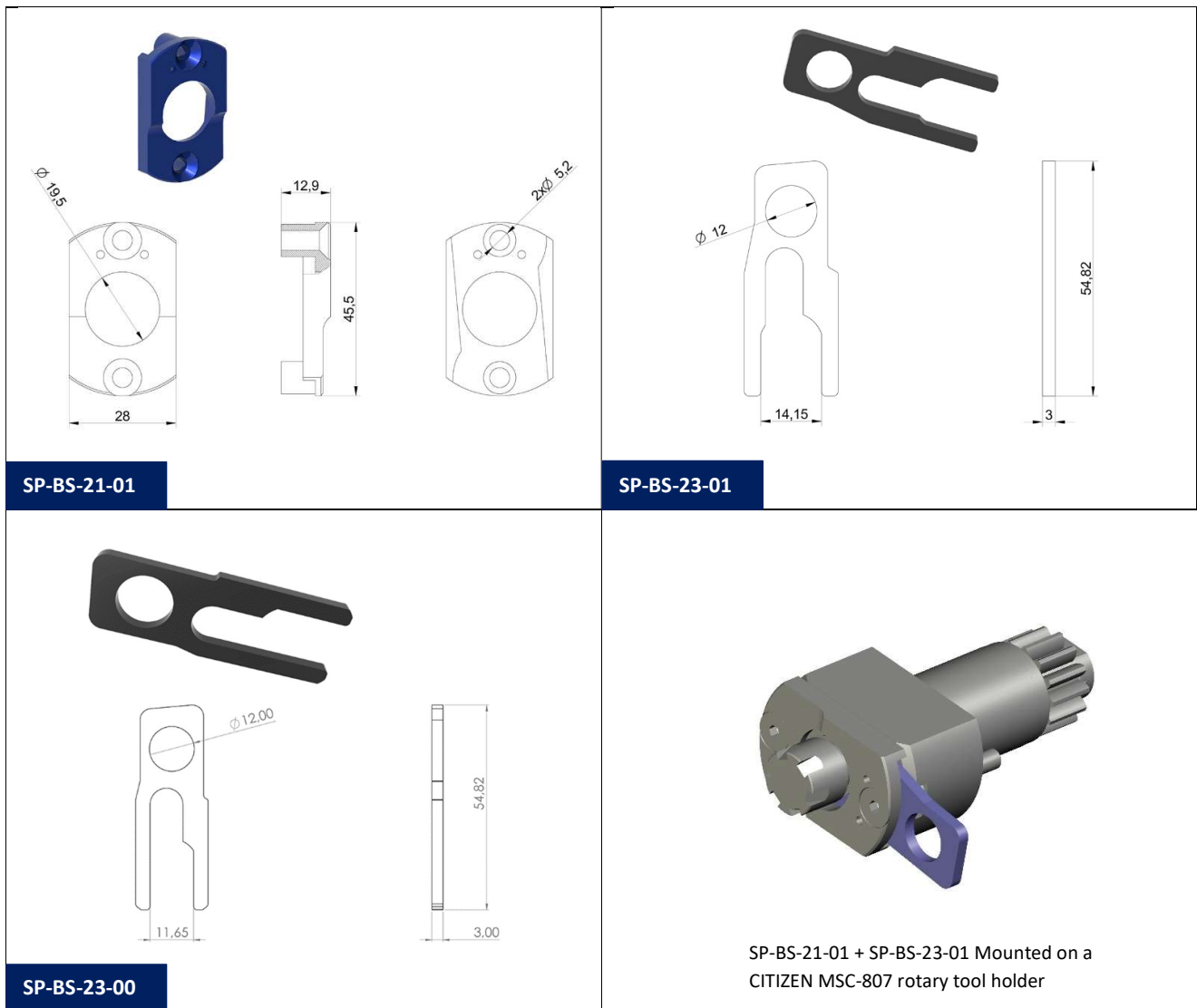


Main tool post of a CITIZEN K12/16E with SP-BS-31-00 + SP-BS-33-00 mounted on GSC-807 rotary tool holder

SP-BS-21-01 + SP-BS-23-01 (Blocking system for tool holder MSC-507)

Allows to install coolant ring SP-BS-24-00.

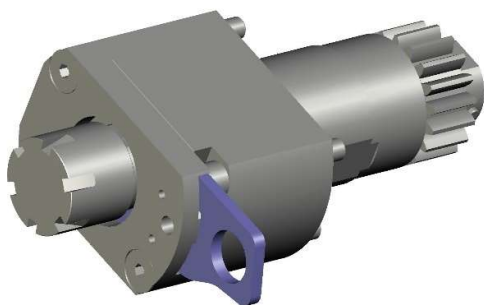
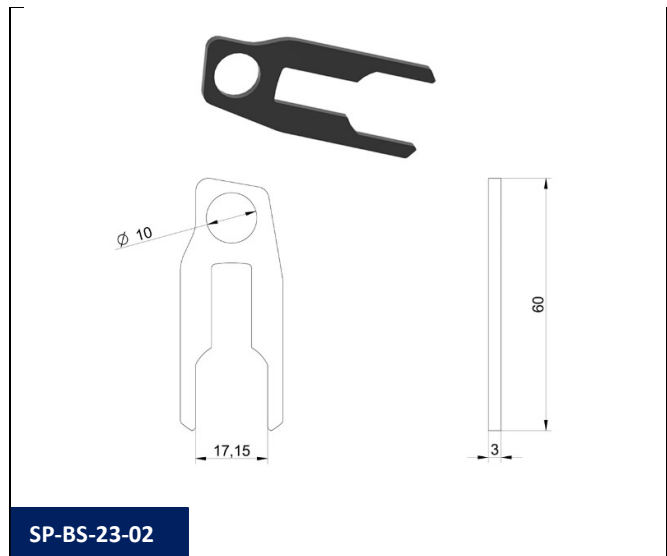
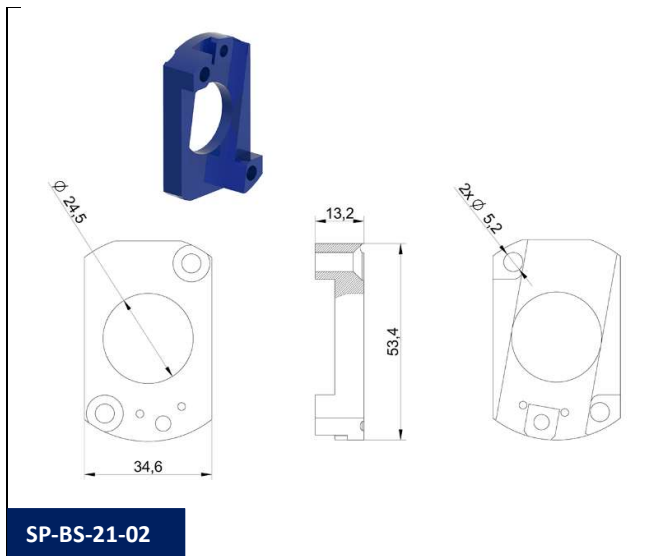
Ref.	Description
SP-BS-21-01	Blocking system for mounting in axial rotary tool holder in upper gang tool post and back tool post ref. MSC-507 with ER-11 collet in CITIZEN lathe A20, L12, L20, L25, A32, L32, M16, M32, M532. Includes fixation screws. Does not include locking key ER-11 ref. SP-BS-23-01 (for PCM tool holder) or SP-BS-23-00 (for CITIZEN tool holder).
SP-BS-23-01	Blocking key for ER-11 collet for SP-BS-21-01 (for tool holder manufactured by PCM).
SP-BS-23-00	Blocking key for ER-11 collet for SP-BS-21-00 (for tool holder manufactured by CITIZEN).



SP-BS-21-02 + SP-BS-23-02 (Blocking system for tool holder GSC-1110/1310)

Allows to install coolant ring SP-BS-24-00.

Ref.	Description
SP-BS-21-02	Blocking system for mounting in axial rotary tool holder in upper gang tool post ref. GSC-1110/1310 with ER-16 collet in CITIZEN lathe A20, L20, L25, A32, L32, M32. Includes fixation screws. Does not include locking key ER-16 ref. SP-BS-23-02.
SP-BS-23-02	Blocking key for ER-11 collet for SP-BS-21-02 (for tool holder manufactured by PCM or CITIZEN).



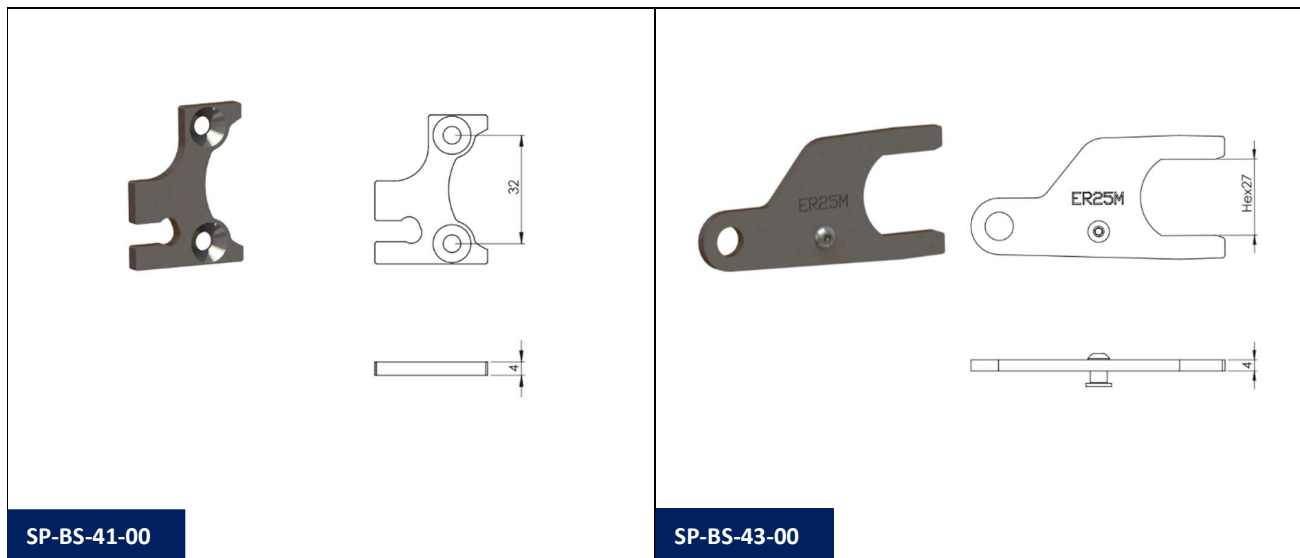
SP-BS-21-02 + SP-BS-23-02 Mounted on a
CITIZEN MSC-1110 rotary tool holder

BLOCKING SYSTEMS FOR TORNOS

SP-BS-41-00 + SP-BS-43-00 (Blocking system for tool holder 306164)

Original TORNOS tool holder.

