



TANDEM® KSP3

**Pneumatic third-generation
powerhouses**

Hand in hand for tomorrow

Compact, pneumatically actuated powerhouses with an enormously wide range of variants in the standard version

TANDEM KSP3 stands for powerful, pneumatically actuated clamping force blocks, which have an extremely wide range of applications – whenever pneumatics is available on the machine. Patented monitoring during O.D. clamping through integrated spring assemblies, patented monitoring of the base jaw position via dynamic pressure, or the possibility of air control through the jaw are only three of the additional features that have been included in the new generation. These are trendsetting, especially when it comes to automation.



Advantages – Your benefits

- + Enormous diversity of variants**
Therefore ensuring highest flexibility with by far the largest and most powerful standard range of pneumatically actuated clamping force blocks
- + Force amplification for O.D. clamping via spring force**
Increased clamping force for heavy metal-cutting tasks as well as maintenance of the spring tension during storage
- + Patented monitoring of the base jaw position via dynamic pressure**
Know whether the vise is open or clamped
- + Workpiece presence control through the base jaw**
Enables automated loading of the clamping force block
- + Precision wedge hook clamping force block for top-quality demands**
Allows excellent machining results
- + Square design with ideal external contour**
Ideal for 6-sided machining in two set-ups with the best lateral accessibility
- + High efficiency of the wedge hook system**
Process-reliable clamping due to high clamping forces
- + Base jaws with tongue and groove and fine serration as a dual interface as standard**
High flexibility of system jaws
- + Optimal jaw support due to the use of a very long base jaw guidance**
Allows high clamping forces at a long service life
- + All sides of the functional parts are hardened and ground**
Ensures a long service life

Function KSP3

The force is transferred from the axially adjustable pneumatic cylinder to the slightly longer base jaws with the help of the diagonal pull at the wedge hook. For the KSP3 and KSP3-LH variants, the force generates a synchronous jaw movement to the clamping center. For the KSP3-F variant, the force generates a movement directed to the fixed jaw.

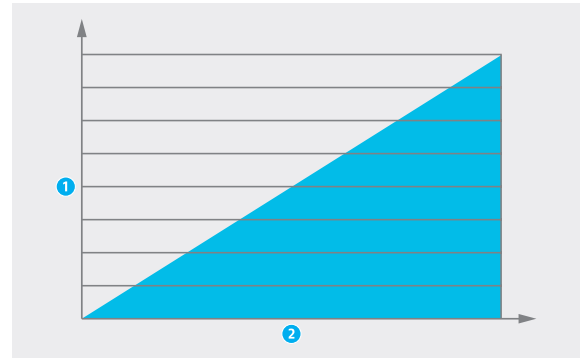


- | | |
|--|--|
| <ul style="list-style-type: none"> 1 Wedge hook drive
Offers constantly high clamping forces in operation 2 Hardened and extremely rigid base body
Therefore a longer service life at highest precision. Even with maximum clamping force 3 Innovative greasing system
For enhanced efficiency and constant clamping force 4 Long jaw guidance
Offers optimal support for O.D.- and I.D. clamping 5 Low height design
Expands your machine's workspace 6 Improved design which is insensitive to dirt
By means of targeted sealing | <ul style="list-style-type: none"> 7 Standard jaw interface
For the use of standard jaws from SCHUNK 8 Ideal outside contour
For best accessibility and optimal chip fall 9 Control of the clamping force block
From the side or bottom as desired 10 Piston guided in the body
For absorption of the machining forces along the guideway 11 Greasing channels in the cover plate
Enable bottom greasing via a central greasing system 12 Fitting screws available as an option
For positioning the clamping device with high repetition precision |
|--|--|

Clamping force depending on the actuation pressure

The clamping force increases in direct proportion to the increase in actuation pressure. The minimum air pressure should not drop below 2 bar during this process.

- ① Clamping force
- ② Actuation pressure



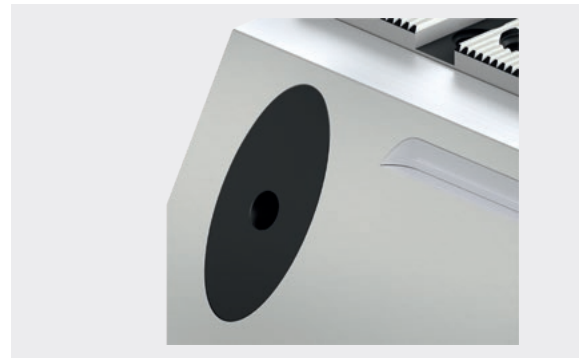
Chip-repellent design

The special design of the base jaw and cover strip prevents chips becoming permanently lodged. During the clamping process, the chips are pushed from the base jaw by the incline of the cover strip.



Cover plugs for the mounting screws

All four mounting screws are sealed with anodized aluminum plugs. Chip build-up is therefore completely eliminated in advance.



Alignment edge

An alignment edge is recessed into the side of the clamping force block. It extends parallel to the jaw guidance and enables an exact alignment of the vises to the machine table.



Coolant drainage holes

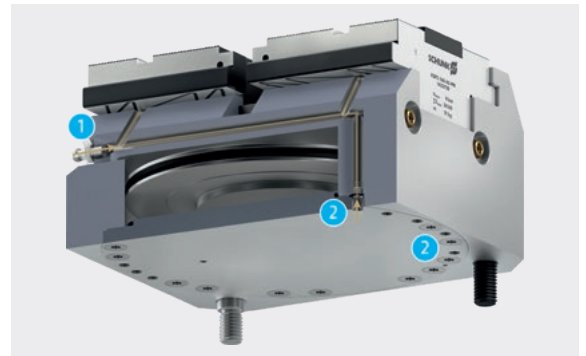
All clamping force blocks are equipped with two coolant drainage holes. That allows coolant that penetrates to be drained to the outside. The drainage holes are sealed with a sintered filter to prevent entry of chips.



Greasing system

All clamping force blocks are equipped with a dual greasing system.

- ❶ **Manual lubrication**
A grease gun is used to supply all friction surfaces (jaw guidance, piston guidance, and diagonal pull) evenly.
- ❷ **Central lubrication**
The connections on the base side are used to supply all friction surfaces (jaw guidance, piston guidance and diagonal pull) evenly with grease. Several vises can be greased at the same time by means of the base plate.



Console plates

Console plates offer several options for mounting the clamping force blocks on the machine table. To minimize the set-up time the clamping force blocks can be placed on the VERO-S NSE3 quick-change pallet modules with anti-rotation protection using the existing VERO-S interface. Alternatively, they can be mounted on the machine table or dividing heads using cylindrical clamps or T-nuts.

- ❶ **Mounting via quick-change pallet system**
- ❷ **Mounting via cylindrical clamps**
- ❸ **Mounting via T-nuts**

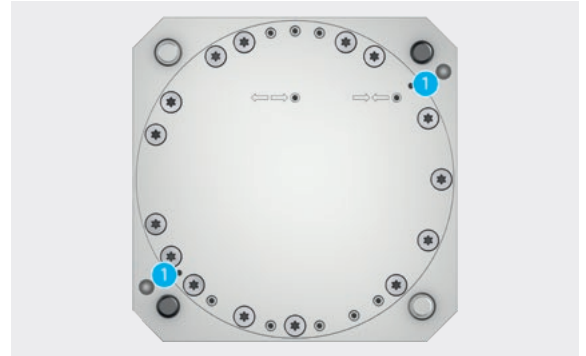


Standardized equipment versions

Jig-produced positioning bores (-Z)

In order to position several clamping force blocks very accurately, jig-produced positioning bores are integrated in the Z-version. The jig-produced positioning bores ensure a positioning accuracy of ± 0.01 mm to the clamp center when changing the clamping force block.

