TOPlus

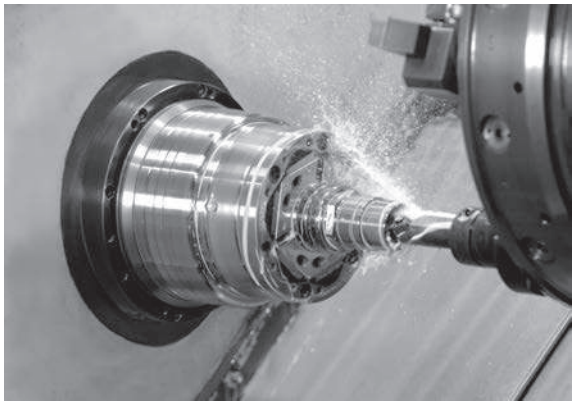
Six to win

Up to 25 % more clamping force and higher output – with the same draw force of the clamping cylinder that is used to actuate our SPANNTOP chucks. The pyramid arrangement of glide surfaces is what makes it possible. The clamping head rests with full-surface contact in the TOPlus chuck body – even with large workpiece tolerances. In addition this geometry ensures that TOPlus is significantly less sensitive to contamination than previous chuck/clamping head solutions, and it offers a concentric precision of approx. 0.015 mm [for chuck size 65]! Thus TOPlus is even better suited for raw material, cast and forged parts, as well as fine-particle non-ferrous metals such as brass. Therefore, the optimized values make the chuck an ideal partner for modern manufacturing strategies and state-of-the-art machine tools.

TOPlus – simply revolutionary!

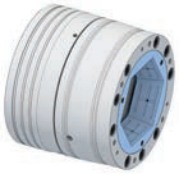
Key advantages

- 25 % higher holding power than SPANNTOP
- Unequalled rigidity due to full-surface contact of the clamping segments
- Superior resistance to contamination because of the clamping head geometry
- Absorbs vibration
- Optimal lubrication thanks to lubricating grooves in the clamping head reception
- Minimal inertia loss compared to 3-jaw chucks