Ref.	Description
SP-BS-41-00	Blocking system for mounting in rotary tool holder ref. 306164 with ER-25 collet in TORNOS DECO 20/26 lathe. Includes fixation screws. Does not include locking key ER-25 ref. SP-BS-43-00.
SP-BS-43-00	Blocking key for ER-25 collet for ref. SP-BS-41-00



SP-BS-41-00

SP-BS-43-00



SP-BS-41-00 Blocking system mounted on a TORNOS rotary tool holder ref. 306164.



SP-BS-41-00 Blocking system mounted on a TORNOS rotary tool holder ref. 306164 with SP-BS-43-00 Blocking key in position for safe tool change.

SP-BS-41-00-B + SP-BS-43-00-B (Blocking system for tool holder MADAULA P000094 equivalent to 306164)

Tool holder from MADAULA.

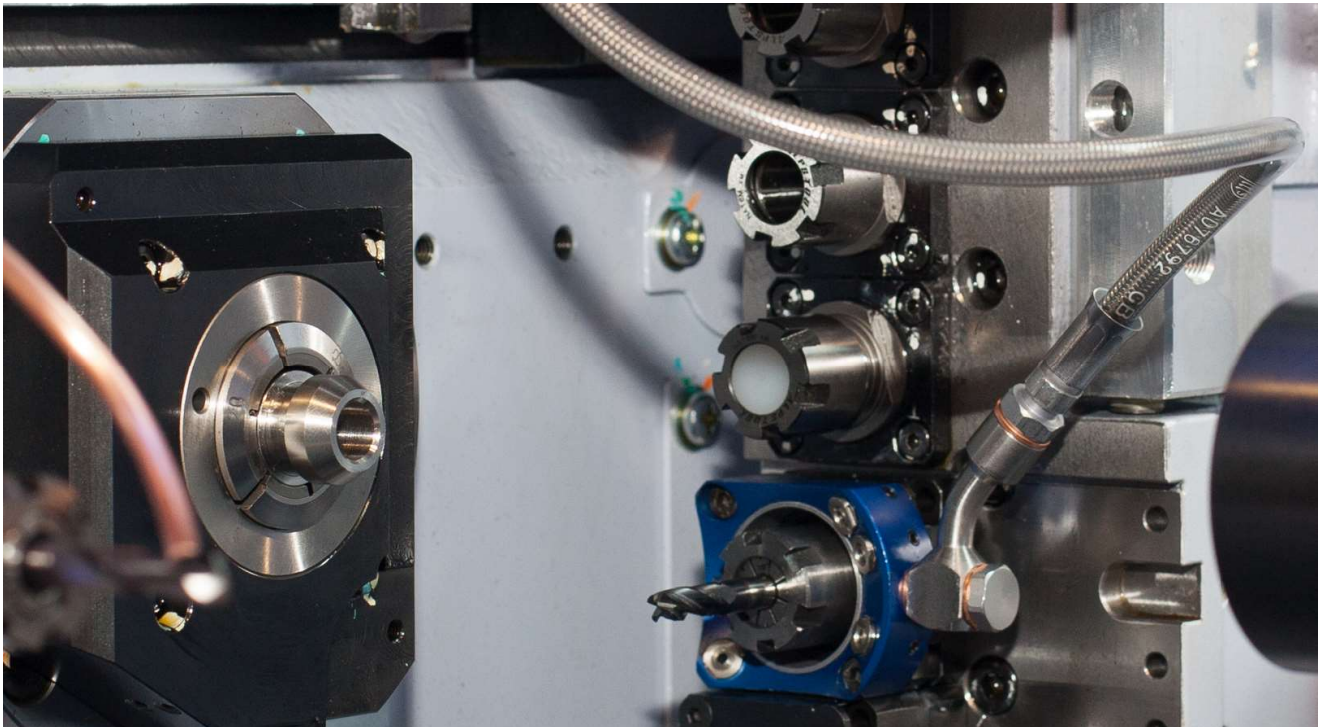
Ref.	Description
SP-BS-41-00-B	Blocking system for mounting in rotary tool holder MADAULA ref. P000094 with ER-25 collet in TORNOS DECO 20/26 lathe. Includes fixation screws. Does not include locking key ER-11 ref. SP-BS-43-00."
SP-BS-43-00-B	Blocking key for ER-25 collet for ref. SP-BS-41-00-B

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 SP-BS-21-XX.

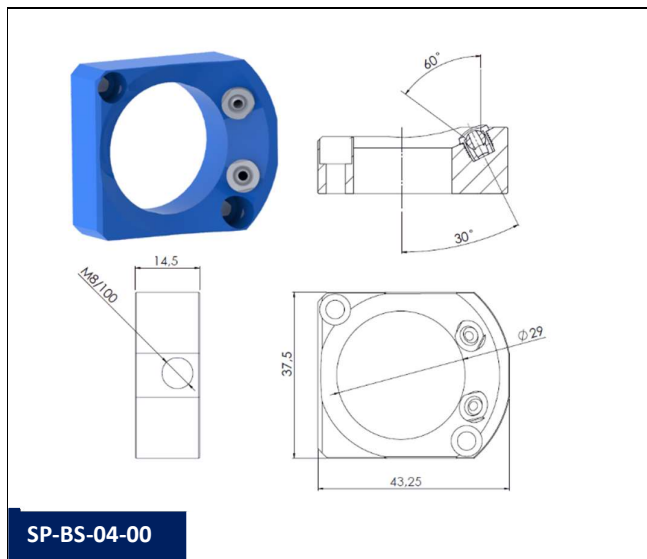
Material: Steel.



COOLANT RINGS FOR STAR

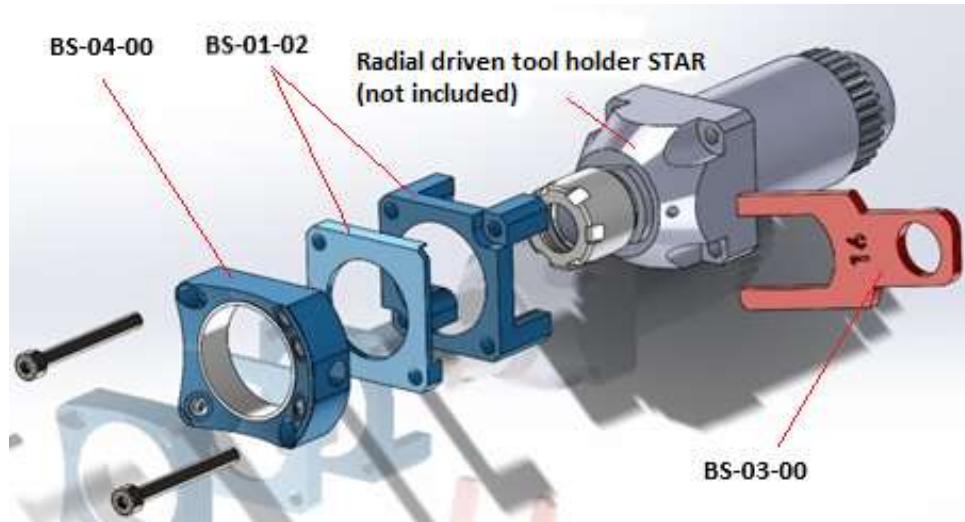
SP-BS-04-00 (Coolant ring for tool holder 331-50-00, 7.072.950 & 571-55-00)

Ref.	Description
SP-BS-04-00	<p>Coolant distribution ring with inlet M8x1(F) and 2 orientable ball-type nozzle outlets with ID:2 mm. To be mounted in STAR lathes:</p> <ol style="list-style-type: none"> 1. Radial driven tool holder ref. 331-50-00 with ER-16 collet. 2. Radial driven tool holder ref. 7.072.950 with ER-20 collet 3. Radial driven tool holder ref. 571-55-00 or ref. 7.073.789 with ER-16 collet. <p>Requires the following Blocking systems as a base for assembly. For 1. ref. SP-BS-01-00, for 2. ref. SP-BS-01-01 and for 3. ref. SP-BS-01-02.</p> <p>Does not include Wrench for locking/unlocking coolant ball-type nozzle ref. SP-BS-05-00 or Pin for orienting the ball-type nozzle ref. SP-BS-05-01.</p>



SP-BS-04-00 + SP-BS-01-00 + SP-BS-03-00 +
MICRO program banjo and flexible tube mounted
in tool holder 331-50-00.

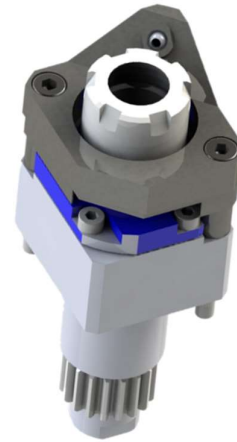
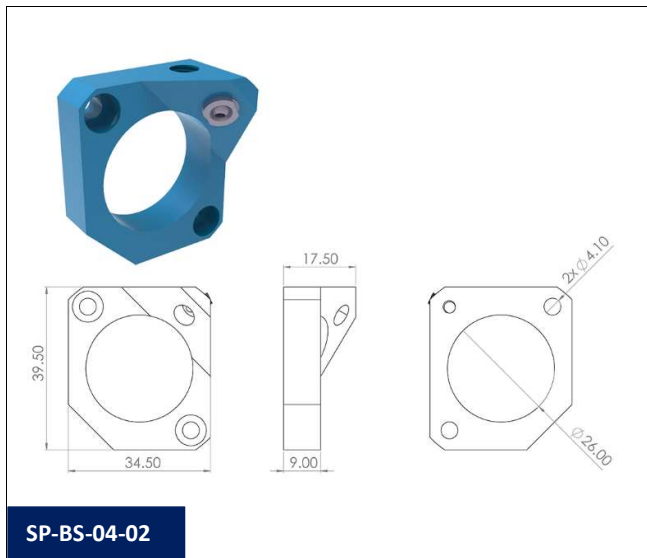
Example of assembly with tool holder ref. 571-55-00/7.073.789:



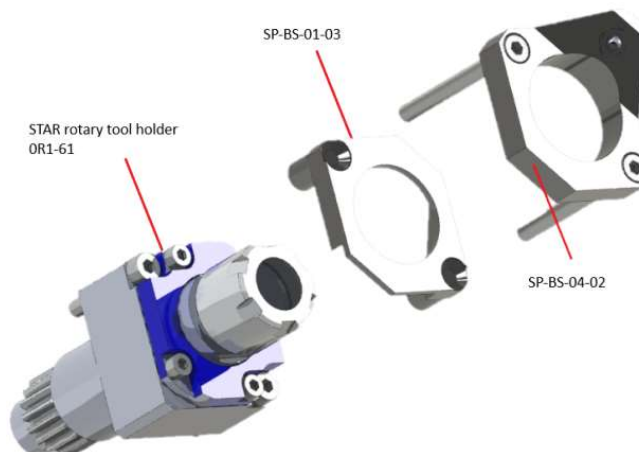
- SP-BS-04-00: Coolant distribution ring with inlet M8x1(F) and 4 orientable ball-type nozzle outlets
- SP-BS-01-02: Blocking system for radial driven tool holder ref. 571-55-00 or ref. 7.073.789 with ER-16 Collet for STAR lathe
- SP-BS-03-00: Blocking key for ER-16 collet