1 Positioning bore



Clamping force amplification for O.D. clamping (-AS)

Spring assemblies that are integrated in the vise, increase the clamping force of the pneumatic pressure by up to 20% during O.D. clamping. This increases the application possibilities, especially in heavy-duty machining, many times over. In addition, the clamping force of the springs is maintained if the clamping force block is disconnected from the media transfer unit.

1 Stainless, fatigue-resistant pressure springs



Pneumatic monitoring (-PM)

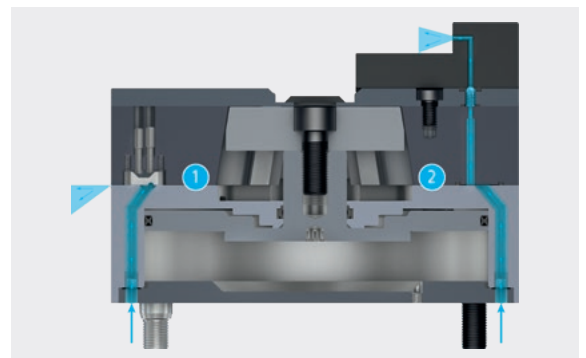
The PM version of the TANDEM3 generation includes several features. The base jaw positions can be queried via dynamic pressure. Transfer via the base jaw enables compressed air to be fed through into the system jaws. In this way, a workpiece presence control or cleaning of the clamping surfaces can be done by the customer.

1 Patented monitoring of the base jaw position

Open and closed via dynamic pressure

2 Air transfer in the system jaw

For workpiece presence control or cleaning of the clamping surfaces by the customer



Technical data

Description	ID	Jig-produced positioning bores	Clamping force amplification for O.D. clamping	Pneumatic monitoring	Clamping force at max. operating pressure [kN]	Additional clamping force resulting from spring assembly [kN]	Operating pressure [bar]
KSP3 64	1409254				4.5		2 – 9
KSP3 64-Z	1409255	●			4.5		2 – 9
KSP3 64-AS	1409256		●		4.5	0.5 – 1.5	3 – 9
KSP3 64-Z-AS	1409257	●	●		4.5	0.5 – 1.5	3 – 9
KSP3 64-PM	1433619			●	4.5		2 – 9
KSP3 64-Z-PM	1433620	●		●	4.5		2 – 9
KSP3 64-AS-PM	1433621		●	●	4.5	0.5 – 1.5	3 – 9
KSP3 64-Z-AS-PM	1433622	●	●	●	4.5	0.5 – 1.5	3 – 9
KSP3-LH 64	1409295				2.3		2 – 9
KSP3-LH 64-Z	1409296	●			2.3		2 – 9
KSP3-LH 64-AS	1409297		●		2.3	0.4 – 0.8	3 – 9
KSP3-LH 64-Z-AS	1409298	●	●		2.3	0.4 – 0.8	3 – 9
KSP3-LH 64-PM	1433636			●	2.3		2 – 9
KSP3-LH 64-Z-PM	1433637	●		●	2.3		2 – 9
KSP3-LH 64-AS-PM	1433638		●	●	2.3	0.4 – 0.8	3 – 9
KSP3-LH 64-Z-AS-PM	1433639	●	●	●	2.3	0.4 – 0.8	3 – 9
KSP3-F 64	1409334				4.5		2 – 9
KSP3-F 64-Z	1409335	●			4.5		2 – 9
KSP3-F 64-AS	1409336		●		3.5	0.5 – 1.5	3 – 7
KSP3-F 64-Z-AS	1409337	●	●		3.5	0.5 – 1.5	3 – 7
KSP3-F 64-PM	1433654			●	4.5		2 – 9
KSP3-F 64-Z-PM	1433655	●		●	4.5		2 – 9
KSP3-F 64-AS-PM	1433656		●	●	3.5	0.5 – 1.5	3 – 7
KSP3-F 64-Z-AS-PM	1433657	●	●	●	3.5	0.5 – 1.5	3 – 7

For a detailed description of the equipment versions listed above, see page 6.

Scope of delivery

Clamping force block, mounting screws for system jaws and clamping force block, cover plugs, fitting screws, clamping sleeves, operating manual

Notes

Definition clamping force

The clamping force is the arithmetic sum of the individual forces occurring at the jaws at distance "H" at maximum pressure.

Definition of clamping force increase due to spring assembly

The increase in clamping force caused by the spring assembly depends on the stroke because of the spring tension.

Max. spring force is reached in the "open" condition, min. spring force in the "closed" condition.

General note

The specifications exclusively refer to the grease LP 410 used by SCHUNK.

Further technical data

Description	Stroke version	Stroke per jaw	Max. jaw height	Repeat accuracy	Air consumption per double stroke at 6 bar	Closing/opening time	Weight
		[mm]	[mm]	[mm]	[cm³]	[s]	[kg]
KSP3 64 ...	Standard stroke	2	60	0.01	220	0.1	1.5
KSP3-LH 64 ...	Long stroke (-LH)	4	120	0.01	220	0.1	1.5
KSP3-F 64 ...	With fixed jaw (-F)	4	60	0.01	220	0.1	1.5

Technical data

Description	ID	Jig-produced positioning bores	Clamping force amplification for O.D. clamping	Pneumatic monitoring	Clamping force at max. operating pressure [kN]	Additional clamping force resulting from spring assembly [kN]	Operating pressure [bar]
KSP3 100	1382588				18		2 – 9
KSP3 100-Z	1409263	●			18		2 – 9
KSP3 100-AS	1409264		●		18	2.5 – 6.5	3 – 9
KSP3 100-Z-AS	1409265	●	●		18	2.5 – 6.5	3 – 9
KSP3 100-PM	1433664			●	18		2 – 9
KSP3 100-Z-PM	1433665	●		●	18		2 – 9
KSP3 100-AS-PM	1433666		●	●	18	2.5 – 6.5	3 – 9
KSP3 100-Z-AS-PM	1433667	●	●	●	18	2.5 – 6.5	3 – 9
KSP3-LH 100	1409300				8		2 – 9
KSP3-LH 100-Z	1409301	●			8		2 – 9
KSP3-LH 100-AS	1409302		●		8	1 – 2.5	3 – 9
KSP3-LH 100-Z-AS	1409303	●	●		8	1 – 2.5	3 – 9
KSP3-LH 100-PM	1433671			●	8		2 – 9
KSP3-LH 100-Z-PM	1433672	●		●	8		2 – 9
KSP3-LH 100-AS-PM	1433673		●	●	8	1 – 2.5	3 – 9
KSP3-LH 100-Z-AS-PM	1433674	●	●	●	8	1 – 2.5	3 – 9
KSP3-F 100	1409342				18		2 – 9
KSP3-F 100-Z	1409343	●			18		2 – 9
KSP3-F 100-AS	1409344		●		14.5	2.5 – 6.5	3 – 7
KSP3-F 100-Z-AS	1409345	●	●		14.5	2.5 – 6.5	3 – 7
KSP3-F 100-PM	1433682			●	18		2 – 9
KSP3-F 100-Z-PM	1433683	●		●	18		2 – 9
KSP3-F 100-AS-PM	1433684		●	●	14.5	2.5 – 6.5	3 – 7
KSP3-F 100-Z-AS-PM	1433685	●	●	●	14.5	2.5 – 6.5	3 – 7

For a detailed description of the equipment versions listed above, see page 6.

