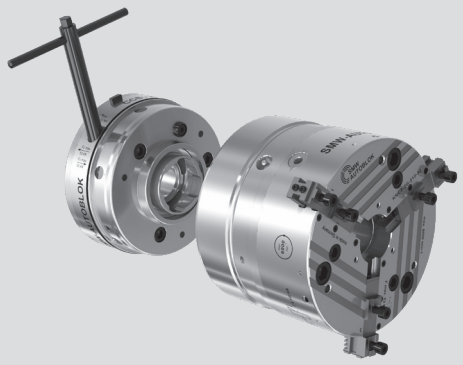
CCS

CHUCK SWITCHING SYSTEM

Manual chuck switching system

- Highest repeatability and change-over accuracy
- Central actuation for locking and unlocking
- Large through-hole
- Optical control for the locking status



Typical application:
CCS with KNCS-2G chuck

Application/customers benefits

- Quick change-over of workholding on CNC machines
- Less down time and high changing accuracy
- Can be adapted to any spindle and any chuck

Technical features

- Highest repeatability and change-over accuracy
- Central actuation for locking and unlocking
- Large through-hole
- Optical control for the locking status
- Protected against contamination
- Automatic „push off" of the adapter flange when opening the CCS

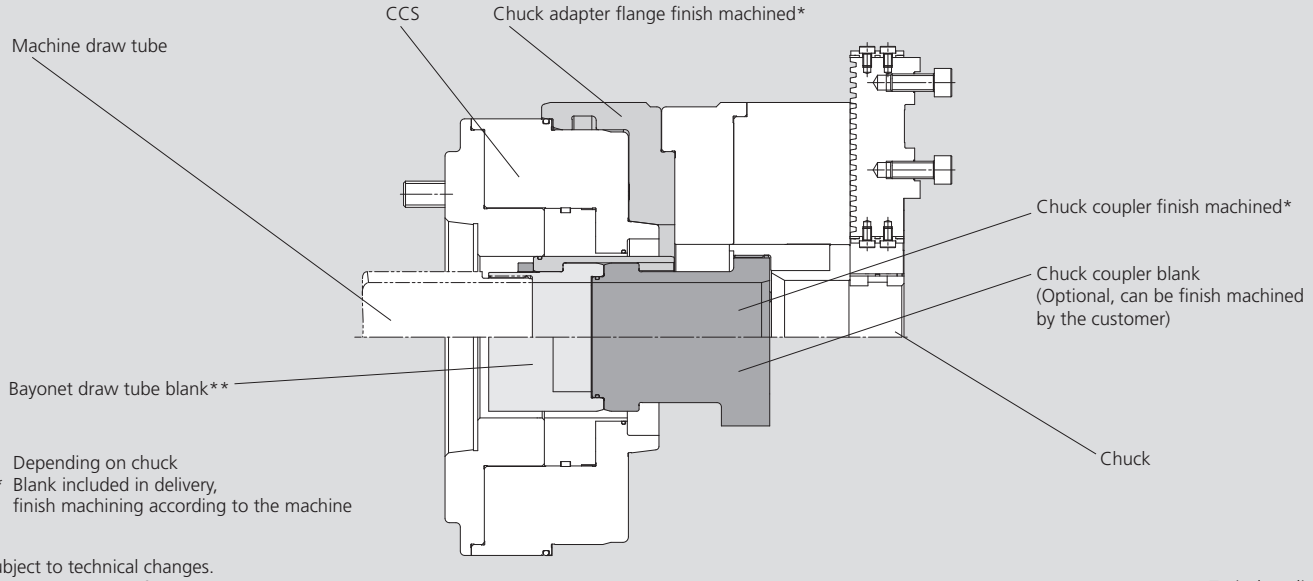
Standard equipment

Chuck switching system
Coupling sleeve
Key
Bayonet draw tube blank
Threaded ring

Ordering example

CCS-A06-A06, Id. No. 054600
or
CCS-Z170-A06, Id. No. 055015

Ordering review



* Depending on chuck
** Blank included in delivery,
finish machining according to the machine

Subject to technical changes.
For more detailed information please ask our customer service.