SP-BS-04-02 (Coolant ring for tool holder OR1-61)

Ref.	Description
SP-BS-04-02	<p>Coolant distribution ring with inlet M6x1(F) and 1 orientable ball-type nozzle outlet with ID:2 mm. To be mounted in STAR lathes:</p> <ul style="list-style-type: none"> • Back post driven tool holder ref. OR1-61 with ER-16 collet. <p>Requires Blocking system ref. SP-BS-01-03 as a base for assembly. Does not include Wrench for locking/unlocking coolant ball-type nozzle ref. SP-BS-05-00 or Pin for orienting the ball-type nozzle ref. SP-BS-05-01.</p>



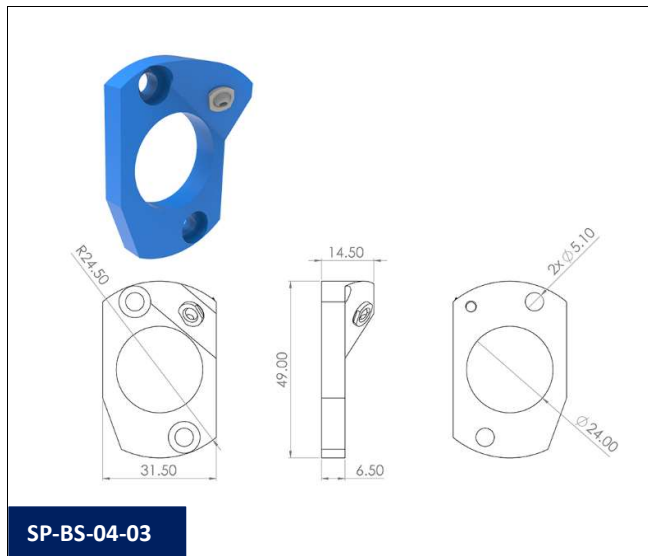
SP-BS-04-02 + SP-BS-01-03 mounted in tool holder OR1-61



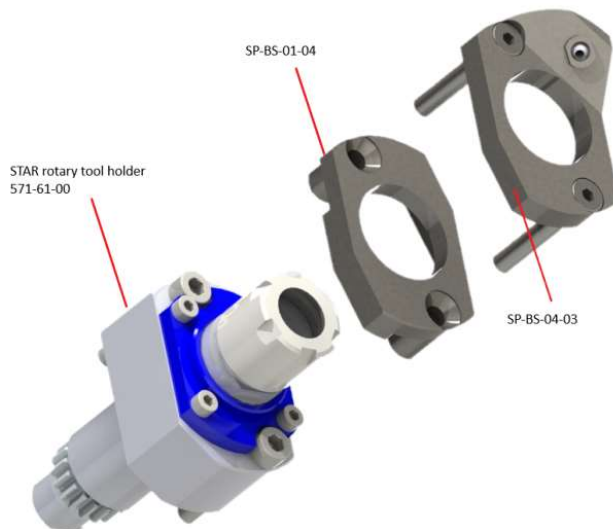
- SP-BS-04-02: Coolant distribution ring with inlet M6x1(F) and 1 orientable ball-type nozzle outlet
- SP-BS-01-03: Blocking system for driven tool holder ref. OR1-61 with ER-16 Collet for STAR lathe
- SP-BS-03-02: Blocking key for ER-16 collet (not shown in the drawing)

SP-BS-04-03 (Coolant ring for tool holder 571-61-00)

Ref.	Description
SP-BS-04-03	<p>Coolant distribution ring with inlet M6x1(F) and 1 orientable ball-type nozzle outlets with ID:2 mm. To be mounted in STAR lathes:</p> <ul style="list-style-type: none"> • Back post driven tool holder ref. 571-61-00 with ER-16 collet. <p>Requires Blocking system ref. SP-BS-01-04 as a base for assembly. Does not include Wrench for locking/unlocking coolant ball-type nozzle ref. SP-BS-05-00 or Pin for orienting the ball-type nozzle ref. SP-BS-05-01.</p>



SP-BS-04-03 + SP-BS-01-04 mounted in tool holder 571-61-00



SP-BS-04-03: Coolant distribution ring with inlet M6x1(F) and 1 orientable ball-type nozzle outlet

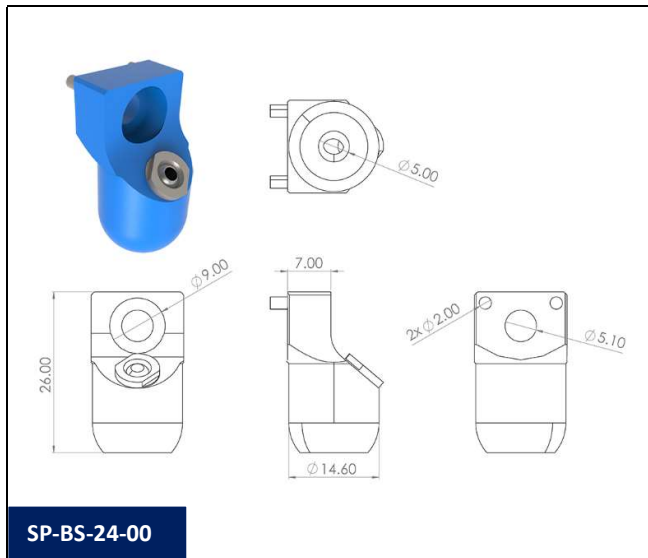
SP-BS-01-04: Blocking system for driven tool holder ref. 571-61-00 with ER-16 Collet for STAR lathe

SP-BS-03-03: Blocking key for ER-16 collet (not shown in the drawing)

COOLANT RINGS FOR CITIZEN

SP-BS-24-00 (Coolant ring for tool holder GSC-807, GSC-1110/1310 & MSC-507)

Ref.	Description
SP-BS-24-00	<p>"Coolant distribution ring with inlet M6x1(F) and 1 orientable ball-type nozzle outlets with ID:2 mm. To be mounted in CITIZEN lathes:</p> <ol style="list-style-type: none"> 1. Tool holder ref. GSC-807 2. Tool holder ref. MSC-507 3. Tool holder ref. GSC-1110/1310. <p>Requires the following Blocking systems as a base for assembly. For 1. ref. SP-BS-21-00, for 2- ref- SP-BS-21-01 amd for 3 ref. SP-BS-21-02.</p> <p>Does not include Wrench for locking/unlocking coolant ball-type nozzle ref. SP-BS-05-00 or Pin for orienting the ball-type nozzle ref. SP-BS-05-01."</p>

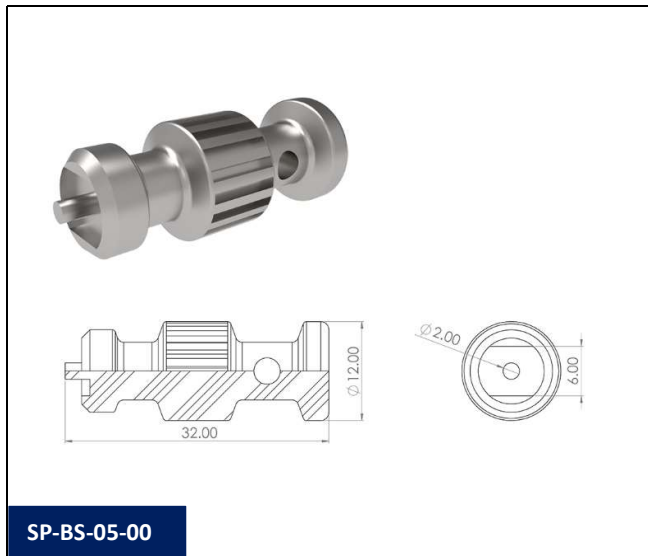


SP-BS-24-00 + SP-BS-21-00 mounted in tool holder GSC-807.

TOOLING FOR COOLANT DISTRIBUTION RINGS

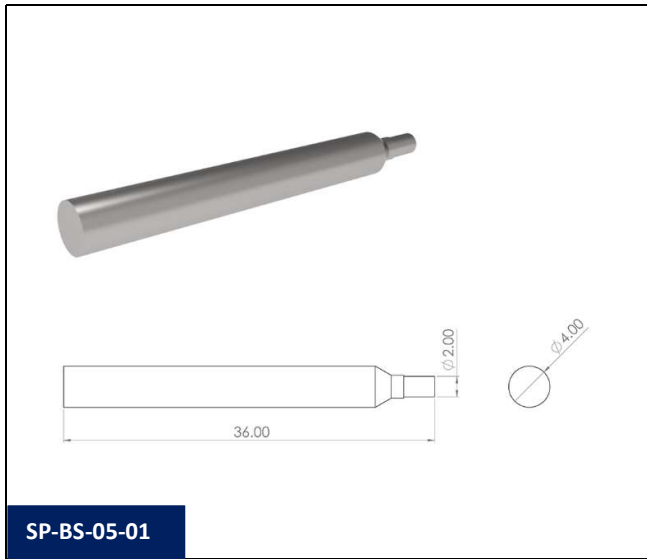
SP-BS-05-00 (Wrench for locking/unlocking ball nozzle)

Ref.	Description
SP-BS-05-00	Wrench for locking/unlocking the adjustable ball-type nozzle of the coolant distribution rings ref. SP-BS-04-00/01/02/03 SP-BS-24-00



SP-BS-05-01 (Pin for orienting the ball nozzle)

