



ZERO POINT CLAMPING SYSTEMS

WPS | APS

For workpiece direct-clamping
Significant reduction of set-up times



Zero Point Clamping System



Page 4

WPS

Workpiece positioning system

- Ideal for workpiece direct clamping
- Highest precision
- Single quick-actuation
- Opening and closing with only 3.5 rotations
- Maximal holding forces
- Modules fully sealed (proofline)



Page 20

APS

Combi units

- Ready to use combi module units
- Different heights



Page 13

WPS

Clamping pins

- 1 piece / 2 pieces
- Drawing for mounting clamping pins



Page 24

APS

Clamping pins

- Large entry radius on the clamping pins for easy and safe loading
- Wear-resistant



Page 15

WPS

Accessories

- Adaption washer
- Extractor
- Reductions
- Positioning-Set
- 3rd clamping point



Page 26

APS

Spacers for combi units

- For adaption of several or different combi units



Page 19

WPS

Grid plates

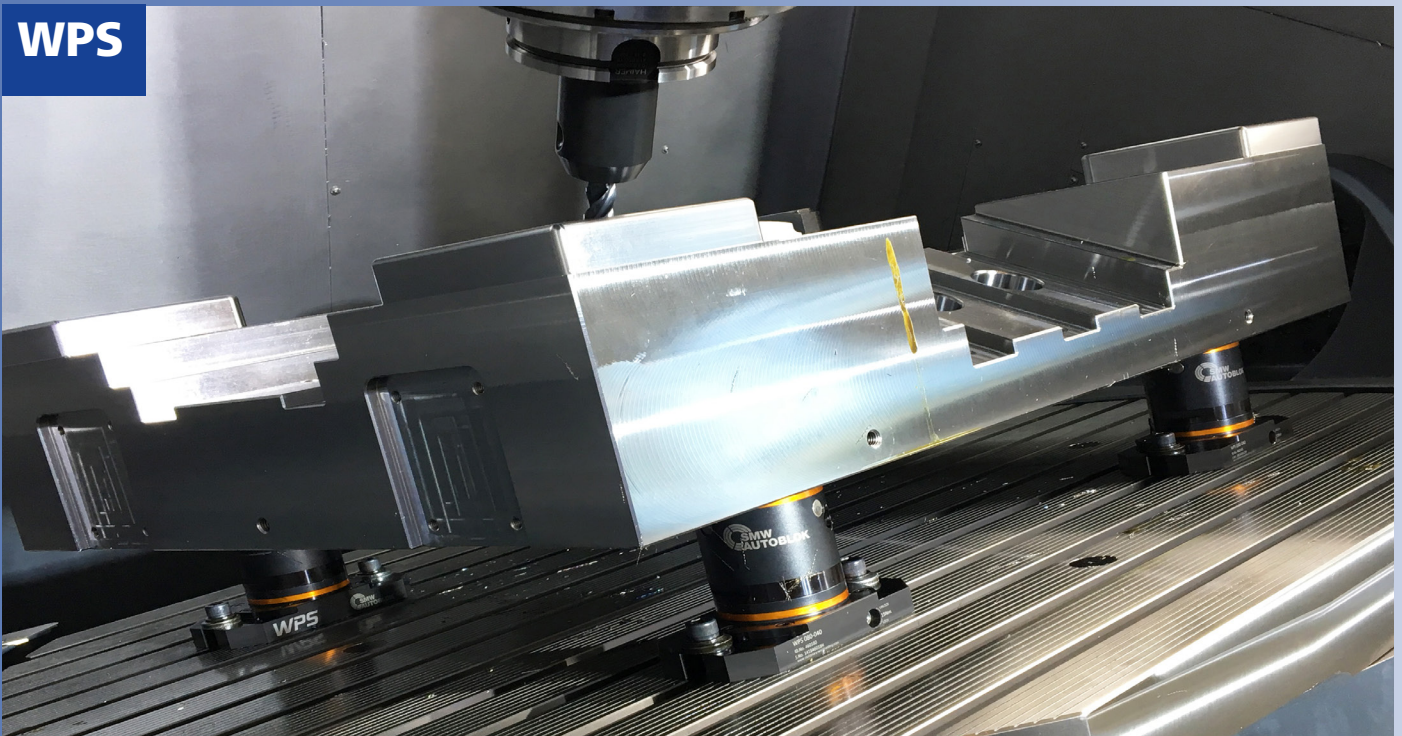
- Different versions

Significant reduction of set-up times for workpiece clamping

Your Benefits

- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Manual single quick-actuation for the rapid opening and closing of the modules with only 3.5 rotations
- Flexible configurations for customized use
- Interchangeable to the proven zero point system APS

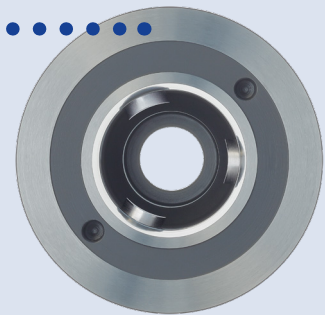
WPS



WPS Workpiece Positioning System

- Precise taper / face support ensures
- interlocking safe clamping and highest
- repeatability

Top view



3 Clamping slides for extreme holding forces when clamping

Clamping module hermetically sealed, therefore low maintenance

Single quick-actuation for the rapid opening and closing of the modules with only 3.5 rotations at best accessibility

Additional option for mounting on the machine table



WPS Workpiece positioning system

Clamping pins Basic WPS

Clamping pins	Id. No.
Clamping pins Basic M12 (without adapter)	460122
Clamping pins Basic M16 (without adapter)	460123
Clamping pins Basic 7/16" (without adapter)	460108
Clamping pins Basic 5/8" (without adapter)	460109

Adapter

Ø	Type	Id. No.	Type	Id. No.	Type	Id. No.
18*	A	460124	B	460341	C	460129
20	A	460125	B	460342	C	460130
22	A	460126	B	460343	C	460131
24	A	460127	B	460344	C	460132
25	A	460128	B	460345	C	460133

Detail description see page 89 Stationary Workholding catalog

* Use only together with Clamping pins M12 / 7/16"

Clamping module with flange

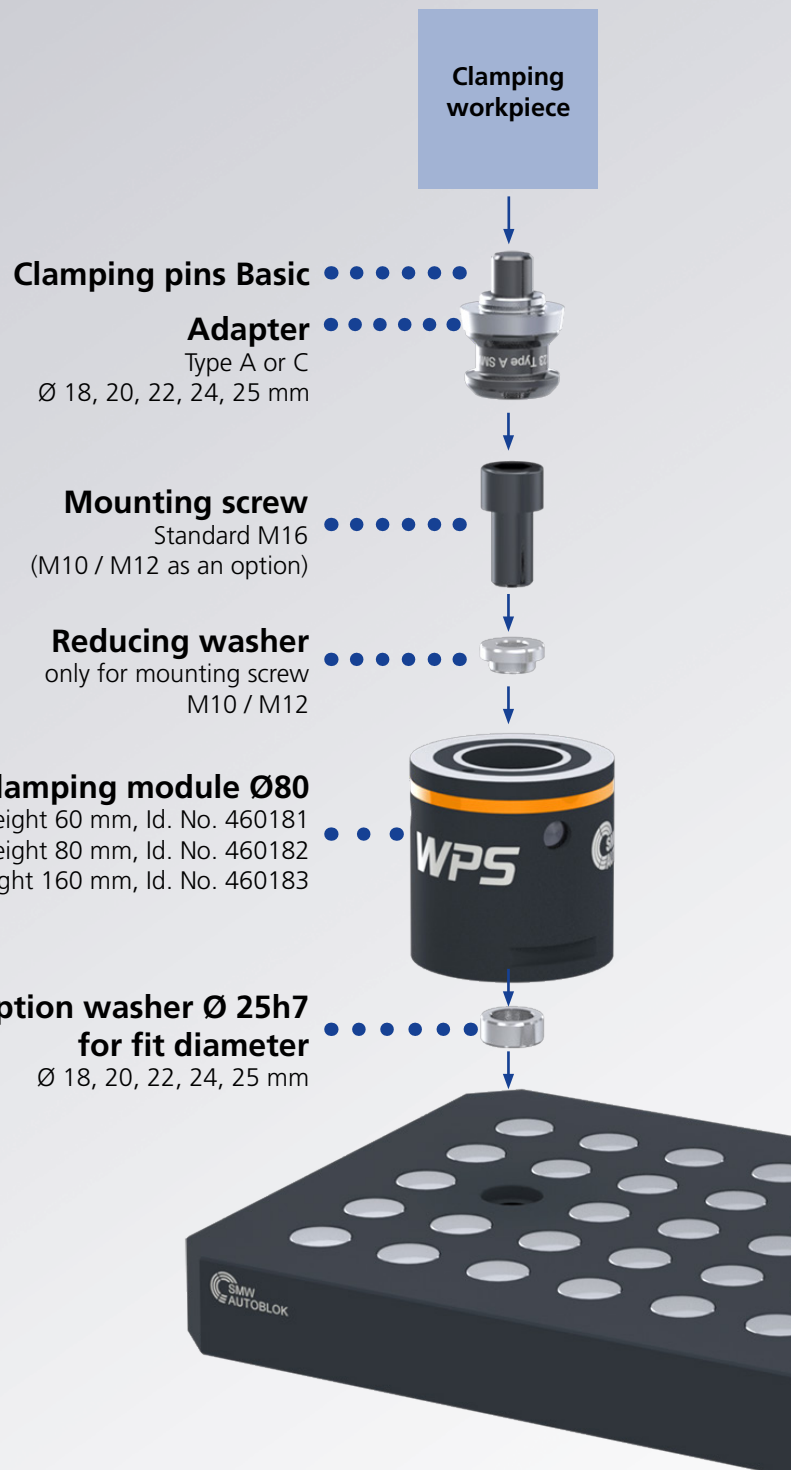
Height 40 mm
Id. No. 460180



Adaption washer Ø 25h7 on [D] pass diameter

Adaption washer Ø	Id. No.
Ø D 18	460135
Ø D 20	460136
Ø D 22	460137
Ø D 24	460138
Ø D 25	460139

For detailed description see page 83 Stationary Workholding catalog



Clamping workpiece



••••• **Reduction Ø 32**
Detail description see page 84
Stationary Workholding catalog



••••• **Further clamping modules Ø 80 mountable on top**
Height 60 mm, Id. No. 460181
Height 80 mm, Id. No. 460182
Height 160 mm, Id. No. 460183
with mounting kit (order separate):
Mounting kit WPS height 60 mm, Id. No. 460261
Mounting kit WPS height 80 mm, Id. No. 460262
Mounting kit WPS height 160 mm, Id. No. 460263
(Mounting kit consisting of clamping pin and mounting screw)



••••• **Mounting with reduction for smaller screws M10 and M12**

Mounting screw / reduction for M10 and M12	Screw M10	Reduction M10	Screw M12	Reduction M12
WPS height 60 mm, bolt length 40 mm	207780	460206	207779	460207
WPS height 80 mm, bolt length 50 mm	010814	460204	010212	460205
WPS height 160 mm, bolt length 130 mm	019363	460204	010599	460205

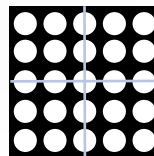
Detail description see page 83 Stationary Workholding catalog



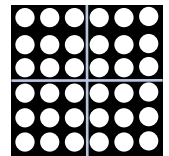
Grid plates (examples)

Grid 50 and 100 mm
Material 1.2311/1.2312

Grid (in center)
Positioning holes Ø25H7, thread M12 / 16



Grid (not in center)
Positioning holes Ø25H7, thread M12 / 16



Grid	Length	Width
50 / 100	500	500
50 / 100	600	600
50 / 100	800	800
50 / 100	1000	500
50 / 100	1000	800
50 / 100	1200	800
50 / 100	1000	1000

Special versions on request

Grid	Length	Width
50 / 100	600	400
50 / 100	500	500
50 / 100	600	500
50 / 100	600	800
50 / 100	1000	500
50 / 100	1000	600
50 / 100	1000	800
50 / 100	1000	1000

Special versions on request



WPS Workpiece positioning system

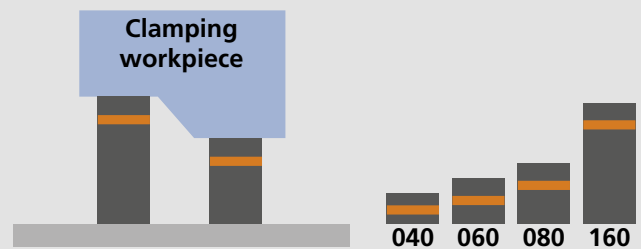
► Convincing advantages

Best accessibility



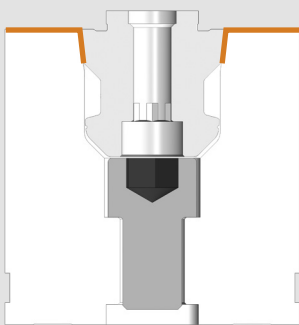
- Best accessibility, ideal for the 5-axis machining without interference.

Modular kit



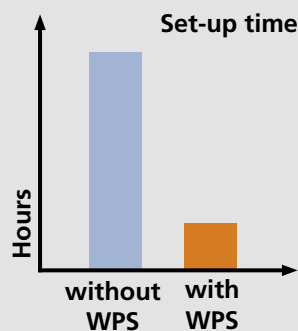
- Modular kit with a wide range of accessories ensures the flexible clamping of nearly every workpiece geometry. Furthermore, the clamping pins are interchangeable to the proven zero point clamping system APS.

Highest repeatability, extremely strong clamping



- The precise taper / face support ensures the interlocking and safe clamping with highest holding forces and maximum stiffness.