Typical application:
CCS with KNCS-2G chuck

SMW-AUTOBLOK Type		CCS		CCS		CCS	
Mounting		A06-A06	Z170-A06	A08-A08	Z220-A08	A11-A11	Z300-A11
Chuck switching system CCS HSP (open center)	Id. No.	054600	055015	054840	055016	054960	055017
Chuck switching system CCS VSP (closed center)	Id. No.	055010	055018	055011	055019	055012	055020
Chuck adapter flange Z140	Id. No.	on request		on request		on request	
Chuck adapter flange Z170	Id. No.	054622		055086		on request	
Chuck adapter flange Z220	Id. No.	055022		054864		055154	
Chuck adapter flange Z300	Id. No.	-		055023		054984	
Chuck adapter flange Z380	Id. No.	-		-		055024	
Chuck coupler blank	Id. No.	054616		054861		054981	
Chuck coupler finish machined KNCS-N-210-Z170	Id. No.	054621		-		-	
Chuck coupler finish machined KNCS-N-260-Z170	Id. No.	055082		-		-	
Chuck coupler finish machined KNCS-N-260-Z220	Id. No.	055160		054877		-	
Chuck coupler finish machined KNCS-N-325-Z220	Id. No.	-		054863		-	
Chuck coupler finish machined KNCS-N-325-Z300	Id. No.	-		055162		054983	
Chuck coupler finish machined KNCS-N-400-Z300	Id. No.	-		-		055165	
Chuck coupler finish machined KNCS-N-400-Z380	Id. No.	-		-		055166	
Chuck coupler finish machined KNCS-N-500-Z300	Id. No.	-		-		055167	
Chuck coupler finish machined KNCS-N-500-Z380	Id. No.	-		-		055168	
Chuck coupler finish machined BH-D-210	Id. No.	054882		-		-	
Chuck coupler finish machined BH-D-250	Id. No.	-		054879		-	

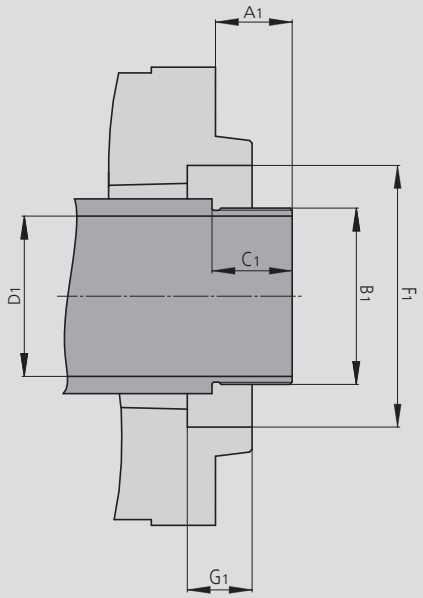
Installation onto machines with open center draw tube

⚠ **The described design is for draw tubes with O.D. thread only!**
For draw tubes with I.D. thread please contact SMW-AUTOBLOK!

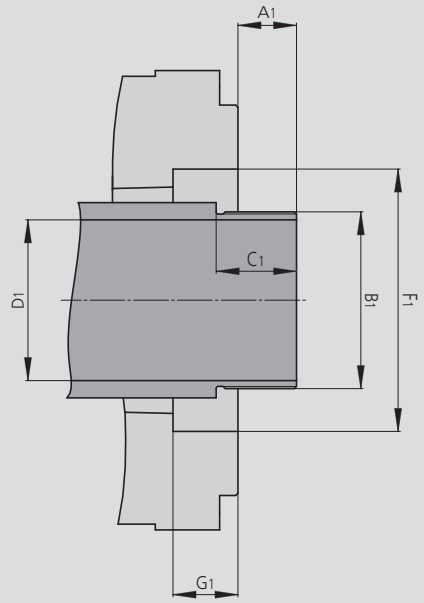
⚠ **Checking of spindle and draw tube (customer side):**
In order to check the existing draw tube dimensions, the cylinder must be in the complete forward end position (dead stop in the cylinder)!
Screw the draw tube firmly into the cylinder and secure it against rotation.