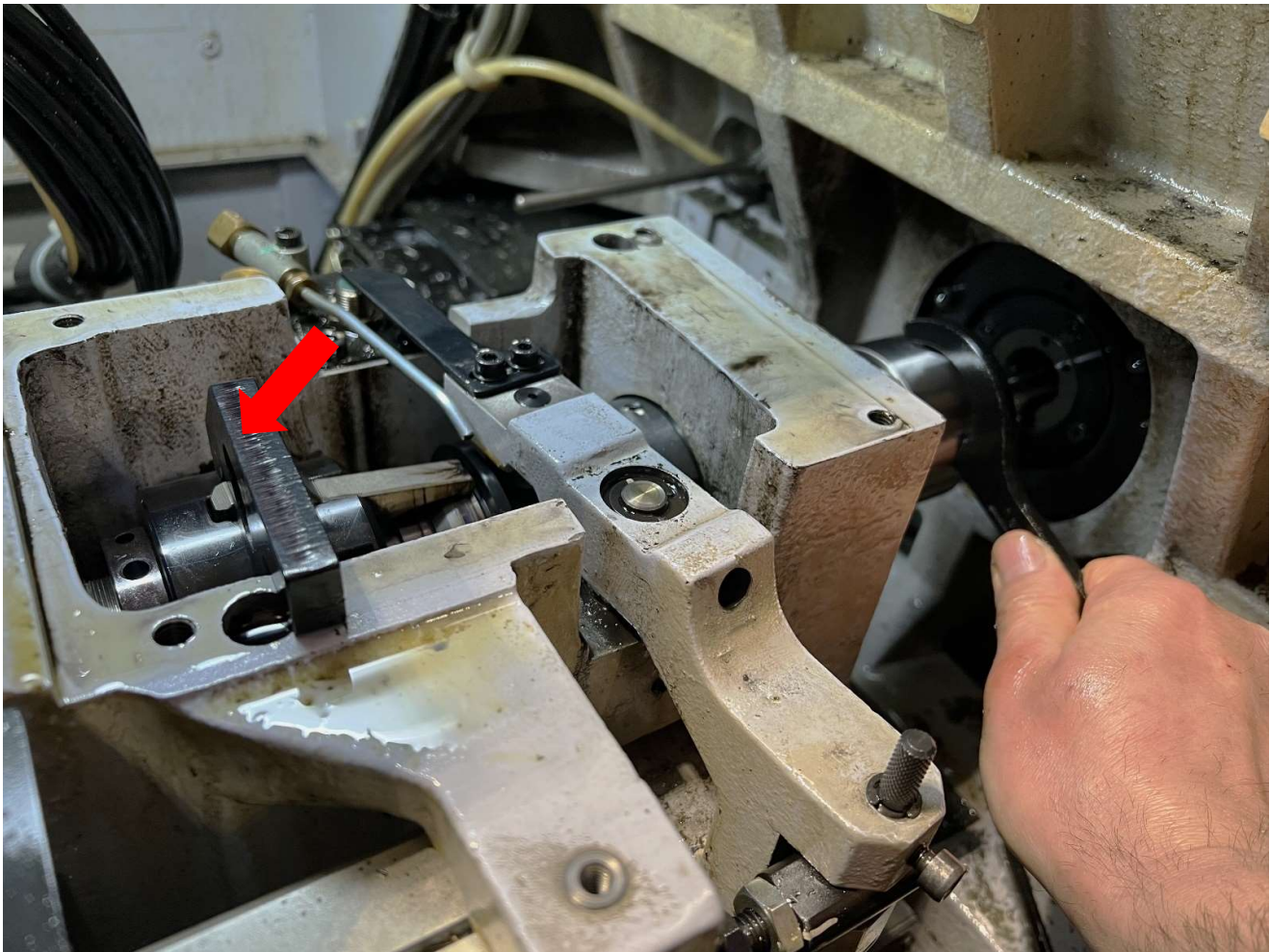
Ref.	Description
SP-BS-05-01	Pin for orienting the adjustable ball-type nozzle of the coolant distribution rings ref. SP-BS-04-00/01/02/03 and SP-BS-24-00



SPINDLE/SUBSPINDLE BLOCKING SYSTEMS FOR SAFE COLLET CHANGE OR ADJUSTMENT IN SWISS-TYPE LATHES:

Improves drastically the easiness and safety of spindle/subspindle blocking for collet change or adjustment. There is no risk of the blocking tool to accidentally disengage or jump off injuring the machine-tool operator or damaging the machine.

Material: Steel



The traditional spindle/subspindle locking system for collet change or adjustment in Swiss type lathes is not comfortable and safe.



Spindle/subspindle locking system for safe collet change or adjustment in Swiss type lathes.

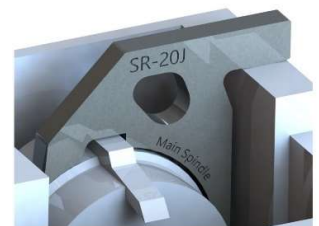


Spindle locking tool is not safe, and it makes it is easy that the tool jumps out of position or gets damaged.

- ✘ Both hands are needed to block properly the spindle and fasten or unfasten the collet which is uncomfortable and limits the applied torque.
- ✘ Frequently, machine operators just use one of the sides of the spindle box frame as a stopper to free one of their hands, with the risk of the blocking tool jumping off and hurting the operator or damaging some part of the machine.
- ✘ Uncomfortable position of the operator as both hands are needed to perform such operation often standing on slippery floor.
- ✘ Possibility of severe injuries in case the spindle blocking tool disengages and the operator loses balance.
- ✘ Standard blocking tools are often damaged (pin that inserts in the spindle blocking nut broken or bended).

The SCS Safe Spindle Locking system makes the collet change or adjustment much easier and minimizes the risk of injury.

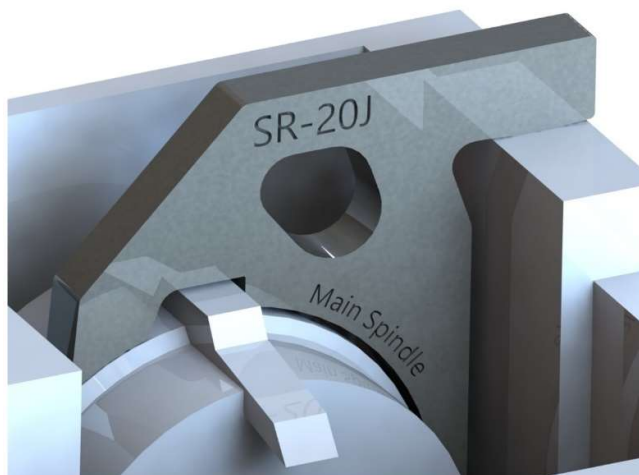
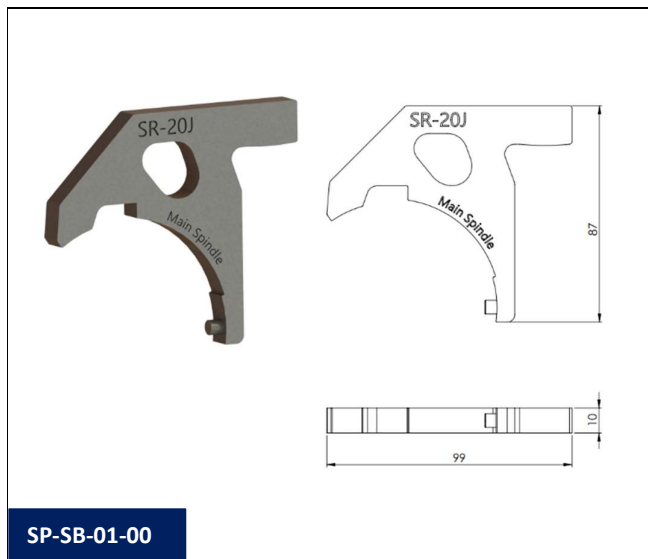
- ✔ By inserting the special locking device into the spindle blocking nut, it stands safely and perfectly blocks the spindle/subspindle.
- ✔ Only one hand is needed to unfasten/fasten the collet.
- ✔ The operator can be in a much more comfortable position and use the hand that is free to hold himself in position, have better stability and therefore avoid losing balance.
- ✔ The Safe Spindle Locking System is robust and allows for additional torque with no risk of the blocking tool being bended or disengaging.
- ✔ Long duration (machine lifetime) and no damage to the spindle frame box.



SPINDLE/SUBSPINDLE BLOCKING FOR STAR

SP-SB-01-00 (Spindle blocking system for STAR SR-20J)

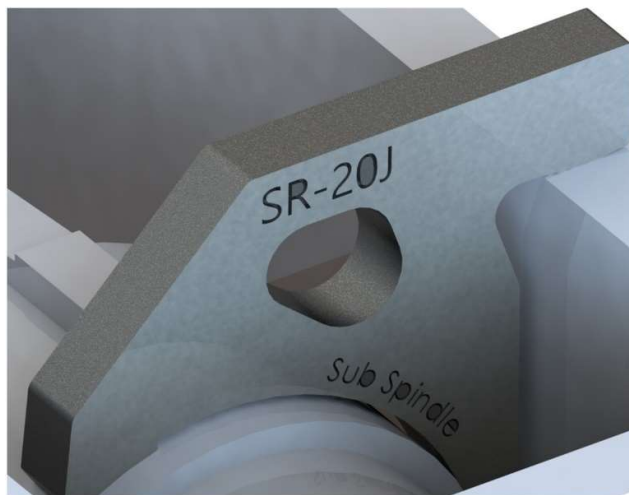
Ref.	Description
SP-SB-01-00	Spindle Blocking system for safe collet change or adjustment in STAR lathes: SR-20J.



Spindle blocking system ref. SP-SB-01-00 mounted on the main spindle of a STAR SR-20J to perform safe collet change or adjustment.

SP-SB-01-01 (Subspindle blocking system for STAR SR-20J)

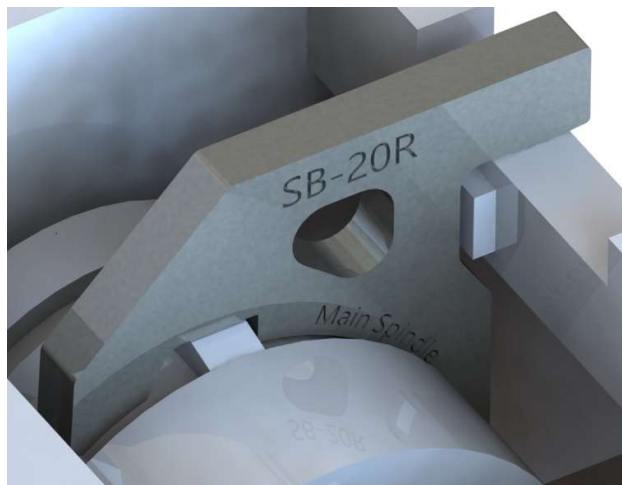
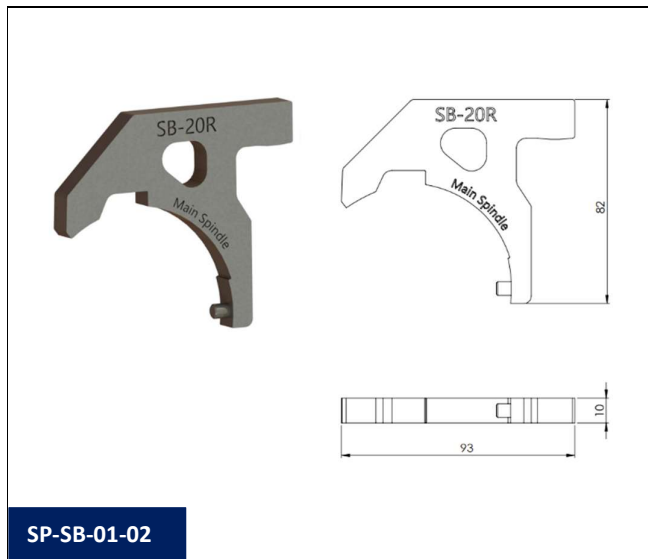
Ref.	Description
SP-SB-01-01	Subspindle Blocking system for safe collet change or adjustment in STAR lathes: SR-20J.