Increased efficiency



- Huge reduction of the set-up times and maximum efficiency. No other clamping devices are necessary.

Fully sealed



- Clamping modules are hermetic sealed, therefore low maintenance. The availability of the machine is increased.

► Function

1 Clamping pins



Clamping pins WPS with adapter
for fit dia. 18, 20, 22, 24
and 25 mm
thread M12 and M16

- SMW-AUTOBLOK clamping pins for the clamping of workpieces or the top mounting are case hardened. The clamping pins are protected against wear and rust. The accurate manufacturing ensures highest centering precision. Due to the weight of the workpiece and the clamping situation different versions are available as a standard.

2 Mounting screw

- Mounting screws for the clamping modules with thread M12 or M16 for maximum stability and stiffness.

3 Reducing washer

- Reducing washer for the mounting of the clamping modules for mounting screw M10 or M12.

4 Clamping modules

- Clamping modules with different heights (40, 60, 80 and 160 mm) guarantee the clamping of almost all workpiece geometries. The clamping modules can be mounted either on a grid plate or by means of a mounting flange directly onto the machine table.

5 Single quick-actuation

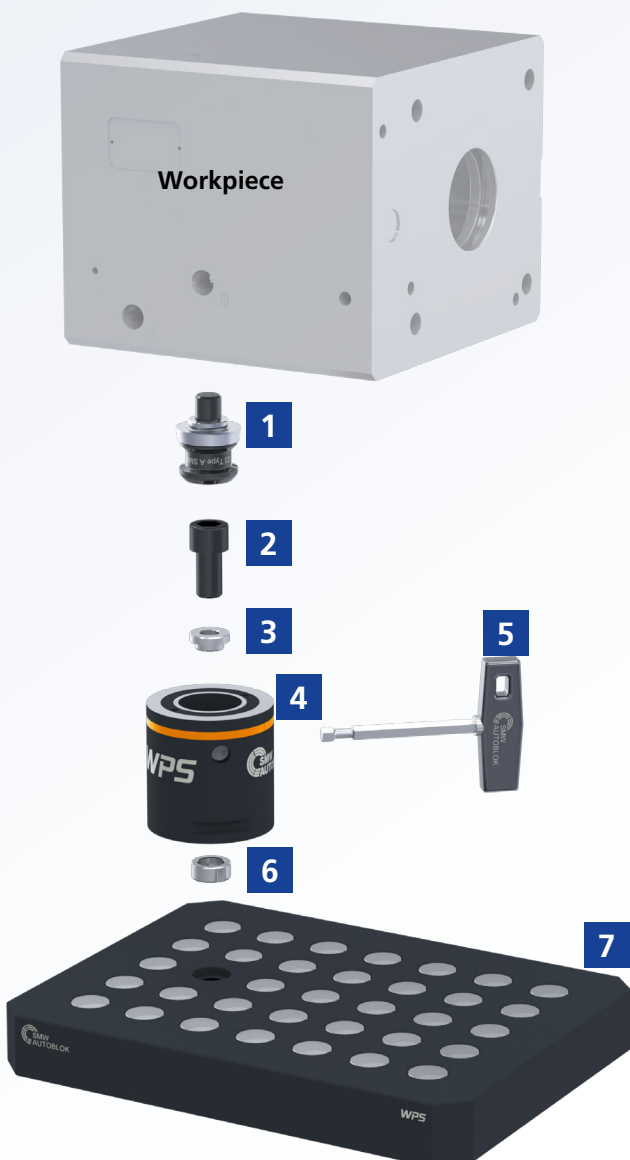
- Thanks to the single quick-actuation, the modules can be opened and closed by only 3.5 rotations. The actuation is done manual and without any media.
- The ideal accessibility of the actuation ensures a comfortable handling and use of the clamping system.

6 Adaption washers

- The adaption washers are available in different diameters (standard 25 mm). The clamping modules can be positioned exactly on the grid plate.

7 Grid plate

- The clamping modules will be mounted on the grid plate. Grid plates are available in different standard versions. Therefore, different workpiece configurations are possible. The grid plates are manufactured from tempered quality steel and are protected against wear and rust.



Manual zero point clamping system for workpiece direct clamping

- Single quick-actuation for the rapid opening and closing
- Fully sealed



Application/customer benefits

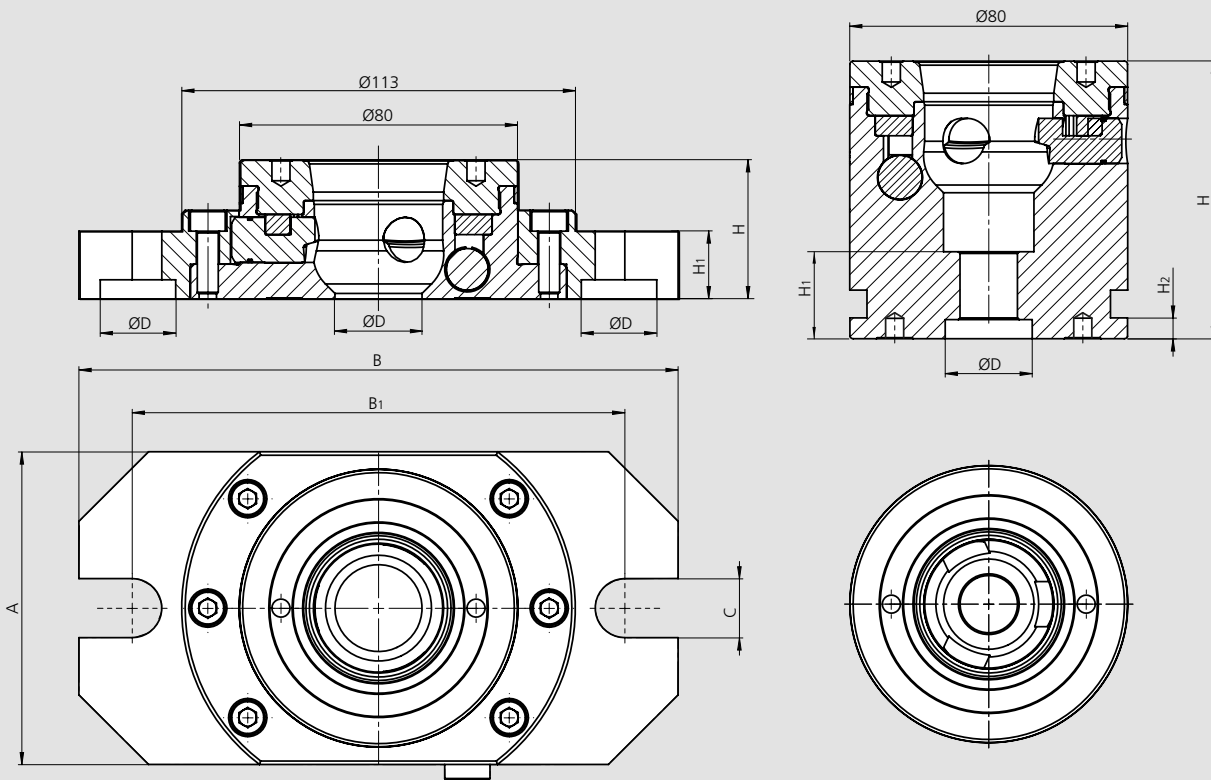
- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Single quick-actuation for the rapid opening and closing of the modules with only 3.5 rotations
- Flexible configurations for customized use
- Interchangeable to the proven zero point system APS

Technical features

- Diameter 80 mm
- Pull-in force 15 kN
- Max. torque 15 Nm
- Repeatability < 0.005 mm
- Holding force 50 / 75 kN (M12 / M16) depending on thread of clamping pin
- 3 clamping slides for maximum hold while clamping
- **proofline®** = fully sealed - low maintenance

WPS 080-040

WPS 080-060, 080-080, 080-160



Subject to technical changes.

Technical data

SMW-AUTOBLOK Type	WPS 080-040 460180	WPS 080-060 460181	WPS 080-080 460182	WPS 080-100 460199	WPS 080-120 460461	WPS 080-160 460183
A	90	-	-	-	-	-
B	172	-	-	-	-	-
B1	141.4	-	-	-	-	-
C	17	-	-	-	-	-
D / Depth	Ø 25H6 / 5.5***	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5
H	40 ± 0.005	60 ± 0.005	80 ± 0.005	100 ± 0.005	120 ± 0.005	160 ± 0.005
H1	19.5	21	25	45	25	105
H2	-	6	6	6	6	6
Pull-in force (kN)	15	15	15	15	15	15
Repeatability (mm)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Holding force M12 (kN)	25* / 50*	25* / 50*	25* / 50*	25* / 50*	25* / 50*	25* / 50*
Holding force M16 (kN)	40** / 75**	40** / 75**	40** / 75**	40** / 75**	40** / 75**	40** / 75**

* Holding force for ISO 4762 M10x45 - 12.9 / Holding force for ISO 4762 M12 - 12.9 (see clamping pins)
 ** Holding force for ISO 10642 M12x55 - 10.9 / Holding force for ISO 4762 M16 - 12.9 (see clamping pins)
 *** Do not use centre hole with module 460180

Manual zero point clamping system for workpiece direct clamping

- Single quick-actuation for the rapid opening and closing
- Fully sealed

WPS Index

Workpiece positioning system



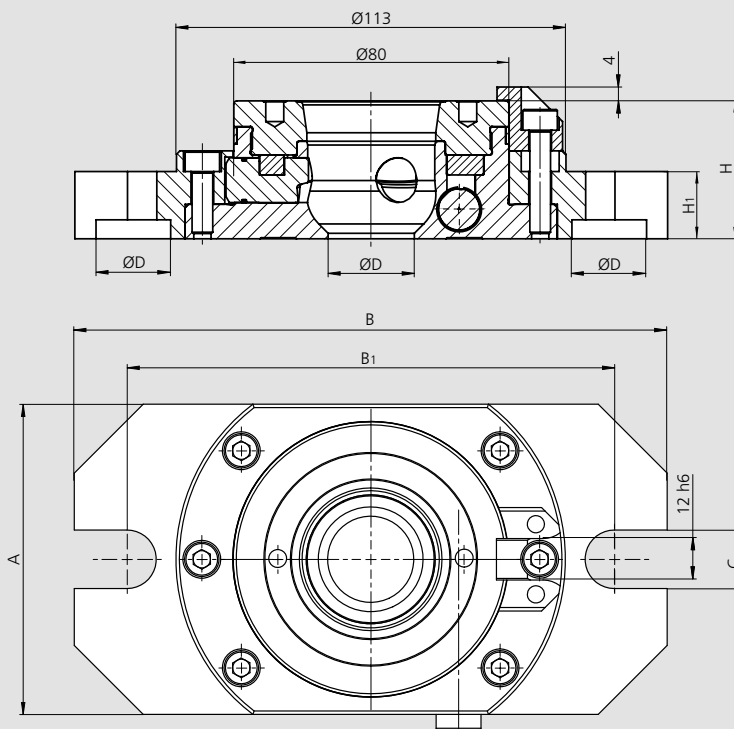
Application/customer benefits

- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Single quick-actuation for the rapid opening and closing of the modules with only 3.5 rotations
- Flexible configurations for customized use
- Interchangeable to the proven zero point system APS
- Anti rotating protection

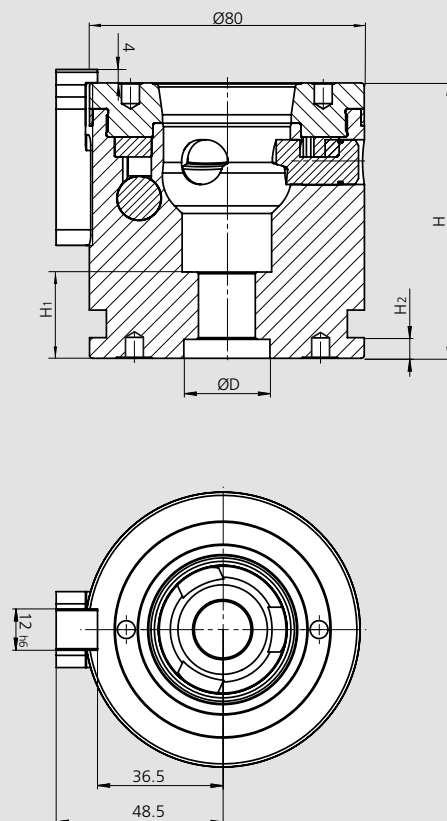
Technical features

- Diameter 80 mm
- Pull-in force 15 kN
- Max. torque 15 Nm
- Repeatability < 0.005 mm
- Holding force 50 / 75 kN (M12 / M16) depending on thread of clamping pin
- 3 clamping slides for maximum hold while clamping
- **proofline®** = fully sealed - low maintenance