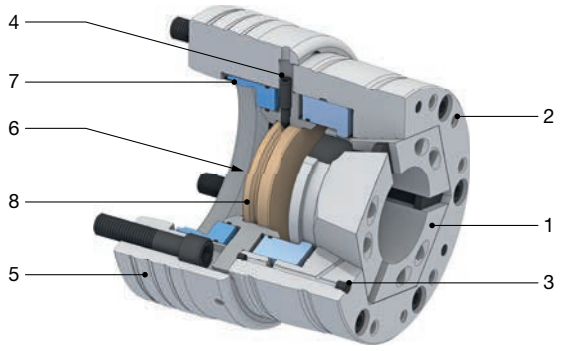


TOPlus combi pull-back chuck in use

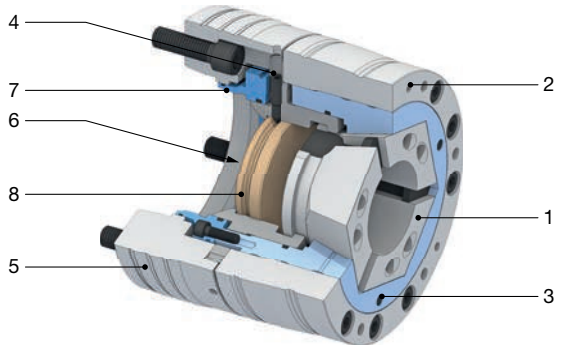
TOPlus chuck types

	TOPlus combi pull-back	TOPlus combi deadlength	TOPlus modular
			
Description	Workpiece clamping with pull-back effect. Chuck with dismountable end-stop plate. Without end-stop plate ideal for machining pipes and bars.	Workpiece clamping without pull-back effect. Chuck with dismountable end-stop plate. It is also frequently used on the sub spindle.	Through-bore chuck only – ideal for machining pipes and bars.
Advantages	■ Workpiece stabilization through axial draw force applied against the workpiece end-stop ■ Prepared for inside and front end-stop ■ Converts to a fully functional »bar chuck« when the end-stop plate is removed	■ Workpiece clamping without axial movement of the clamping head ■ Clamps workpieces with a short collar or shoulder ■ Suitable for pick-off without pull-back effect ■ Prepared for inside and front end-stop ■ Converts to a fully functional »bar chuck« when the end-stop plate is removed	■ Fully-functional bar chuck ■ Due to pull-back effect significantly more rigid clamping is achieved than by conventional collets ■ Higher RPM and metal removal rates for bar work
Clamping elements	 Clamping head SE	 Clamping head SE	 Clamping head SE
Adaptations	 MANDO Adapt T211 SE [Mandrel-in-clamping-device, with draw bolt]  MANDO Adapt T212 SE [Mandrel-in-clamping-device, without draw bolt]  Jaw module SE [Adaptation for jaw clamping]  Face driver SE / Morse taper adapter SE [Adaptation for clamping between centers]  Magnet module SE [Adaptation for magnetic clamping]		 MANDO Adapt T211 SE [Mandrel-in-clamping-device, with draw bolt]  MANDO Adapt T212 SE [Mandrel-in-clamping-device, without draw bolt]  Jaw module SE [Adaptation for jaw clamping]  Face driver SE / Morse taper adapter SE [Adaptation for clamping between centers]  Magnet module SE [Adaptation for magnetic clamping]

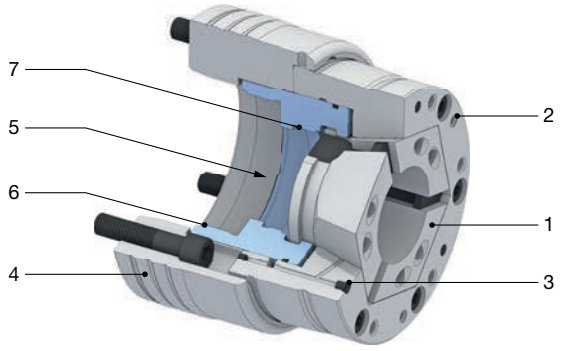
TOPlus combi pull-back in detail

Designation	
1 Vulcanized clamping head with pull-back and hexagonal geometry for optimum chuck sealing and improved clamping force 2 Mounting threads for front end-stop 3 Grease nipple, optimal holding power due to efficient lubrication 4 Clamping screw for base end-stop, easy mounting through external actuation 5 Spindle flange 6 Full chuck through-bore for bar work after disassembling the base end-stop 7 Mounting thread for drawtube connection 8 Fixed base end-stop for clamping with pull-back effect, central mounting thread for workpiece specific end-stop	

TOPlus combi deadlength in detail

Designation	
1 Vulcanized standing clamping head with hexagonal geometry for improved chuck sealant and higher clamping force 2 Mounting threads for front end-stop 3 Grease nipple, optimal holding power due to efficient lubrication 4 Clamping screw for base end-stop, easy mounting through external actuation 5 Spindle flange 6 Full chuck through-bore for bar work after disassembling the base end-stop 7 Mounting thread for drawtube connection 8 Fixed base end-stop with central mounting thread for workpiece specific end-stop	

TOPlus modular in detail

Designation	
1 Vulcanized clamping head with pull-back and hexagonal geometry for optimum chuck sealing and improved clamping force 2 Mounting threads for front end-stop 3 Grease nipple, optimal holding power due to efficient lubrication 4 Spindle flange 5 Full chuck passage for bar work 6 Mounting thread for drawtube connection 7 Mounting thread for guide rings, introduction, spring ejectors, etc.	