Spindle blocking system ref. SP-SB-01-01 mounted on the sub spindle of a STAR SR-20J to perform safe collet change or adjustment.

SP-SB-01-02 (Spindle blocking system for STAR SB-20R)

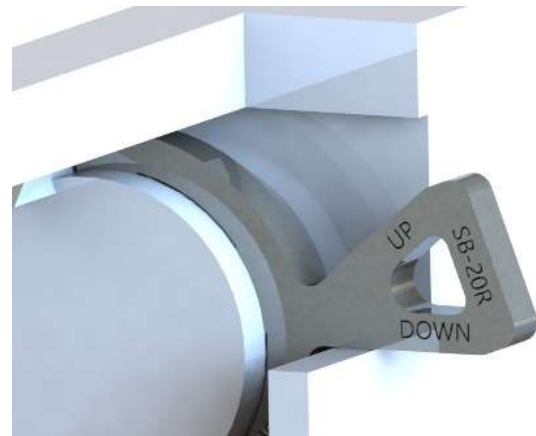
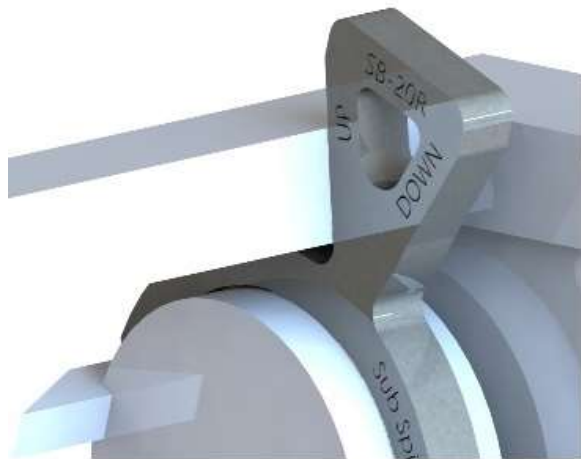
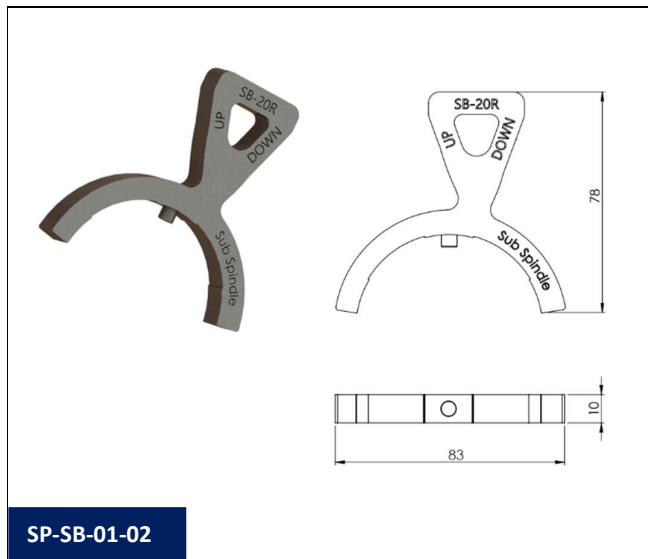
Ref.	Description
SP-SB-01-02	Spindle Blocking system for safe collet change or adjustment in STAR lathes: SB-20R Type G.



Spindle blocking system ref. SP-SB-01-02 mounted on the main spindle of a STAR SB-20R Type G to perform safe collet change or adjustment.

SP-SB-01-03 (Subspindle blocking system for STAR SB-20R)

Ref.	Description
SP-SB-01-03	Subspindle Blocking system for safe collet change or adjustment in STAR lathes: SB-20R Type G.



Spindle blocking system ref. SP-SB-01-03 mounted on the sub spindle of a STAR SB-20R Type G to perform safe collet change or adjustment. UP position for unfasten the subspindle nut and DOWN position to fasten it.

EXTENSION TUBE FROM ER MINI TYPE NUT TO HEXAGON WITH RING END WRENCH FOR SAFE TOOL CHANGE

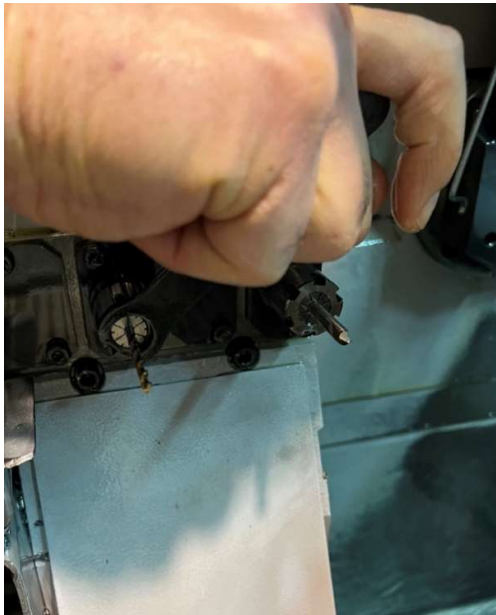
The extension tube fits into the ER M nut slots and covers the cutting tool during the tool change process preventing possible injury.

The hexagon of the extension tube allows the operator to place the ring end wrench (12 faces) where needed and apply the necessary force to fasten/unfasten the ER M nut safely, minimizing the possibility of the wrench coming loose and eliminating the rounding of the edges of the nut. It even allows the use of torque wrenches (not in our sales program).

The combination of the extension tube ER M nut with the SCS safe locking systems (e.g., SP-BS-01-00) and tool protectors (e.g., SP-TP-02-01) greatly increases operator safety and facilitates tool changes.

There are different extension tube lengths to completely cover the tools mounted in the ER tool holder, however, if necessary, it can be used with longer tools.

Material: Blued steel.



Tool change using the standard wrench is dangerous as it can easily come off the ER M nut slots with serious risk of injuries.

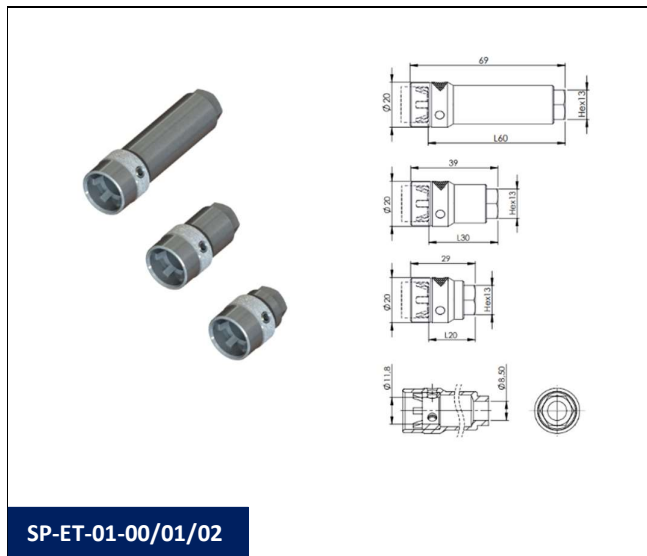


Tool change using the SCS extension tube and ring end hexagonal wrench minimizing injury risks. The tool is fully covered.

EXTENSION TUBES ER MINI REGO TO HEXAGONAL

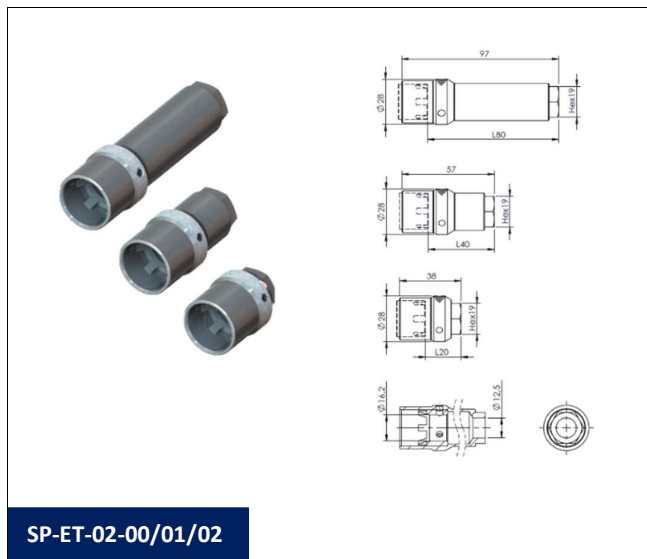
SP-ET-01 (Extension tube from ER-11M to Hex. 13)

Ref.	Description
SP-ET-01-00	Extension tube from ER-11M type REGO nut to Hex. 13 mm for safe tool change. Recommended for tools with a maximum length: 20 mm. We recommend using the SP-FK-01-00 fastening wrench (not included).
SP-ET-01-01	Extension tube from ER-11M type REGO nut to Hex. 13 mm for safe tool change. Recommended for tools with a maximum length: 30 mm. We recommend using the SP-FK-01-00 fastening wrench (not included).
SP-ET-01-02	Extension tube from ER-11M type REGO nut to Hex. 13 mm for safe tool change. Recommended for tools with a maximum length: 60 mm. We recommend using the SP-FK-01-00 fastening wrench (not included).



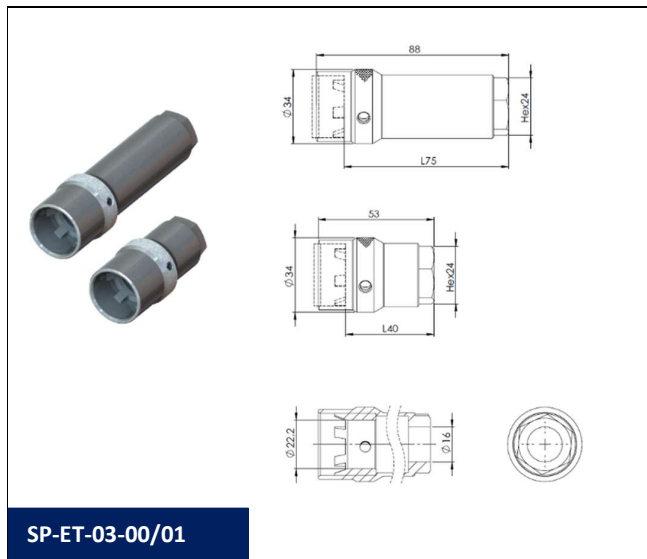
SP-ET-02 (Extension tube from ER-16M to Hex. 19)

Ref.	Description
SP-ET-02-00	Extension tube from ER-16M type REGO nut to Hex. 19 mm for safe tool change. Recommended for tools with a maximum length: 20 mm. We recommend using the SP-FK-02-00 fastening wrench (not included).
SP-ET-02-01	Extension tube from ER-16M type REGO nut to Hex. 19 mm for safe tool change. Recommended for tools with a maximum length: 40 mm. We recommend using the SP-FK-02-00 fastening wrench (not included).
SP-ET-02-02	Extension tube from ER-16M type REGO nut to Hex. 19 mm for safe tool change. Recommended for tools with a maximum length: 80 mm. We recommend using the SP-FK-02-00 fastening wrench (not included).