WPS 080-040 Index



WPS 080-060, 080-080, 080-160 Index



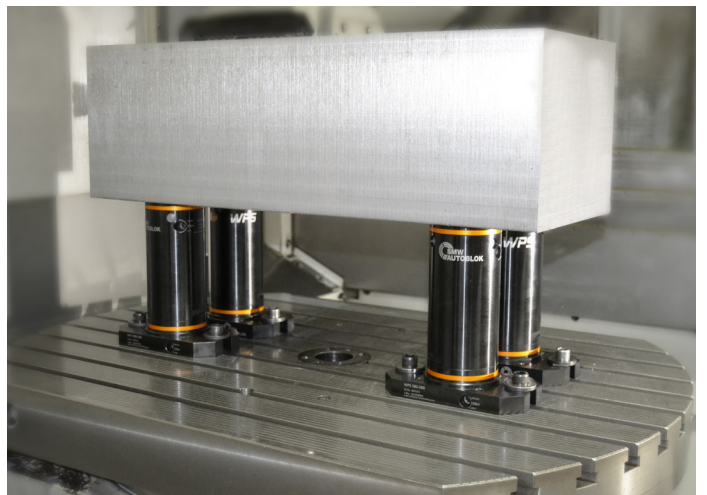
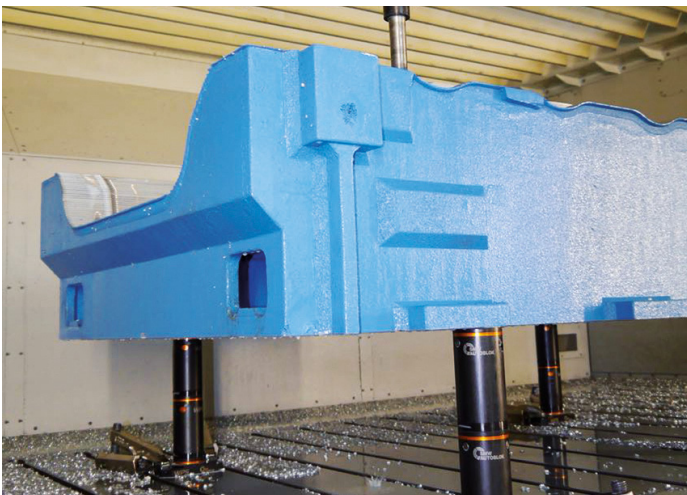
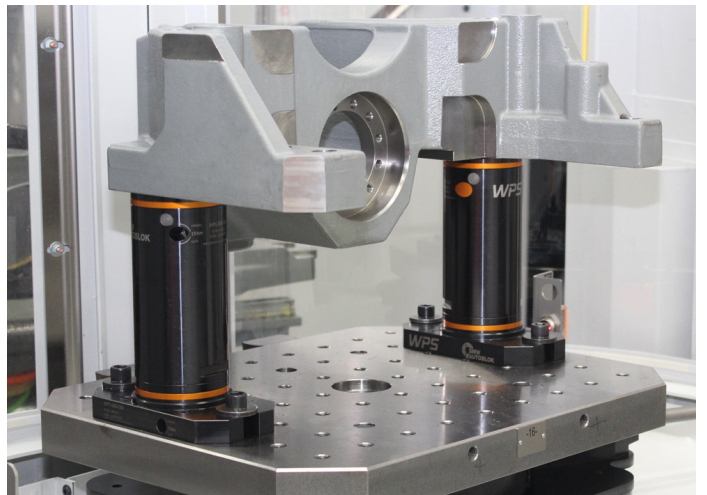
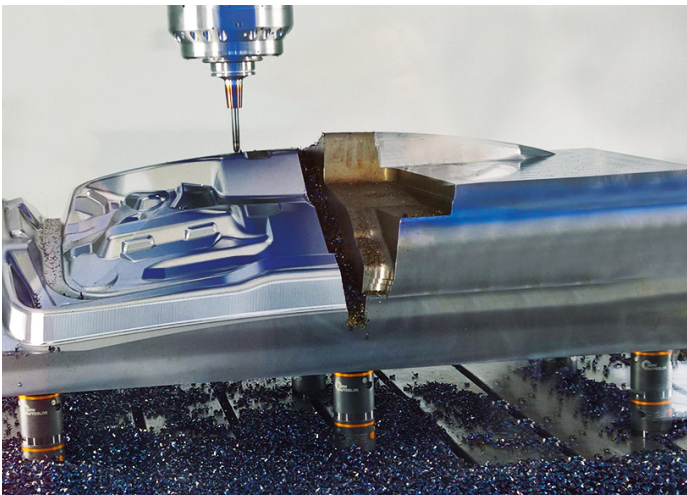
Subject to technical changes.

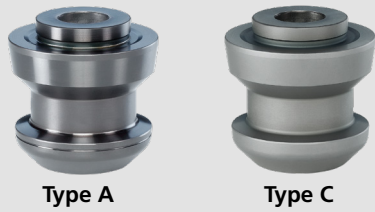
Technical data

SMW-AUTOBLOK Type	WPS 080-040 460240	WPS 080-060 460241	WPS 080-080 460242	WPS 080-160 460243
A	90	-	-	-
B	172	-	-	-
B1	141.1	-	-	-
C	17	-	-	-
D / Depth	Ø 25H6 / 5.5***	Ø 25H6 / 5.5	Ø 25H6 / 5.5	Ø 25H6 / 5.5
H	40 ± 0.005	60 ± 0.005	80 ± 0.005	160 ± 0.005
H1	19.5	21	25	105
H2	-	6	6	6
Pull-in force (kN)	15	15	15	15
Repeatability (mm)	< 0.005	< 0.005	< 0.005	< 0.005
Holding force M12 (kN)	25* / 50*	25* / 50*	25* / 50*	25* / 50*
Holding force M16 (kN)	40** / 75**	40** / 75**	40** / 75**	40** / 75**

* Holding force for ISO 4762 M10x45 - 12.9 / Holding force for ISO 4762 M12 - 12.9 (see clamping pins)
 ** Holding force for ISO 10642 M12x55 - 10.9 / Holding force for ISO 4762 M16 - 12.9 (see clamping pins)
 *** Do not use centre hole with module 460240

Workpiece positioning system





Application/customer benefits

- Fixation and positioning on the clamping system WPS
- Wear-resistant due to an extra hard protective coating
- Large entry radius of the clamping pins for easy and safe loading

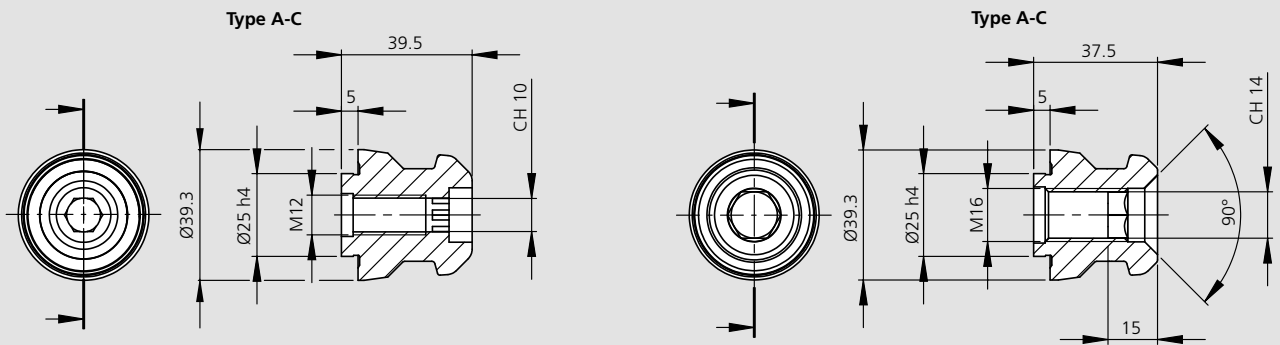
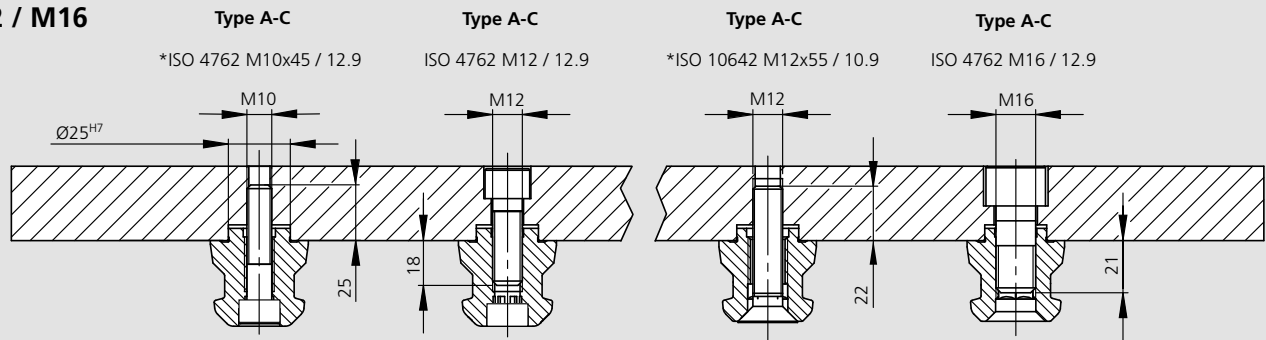
Technical features

- Centering pin type A (Standard)
- Clamping pin type C (with centering play 0.1 mm)

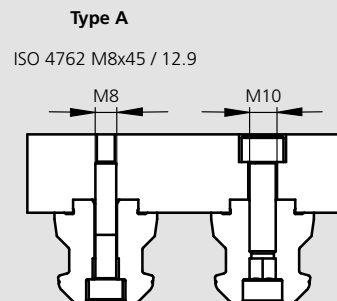
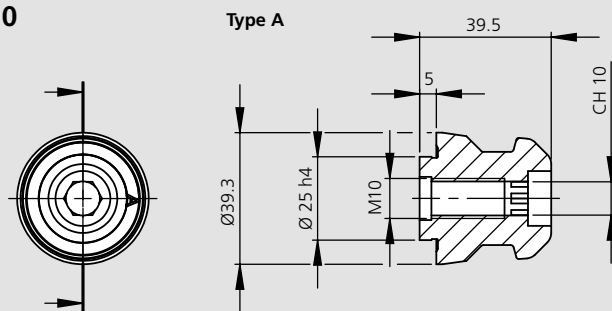
Standard equipment

Clamping pin with mounting screw

M12 / M16



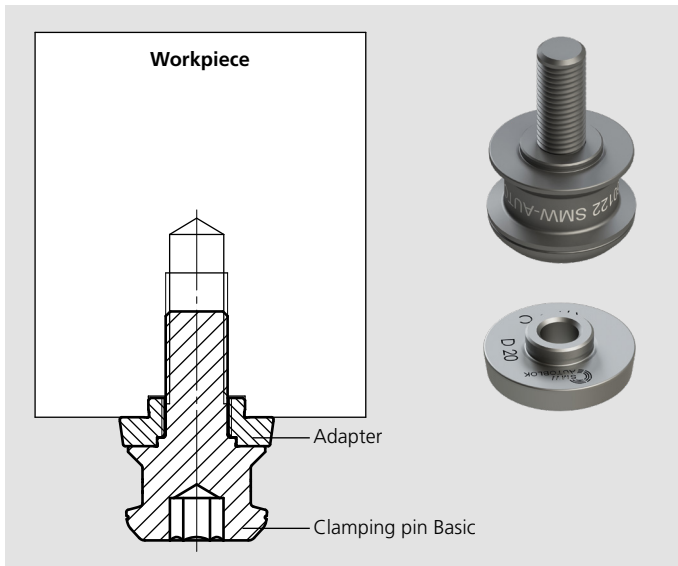
M10



Order review

Type	Thread	Type A Id. No.	Type C Id. No.	Weight kg
Clamping pin WPS	M10 / 12.9	467008	-	0.3
Clamping pin WPS	M12 / 12.9	46162355	46162357	0.3
Clamping pin WPS	M16 / 12.9	46162455	46162457	0.3

Clamping pin WPS for workpieces



Clamping pins Basic WPS 2-pieces

Clamping pins	Id. No.
Clamping pins Basic M12 (without adapter)	460122
Clamping pins Basic M16 (without adapter)	460123
Clamping pins Basic 7/16" (without adapter)	460108
Clamping pins Basic 5/8" (without adapter)	460109

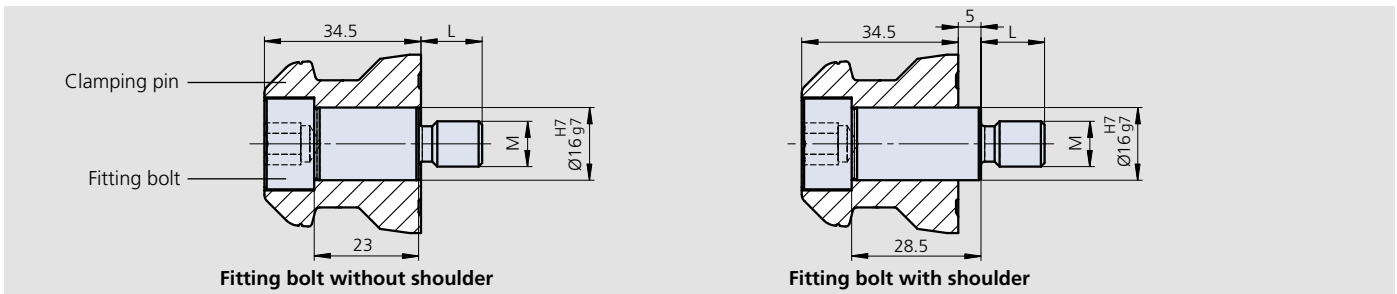
Adapter

Ø	Type	Id. No.	Type	Id. No.	Type	Id. No.
18	A	460124	B	460341	C	460129
20	A	460125	B	460342	C	460130
22	A	460126	B	460343	C	460131
24	A	460127	B	460344	C	460132
25	A	460128	B	460345	C	460133

Centering pin Type A (Standard)
 Sword pin Type B (Positioning pin)
 Clamping pin Type C (with centering play 0.1 mm)

* Use only together with Clamping pins M12/ 7/16"