Order overview. TOPlus chuck

Size	Variant	Spindle nose	Material no.	In stock	Clamping elements and adaptations					
										
					Clamping head SE Page 422	MANDO Adapt T211 SE Page 274	MANDO Adapt T212 SE Page 280	Jaw module SE Page 316	Face driver / morse taper adapter SE Page 324	Magnet module SE Page 332
52	Combi pull-back	A2-5	10001926	-	✔	✔	✔		✔	✔
		A2-6	10001927	-						
		AP120	10001928	-						
		AP140	10001929	-						
	Combi deadlength	A2-5	10001945	-	✔					
		A2-6	10001946	-						
		AP120	10001947	-						
		AP140	10001948	-						
	Modular	A2-5	10001913	-	✔	✔	✔		✔	✔
		A2-6	10001914	-						
		AP120	10001915	-						
		AP140	10001916	-						
65	Combi pull-back	A2-5	10001920	-	✔	✔	✔	✔	✔	✔
		A2-6	10001921	-						
		A2-8	10001922	-						
		AP120	10001923	-						
		AP140	10001924	-						
		AP170	10001925	-						
	Combi deadlength	A2-5	10001936	-	✔					
		A2-6	10001937	-						
		A2-8	10001938	-						
		AP140	10001939	-						
		AP170	10001940	-						
	Modular	A2-5	10001907	-	✔	✔	✔	✔	✔	✔
		A2-6	10001908	-						
		A2-8	10001909	-						
		AP120	10001910	-						
		AP140	10001911	-						
		AP170	10001912	-						
100	Combi pull-back	A2-6	10001930	-	✔	✔	✔	✔	✔	✔
		A2-8	10001931	-						
		A2-11	10001935	-						
		AP170	10001932	-						
		AP220	10001933	-						
	Combi deadlength	A2-6	10001941	-	✔					
		A2-8	10001942	-						
		AP170	10001943	-						
		AP220	10001944	-						
	Modular	A2-8	10001917	-	✔	✔	✔	✔	✔	✔
		AP170	10001918	-						
		AP220	10001919	-						

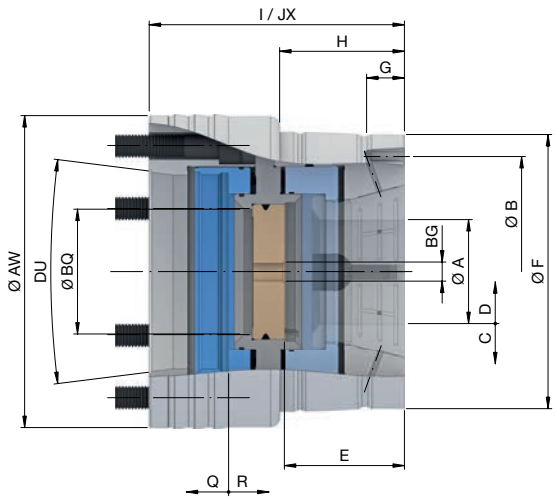
Detailed technical data follows.