SP-ET-03 (Extension tube from ER-20M to Hex. 24)

Ref.	Description
SP-ET-03-00	Extension tube from ER-20M type REGO nut to Hex. 24 mm for safe tool change. Recommended for tools with a maximum length: 40 mm. We recommend using the SP-FK-03-00 fastening wrench (not included).
SP-ET-03-01	Extension tube from ER-20M type REGO nut to Hex. 24 mm for safe tool change. Recommended for tools with a maximum length: 75 mm. We recommend using the SP-FK-03-00 fastening wrench (not included).



WRENCHES FOR TIGHTENING THE EXTENSION TUBE FROM ER MINI NUT TO HEXAGONAL

Special wrench with the optimal length to exert the necessary torque, and reasonably avoid interference with other machine elements.

Material: Blued steel.

SP-FK-01 (Ring end wrench for Hex. 13)

Ref.	Description
SP-FK-01-00	Ring end wrench (12 faces) for fastening the hexagon 13 mm used in extension tube ref. SP-ET-01-XX for nut ER-11M Rego type. SW13.



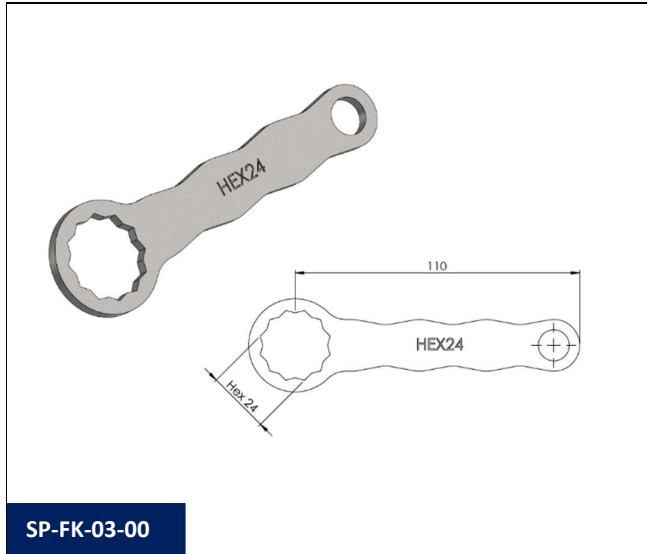
SP-FK-02 (Ring end wrench for Hex. 19)

Ref.	Description
SP-FK-02-00	Ring end wrench (12 faces) for fastening the hexagon 19 mm used in extension tube ref. SP-ET-02-XX for nut ER-16M Rego type. SW19.



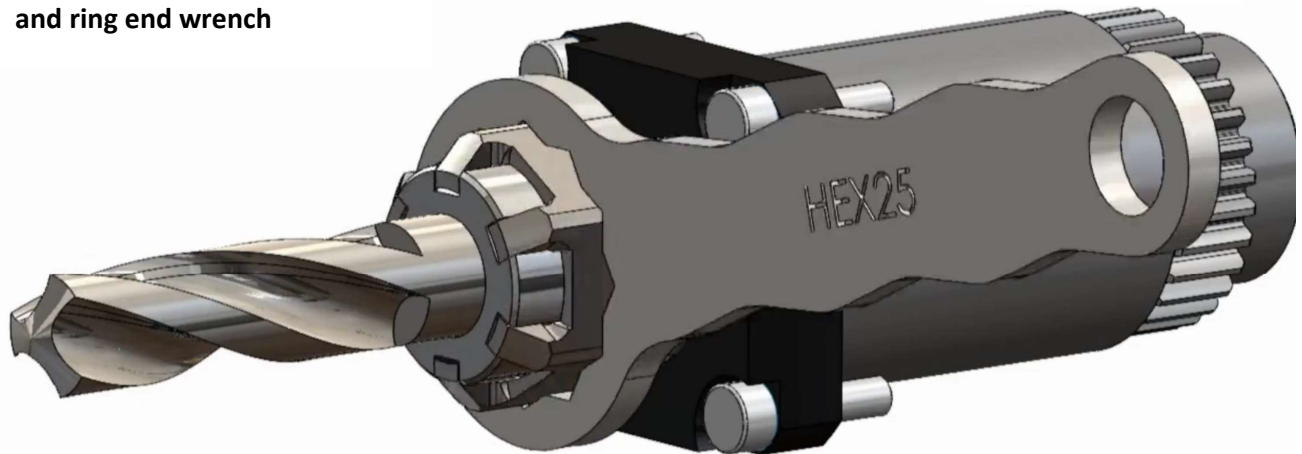
SP-FK-03 (Ring end wrench for Hex. 24)

Ref.	Description
SP-FK-03-00	Ring end wrench (12 faces) for fastening the hexagon 24 mm used in extension tube ref. SP-ET-03-XX for nut ER-20M Rego type. SW24.

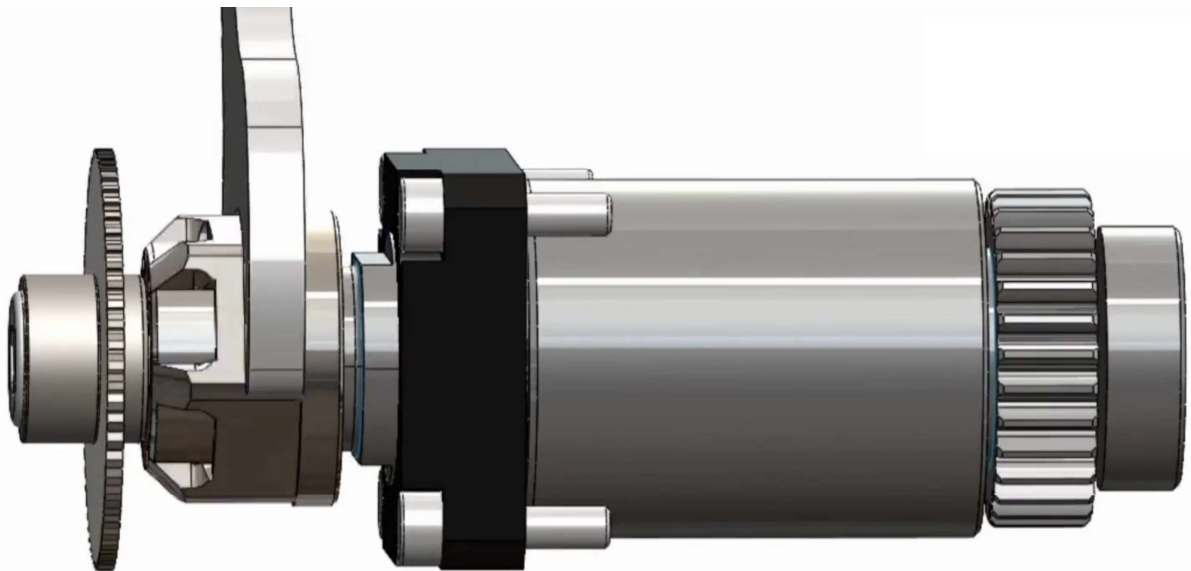


**ADAPTOR FROM ER MINI TYPE NUT TO HEXAGON WITH RING END WRENCH
FOR SAFE TOOL CHANGE AND OPTIMIZED MACHINING WITH DISC CUTTERS**

Safe tool change with adaptor
and ring end wrench



Minimum shaft overhang when
mounting disc milling cutters in
a driven tool holder



Application 1: General application for safe tool change.

This adaptor can be used as a very cost-effective solution to make tool changes safer in combination with the ring end wrench (12 faces) when using tools which do not exceed the diameter of the ER Mini nut (similar application to the Extension tube from ER Mini nut to Hexagon, but without the added safety of covering the tool). In this case, the adaptor is placed over the ER Mini nut prior to the tool change and removed after the tool change.



Tool change using the standard wrench is dangerous as it can easily come off the ER M nut slots with serious risk of injuries.



Tool change using the SCS adaptor and ring end hexagonal wrench reduces the injury risks as there is no risk of the wrench to slipping out.

The combination of this adaptor with the SCS safe locking systems (e.g., SP-BS-01-00) and tool protectors (e.g., SP-TP-02-01) greatly increases operator safety and further facilitates tool change.

Application 2: Optimized machining with disc milling cutters or T-slot milling cutters.

Mounting and fixing disc milling cutters, T-slot milling cutters or any other tool with bigger diameter than the ER M nut presents some problems, often causing the tool to be extremely separated from the tool holder (to allow enough space for the standard wrench to insert into the slots of the nut) and consequently having less rigidity and higher vibrations during the machining process.

The SCS adaptor fits into the ER M nut slots and it is placed over the nut before mounting the milling disc cutter and allows the operator to place a wrench over the hexagon and apply the necessary force needed to securely fasten/unfasten the ER M nut, thus minimizing the chance of the wrench slipping out and eliminating the rounding of the edges of the ER M nut slots. It even allows the use of torque wrenches (not in SCS sales program). The adaptor remains mounted during the whole machining process.

Common application for driven tool holders in Swiss type lathes: STAR, CITIZEN, TSUGAMI, TORNOS, etc.



The standard system obliges to greatly extend the distance from the cutting tool to the clamping point to allow enough space for the wrench to insert into the ER M nut slots for fastening/unfastening. This implies less rigidity and more vibration.



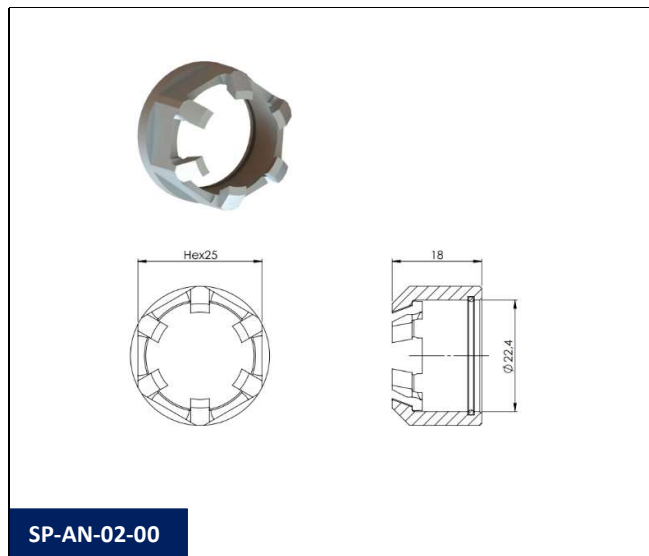
The SCS adaptor allows for huge improvements in tool clamping. The distance from the cutting tool to the clamping point is reduced for better rigidity and stability.