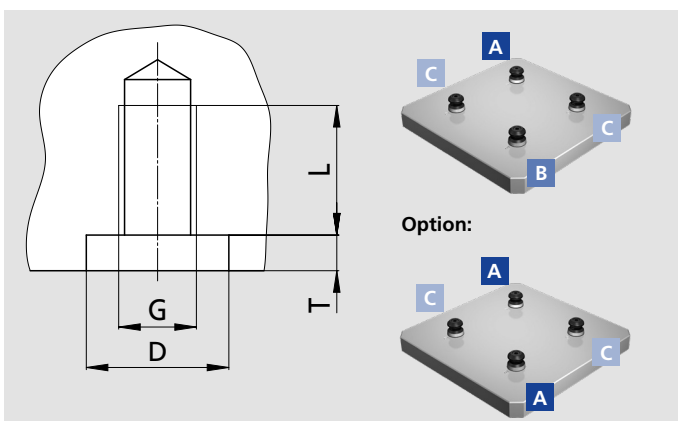
Clamping pin without shoulder



Id. No.	Description	M	L
460093	Fitting bolt D16	M10	14
460091	Fitting bolt D16	M12	17
460096	Fitting bolt D16	M16	20
460258	Fitting bolt D16 with shoulder	M10	14
460259	Fitting bolt D16 with shoulder	M12	17
460260	Fitting bolt D16 with shoulder	M16	20
460176	Clamping pin without shoulder Type A	-	-
460208	Clamping pin without shoulder Type C*	-	-

* Centering play 0.1 mm

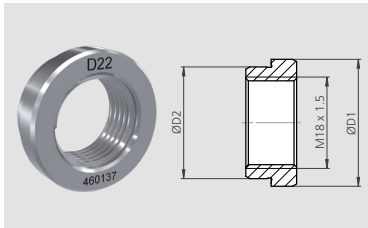
Interface dimensions for clamping pins in the workpiece



SMW-AUTOBLOK Type	D ^{H7}	G	L	T ^{+0.2}
Clamping pin Basic M12				
Adapter Ø18	18	M12	20	5.5
Adapter Ø20	20	M12	20	5.5
Adapter Ø22	22	M12	20	5.5
Adapter Ø24	24	M12	20	5.5
Adapter Ø25	25	M12	20	5.5
Clamping pin Basic M16				
Adapter Ø20	20	M16	25	5.5
Adapter Ø22	22	M16	25	5.5
Adapter Ø24	24	M16	25	5.5
Adapter Ø25	25	M16	25	5.5

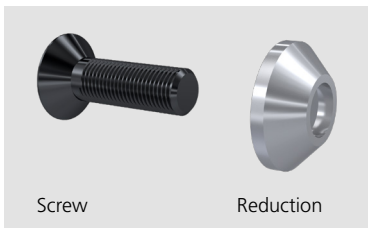
Note: Id. No. clamping pins see page 71 - 79 (Stationary Workholding catalog)
 Please download the 3D data for customer integration from our website www.stationary-workholding.com.

**Adaption washer \varnothing 25h7
on [D] pass diameter**



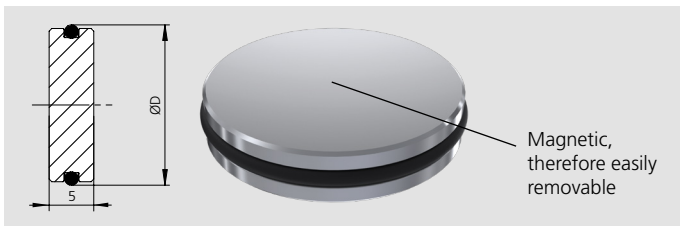
Adaption washer \varnothing		Id. No.
D1 (h7)	D2 (h7)	
\varnothing 25	\varnothing 18	460135
\varnothing 25	\varnothing 20	460136
\varnothing 25	\varnothing 22	460137
\varnothing 25	\varnothing 24	460138
\varnothing 25	\varnothing 25	460139

**Mounting screws with reduction for WPS installation
for the use of M10 and M12 screws**



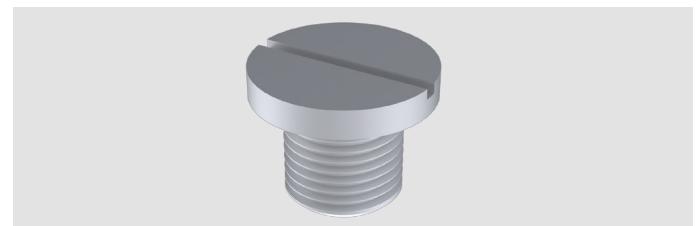
Mounting screw / reduction for M10 and M12	Screw M10	Reduction M10	Screw M12	Reduction M12
WPS height 60 mm, bolt length 40 mm	207780	460206	207779	460207
WPS height 80 mm, bolt length 50 mm	010814	460204	010212	460205
WPS height 100 mm, bolt length 70 mm	on request	on request	on request	on request
WPS height 160 mm, bolt length 130 mm	019363	460204	010599	460205

Cover plug with O-ring for grid plates



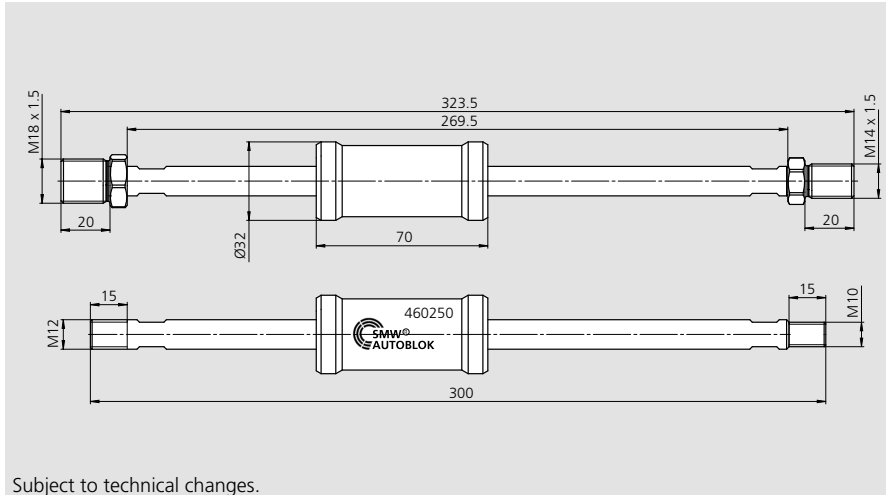
Type	Id. No.
Cover plug D=18	460163
Cover plug D=20	460255
Cover plug D=22	460256
Cover plug D=24	460257
Cover plug D=25	460164

Aluminium threaded plug for grid plates



Type	Id. No.
Aluminium threaded plug \varnothing 25 M16	57602397

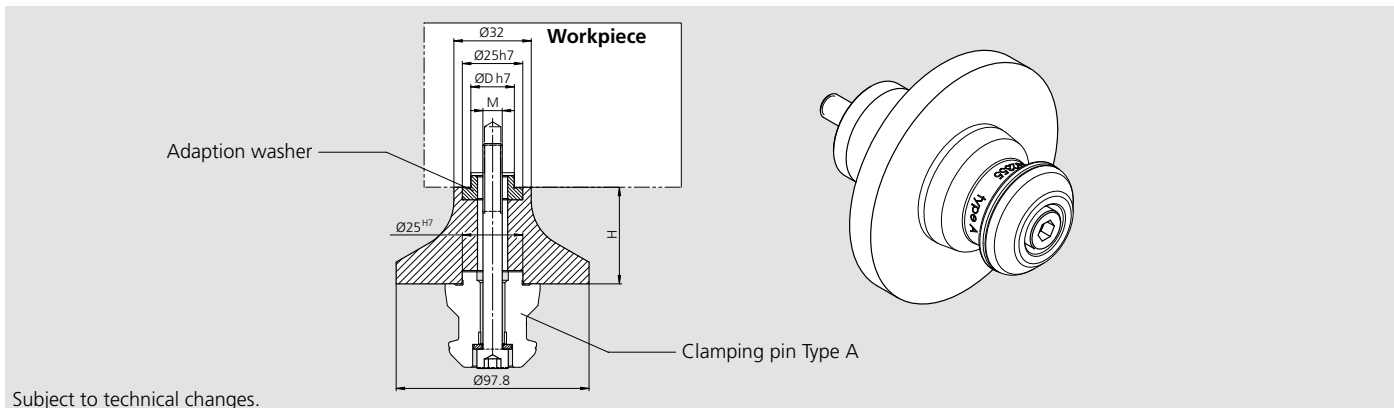
Extractor for adapter rings and clamping pin, Id. No. 460250



Subject to technical changes.

Extractor	Id. No.
for adapter rings and clamping pins	460250

Reduction D32 for WPS 080

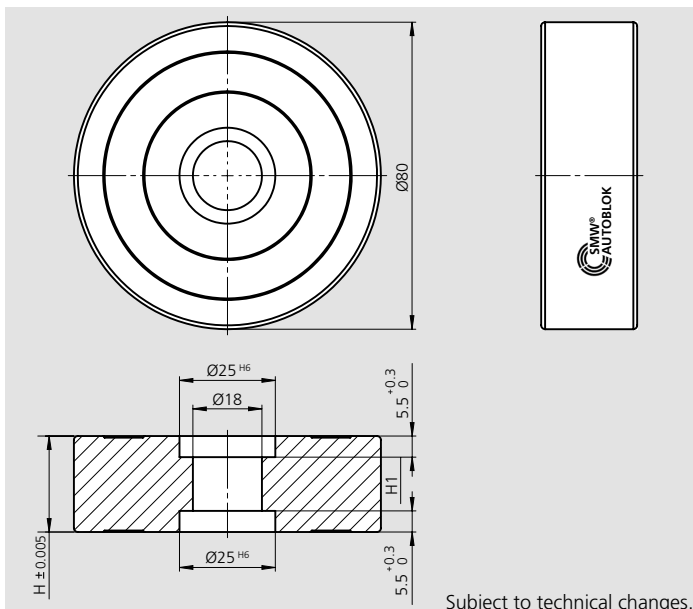


Subject to technical changes.

Reduction Thread [M]	Id. No.	
	Height 40 mm [H]	Height 80 mm [H]
M 08	460216	460219
M 10	460217	460220
M 12	460218	460221
M 16	460365	460366

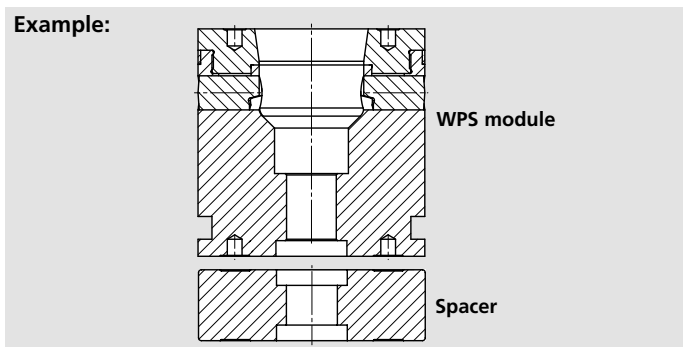
Note: Id. No. Adaption washers from Ø 25h7 to [D] (not included) see page 83 (Stationary Workholding catalog)

Spacers for WPS modules



Subject to technical changes.

Example:



Id. No.	H	H1
460224	10	0
460225	15	4
460226	20	9
460227	25	14
460236	45	34

Attention: Standard mounting bolt can not be used anymore. Please check for correct thread engagement.

■ Positioning set WPS 080



Application/customer benefits

- Simply use of WPS modules on T-slot machine tables
- Easy and high precise grid-free positioning of WPS clamping modules on the machine table
- The positioning set will be mounted on a tool holder provided by the customer

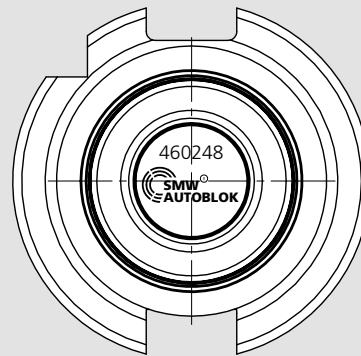
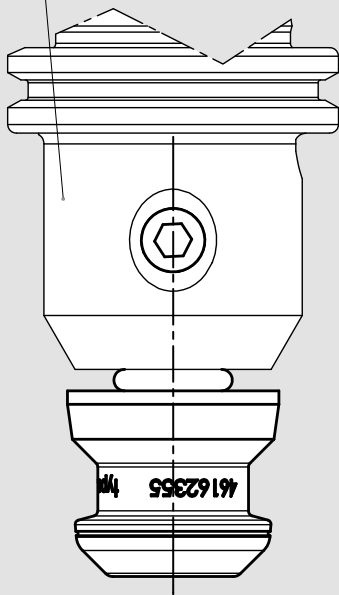
Technical features

- Compatible to all common tool holders
- Positioning of the module ± 0.03 (depending of tool holder)
- The WPS modules may be actuated with max. 2 Nm (instead of 15 Nm) by using the WPS positioning system, otherwise there is a risk of damage!