For more connection data please visit www.hainbuch.com

Scope of delivery

- Chuck
- Base end-stop [depending on the variant]
- Chip protection cover

TOPlus combi pull-back size 52. Technical data

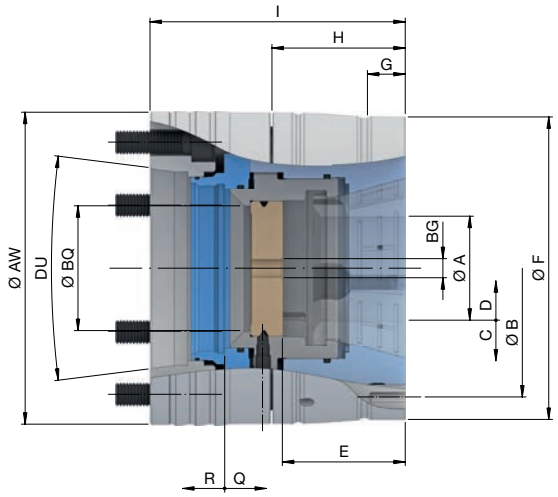


Size		52			
Variant		Combi pull-back			
Spindle nose	DU	A2-5	A2-6	AP120	AP140
Run-out ≤ [mm]		0,010			
Max. radial clamping force [kN]		108			
Max. axial drawtube force [pull / push] [kN]		40			
RPM n max. [1/min.]		7000			
Clamping range [mm]	A	3 – 52			
Release stroke in Ø [mm]	C	0,6			
Reserve stroke in Ø [mm]	D	1			
Range / recommended workpiece tolerance [mm]		± 0,5			
End-stop depth [mm]	E	56,5			
Ø Capacity [mm]	BQ	53			
End-stop thread size [M]	BG	10			
Location front end-stop	F	Ø 125 f7			
Centering length [mm]	G	17			
Bolt hole circle end-stop	B	LK Ø 107 [3 x M6]			
Length [mm]	H	59			
Total length [mm]	I	122		115	
Total length with guard plate [mm]	JX	125		118	
Reserve stroke axial [mm]	Q	2			
Release stroke axial [mm]	R	2,5			
Outer Ø [mm]	AW	144	165	144	150
Weight [kg]		10	12	9	10
In stock		-	-	-	-
Material no.		10001926	10001927	10001928	10001929

Machine spindle standard DIN 55026.
Total length can be extended via flange.

					
Clamping heads Page 422	Adaptations I.D. clamping Page 270	Face driver / morse taper Page 324	Magnet module Page 332	Alignment set Page 540	Accessory overview Page 478

TOPlus combi deadlength size 52. Technical data



Size		52			
Variant		**Combi deadlength**			
Spindle nose	DU	A2-5	A2-6	AP120	AP140
Run-out ≤ [mm]		0,020			
Max. radial clamping force [kN]		108			
Max. axial compression force [kN]		40			
RPM n max. [1/min.]		7000			
Clamping range [mm]	A	3 – 52			
Release stroke in Ø [mm]	C	0,6			
Reserve stroke in Ø [mm]	D	1			
Range / recommended workpiece tolerance [mm]		± 0,5			
End-stop depth [mm]	E	54,8			
Ø Capacity [mm]	BQ	53			
End-stop thread size [M]	BG	10			
Location front end-stop	F	Ø 140 f7			
Centering length [mm]	G	17			
Bolt hole circle end-stop	B	LK Ø 122 [3 x M6]			
Length [mm]	H	61,5			
Total length [mm]	I	120		110	
Reserve stroke axial [mm]	Q	2			
Release stroke axial [mm]	R	2,5			
Outer Ø [mm]	AW	145	162	145	150
Weight [kg]		11	12	10	11
In stock		-	-	-	-
Material no.		10001945	10001946	10001947	10001948

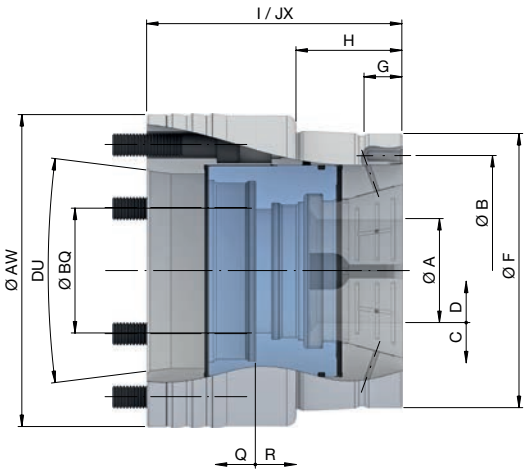
Machine spindle standard DIN 55026.
Total length can be extended via flange.