ADAPTORS

Adaptors from ER Mini type REGO nut to Hex.
Material: Steel.

SP-AN-02-00 (Adaptor from ER-16M to Hex. 25)

Ref.	Description
SP-AN-02-00	Adaptor from ER-16M type REGO nut to Hex. 25 mm for mounting disc / T-slot milling cutters or alternatively for safe tool change when using tools with a smaller diameter than the ER nut. For safe tool change application, the use of ring end wrench SP-FK-04-00 (not included) is recommended.



WRENCHES FOR TIGHTENING THE ADAPTOR FROM ER MINI NUT TO HEXAGONAL (FOR SAFE TOOL CHANGE APPLICATION)

Special wrench with the optimal length to exert the necessary torque, and reasonably avoid interference with other machine elements. Only to be used for safe tool change application (for standard tools and not tools exceeding the diameter of the ER M nut).

Material: Blued steel.

SP-FK-04-00 (Ring end wrench for Hex. 25)

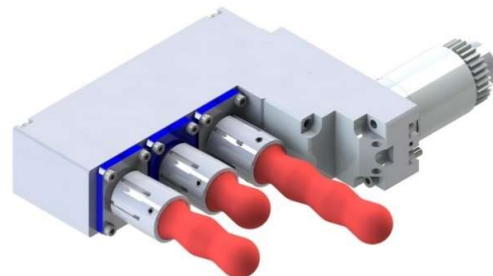
Ref.	Description
SP-FK-04-00	Ring end wrench (12 faces) for fastening the hexagon 25 mm used in adaptor ref. SP-AN-02-00 for nut ER-16M Rego type. SW25. For safe tool change application only.



TOOL PROTECTION FOR COLLET TOOL HOLDERS WITH ER MINI NUT

Covers the tools mounted in the tool holder eliminating the risk of injuries during tool changes and allows tools to be stored and kept mounted in the tool holder without the possibility of damage or breakage. It can be installed and removed in seconds without the need of tools.

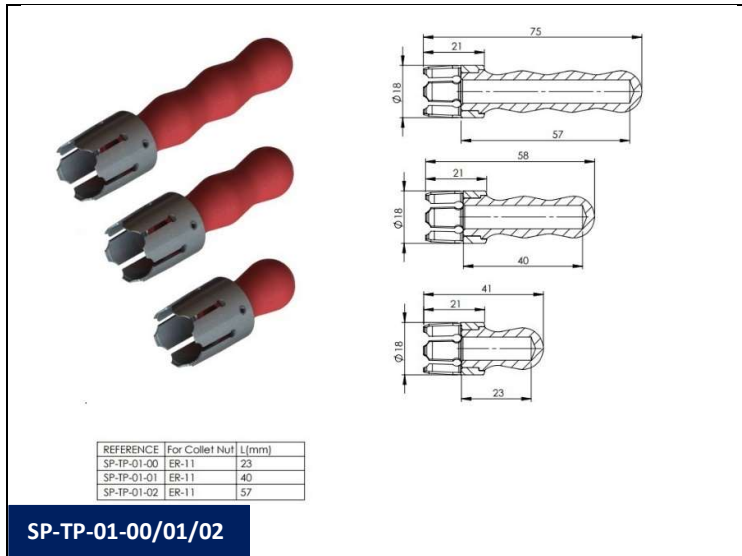
Material: Blued steel for clamp on ER M nut and red PVC for protective handle.





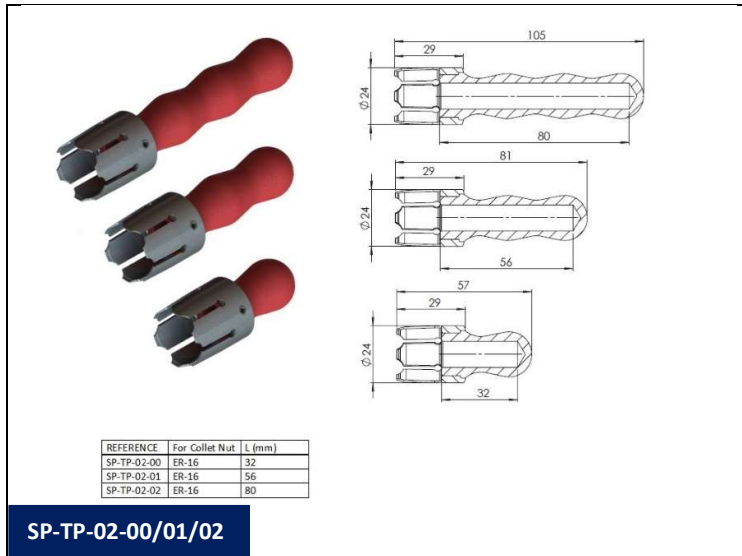
SP-TP-01 (Tool protector ER-11M)

Ref.	Description
SP-TP-01-00	Tool protector for ER-11M tool holder and a maximum tool length of 23 mm.
SP-TP-01-01	Tool protector for ER-11M tool holder and a maximum tool length of 40 mm.
SP-TP-01-02	Tool protector for ER-11M tool holder and a maximum tool length of 57 mm.



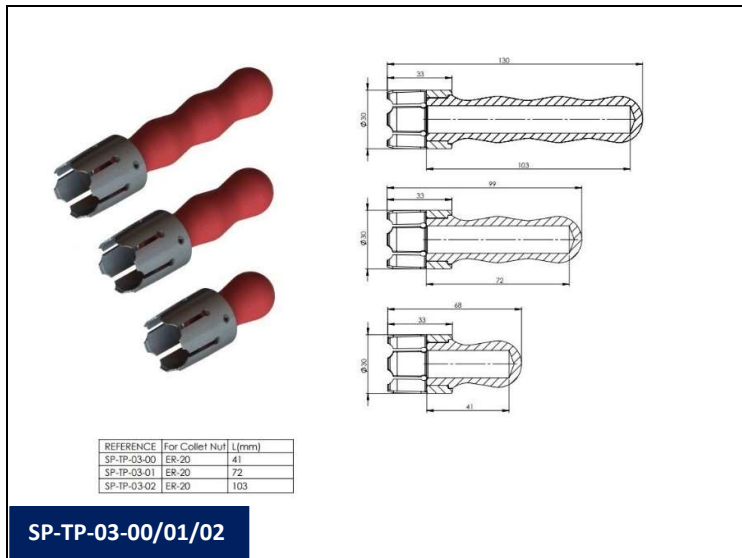
SP-TP-02 (Tool protector ER-16M)

Ref.	Description
SP-TP-02-00	Tool protector for ER-16M tool holder and a maximum tool length of 32 mm.
SP-TP-02-01	Tool protector for ER-16M tool holder and a maximum tool length of 56 mm.
SP-TP-02-02	Tool protector for ER-16M tool holder and a maximum tool length of 80 mm.



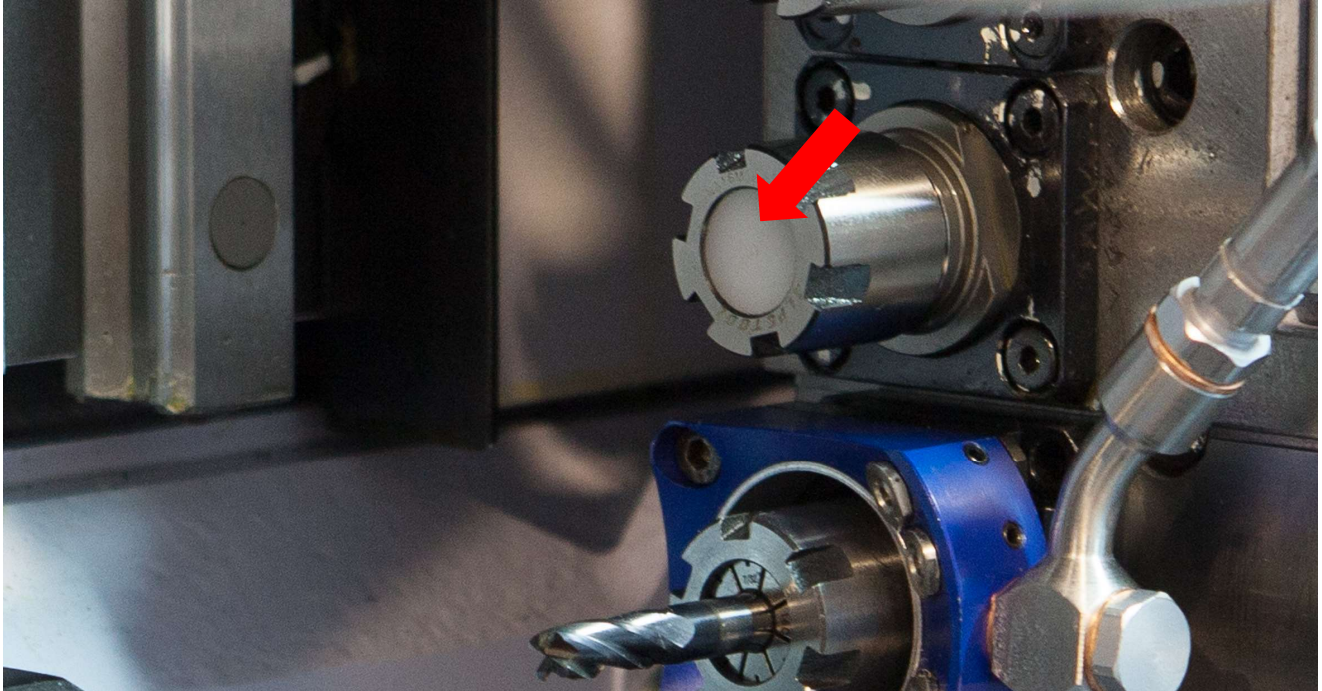
SP-TP-03 (Tool protector ER-20M)

Ref.	Description
SP-TP-03-00	Tool protector for ER-20M tool holder and a maximum tool length of 41 mm.
SP-TP-03-01	Tool protector for ER-20M tool holder and a maximum tool length of 72 mm.
SP-TP-03-02	Tool protector for ER-20M tool holder and a maximum tool length of 103 mm.



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.

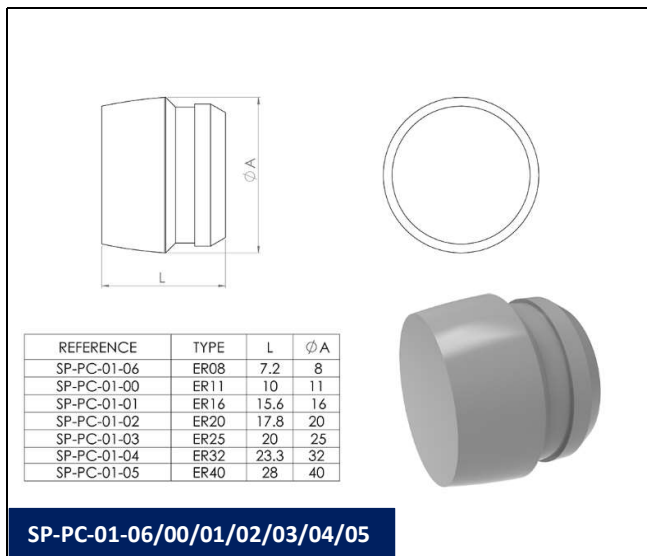


SP-PC-01 (Protective cover in white polyamide)

Very cost-effective blind collets to keep tool holders mounted in the machine sealed from coolant and chips

Material: White polyamide.