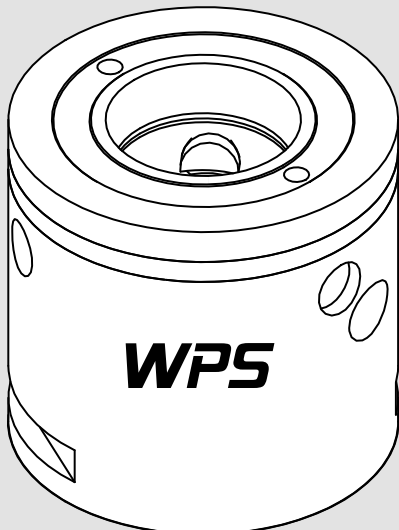
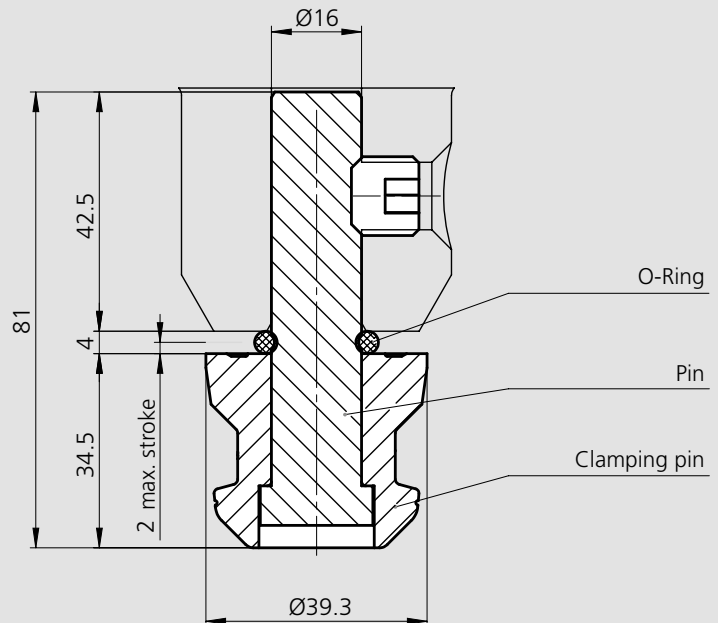
Standard equipment

Positioning set without tool holder

Customers tool holder:
- Weldon mounting
- ER collets
- Hydro expansion chuck

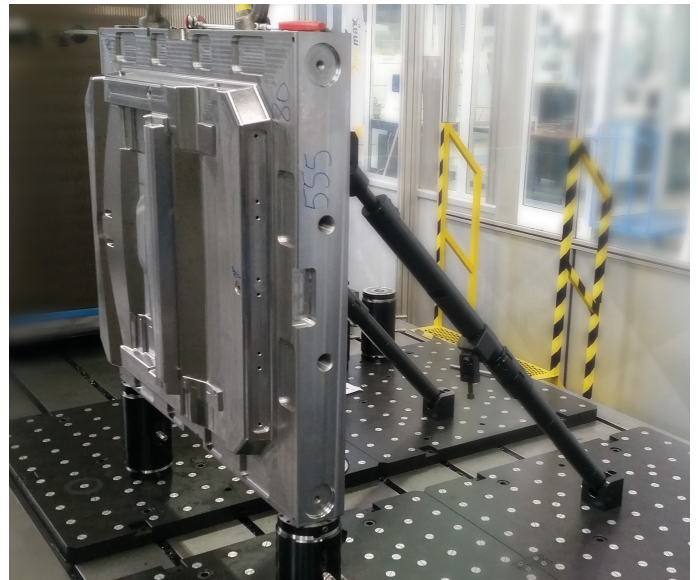


SCHNITT / SECTION A-A



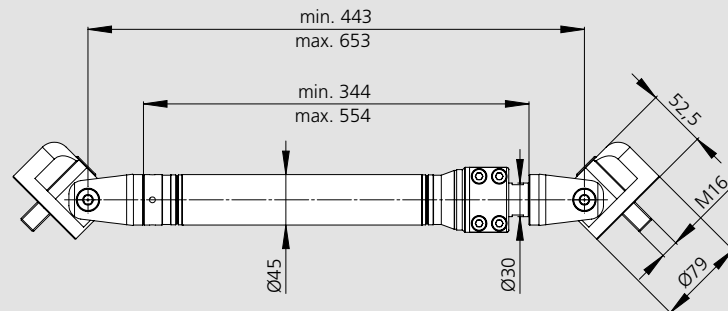
Subject to technical changes.

Workpiece stabilizer with telescope



Workpiece stabilizer WS-210

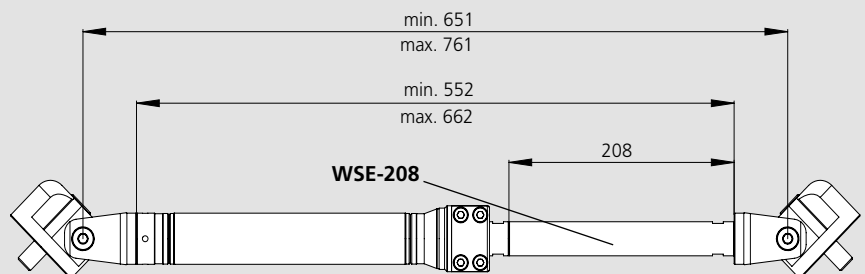
- Stroke 210 mm
- Optional fine adjustment



Subject to technical changes.

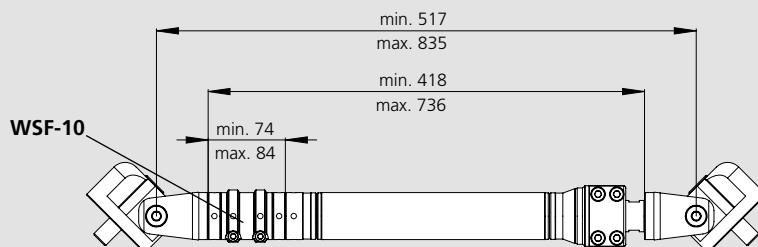
Workpiece stabilizer WS-210 with extension WSE-208

- Max. 2 pcs. of the extensions



Subject to technical changes.

Workpiece stabilizer WS-210 with fine adjustment WSF-10



Subject to technical changes.

Type	Id. No.
Workpiece stabilizer WS-210	460395
Extension WSE-208	460354
Fine adjustment WSF-10	460336

■ Grid plates

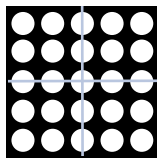


Application/customer benefits

- Easy and high-precise positioning of the zero point clamping modules
- Special sizes or customer request versions for maximum distances of the machine available in short time
- Alphanumeric labelling for the definition of the positioning of the clamping modules available on request
- Rust protected by means of phosphating

Technical features

- Grid and holes available as standard or on customer request
- High-quality steel (1.2311/1.2312)
- Standard = phosphating / optional = other surface treatment
- Machine specific holes on request

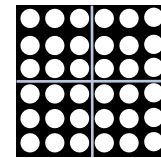


Grid (in center)

Positioning holes Ø25H7,
thread M12/16

Grid	Length	Width
50 / 100	500	500
50 / 100	600	600
50 / 100	800	800
50 / 100	1000	500
50 / 100	1000	800
50 / 100	1200	800
50 / 100	1000	1000

Special versions on request



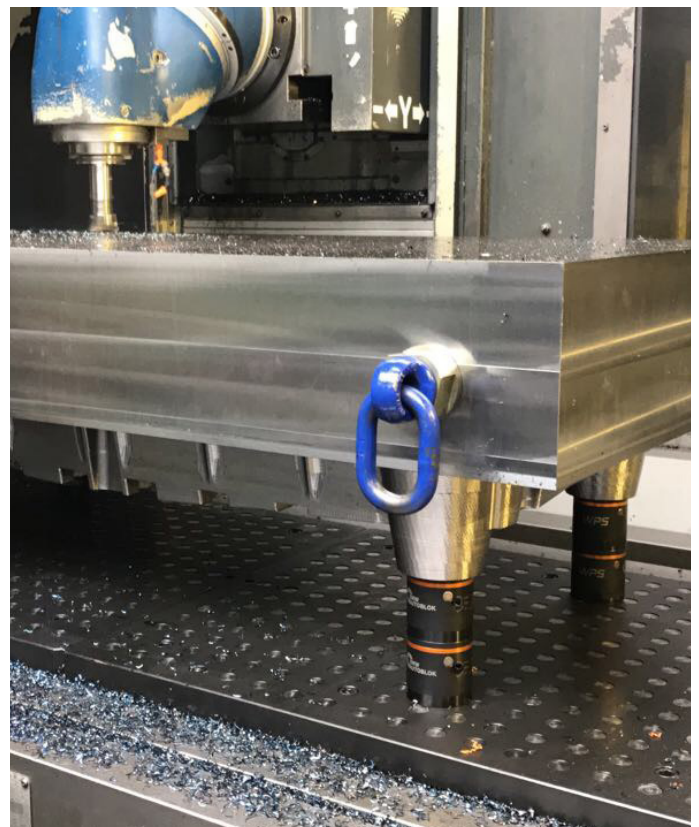
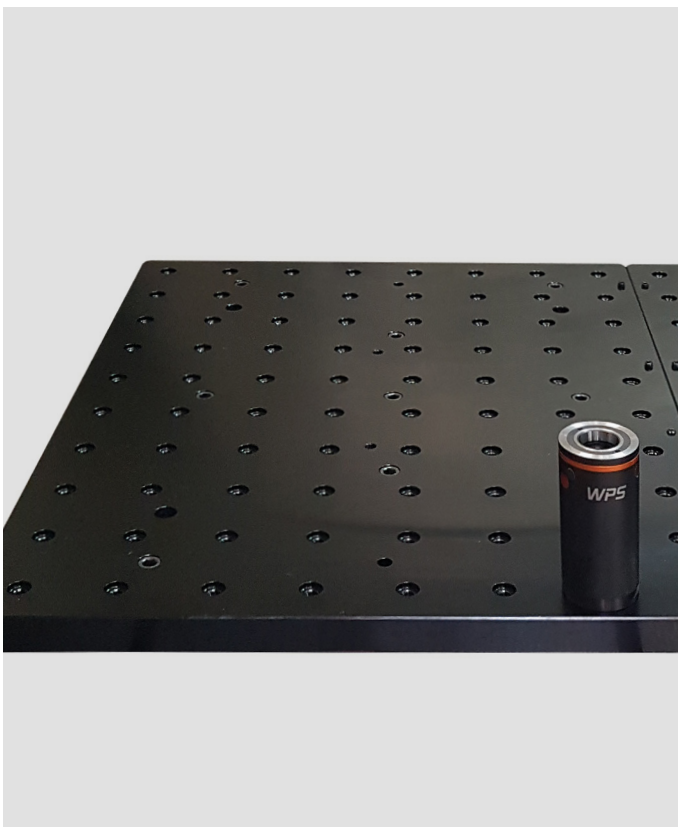
Grid (not in center)

Positioning holes Ø25H7,
thread M12/16

Grid	Length	Width
50 / 100	600	400
50 / 100	500	500
50 / 100	600	500
50 / 100	600	800
50 / 100	1000	500
50 / 100	1000	600
50 / 100	1000	800
50 / 100	1000	1000

Special versions on request

Application examples



Significant reduction of set-up times

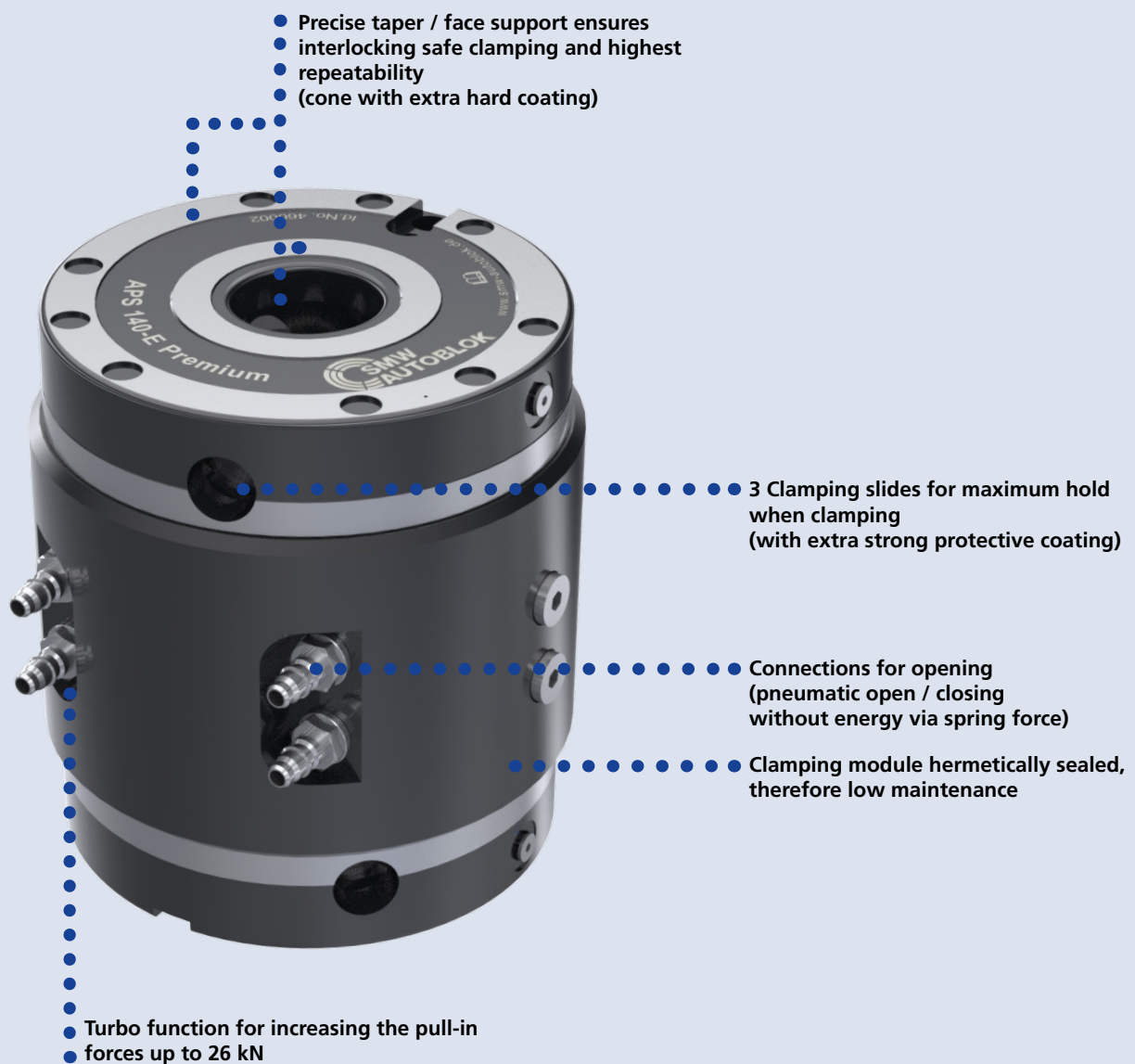
Your Benefits

- Huge reduction of set-up times for highest efficiency
- Safe workpiece clamping with maximum holding forces and highest repeatability
- Ideal for 5-axis machining
- Open pneumatically, close by spring force
- Turbo function for increasing the pull-in forces up to 26 kN
- Modular system
- Clamping pins compatible to WPS