Clamping heads
Page 422


Alignment set
Page 540


Accessory overview
Page 478

TOPlus modular size 52. Technical data

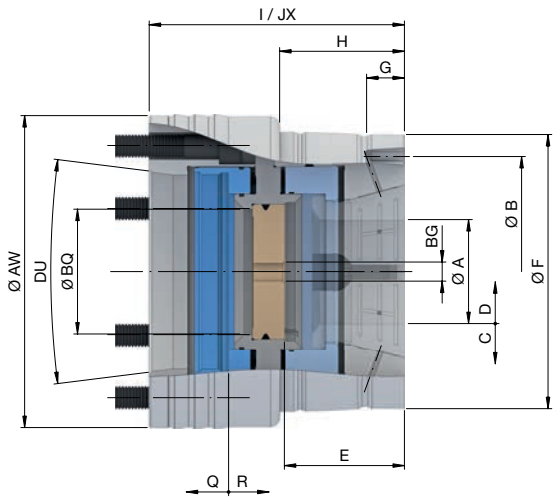


Size		52			
Variant		Modular			
Spindle nose	DU	A2-5	A2-6	AP120	AP140
Run-out ≤ [mm]		0,010			
Max. radial clamping force [kN]		108			
Max. axial drawtube force [pull / push] [kN]		40			
RPM n max. [1/min.]		7000			
Clamping range [mm]	A	3 – 52			
Release stroke in Ø [mm]	C	0,6			
Reserve stroke in Ø [mm]	D	1			
Range / recommended workpiece tolerance [mm]		± 0,5			
Ø Capacity [mm]	BQ	53			
Location front end-stop	F	Ø 125 f7			
Centering length [mm]	G	17			
Bolt hole circle end-stop	B	LK Ø 107 [3 x M6]			
Length [mm]	H	49			
Total length [mm]	I	112		105	
Total length with guard plate [mm]	JX	115		108	
Reserve stroke axial [mm]	Q	2			
Release stroke axial [mm]	R	2,5			
Outer Ø [mm]	AW	144	165	144	150
Weight [kg]		9	11	9	
In stock		-	-	-	-
Material no.		10001913	10001914	10001915	10001916

Machine spindle standard DIN 55026.
Total length can be extended via flange.

					
Clamping heads Page 422	Adaptations I.D. clamping Page 270	Face driver / morse taper Page 324	Magnet module Page 332	Alignment set Page 540	Accessory overview Page 478

TOPlus combi pull-back size 65. Technical data



Size		65					
Variant		Combi pull-back					
Spindle nose	DU	A2-5	A2-6	A2-8	AP120	AP140	AP170
Run-out ≤ [mm]		0,010					
Max. radial clamping force [kN]		120					
Max. axial drawtube force [pull / push] [kN]		45					
RPM n max. [1/min.]		6000					
Clamping range [mm]	A	3 – 65					
Release stroke in Ø [mm]	C	0,6					
Reserve stroke in Ø [mm]	D	1					
Range / recommended workpiece tolerance [mm]		± 0,5					
End-stop depth [mm]	E	63,5					
Ø Capacity [mm]	BQ	66					
End-stop thread size [M]	BG	12					
Location front end-stop	F	Ø 145 f7					
Centering length [mm]	G	20					
Bolt hole circle end-stop	B	LK Ø 126 [3 x M6]					
Length [mm]	H	66					
Total length [mm]	I	131	130	131	120		115
Total length with guard plate [mm]	JX	134	133	134	123		118
Reserve stroke axial [mm]	Q	2					
Release stroke axial [mm]	R	2,5					
Outer Ø [mm]	AW	160	165	210	160		184
Weight [kg]		14	12	18	12	13	12
In stock		-	-	-	-	-	-
Material no.		10001920	10001921	10001922	10001923	10001924	10001925

Machine spindle standard DIN 55026.
Total length can be extended via flange.