Scope of delivery

Clamping force block, mounting screws for system jaws and clamping force block, cover plugs, fitting screws, clamping sleeves, operating manual

Notes

Definition clamping force

The clamping force is the arithmetic sum of the individual forces occurring at the jaws at distance "H" at maximum pressure.

Definition of clamping force increase due to spring assembly

The increase in clamping force caused by the spring assembly depends on the stroke because of the spring tension.

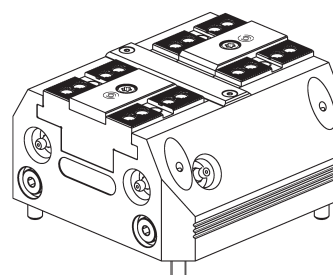
Max. spring force is reached in the "open" condition, min. spring force in the "closed" condition.

General note

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Further technical data

Description	Stroke version	Stroke per jaw	Max. jaw height	Repeat accuracy	Air consumption per double stroke at 6 bar	Closing/opening time	Weight
		[mm]	[mm]	[mm]	[cm³]	[s]	[kg]
KSP3 100 ...	Standard stroke	2	60	0.01	1000	0.2	4
KSP3-LH 100 ...	Long stroke (-LH)	6	150	0.01	1000	0.2	4
KSP3-F 100 ...	With fixed jaw (-F)	4	60	0.01	1000	0.2	4



- ④ Connection M5 for air purge
- ⑤ Air transfer in the system jaw for the workpiece presence control (see operating manual for top jaw dimensions)
- ⑥ Fixed jaw

Technical data

Description	ID	Jig-produced positioning bores	Clamping force amplification for O.D. clamping	Pneumatic monitoring	Clamping force at max. operating pressure [kN]	Additional clamping force resulting from spring assembly [kN]	Operating pressure [bar]
KSP3 140	1409267				30		2 – 9
KSP3 140-Z	1409268	●			30		2 – 9
KSP3 140-AS	1409269		●		30	4.5 – 9	3 – 9
KSP3 140-Z-AS	1409270	●	●		30	4.5 – 9	3 – 9
KSP3 140-PM	1433689			●	30		2 – 9
KSP3 140-Z-PM	1433690	●		●	30		2 – 9
KSP3 140-AS-PM	1433691		●	●	30	4.5 – 9	3 – 9
KSP3 140-Z-AS-PM	1433692	●	●	●	30	4.5 – 9	3 – 9
KSP3-LH 140	1409307				15		2 – 9
KSP3-LH 140-Z	1409308	●			15		2 – 9
KSP3-LH 140-AS	1409309		●		15	2 – 4	3 – 9
KSP3-LH 140-Z-AS	1409310	●	●		15	2 – 4	3 – 9
KSP3-LH 140-PM	1433695			●	15		2 – 9
KSP3-LH 140-Z-PM	1433696	●		●	15		2 – 9
KSP3-LH 140-AS-PM	1433697		●	●	15	2 – 4	3 – 9
KSP3-LH 140-Z-AS-PM	1433698	●	●	●	15	2 – 4	3 – 9
KSP3-F 140	1409346				30		2 – 9
KSP3-F 140-Z	1409347	●			30		2 – 9
KSP3-F 140-AS	1409348		●		24	4.5 – 9	3 – 7
KSP3-F 140-Z-AS	1409349	●	●		24	4.5 – 9	3 – 7
KSP3-F 140-PM	1433701			●	30		2 – 9
KSP3-F 140-Z-PM	1433702	●		●	30		2 – 9
KSP3-F 140-AS-PM	1433703		●	●	24	4.5 – 9	3 – 7
KSP3-F 140-Z-AS-PM	1433704	●	●	●	24	4.5 – 9	3 – 7

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Scope of delivery

Clamping force block, mounting screws for system jaws and clamping force block, cover plugs, fitting screws, clamping sleeves, operating manual

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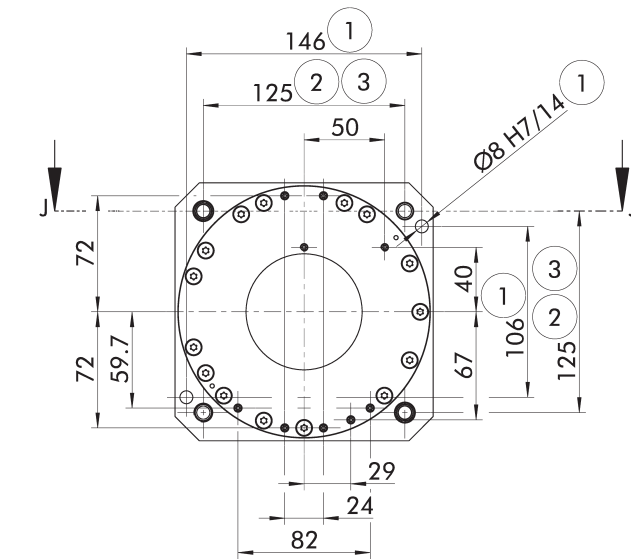
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General note

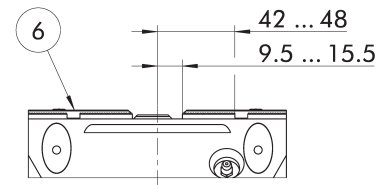
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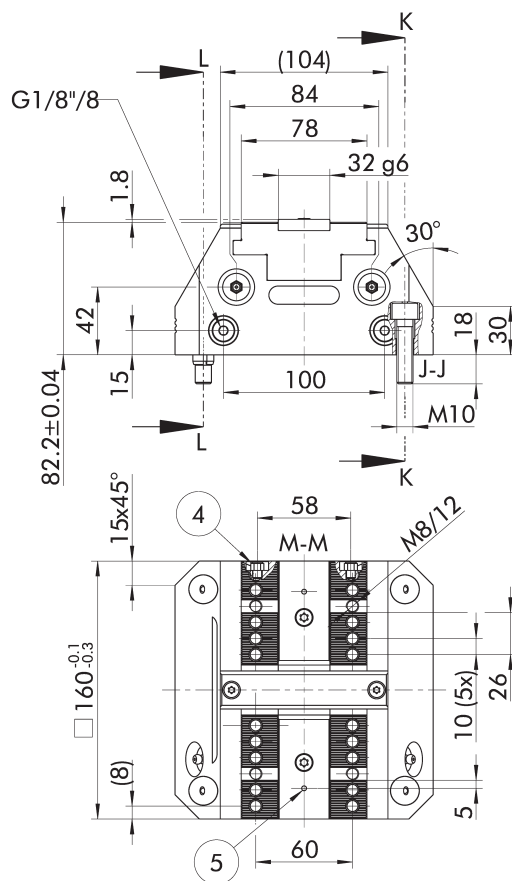
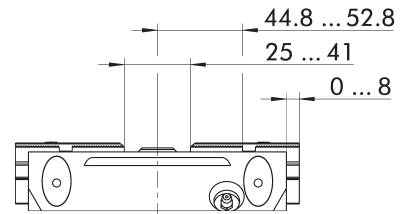
Description	Stroke version	Stroke per jaw	Max. jaw height	Repeat accuracy	Air consumption per double stroke at 6 bar	Closing/opening time	Weight
		[mm]	[mm]	[mm]	[cm³]	[s]	[kg]
KSP3 140 ...	Standard stroke	3	60	0.01	2300	0.3	7.1
KSP3-LH 140 ...	Long stroke (-LH)	7	120	0.01	2300	0.3	7.1
KSP3-F 140 ...	With fixed jaw (-F)	6	60	0.01	2300	0.3	7.1