APS



APS Zero Point Clamping System



■ Combi unit



Application/customer benefits

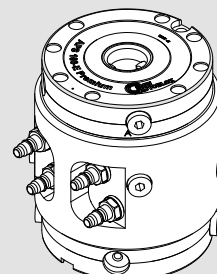
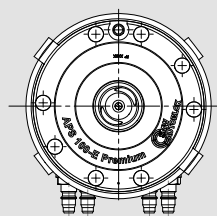
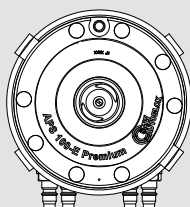
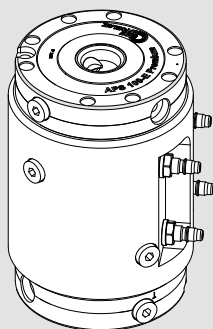
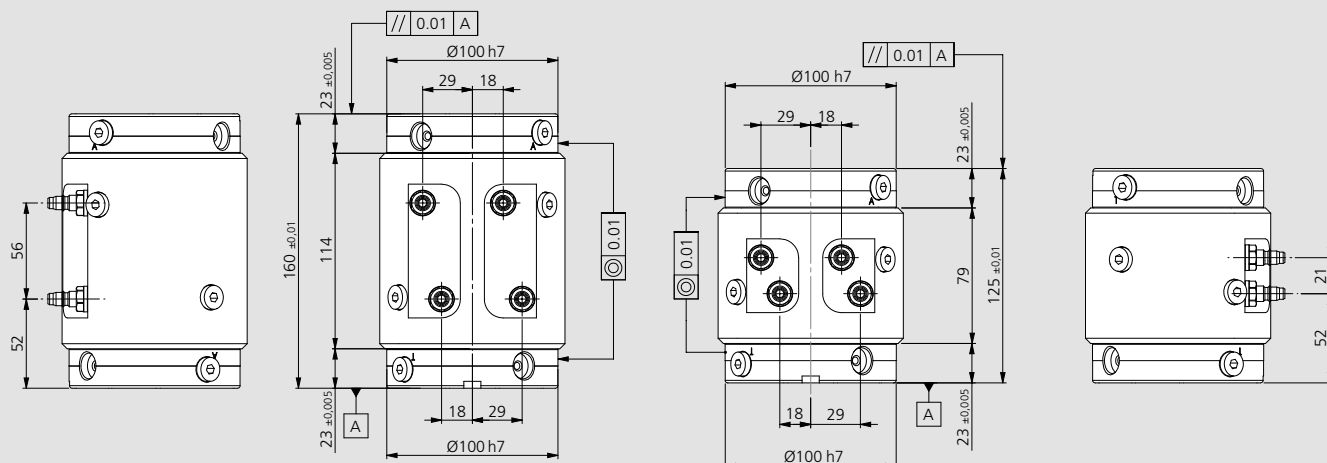
- Pre-assembled clamping unit with 2 pieces APS 100 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 2 clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces up to 15 kN (pull-in force without turbo 4 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Combi unit with 2 pieces APS 100 Premium



Order review

Type	Id. No.	Height mm	Weight kg
Combi unit with 2 pieces APS 100 Premium	460117	125	7
Combi unit with 2 pieces APS 100 Premium	460118	160	9

■ Combi unit

Application/customer benefits

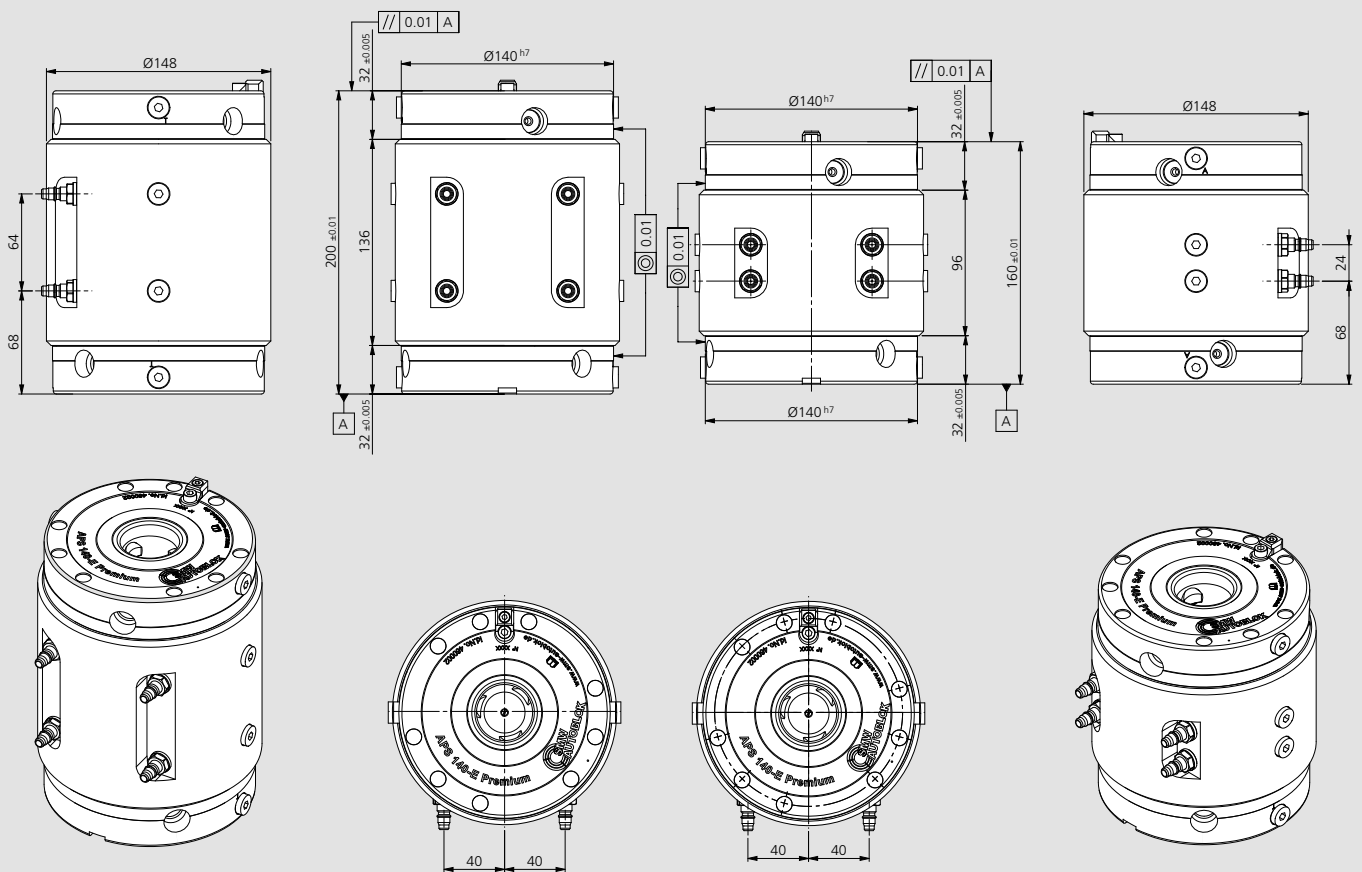
- Pre-assembled clamping unit with 2 pieces APS 140 Premium
- Universal applicable
- Fast and easy set-up

Technical features

- 3 clamping slides
- Repeatability < 0.005 mm
- Protective coating
- Turbo function for increasing the pull-in forces up to 26 kN (pull-in force without turbo 7.5 kN)
- Anti rotating protection
- Air cleaning

Standard equipment

Clamping unit with 2 pieces APS 140 Premium



Order review

Type	Id. No.	Height mm	Weight kg
Combi unit with 2 pieces APS 140 Premium	460119	160	17
Combi unit with 2 pieces APS 140 Premium	460120	200	21



Type A

Type B

Type C

Application/customer benefits

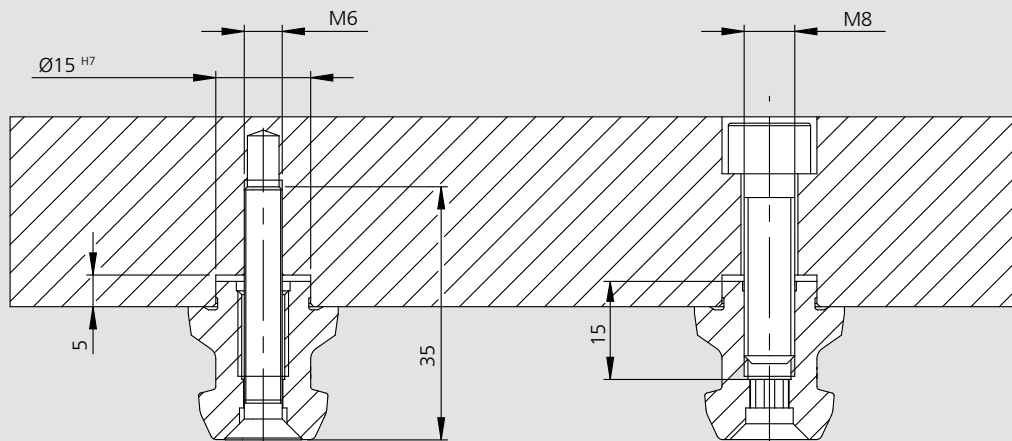
- Fixation and positioning on the clamping systems APS 100
- Wear-resistant due to an extra hard protective coating
- Large entry radii of the clamping pins for easy and safe loading

Technical features

- Centering pin type A (Standard)
- Sword pin type B (Positioning pin)
- Clamping pin type C (with centering play 0.1 mm)

Standard equipment

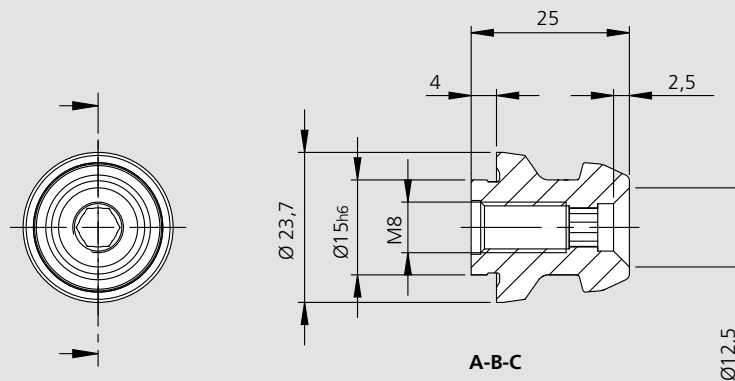
Clamping pin with mounting screw M6 x 35



A-B-C

A-B-C

ISO 10642 M6 x 35



A-B-C

Order review

Type	Thread	Type A Id. No.	Type B Id. No.	Type C Id. No.	Weight kg
Clamping pin APS 100	M8	46162155	46162156	46162157	0.3

Accessories

■ Clamping pins



Type A

Type B

Type C

Application/customer benefits

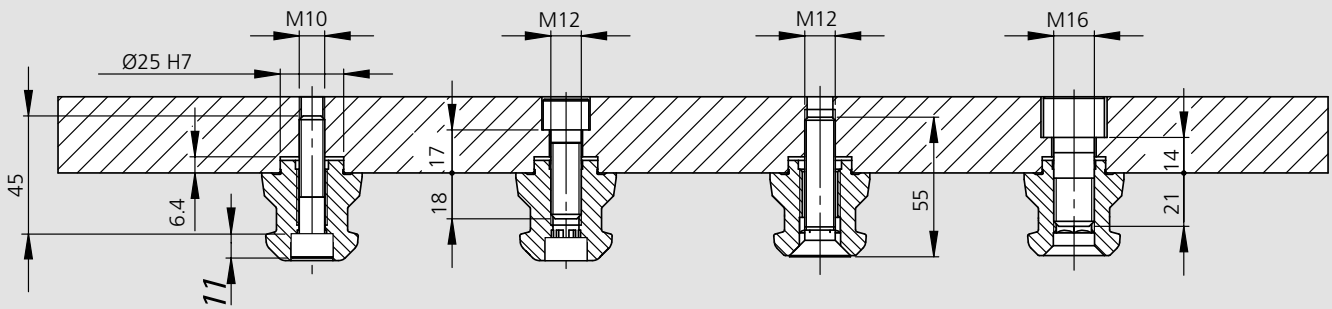
- Fixation and positioning on the clamping systems APS 140
- Wear-resistant due to an extra hard protective coating
- Large entry radii of the clamping pins for easy and safe loading

Technical features

- Centering pin Type A (Standard)
- Sword pin Type B (Positioning pin)
- Clamping pin Type C (with centering play 0.1 mm)