Clamping heads
Page 422


Adaptations I.D. clamping
Page 270


Adaptations jaw clamping
Page 316

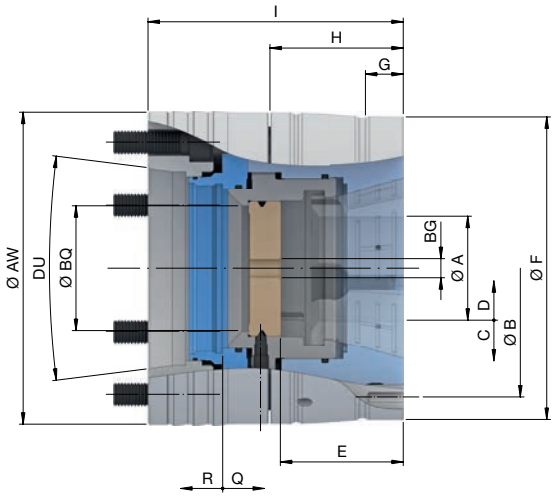

Face driver / morse taper
Page 324


Magnet module
Page 332


Alignment set
Page 540


Accessory overview
Page 478

TOPlus combi deadlength size 65. Technical data

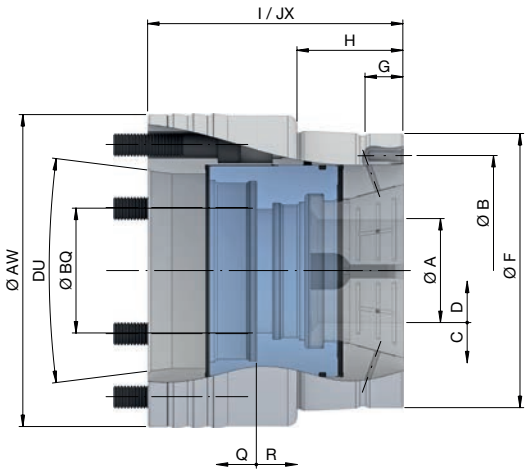


Size		65				
Variant		Combi deadlength				
Spindle nose	DU	A2-5	A2-6	A2-8	AP140	AP170
Run-out ≤ [mm]		0,020				
Max. radial clamping force [kN]		120				
Max. axial compression force [kN]		45				
RPM n max. [1/min.]		6000				
Clamping range [mm]	A	3 – 65				
Release stroke in Ø [mm]	C	0,6				
Reserve stroke in Ø [mm]	D	1				
Range / recommended workpiece tolerance [mm]		± 0,5				
End-stop depth [mm]	E	65				
Ø Capacity [mm]	BQ	66				
End-stop thread size [M]	BG	12				
Location front end-stop	F	Ø 160 f7				
Centering length [mm]	G	17				
Bolt hole circle end-stop	B	LK Ø 141 [3 x M6]				
Length [mm]	H	71,5				
Total length [mm]	I	135				125
Reserve stroke axial [mm]	Q	2				
Release stroke axial [mm]	R	2,5				
Outer Ø [mm]	AW	165		210	165	180
Weight [kg]		16		21	16	
In stock		-	-	-	-	-
Material no.		10001936	10001937	10001938	10001939	10001940

Machine spindle standard DIN 55026.
Total length can be extended via flange.

		
Clamping heads Page 422	Alignment set Page 540	Accessory overview Page 478

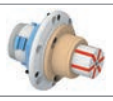
TOPlus modular size 65. Technical data



Size		65					
Variant		**Modular**					
Spindle nose	DU	A2-5	A2-6	A2-8	AP120	AP140	AP170
Run-out ≤ [mm]		0,010					
Max. radial clamping force [kN]		120					
Max. axial drawtube force [pull / push] [kN]		45					
RPM n max. [1/min.]		6000					
Clamping range [mm]	A	3 – 65					
Release stroke in Ø [mm]	C	0,6					
Reserve stroke in Ø [mm]	D	1					
Range / recommended workpiece tolerance [mm]		± 0,5					
Ø Capacity [mm]	BQ	66					
Location front end-stop	F	Ø 145 f7					
Centering length [mm]	G	20					
Bolt hole circle end-stop	B	LK Ø 126 [3 x M6]					
Length [mm]	H	56					
Total length [mm]	l	121	120	121	110		105
Total length with guard plate [mm]	JX	124	123	124	113		108
Reserve stroke axial [mm]	Q	2					
Release stroke axial [mm]	R	2,5					
Outer Ø [mm]	AW	160	165	210	160		184
Weight [kg]		12		17	11		12
In stock		-	-	-	-	-	-
Material no.		10001907	10001908	10001909	10001910	10001911	10001912

Machine spindle standard DIN 55026.
Total length can be extended via flange.