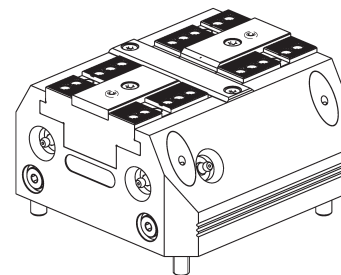
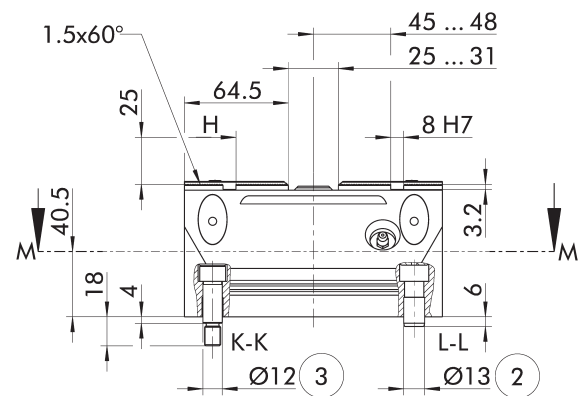
KSP3-F



KSP3-LH



KSP3



Subject to technical changes.

- ① Z-variant ± 0.01 mm to clamping center
- ② Clamping sleeve ± 0.04 mm to clamping center
- ③ Fitting screw ± 0.02 mm to clamping center
- ④ Connection M5 for air purge
- ⑤ Air transfer in the system jaw for the workpiece presence control (see operating manual for top jaw dimensions)
- ⑥ Fixed jaw

Technical data

Description	ID	Jig-produced positioning bores	Clamping force amplification for O.D. clamping	Pneumatic monitoring	Clamping force at max. operating pressure [kN]	Additional clamping force resulting from spring assembly [kN]	Operating pressure [bar]
KSP3 160	1409271				45		2 – 9
KSP3 160-Z	1409272	●			45		2 – 9
KSP3 160-AS	1409273		●		45	5.5 – 11	3 – 9
KSP3 160-Z-AS	1409274	●	●		45	5.5 – 11	3 – 9
KSP3 160-PM	1433718			●	45		2 – 9
KSP3 160-Z-PM	1433719	●		●	45		2 – 9
KSP3 160-AS-PM	1433720		●	●	45	5.5 – 11	3 – 9
KSP3 160-Z-AS-PM	1433721	●	●	●	45	5.5 – 11	3 – 9
KSP3-LH 160	1409311				20		2 – 9
KSP3-LH 160-Z	1409312	●			20		2 – 9
KSP3-LH 160-AS	1409313		●		20	2 – 4.5	3 – 9
KSP3-LH 160-Z-AS	1409314	●	●		20	2 – 4.5	3 – 9
KSP3-LH 160-PM	1433724			●	20		2 – 9
KSP3-LH 160-Z-PM	1433725	●		●	20		2 – 9
KSP3-LH 160-AS-PM	1433726		●	●	20	2 – 4.5	3 – 9
KSP3-LH 160-Z-AS-PM	1433727	●	●	●	20	2 – 4.5	3 – 9
KSP3-F 160	1409350				45		2 – 9
KSP3-F 160-Z	1409351	●			45		2 – 9
KSP3-F 160-AS	1409352		●		35.5	5.5 – 11	3 – 7
KSP3-F 160-Z-AS	1409353	●	●		35.5	5.5 – 11	3 – 7
KSP3-F 160-PM	1433756			●	45		2 – 9
KSP3-F 160-Z-PM	1433757	●		●	45		2 – 9
KSP3-F 160-AS-PM	1433758		●	●	35.5	5.5 – 11	3 – 7
KSP3-F 160-Z-AS-PM	1433759	●	●	●	35.5	5.5 – 11	3 – 7

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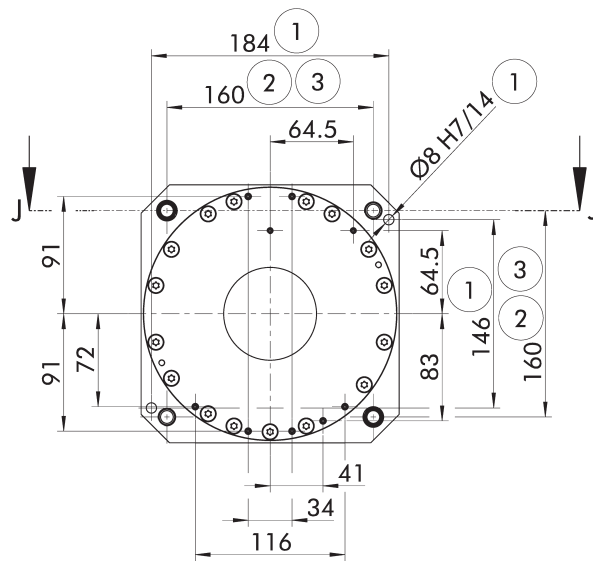
Max. spring force is reached in the "open" condition, min. spring force in the "closed" condition.

General note

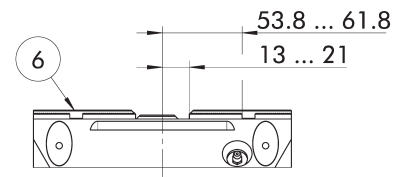
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Further technical data

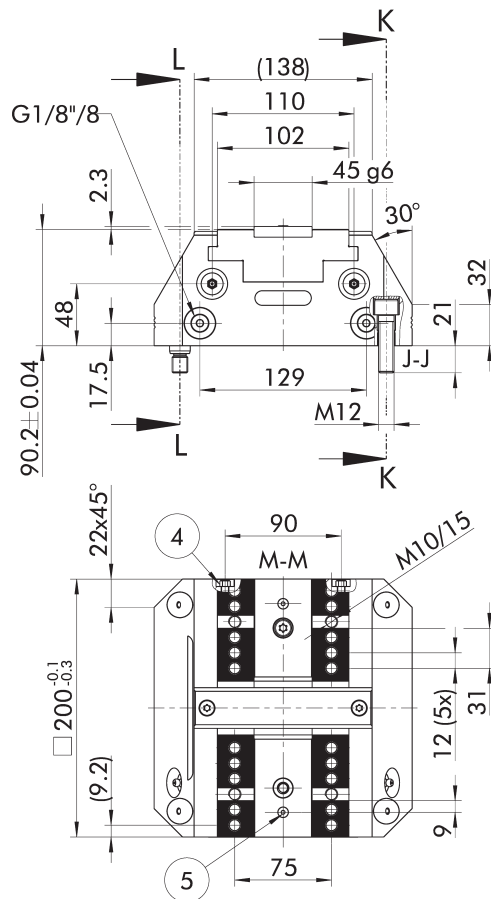
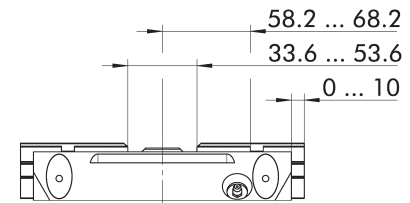
Description	Stroke version	Stroke per jaw	Max. jaw height	Repeat accuracy	Air consumption per double stroke at 6 bar	Closing/opening time	Weight
		[mm]	[mm]	[mm]	[cm³]	[s]	[kg]
KSP3 160 ...	Standard stroke	3	60	0.01	3400	0.4	11
KSP3-LH 160 ...	Long stroke (-LH)	8	200	0.01	3400	0.4	11
KSP3-F 160 ...	With fixed jaw (-F)	6	60	0.01	3400	0.4	11