Checking of the dimensions for usability:
All surfaces have to be clean and free of burrs.
Carry out several measurements at different and opposed positions.
If the draw tube dimensions are within the dimensions (see table below) the existing draw tube can be used.
If the draw tube dimensions are not within the dimensions (see table below) a new draw tube has to be used!

Spindle with short taper mounting



Spindle with cylindrical mounting



Spindle with short taper mounting			
Check dimensions A-A	**CCS A06-A06**	**CCS A08-A08**	**CCS A11-A11**
A1 min. / max.	25 / 50.5	25 / 53	28 / 69
B1 max.	M56 x 1.5	M77 x 1.5	M100 x 1.5
C1 min.	18	20	22
D1 max. (Ø)	50	70	92
F1 min. (Ø)	70	90	115
G1 min. (depth)	8	10	10

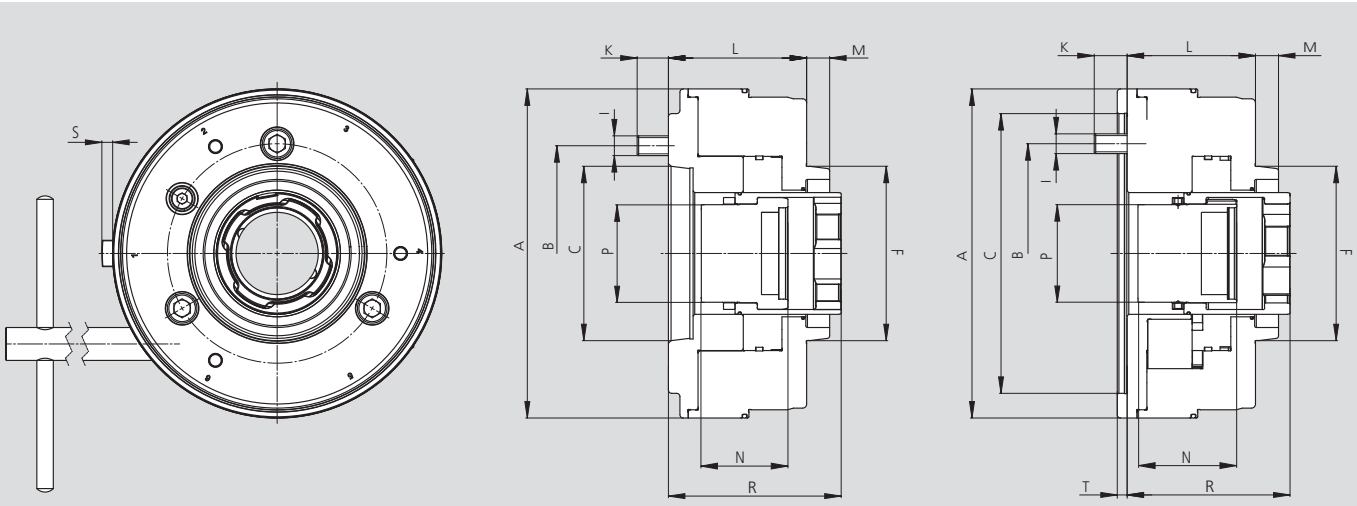
Spindle with cylindrical mounting			
Check dimensions Z-A	**CCS Z170-A06**	**CCS Z220-A08**	**CCS Z300-A11**
A1 min. / max.	19 / 44.5	19 / 47	22 / 63
B1 max.	M56 x 1.5	M77 x 1.5	M100 x 1.5
C1 min.	18	20	22
D1 max. (Ø)	50	70	92
F1 min. (Ø)	70	90	-
G1 min. (depth)	8	10	-

CCS

CHUCK SWITCHING SYSTEM
for open center (Type HSP)

Manual chuck switching system (CCS-HSP)

- Highest repeatability and change-over accuracy
- Central actuation for locking and unlocking
- Large through-hole
- Optical control for the locking status



Subject to technical changes.
For more detailed information please ask our customer service.