Ref.	Description
SP-PC-01-06	Protective cover in white polyamide for tool holder with collet type ER-8
SP-PC-01-00	Protective cover in white polyamide for tool holder with collet type ER-11
SP-PC-01-01	Protective cover in white polyamide for tool holder with collet type ER-16
SP-PC-01-02	Protective cover in white polyamide for tool holder with collet type ER-20
SP-PC-01-03	Protective cover in white polyamide for tool holder with collet type ER-25
SP-PC-01-04	Protective cover in white polyamide for tool holder with collet type ER-32
SP-PC-01-05	Protective cover in white polyamide for tool holder with collet type ER-40



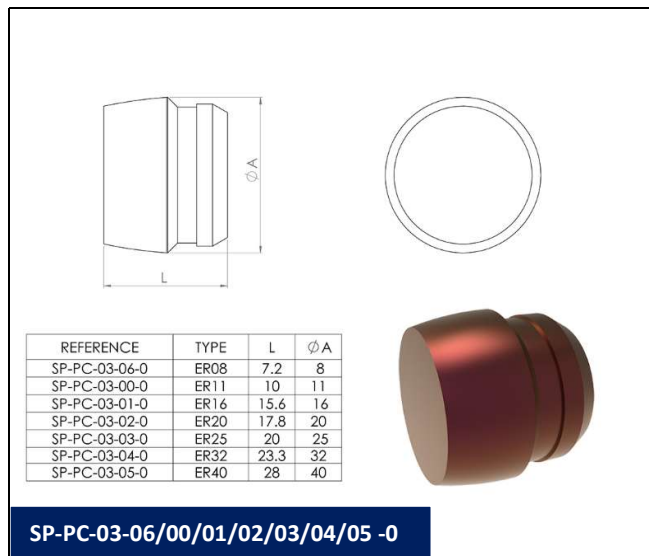
SP-PC-03 (Protective cover in anodized aluminum)

Blind collets in anodized aluminum to keep tool holders mounted in the machine sealed from coolant and chips. Laser marking (optional) provides great branding acknowledgement. Environmentally friendly by not using plastic.

Material: Anodized aluminum.

Ref.	Description
SP-PC-03-06-0	Protective cover in red anodized aluminum for tool holder with collet type ER-8
SP-PC-03-00-0	Protective cover in red anodized aluminum. for tool holder with collet type ER-11
SP-PC-03-01-0	Protective cover in red anodized aluminum for tool holder with collet type ER-16
SP-PC-03-02-0	Protective cover in red anodized aluminum for tool holder with collet type ER-20
SP-PC-03-03-0	Protective cover in red anodized aluminum for tool holder with collet type ER-25
SP-PC-03-04-0	Protective cover in red anodized aluminum for tool holder with collet type ER-32
SP-PC-03-05-0	Protective cover in red anodized aluminum for tool holder with collet type ER-40

Note: Other colors and customized laser marking under request.

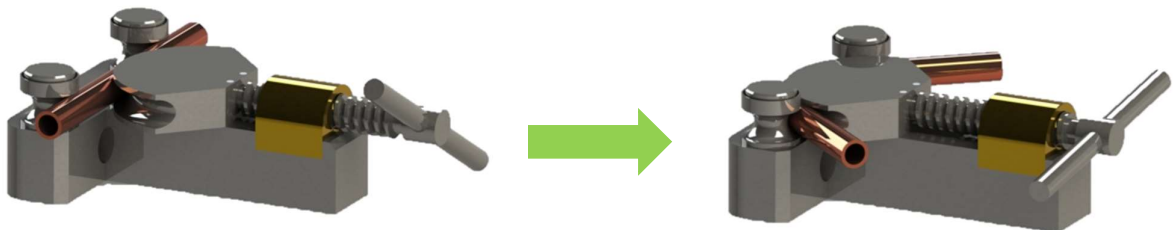
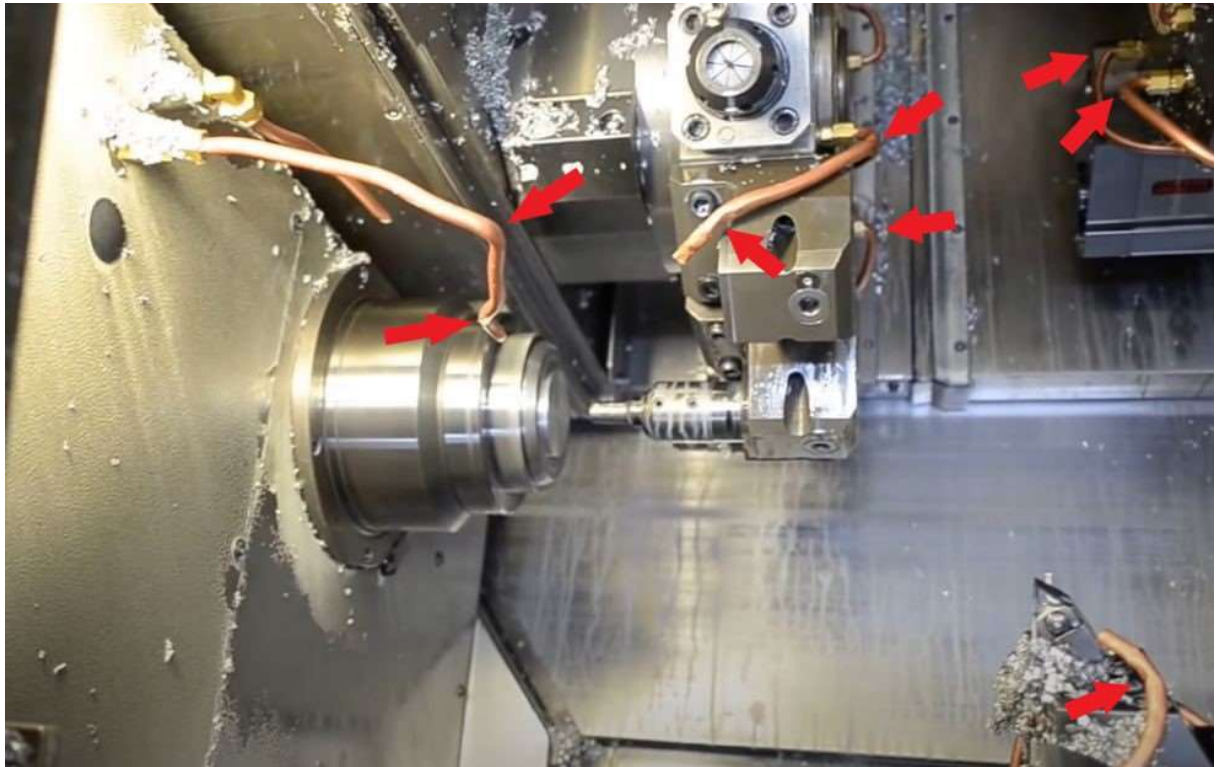


MANUAL TOOL FOR ACCURATE BENDING OF COOLANT TUBES

The SCS manual tube bending tool improves drastically the bending precision, thus avoiding undesired strangling of steel or copper coolant tubes and reducing the minimum bending radius.

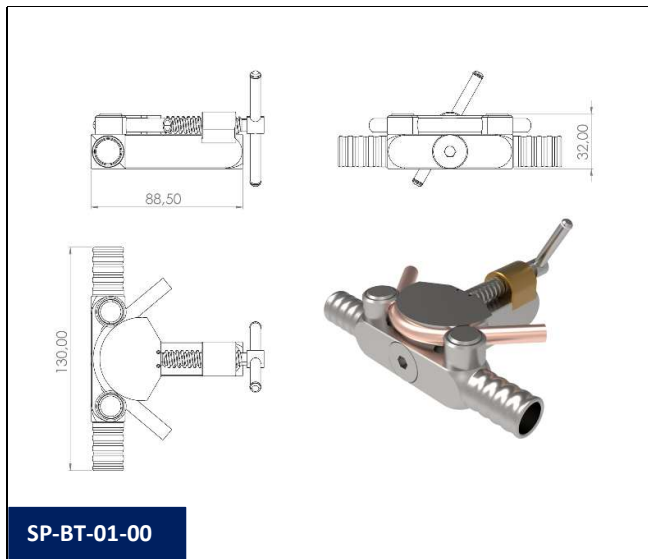
In combination with the copper or steel tube adaptors from the HECTO and DECA program, it allows the use of quick connection fittings and all the range of nozzles, bringing efficiency of traditional coolant tubes to a new dimension.

Ideal for use with steel or copper tubes with an outer diameter of 6 or 8 mm and a maximum wall thickness of 1 mm.



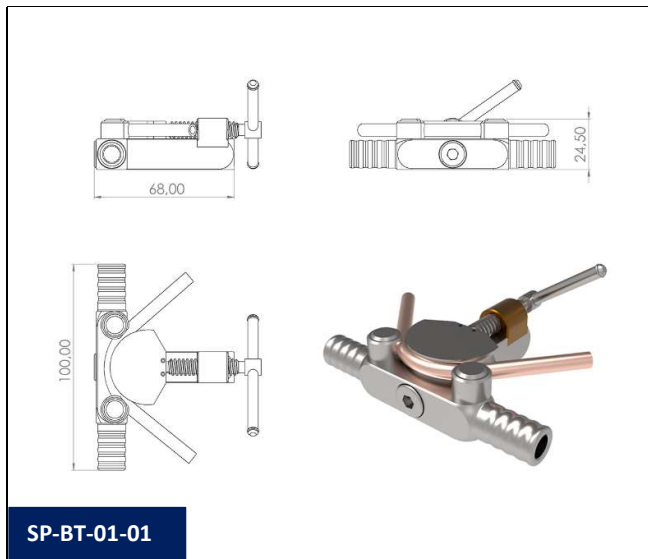
SP-BT-01-00 (Bending tool for tubes OD:8 mm)

Ref.	Description
SP-BT-01-00	Manual tool for precision bending of copper or steel coolant tubes OD:8 mm with a maximum wall thickness of 1 mm.



SP-BT-01-01 (Bending tool for tubes OD:6 mm)

Ref.	Description
SP-BT-01-01	Manual tool for precision bending of copper or steel coolant tubes OD:6 mm with a maximum wall thickness of 1 mm.



END OF DOCUMENT



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