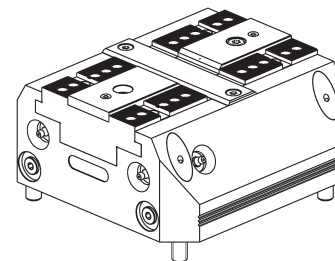
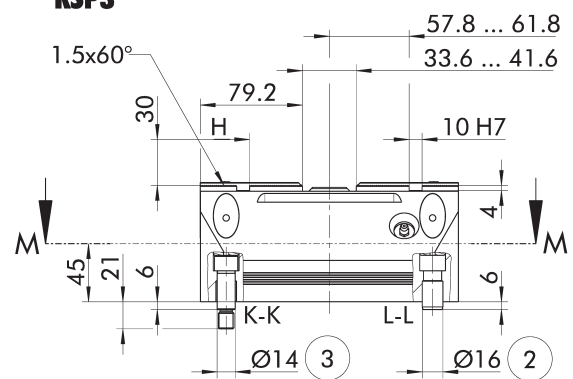
KSP3-F



KSP3-LH



KSP3



Subject to technical changes.

- ① Z-variant ± 0.01 mm to clamping center
- ② Clamping sleeve ± 0.04 mm to clamping center
- ③ Fitting screw ± 0.02 mm to clamping center
- ④ Connection M5 for air purge
- ⑤ Air transfer in the system jaw for the workpiece presence control (see operating manual for top jaw dimensions)
- ⑥ Fixed jaw

Technical data

Description	ID	Jig-produced positioning bores	Clamping force amplification for O.D. clamping	Pneumatic monitoring	Clamping force at max. operating pressure [kN]	Additional clamping force resulting from spring assembly [kN]	Operating pressure [bar]
KSP3 200	1409277				55		2 – 9
KSP3 200-Z	1409278	●			55		2 – 9
KSP3 200-AS	1409279		●		55	8.5 – 16	3 – 9
KSP3 200-Z-AS	1409280	●	●		55	8.5 – 16	3 – 9
KSP3 200-PM	1433775			●	55		2 – 9
KSP3 200-Z-PM	1433776	●		●	55		2 – 9
KSP3 200-AS-PM	1433777		●	●	55	8.5 – 16	3 – 9
KSP3 200-Z-AS-PM	1433779	●	●	●	55	8.5 – 16	3 – 9
KSP3-LH 200	1409316				25		2 – 9
KSP3-LH 200-Z	1409317	●			25		2 – 9
KSP3-LH 200-AS	1409318		●		25	3.5 – 7	3 – 9
KSP3-LH 200-AS-Z	1409319	●	●		25	3.5 – 7	3 – 9
KSP3-LH 200-PM	1433785			●	25		2 – 9
KSP3-LH 200-Z-PM	1433786	●		●	25		2 – 9
KSP3-LH 200-AS-PM	1433787		●	●	25	3.5 – 7	3 – 9
KSP3-LH 200-Z-AS-PM	1433788	●	●	●	25	3.5 – 7	3 – 9
KSP3-F 200	1409354				55		2 – 9
KSP3-F 200-Z	1409355	●			55		2 – 9
KSP3-F 200-AS	1409356		●		43	8.5 – 16	3 – 7
KSP3-F 200-Z-AS	1409357	●	●		43	8.5 – 16	3 – 7
KSP3-F 200-PM	1433793			●	55		2 – 9
KSP3-F 200-Z-PM	1433794	●		●	55		2 – 9
KSP3-F 200-AS-PM	1433795		●	●	43	8.5 – 16	3 – 7
KSP3-F 200-Z-AS-PM	1433796	●	●	●	43	8.5 – 16	3 – 7

For a detailed description of the equipment versions listed above, see page 6.

Scope of delivery

Clamping force block, mounting screws for system jaws and clamping force block, cover plugs, fitting screws, clamping sleeves, operating manual

Notes

Definition clamping force

The clamping force is the arithmetic sum of the individual forces occurring at the jaws at distance "H" at maximum pressure.

Definition of clamping force increase due to spring assembly

The increase in clamping force caused by the spring assembly depends on the stroke because of the spring tension.

Max. spring force is reached in the "open" condition, min. spring force in the "closed" condition.

General note

The specifications exclusively refer to the grease LP 410 used by SCHUNK.

Further technical data

Description	Stroke version	Stroke per jaw	Max. jaw height	Repeat accuracy	Air consumption per double stroke at 6 bar	Closing/opening time	Weight
		[mm]	[mm]	[mm]	[cm³]	[s]	[kg]
KSP3 200 ...	Standard stroke	4	100	0.02	5100	1	18.9
KSP3-LH 200 ...	Long stroke (-LH)	10	200	0.02	5100	1	18.9
KSP3-F 200 ...	With fixed jaw (-F)	8	100	0.01	5100	1	18.9

Technical data

Description	ID	Jig-produced positioning bores	Clamping force amplification for O.D. clamping	Pneumatic monitoring	Clamping force at max. operating pressure [kN]	Additional clamping force resulting from spring assembly [kN]	Operating pressure [bar]
KSP3 250	1409281				55		2 – 6
KSP3 250-Z	1409282	●			55		2 – 6
KSP3 250-AS	1409283		●		55	10.5 – 20	3 – 6
KSP3 250-Z-AS	1409284	●	●		55	10.5 – 20	3 – 6
KSP3 250-PM	1433812			●	55		2 – 6
KSP3 250-Z-PM	1433813	●		●	55		2 – 6
KSP3 250-AS-PM	1433814		●	●	55	10.5 – 20	3 – 6
KSP3 250-Z-AS-PM	1433815	●	●	●	55	10.5 – 20	3 – 6
KSP3-LH 250	1409321				20		2 – 6
KSP3-LH 250-Z	1409322	●			20		2 – 6
KSP3-LH 250-AS	1409323		●		20	3.5 – 7	3 – 6
KSP3-LH 250-Z-AS	1409324	●	●		20	3.5 – 7	3 – 6
KSP3-LH 250-PM	1433818			●	20		2 – 6
KSP3-LH 250-Z-PM	1433819	●		●	20		2 – 6
KSP3-LH 250-AS-PM	1433820		●	●	20	3.5 – 7	3 – 6
KSP3-LH 250-Z-AS-PM	1433821	●	●	●	20	3.5 – 7	3 – 6
KSP3-F 250	1409358				55		2 – 6
KSP3-F 250-Z	1409359	●			55		2 – 6
KSP3-F 250-AS	1409360		●		37	10.5 – 20	3 – 4
KSP3-F 250-Z-AS	1409361	●	●		37	10.5 – 20	3 – 4
KSP3-F 250-PM	1433822			●	55		2 – 6
KSP3-F 250-Z-PM	1433823	●		●	55		2 – 6
KSP3-F 250-AS-PM	1433824		●	●	37	10.5 – 20	3 – 4
KSP3-F 250-Z-AS-PM	1433825	●	●	●	37	10.5 – 20	3 – 4

For a detailed description of the equipment versions listed above, see page 6.