Clamping heads
Page 422


Adaptations I.D. clamping
Page 270


Adaptations jaw clamping
Page 316

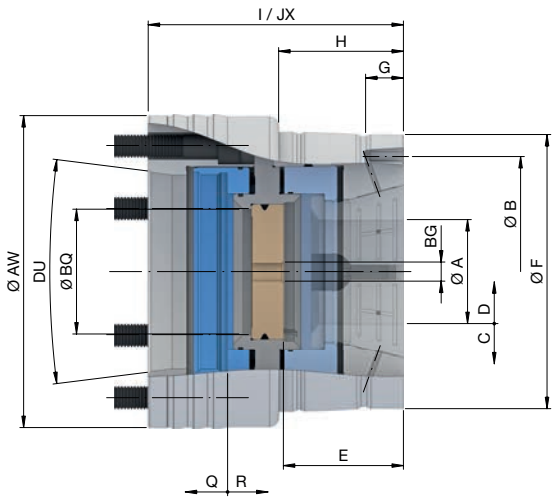

Face driver / morse taper
Page 324


Magnet module
Page 332


Alignment set
Page 540


Accessory overview
Page 478

TOPlus combi pull-back size 100. Technical data

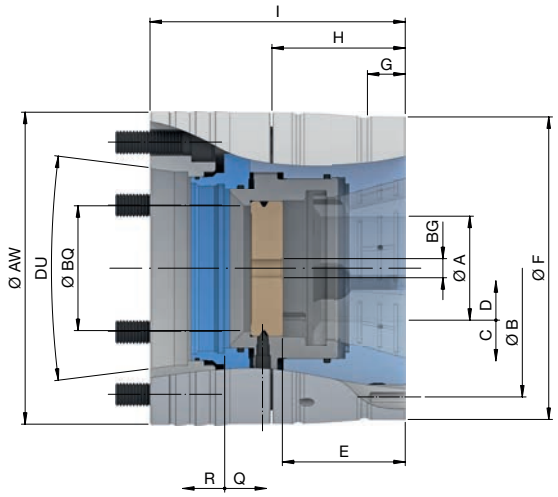


Size		100				
Variant		Combi pull-back				
Spindle nose	DU	A2-6	A2-8	A2-11	AP170	AP220
Run-out ≤ [mm]		0,015				
Max. radial clamping force [kN]		172				
Max. axial drawtube force [pull / push] [kN]		65				
RPM n max. [1/min.]		5000				
Clamping range [mm]	A	15 – 100				
Release stroke in Ø [mm]	C	1,6		2	1,6	
Reserve stroke in Ø [mm]	D	1,5				
Range / recommended workpiece tolerance [mm]		± 1,0				
End-stop depth [mm]	E	73				
Ø Capacity [mm]	BQ	101				
End-stop thread size [M]	BG	12				
Location front end-stop	F	Ø 215 f7				
Centering length [mm]	G	23				
Bolt hole circle end-stop	B	LK Ø 180 [3 x M8]				
Length [mm]	H	78,5				
Total length [mm]	I	155	159	165	159	
Total length with guard plate [mm]	JX	159	163	169	163	
Reserve stroke axial [mm]	Q	3				
Release stroke axial [mm]	R	5				
Outer Ø [mm]	AW	235		280	235	240
Weight [kg]		33	32	42	32	35
In stock		-	-	-	-	-
Material no.		10001930	10001931	10001935	10001932	10001933

Machine spindle standard DIN 55026.
Total length can be extended via flange.