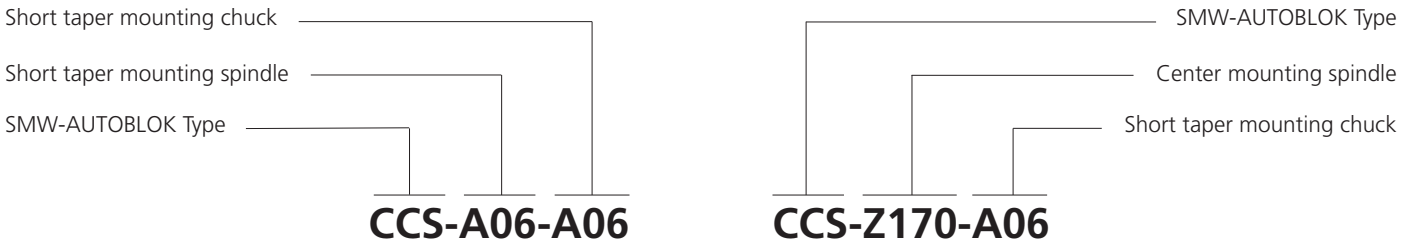
SMW-AUTOBLOK Type open center (HSP)*		CCS-A06-A06	CCS-Z170-A06	CCS-A08-A08	CCS-Z220-A08	CCS-A11-A11	CCS-Z300-A11
Mounting		**A06**	**Z170**	**A08**	**Z220**	**A11**	**Z300**
	A	200	200	250	250	300	315
	B	133.4	133.4	171.4	171.4	235	235
Mounting spindle side	C	A06	Z170	A08	Z220	A11	Z300
Mounting chuck side	F	A06	A06	A08	A08	A11	A11
	I	M12	M12	M16	M16	M20	M20
	K	19	20	22.5	23.5	30.5	31.5
	L	84	78	87.5	81.5	100.5	94.5
	M	14	14	16	16	18	18
	N	65	65	70	70	85	85
	P	59.3	59.3	79.3	79.3	105.3	105.3
Max. / min.	R	105 / 79.5	99 / 73.5	111 / 83	105 / 77	127 / 85	121 / 79
Max. axial stroke CCS		25.5	25.5	28	28	42	42
Stroke of indicator slide / optical control for the locking status	S	~ 6.5	~ 6.5	~ 6.5	~ 6.5	~ 6.8	~ 6.8
	T	-	6	-	6	-	6
Moment of inertia	kg·m²	0.084	0.085	0.217	0.223	0.581	0.585
Weight without flange and chuck	kg	15.9	16.0	26.2	26.5	45.1	45.9
Max. possible through-hole Ø	mm	50	50	70	70	92	92
Max. chuck size **	Ø	260	260	325	325	500	500
Torque for wrench Md at CCS	Nm	22	22	40	40	55	55
Max. speed	r.p.m.	6300	6300	5000	5000	4700	4700

** Above values refer to SMW-AUTOBLOK standard chucks. For other chucks and for special application a seperate approval from SMW-AUTOBLOK is necessary! The same applies for special machining processes or when clamping heavy or long workpieces!

Technical data for outside clamping (pull)							
Actuating force F max. (axial force of the cylinder)	kN	53	53	95	95	120	120

Technical data for inside clamping (push)							
Actuating force F max. (axial force of the cylinder)	kN	35	35	60	60	80	80

* The **codes** on the **description of the type** have the following meaning:

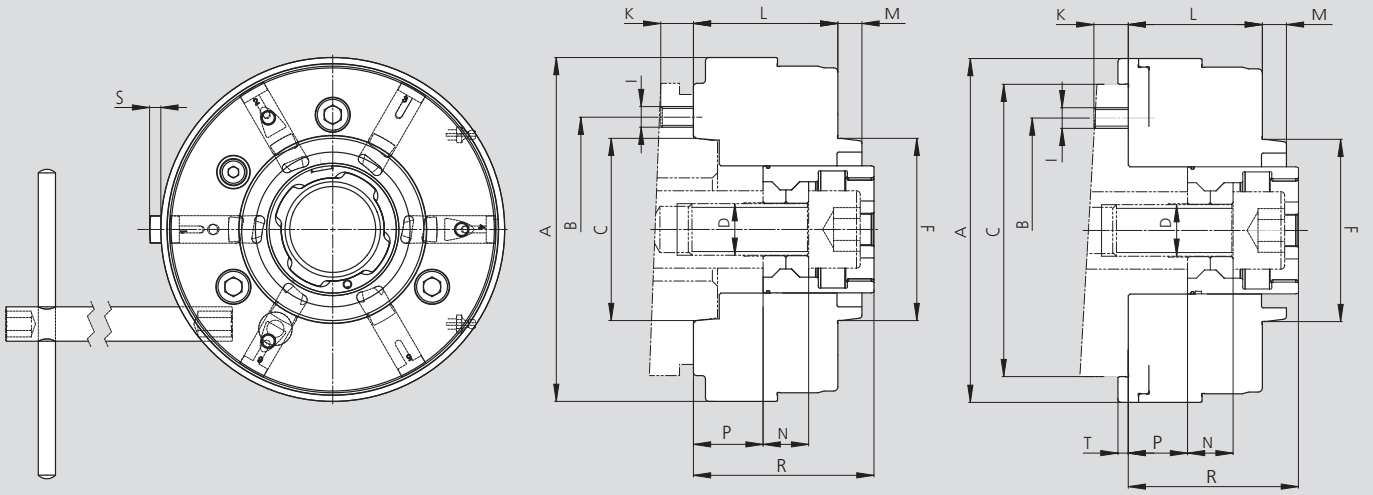


Manual chuck switching system (CCS-VSP)

- Highest repeatability and change-over accuracy
- Central actuation for locking and unlocking
- Optical control for the locking status

CCS

CHUCK SWITCHING SYSTEM
for closed center (Type VSP)



Subject to technical changes.
For more detailed information please ask our customer service.

SMW-AUTOBLOK Type closed center (VSP)*		CCS-A06-A06	CCS-Z170-A06	CCS-A08-A08	CCS-Z220-A08	CCS-A11-A11	CCS-Z300-A11
Mounting		**A06**	**Z170**	**A08**	**Z220**	**A11**	**Z300**
	A	200	200	250	250	300	315
	B	133.4	133.4	171.4	171.4	235	235
Mounting spindle side	C	A06	Z170	A08	Z220	A11	Z300
Draw bar thread max.	D	M30	M30	M36	M36	M42	M42
Mounting chuck side	F	A06	A06	A08	A08	A11	A11
	I	M12	M12	M16	M16	M20	M20
	K	19	20	22.5	23.5	30.5	31.5
	L	84	78	87.5	81.5	100.5	94.5
	M	14	14	16	16	18	18
	N	26.5	26.5	24.35	24.35	24.35	24.35
Max. (draw bar)	P	40.5	34.5	45	39	61	55
Max. / min.	R	105 / 79.5	99 / 73.5	111 / 83	105 / 77	127 / 85	121 / 79
Max. axial stroke CCS		25.5	25.5	28	28	42	42
Stroke of indicator slide / optical control for the locking status	S	~ 6.5	~ 6.5	~ 6.5	~ 6.5	~ 6.8	~ 6.8
	T	-	6	-	6	-	6
Moment of inertia	kg·m²	0.085	0.086	0.240	0.260	0.600	0.620
Weight without flange and chuck	kg	17.1	17.3	28.3	28.6	48.9	49.8
Max. chuck size **	Ø	260	260	400	400	500	500
Torque for wrench Md at CCS	Nm	22	22	40	40	55	55
Max. speed	r.p.m.	6300	6300	5000	5000	4700	4700

** Above values refer to SMW-AUTOBLOK standard chucks.
For other chucks and for special application a seperate approval from SMW-AUTOBLOK is necessary!