Scope of delivery

Clamping force block, mounting screws for system jaws and clamping force block, cover plugs, fitting screws, clamping sleeves, operating manual

Notes

Definition clamping force

The clamping force is the arithmetic sum of the individual forces occurring at the jaws at distance "H" at maximum pressure.

Definition of clamping force increase due to spring assembly

The increase in clamping force caused by the spring assembly depends on the stroke because of the spring tension.

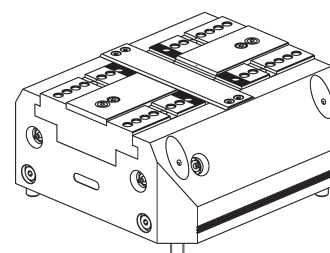
Max. spring force is reached in the "open" condition, min. spring force in the "closed" condition.

General note

The specifications exclusively refer to the grease LP 410 used by SCHUNK.

Further technical data

Description	Stroke version	Stroke per jaw	Max. jaw height	Repeat accuracy	Air consumption per double stroke at 6 bar	Closing/opening time	Weight
		[mm]	[mm]	[mm]	[cm³]	[s]	[kg]
KSP3 250 ...	Standard stroke	5	150	0.02	9100	1.6	32
KSP3-LH 250 ...	Long stroke (-LH)	15	500	0.02	9100	1.6	32
KSP3-F 250 ...	With fixed jaw (-F)	10	150	0.01	9100	1.6	32



Technical data

Description	ID	Jig-produced positioning bores	Clamping force amplification for O.D. clamping	Pneumatic monitoring	Clamping force at max. operating pressure [kN]	Additional clamping force resulting from spring assembly [kN]	Operating pressure [bar]
KSP3 315	1409287				100		2 – 6
KSP3 315-Z	1409288	●			100		2 – 6
KSP3 315-AS	1409289				100	16 – 32.5	3 – 6
KSP3 315-Z-AS	1409290	●			100	16 – 32.5	3 – 6
KSP3 315-PM	1496888			●	100		2 – 6
KSP3 315-Z-PM	1496889	●		●	100		2 – 6
KSP3 315-AS-PM	1496930			●	100	16 – 32.5	3 – 6
KSP3 315-Z-AS-PM	1496931	●		●	100	16 – 32.5	3 – 6
KSP3-LH 315	1409325				40		2 – 6
KSP3-LH 315-Z	1409327	●			40		2 – 6
KSP3-LH 315-AS	1409328		●		40	6.5 – 12.5	3 – 6
KSP3-LH 315-Z-AS	1409329	●	●		40	6.5 – 12.5	3 – 6
KSP3-LH 315-PM	1496932			●	40		2 – 6
KSP3-LH 315-Z-PM	1496933	●		●	40		2 – 6
KSP3-LH 315-AS-PM	1496934		●	●	40	6.5 – 12.5	3 – 6
KSP3-LH 315-Z-AS-PM	1496935	●	●	●	40	6.5 – 12.5	3 – 6
KSP3-F 315	1409365				100		2 – 6
KSP3-F 315-Z	1409366	●			100		2 – 6
KSP3-F 315-AS	1409367		●		67	16 – 32.5	3 – 4
KSP3-F 315-Z-AS	1409368	●	●		67	16 – 32.5	3 – 4
KSP3-F 315-PM	1496936			●	100		2 – 6
KSP3-F 315-Z-PM	1496937	●		●	100		2 – 6
KSP3-F 315-AS-PM	1496938		●	●	67	16 – 32.5	3 – 4
KSP3-F 315-Z-AS-PM	1496939	●	●	●	67	16 – 32.5	3 – 4

For a detailed description of the equipment versions listed above, see page 6.

Scope of delivery

Clamping force block, mounting screws for system jaws and clamping force block, cover plugs, fitting screws, clamping sleeves, operating manual

Notes

Definition clamping force

The clamping force is the arithmetic sum of the individual forces occurring at the jaws at distance "H" at maximum pressure.

Definition of clamping force increase due to spring assembly

The increase in clamping force caused by the spring assembly depends on the stroke because of the spring tension.

Max. spring force is reached in the "open" condition, min. spring force in the "closed" condition.

General note

The specifications exclusively refer to the grease LP 410 used by SCHUNK.

Further technical data

Description	Stroke version	Stroke per jaw	Max. jaw height	Repeat accuracy	Air consumption per double stroke at 6 bar	Closing/opening time	Weight
		[mm]	[mm]	[mm]	[cm³]	[s]	[kg]
KSP3 315 ...	Standard stroke	6.5	200	0.02	21500	2	70
KSP3-LH 315 ...	Long stroke (-LH)	18	500	0.02	21500	2	70
KSP3-F 315 ...	With fixed jaw (-F)	13	200	0.01	21500	2	70

System jaws

Supporting jaw TBA-D

Reversible supporting jaws with fine serration for mounting standard top jaws from SCHUNK.



Suitable for	Description	Interface	ID
KSP3 100	TBA-D 100	W-65-1	0402294
		W-90-1	
KSP3 140	TBA-D 140	W-100-1	1349715
KSP3 160	TBA-D 160	W-100-1	0402295
KSP3 200	TBA-D 200	W-100-1	1498197
KSP3 250	TBA-D 250	W-125-1	0402296
KSP3 315	TBA-D 315	W-160	1498198

3-axis jaw grip S3A-G5

With grip step, 5 mm.
For embossed clamping of unhardened materials up to 22 HRC.



Suitable for	Description	ID
KSP3 64	S3A-G5 64	1471165
KSP3 100	S3A-G5 100	1471166
KSP3 140	S3A-G5 140	1471167
KSP3 160	S3A-G5 160	1471168
KSP3 200	S3A-G5 200	1471186
KSP3 250	S3A-G5 250	1471187
KSP3 315	S3A-G5 315	1471188

5-axis jaw grip S5A-G5

With grip step, 5 mm.
For embossed clamping of unhardened materials up to 22 HRC.



Suitable for	Description	ID
KSP3 64	S5A-G5 64	1471189
KSP3 100	S5A-G5 100	1471190
KSP3 140	S5A-G5 140	1471197
KSP3 160	S5A-G5 160	1471198
KSP3 200	S5A-G5 200	1471199
KSP3 250	S5A-G5 250	1471200
KSP3 315	S5A-G5 315	1471201

Top jaw blank STR

Top jaw blanks with fine serration for customer rework.



Suitable for	Description	ID
KSP3 64	STR 64	0402100
KSP3 100	STR 100	0402101
KSP3 140	STR 140	1349709
KSP3 160	STR 160	0402102
KSP3 200	STR 200	1446894
KSP3 250	STR 250	0402103
KSP3 315	STR 315	1446896

Top jaw blank STR-H

High top jaw blanks with fine serration for customer rework.