 Clamping heads Page 422	 Adaptations I.D. clamping Page 270	 Adaptations jaw clamping Page 316	 Face driver / morse taper Page 324	 Magnet module Page 332	 Clamping head adapter Page 513	 Alignment set Page 540	 Accessory overview Page 478

TOPlus combi deadlength size 100. Technical data



Size		**100**			
Variant		**Combi deadlength**			
Spindle nose	DU	A2-6	A2-8	AP170	AP220
Run-out ≤ [mm]		0,025			
Max. radial clamping force [kN]		172			
Max. axial compression force [kN]		65			
RPM n max. [1/min.]		5000			
Clamping range [mm]	A	15 – 100			
Release stroke in Ø [mm]	C	1,6			
Reserve stroke in Ø [mm]	D	1,5			
Range / recommended workpiece tolerance [mm]		± 1,0			
End-stop depth [mm]	E	85,5			
Ø Capacity [mm]	BQ	84	101		
End-stop thread size [M]	BG	12			
Location front end-stop	F	Ø 215 f7			
Centering length [mm]	G	23			
Bolt hole circle end-stop	B	LK Ø 192 [3 x M8]			
Length [mm]	H	94			
Total length [mm]	I	175		180	170
Reserve stroke axial [mm]	Q	3			
Release stroke axial [mm]	R	5			
Outer Ø [mm]	AW	220			240
Weight [kg]		36	34	37	38
In stock		-	-	-	-
Material no.		10001941	10001942	10001943	10001944

Machine spindle standard DIN 55026.
Total length can be extended via flange.

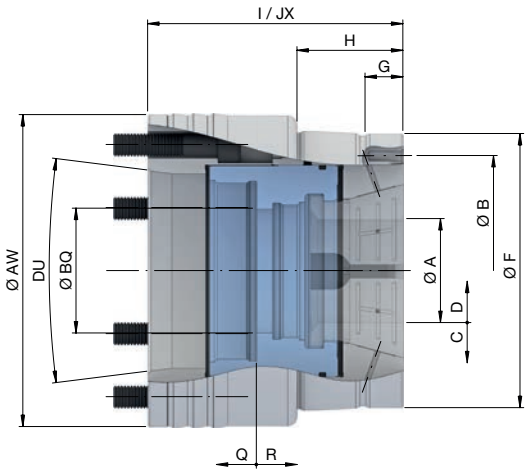

Clamping heads
Page 422


Clamping head adapter
Page 513


Alignment set
Page 540


Accessory overview
Page 478

TOPlus modular size 100. Technical data



Size		100		
Variant		**Modular**		
Spindle nose	DU	A2-8	AP170	AP220
Run-out ≤ [mm]		0,015		
Max. radial clamping force [kN]		172		
Max. axial drawtube force [pull / push] [kN]		65		
RPM n max. [1/min.]		5000		
Clamping range [mm]	A	15 – 100		
Release stroke in Ø [mm]	C	2		
Reserve stroke in Ø [mm]	D	1,5		
Range / recommended workpiece tolerance [mm]		± 1,0		
Ø Capacity [mm]	BQ	104,5		
Location front end-stop	F	Ø 215 f7		
Centering length [mm]	G	23		
Bolt hole circle end-stop	B	LK Ø 180 [3 x M8]		
Length [mm]	H	68,5		
Total length [mm]	I	149		
Total length with guard plate [mm]	JX	153		
Reserve stroke axial [mm]	Q	3		
Release stroke axial [mm]	R	5		
Outer Ø [mm]	AW	235		240
Weight [kg]		28	31	30
In stock		-	-	-
Material no.		10001917	10001918	10001919

Machine spindle standard DIN 55026.
Total length can be extended via flange.

							
Clamping heads Page 422	Adaptations I.D. clamping Page 270	Adaptations jaw clamping Page 316	Face driver / morse taper Page 324	Magnet module Page 332	Clamping head adapter Page 513	Alignment set Page 540	Accessory overview Page 478