Technical data for outside clamping (pull)							
Actuating force F max. (axial force of the cylinder)	kN	53	53	95	95	120	120

Technical data for inside clamping (push)							
Actuating force F max. (axial force of the cylinder)	kN	35	35	60	60	80	80

* The **codes** on the **description of the type** have the following meaning:

Short taper mounting chuck
Short taper mounting spindle
SMW-AUTOBLOK Type

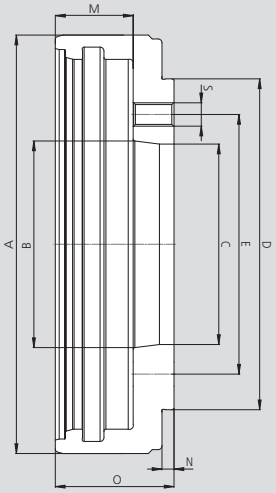
CCS-A06-A06

SMW-AUTOBLOK Type
Center mounting spindle
Short taper mounting chuck

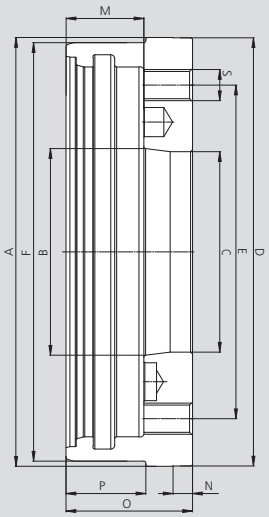
CCS-Z170-A06

Technical data chuck adapter flange finish machined

Dimension for:
054622
054864
054984



Dimension for:
055022
055023
055024



Subject to technical changes.
For more detailed information please ask our customer service.

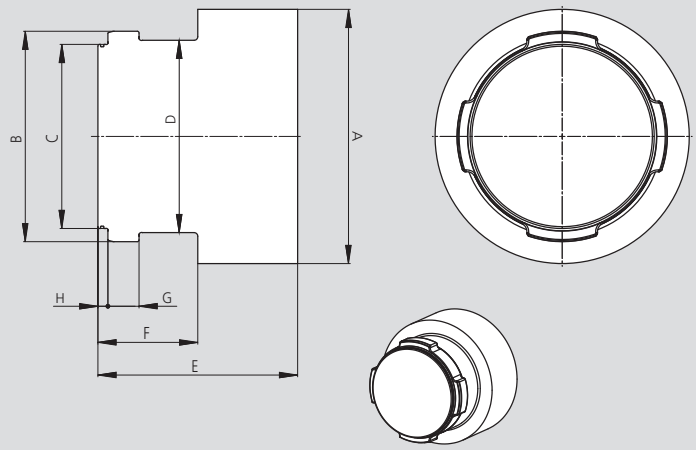
SMW-AUTOBLOK Type CCS-	CCS-	A06-A06 Z170-A06	A06-A06 Z170-A06	A08-A08 Z220-A08	A08-A08 Z220-A08	A11-A11 Z300-A11	A11-A11 Z300-A11	A11-A11 Z300-A11
Type chuck adapter flange *		A06-Z170	A06-Z220	A08-Z220	A08-Z300	A11-Z220	A11-Z300	A11-Z380
Id. No.		054622	055022	054864	055023	055154	054984	055024
A	Ø	215	220.3	280	300.3	340	340	380.3
B	Ø	106.375 (A06)	106.375 (A06)	139.719 (A08)	139.719 (A08)	196.869 (A11)	196.869 (A11)	196.869 (A11)
C	Ø	103	103	136	136	140	193	193
D	Ø	170	220	220	300	220	300	380
E	Ø	133.4	171.4	171.4	235	171,4	235	380.2
F	Ø	-	215	-	280	340	-	340
M		40	40	40.75	40.75	-	43	43
N		6.2	10	6.2	12.5	6,5	8.2	15
O		61	65	68.25	71.75	90	75	97
P		-	41	-	42	-	-	44
S (Thread)		M12	M16	M16	M20	M16	M20	M24
S (division / number)		15° / 22	15° / 24	15° / 19	15° / 24	15° / 24	15° / 22	15° / 24