Suitable for	Description	ID
KSP3 64	STR-H 64	0402200
KSP3 100	STR-H 100	0402201
KSP3 160	STR-H 160	0402202
KSP3 200	STR-H 200	1446905
KSP3 250	STR-H 250	0402203
KSP3 315	STR-H 315	1446907

Top jaw blank KTR

Top jaw blanks with tongue and groove and preassembled mounting holes for customer rework.



Suitable for	Description	ID
KSP3 64	KTR 64	0402120
KSP3 100	KTR 100	0402121
KSP3 140	KTR 140	1349707
KSP3 160	KTR 160	0402122
KSP3 200	KTR 200	1446913
KSP3 250	KTR 250	0402123
KSP3 315	KTR 315	1446915

Top jaw blank KTR-H

High top jaw blanks with tongue and groove and preassembled mounting holes for customer rework.



Suitable for	Description	ID
KSP3 64	KTR-H 64	0402220
KSP3 100	KTR-H 100	0402221
KSP3 140	KTR-H 140	1349708
KSP3 160	KTR-H 160	0402222
KSP3 200	KTR-H 200	1446923
KSP3 250	KTR-H 250	0402223
KSP3 315	KTR-H 315	1446925

Top jaw blank STR-S

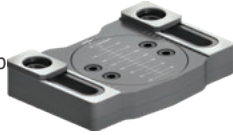
Top jaw blanks with fine serration and preassembled mounting groove for customer rework.



Suitable for	Description	ID
KSP3 64	STR-S 64	0402110
KSP3 100	STR-S 100	0402111
KSP3 140	STR-S 140	1349712
KSP3 160	STR-S 160	0402112
KSP3 200	STR-S 200	1446933
KSP3 250	STR-S 250	0402113
KSP3 315	STR-S 315	1446935

Swivel plate

Used – in combination with adapter plates and 6-way reversal jaws – to clamp bulky workpieces.



Suitable for	Description	Interface	ID
KSP3 160	KTP 160	W-38	1580334

Adapter plate

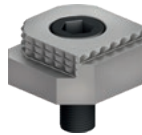
Used – in combination with swivel plates and 6-way reversal jaws – to clamp bulky workpieces.



Suitable for	Description	Interface	ID
KSP3 160	KTA 160	W-38	1580335

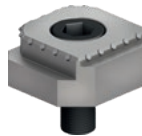
Top jaws**6-way reversible jaws grip**

With five grip steps as well as a coated clamping face.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBG-6W 38-38-18	38.5	18	38.2	W-38	0430803

With five carbide grip steps as well as a smooth clamping face.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBCG-6W 38-38-18	38.5	18	38.2	W-38	1395550

Jaw profiled

For increasing the friction between jaw and workpiece without clamping impressions.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBD 100-35-10	100	35	10	W-100-1	1373346
GBD 125-40-11.5	125	40	11.5	W-125-1	1373349
GBD 160-50-13.5	160	50	13.5	W-160	1373350

Soft jaw

Hardenable jaws for rework at the customer site, e.g. for incorporating contours or special shapes.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBW 100-35-16	100	35	16	W-100-1	1373287
GBW 125-40-20	125	40	20	W-125-1	1373288
GBW 160-50-20	160	50	20	W-160	1373289

Stepped jaw

With ground step, 8 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS 100-35-10-5	100	35	10	W-100-1	1373325
GBS 125-40-11.5-8	125	40	11.5	W-125-1	1373327
GBS 160-50-13.5-8	160	50	13.5	W-160	1373328

Stepped jaw

With ground step, 17 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS 125-40-11.5-17	125	40	11.5	W-125-1	0430413

Stepped jaw

With coated step, 5 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-W 100-35-10-5	100	35	10	W-100-1	1395510
GBS-W 125-40-11.5-5	125	40	11.5	W-125-1	0430414
GBS-W 160-50-13.5-5	160	50	13.5	W-160	1395511

Stepped jaw

With grip step 3 mm and ground step 18 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-G3					
125-40-21.5-18	125	40	21.5	W-125-1	0430415
GBS-G3 125-40-24-18	125	40	24	W-125-1	1322989

Stepped jaw

With special "soft" grip step, 5 mm.
For embossed clamping of soft materials
such as plastic or aluminum.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-SG5 125-40-11.5	125	40	11.5	W-125-1	1393552

Stepped jaw

With grip step, 3 mm.
For embossed clamping of unhardened
materials up to 22 HRC.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-G3 100-35-10	100	35	10	W-100-1	1373330
GBS-G3 125-40-11.5	125	40	11.5	W-125-1	1373331
GBS-G3 160-50-13.5	160	50	13.5	W-160	1373332

Stepped jaw

With grip step, 5 mm.
For embossed clamping of unhardened
materials up to 22 HRC.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-G5 65-22-8	65	22	8	W-65-1	1465122
GBS-G5 100-35-10	100	35	10	W-100-1	1373333
GBS-G5 125-40-11.5	125	40	11.5	W-125-1	1373334
GBS-G5 160-50-13.5	160	50	13.5	W-160	1373335

Stepped jaw

With grip step, 8 mm.
For embossed clamping of unhardened
materials up to 22 HRC.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-G8 100-35-10	100	35	10	W-100-1	1373337
GBS-G8 125-40-11.5	125	40	11.5	W-125-1	1373338

Stepped jaw

With carbide grip step, 3 mm.
For embossed clamping of hardened
materials up to 58 HRC.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-CG3 100-35-10	100	35	10	W-100-1	1428440
GBS-CG3 125-40-11.5	125	40	11.5	W-125-1	1395524
GBS-CG3 160-50-13.5	160	50	13.5	W-160	1431232

Stepped jaw

With carbide grip step, 5 mm.
For embossed clamping of hardened
materials up to 58 HRC.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-CG5 100-35-12	100	35	12	W-100-1	1428441
GBS-CG5 125-40-11.5	125	40	11.5	W-125-1	1424000
GBS-CG5 160-50-15.5	160	50	15.5	W-160	1431233

Stepped jaw

With special grip step, 3 mm.
For clamping pre-embossed materials and
workpieces.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-GL3 125-40-11.5	125	40	11.5	W-125-1	1395577

Stepped jaw with T-slot

With grip step, 3 mm.
T-slot for mounting the positioning strip.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-G3-T 100-35-17.5	100	35	17.5	W-100-1	0430242
GBS-G3-T 125-40-17.5	125	40	17.5	W-125-1	0430248

Stepped jaw with T-slot

With grip step, 5 mm.
T-slot for mounting the positioning strip.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-G5-T 100-35-17.5	100	35	17.5	W-100-1	0430241
GBS-G5-T 125-40-17.5	125	40	17.5	W-125-1	0430247
GBS-G5-T 160-50-20	160	50	20	W-160	0430250

Stepped jaw with T-slot

With grip step, 8 mm.
T-slot for mounting the positioning strip.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBS-G8-T 100-35-17.5	100	35	17.5	W-100-1	0430240
GBS-G8-T 125-40-17.5	125	40	17.5	W-125-1	0430237
GBS-G8-T 160-50-20	160	50	20	W-160	0430249

Positioning bar

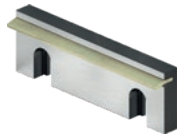
To suit all stepped jaws with T-slot.