Standard equipment

Clamping pin with mounting screw



A-B-C

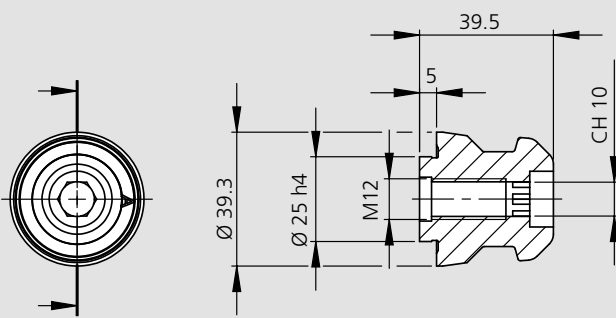
ISO 4762 M10x45

A-B-C

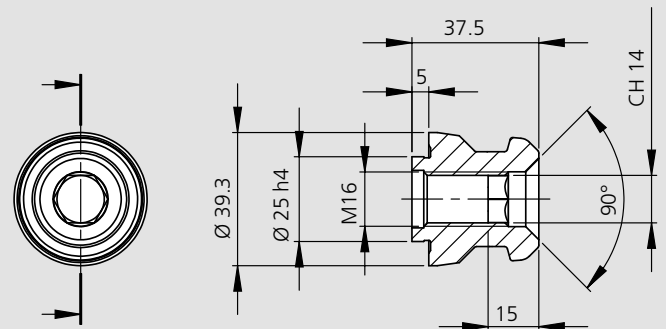
A-B-C

ISO 10642 M12x55

A-B-C



A-B-C



A-B-C

Order review

Type	Thread	Type A Id. No.	Type B Id. No.	Type C Id. No.	Weight kg
Clamping pin APS 140	M12	46162355	46162356	46162357	0.3
Clamping pin APS 140	M16	46162455	46162456	46162457	0.3

■ Spacers for combi units



Application/customer benefits

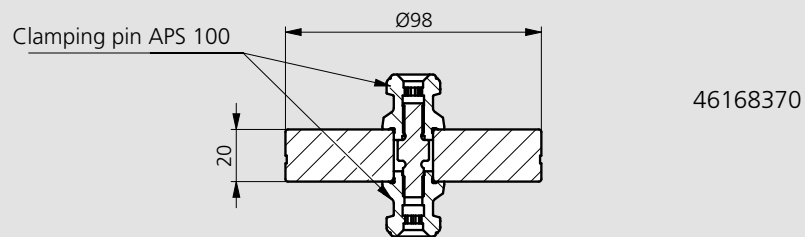
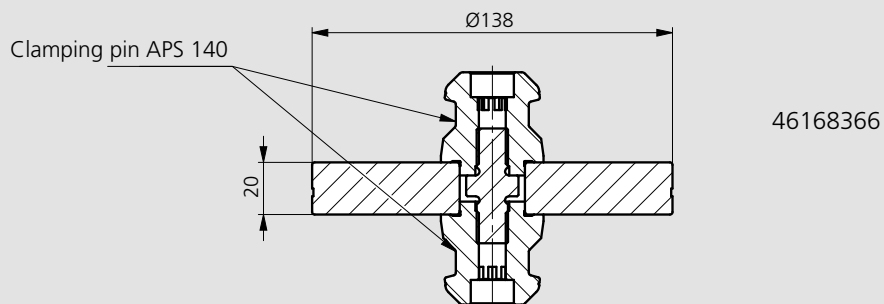
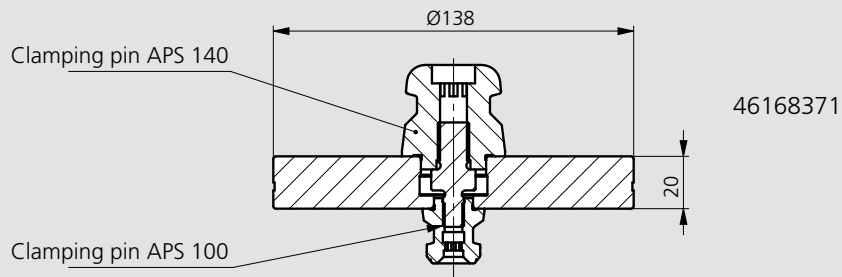
- Spacers to adapt more different module units
- Universal use

Technical features

- Height 20 mm

Standard equipment

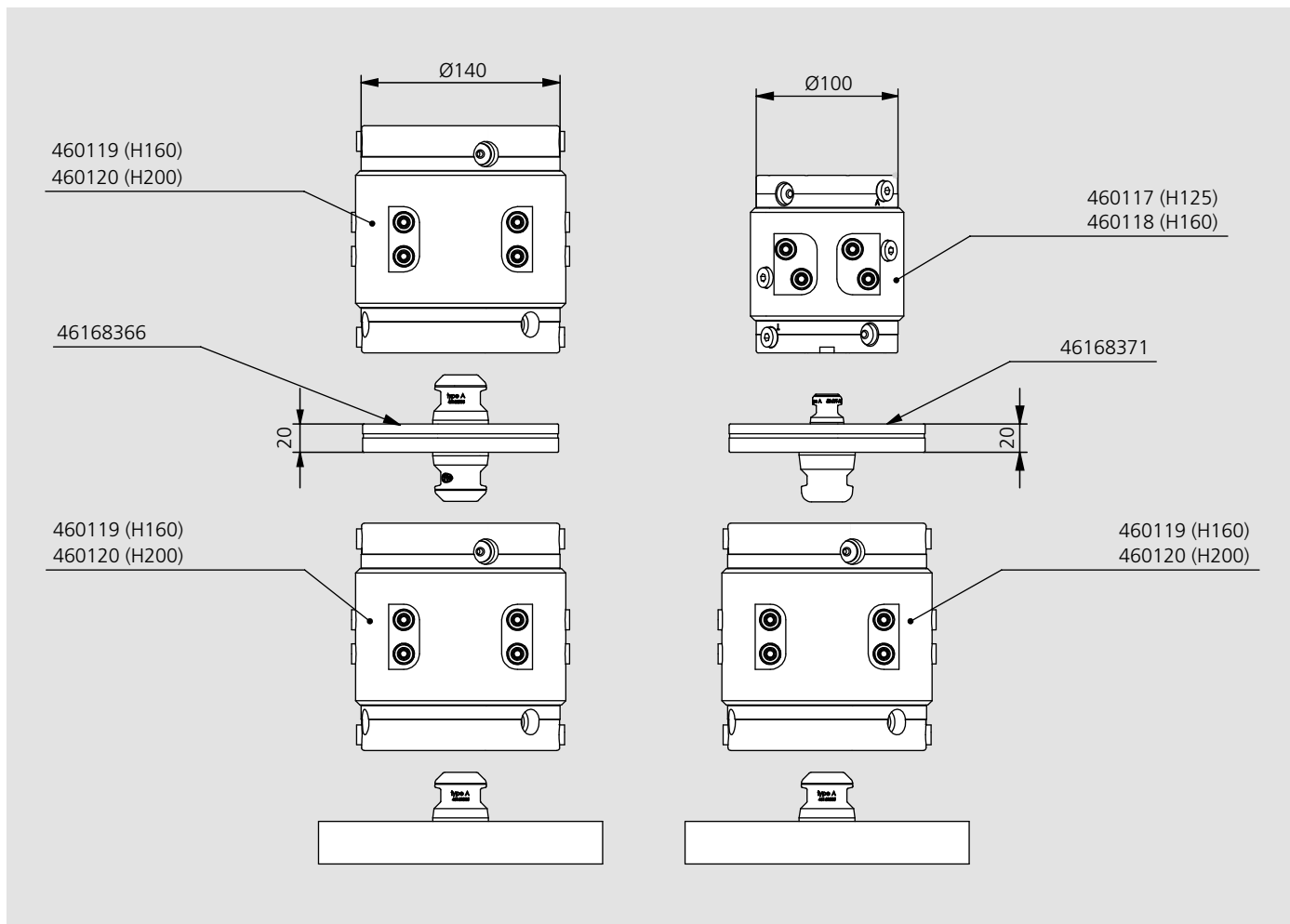
Spacer without clamping pin



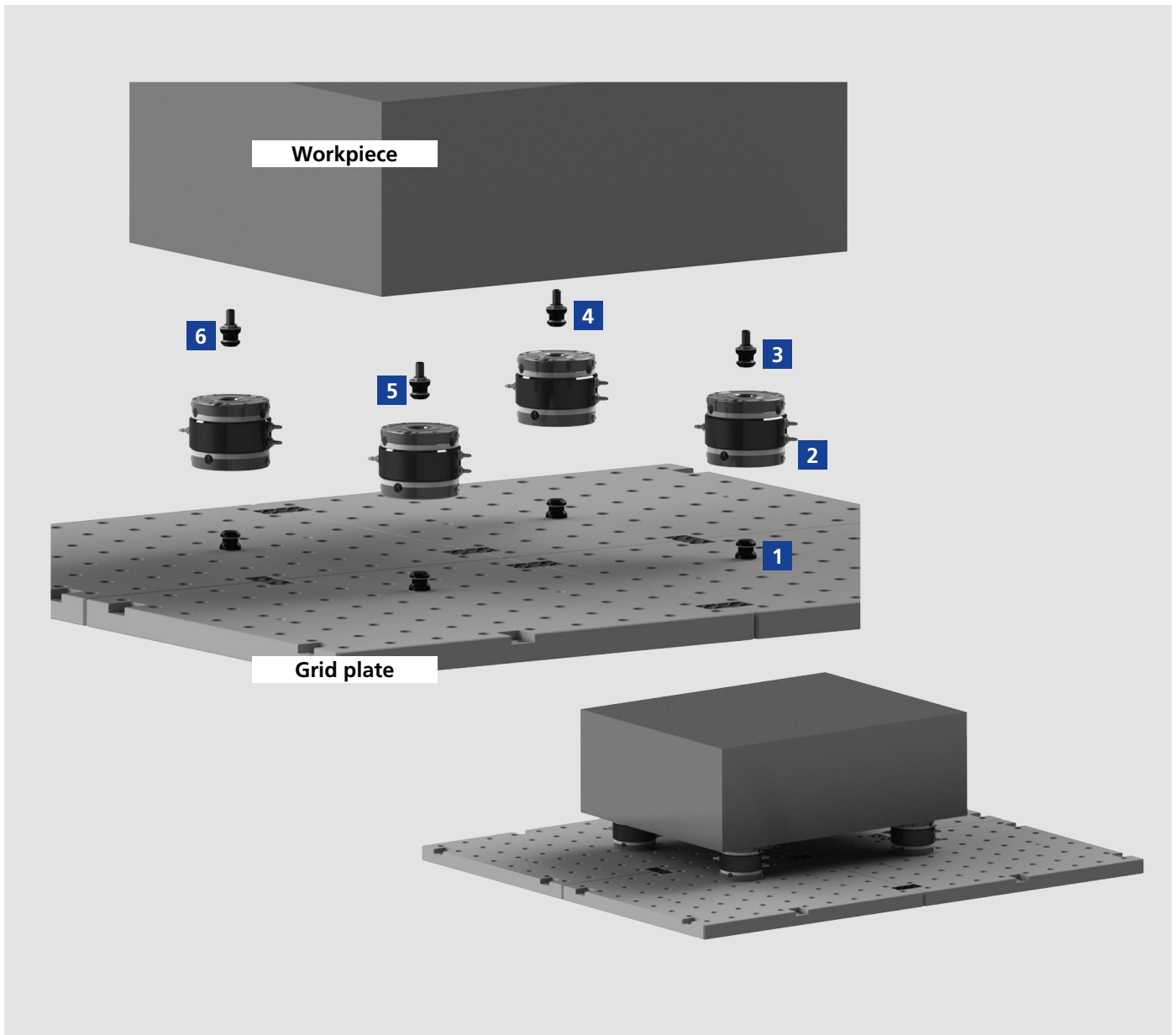
Order review

Type	Id. No.	Height mm	Weight kg
Spacer H20 APS 140-100	46168371	20	2.2
Spacer H20 APS 140-140	46168366	20	2.3
Spacer H20 APS 100-100	46168370	20	1.1

Combi units and spacers



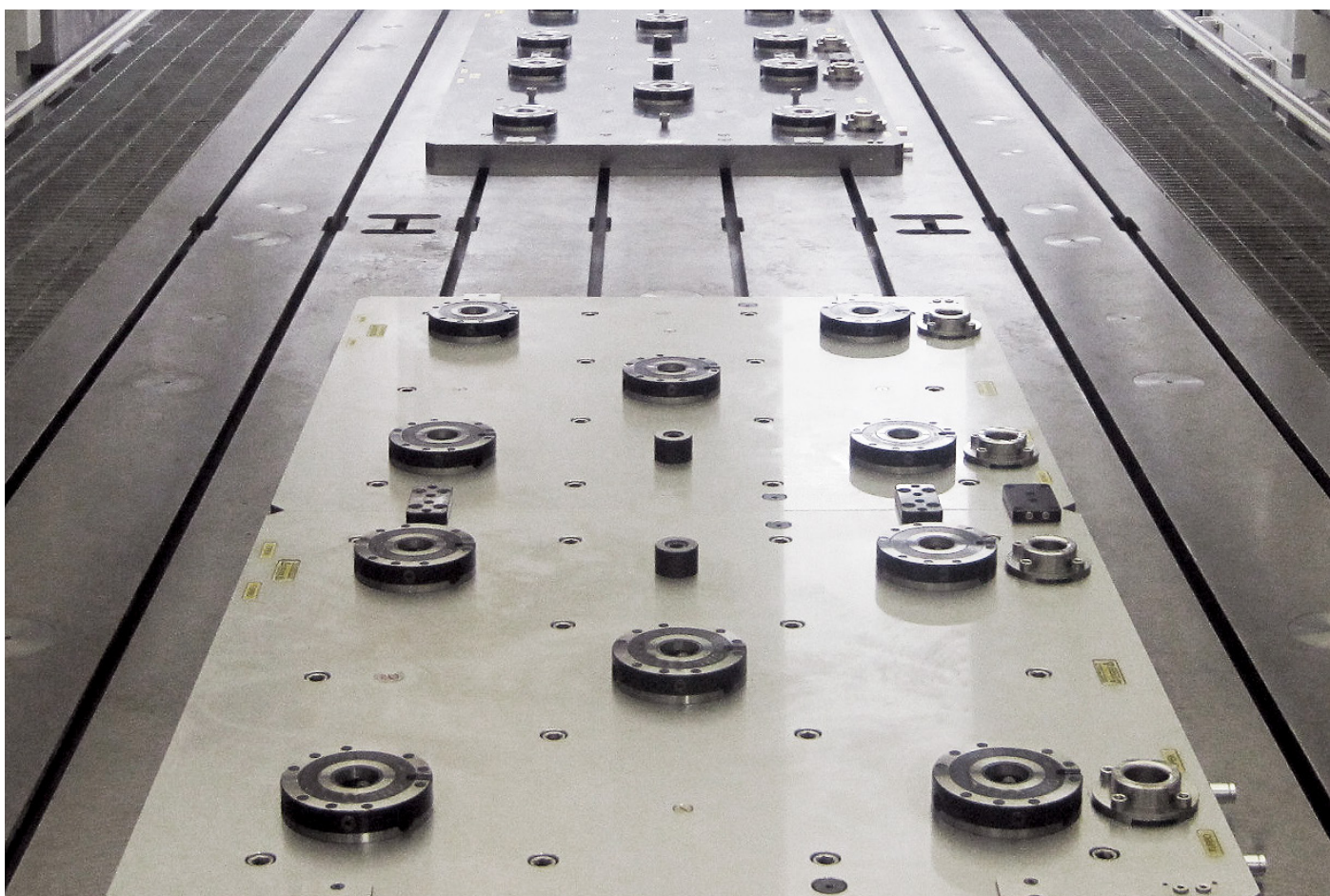
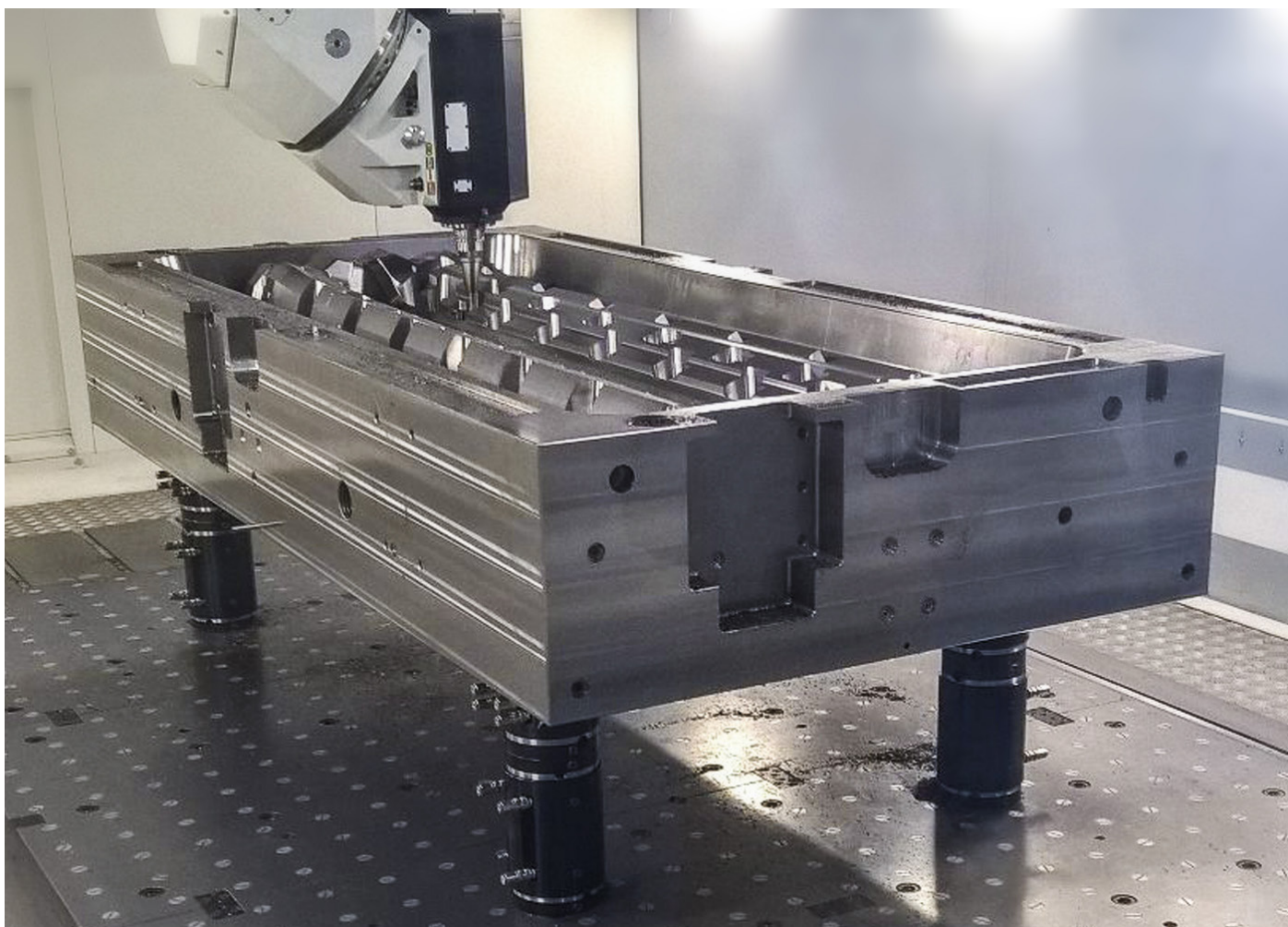
Combi Units



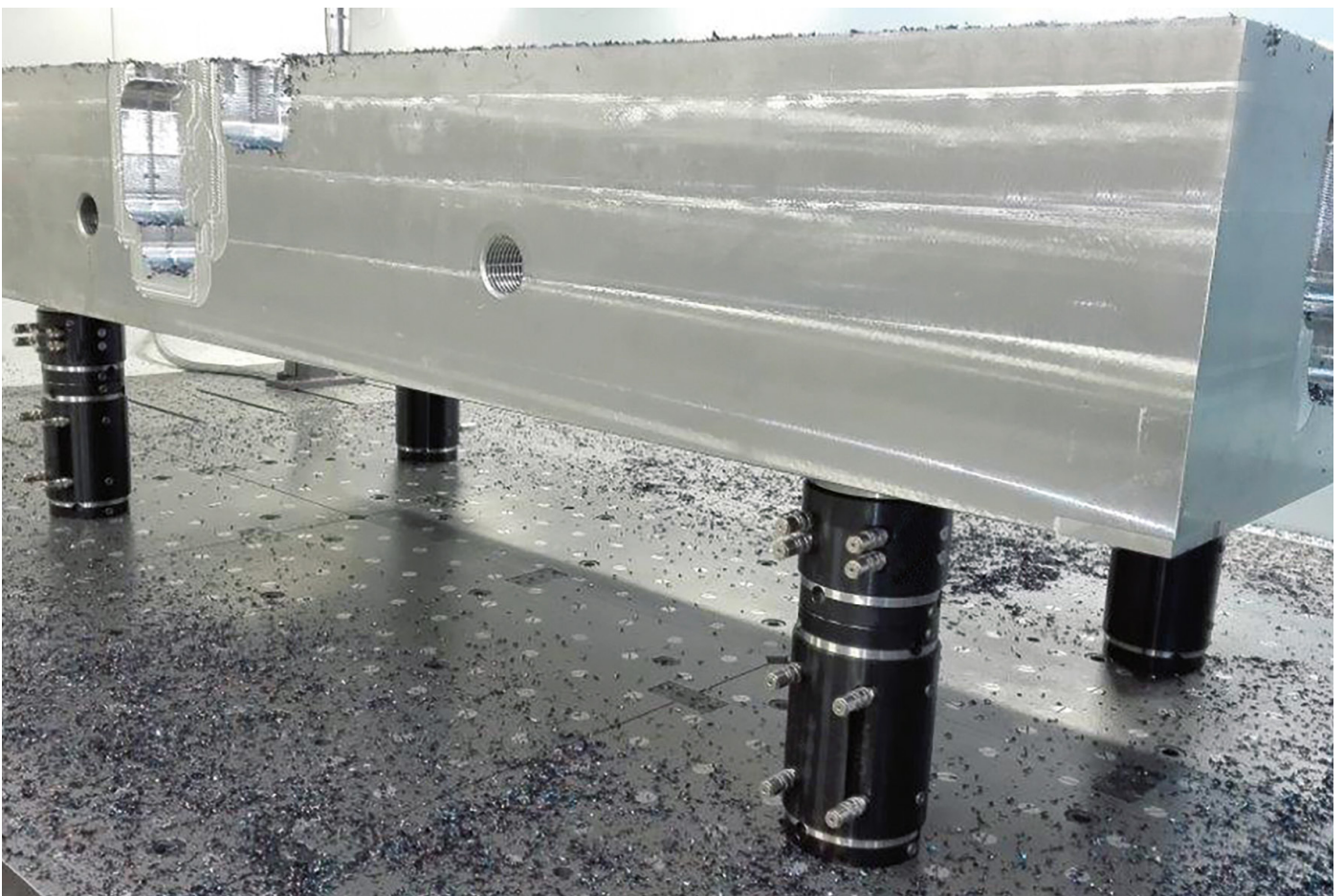
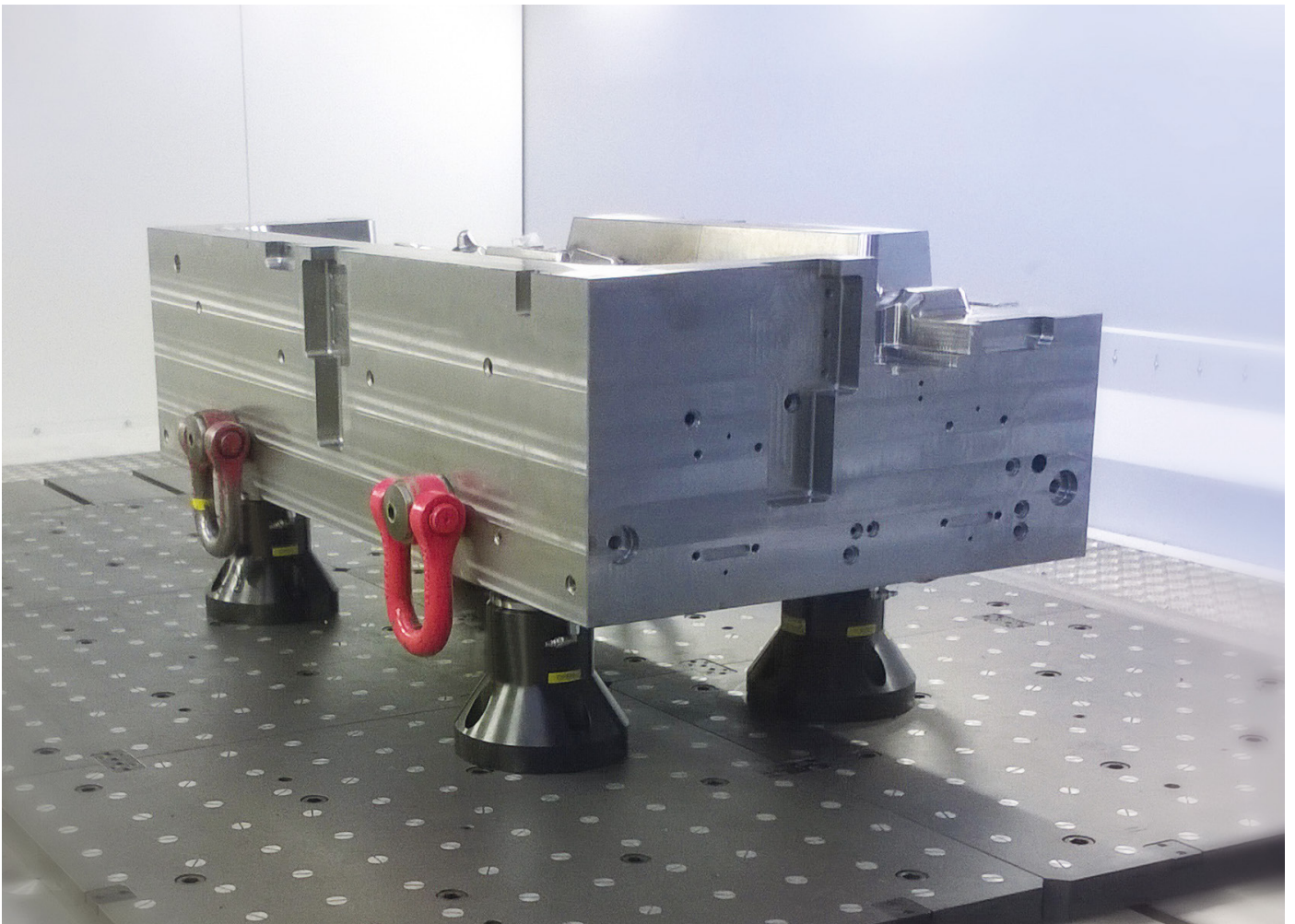
Pin overview

1	Clamping Pin Type A in grid plate	Page 24-25
2	Combi Unit	Page 22-23
3	Clamping Pin Type A	Page 24-25
4	Clamping Pin Type C	Page 24-25
5	Clamping Pin Type C	Page 24-25
6	Clamping Pin Type B	Page 24-25

Application examples



Application examples





ZIBTRPRO
tehnologija obdelave · vpenjalni sistemi