Description	Width mm	Height mm	Depth mm	Interface	ID
GPL 100-32-13.5	100	32	13.5	W-100-1	0430246
GPL 125-32-13.5	125	32	13.5	W-125-1	0430238
GPL 160-32-13.5	160	32	13.5	W-160	0430251

Spring leaf pull-down jaw

For an active jaw pull-down function with a light clamping impression on the workpiece for more precise machining results.



Description	Width mm	Height mm	Depth mm	Interface	ID
GFA 100-35-10	100	35	10	W-100-1	1373301
GFA 125-40-11.5	125	40	11.5	W-125-1	1373304
GFA 160-50-13.5	160	50	13.5	W-160	1373306

Spring plate pull-down jaw

For an active jaw pull-down function without clamping impressions on the workpiece for more precise machining results.



Description	Width mm	Height mm	Depth mm	Interface	ID
GFB 100-34-10	100	34	10	W-100-1	0430191
GFB 125-39-10	125	39	10	W-125-1	0430192

Precision pull-down jaw

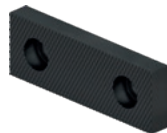
For an active jaw pull-down function without clamping impressions on the workpiece for more precise machining results.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBN-P 100-35-25	100	35	25	W-100-1	0430146
GBN-P 125-40-25	125	40	25	W-125-1	0430147
GBN-P 160-50-27.5	160	50	27.5	W-160	0430148

Serrated jaw

For increasing the friction between jaw and workpiece with minimal clamping impressions. Height = 22 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBC 90-35-11	90	35	11	W-90	0490569
GBC 65-22-8	64	22	8	W-65-1	0490565
GBC 100-35-11	100	35	11	W-100-1	1373267
GBC 125-40-12.5	125	40	12.5	W-125-1	1373268
GBC 160-50-14.4	160	50	14.4	W-160	1373269

Ground jaw

With a completely ground clamping face. Height = 22 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBP 90-35-10	90	35	10	W-90	0490580
GBP 65-22-7.7	64	22	7.7	W-65-1	0490566
GBP 100-35-10	100	35	10	W-100-1	1373272
GBP 125-40-11.5	125	40	11.5	W-125-1	1373278
GBP 160-50-13.5	160	50	13.5	W-160	1373281

Soft jaw

Blanks for rework by the customer. Height = 22 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBW 90-35-16	90	35	16	W-90	0490570
GBW 65-22-20	65	22	20	W-65-1	0490567

Grip jaw

For embossed clamping of unhardened materials up to 22 HRC. Height = 22 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBG 100-35-10	100	35	10	W-100-1	1373282
GBG 125-40-11.5	125	40	11.5	W-125-1	1373284
GBG 160-50-13.5	160	50	13.5	W-160	1373285
GBG 90-35-10	90	35	10	W-90	0490571
GBG 65-22-7.8	64	22	7.8	W-65-1	0430804

Reversible grip jaw

Reversible jaw with grip step 3 mm in vertical direction and 5 mm in horizontal direction.



Description	Width mm	Height mm	Depth mm	Interface	ID
GBG-W 65-22-8	65	22	8	W-65-1	0430729

Prism jaw, ground

For precise clamping of round workpieces. Height = 22 mm.



Description	Width mm	Height mm	Depth mm	Interface	ID
GVA 100-35-15.5	100	35	15.5	W-100-1	1373342
GVA 125-40-17.5	125	40	17.5	W-125-1	1373344
GVA 160-50-19.5	160	50	19.5	W-160	1373345
GVA 65-22-15	65	22	15	W-65-1	0430707

Universal stepped jaw

Versatile stepped jaw with ground step.



Description	Width mm	Height mm	Depth mm	Interface	ID
GPE 65-22-8-3	65	22	8	W-65-1	0430704

Base plates**Consol plate**

For direct mounting on VERO-S or T-slot tables.



Suitable for	Description	ID
KSP3 64	KSL3 64-1	1466118
KSP3 100	KSL3 100-1	1466119
KSP3 140	KSL3 140-1	1466120
KSP3 160	KSL3 160-1	1466121
KSP3 200	KSL3 200-1	1466122

Single base plate

For direct mounting and actuation of one TANDEM clamping force block both with and without VERO-S.



Suitable for	Description	ID
KSP3 100		
KSP3 160	ABP-h plus 100/160-1	1323973
KSP3 250	ABP-h plus 250-1	1323976

Double base plate

For direct mounting and actuation of up to two TANDEM clamping force blocks with and also without VERO-S.



Suitable for	Description	ID
KSP3 100		
KSP3 160	ABP-h plus 100/160-2	1323974
KSP3 250	ABP-h plus 250-2	1323977

Triple base plate

For direct mounting and actuation of up to three TANDEM clamping force blocks with and also without VERO-S.



Suitable for	Description	ID
KSP3 100		
KSP3 160	ABP-h plus 100/160-3	1323975

Accessories

Clamping force tester

For measuring the jaw clamping force of stationary clamping devices.



Suitable for	Description	ID
KSP3 64		
KSP3 100		
KSP3 140		
KSP3 160		
KSP3 200		
KSP3 250		
KSP3 315	IFT SST Set	1475766

Clamping pins SPx

Clamping pin for positive connection with NSE3 clamping modules.



Suitable for	Description	ID
ABP-h plus 100/160-1		
ABP-h plus 100/160-2		
ABP-h plus 100/160-3		
ABP-h plus 250-1		
ABP-h plus 250-2		
KSL3 64-1		
KSL3 100-1		
KSL3 140-1		
KSL3 160-1		
KSL3 200-1	SPA 40	0471151
ABP-h plus 100/160-2		
ABP-h plus 100/160-3		
ABP-h plus 250-2		
KSL3 200-1	SPB 40	0471152
ABP-h plus 100/160-3		
ABP-h plus 250-2		
KSL3 200-1	SPC 40	0471153

Grease

LP 410

High-performance grease as standard for regularly lubricating SCHUNK TANDEM clamping force blocks.



Bundle	Description	ID
Cartridge	LP 410 cartridge	0184213

LINOMAX plus

High-performance grease as standard for regularly lubricating SCHUNK manual and power lathe chucks and steady rests.



Bundle	Description	ID
Cartridge	LINOMAX plus cartridge	1342585

Indexing pin

Used as an anti-rotation protection for VERO-S modules with anti-rotation protection V1.



Suitable for	Description	ID
ABP-h plus 100/160-1		
KSL3 64-1		
KSL3 100-1		
KSL3 140-1		
KSL3 160-1	IXB V1	0471980

Cylindrical clamp blanks

For individual fastening of the clamping stations or console plates on all common machine table slot spacings



Suitable for	Description	ID
KSL3 64-1		
KSL3 100-1		
KSL3 140-1		
KSL3 160-1	BRR 50	0470020

Plate spring for pull-down jaw

Spare part for spring plate pull-down jaw



Suitable for	Description	ID
GFA 100-35-10	GFB 100	0430054
GFA 125-40-11.5	GFB 125	0430055
GFA 160-50-13.5	GFB 160	0430046

Grease gun

Auxiliary tools for lubrication of all kinds of SCHUNK products. The grease gun can be used for cartridges of all types of SCHUNK grease.



Bundle	Description	ID
Cartridge	Grease gun	9900543



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