* The **codes** on the **description of the chuck adapter flange type** have the following meaning:

Short taper mounting CCS
Center mounting chuck

A06-Z170

Technical data chuck coupler blank

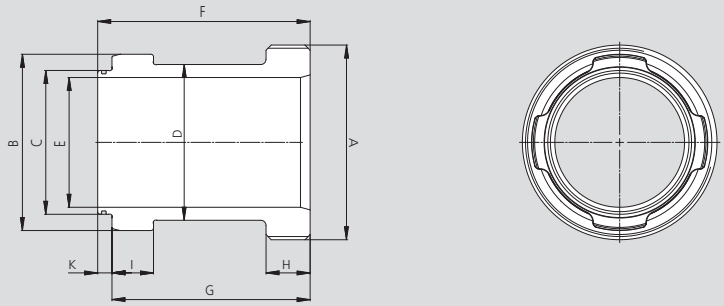


SMW-AUTOBLOK Type		CCS-A06-A06 CCS-Z170-A06	CCS-A08-A08 CCS-Z220-A08	CCS-A11-A11 CCS-Z300-A11
Chuck coupler blank		054616	054861	054981
A	Ø	103	135	186
B	Ø	67.9	88.9	115.9
C	Ø	55.4	75.4	101.4
D	Ø	60	80	105.9
E		94	105	144
F		39.5	45	55
G		16	17.15	17.15
H		5.5	5.5	5.5

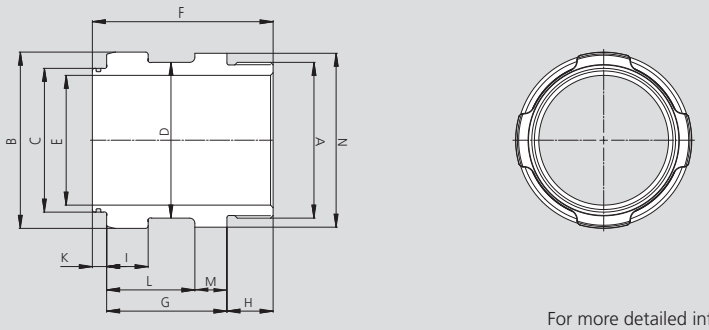
Subject to technical changes.
For more detailed information please ask our customer service.

Technical data chuck coupler finish machined

Dimension for CCS + KNCS-N



Dimension for CCS + BH-D



Subject to technical changes.
For more detailed information please ask our customer service.

SMW-AUTOBLOK Type		CCS-A06-A06 CCS-Z170-A06	CCS-A06-A06 CCS-Z170-A06	CCS-A06-A06 CCS-Z170-A06		CCS-A08-A08 CCS-Z220-A08	CCS-A08-A08 CCS-Z220-A08	CCS-A08-A08 CCS-Z220-A08		CCS-A11-A11 CCS-Z300-A11	CCS-A11-A11 CCS-Z300-A11		CCS-A11-A11 CCS-Z300-A11	
for chuck		KNCS-N-210	BH-D-210	KNCS-N-260		BH-D-250	KNCS-N-260	KNCS-N-325		KNCS-N-325	KNCS-N-400		KNCS-N-500	
Mounting		Z170	Z170	Z170	Z220	Z220	Z220	Z220	Z300	Z300	Z300	Z380	Z300	Z380
Chuck coupler		054621	054882	055082	055160	055459*	054877	054863	055162	054983	055165	055166	055167	055168
A	Ø	M75 x 2.0	M60 x 1.5	M102 x 2.0		M72 x 1.5	M102 x 2.0	M132 x 2.0		M132 x 2.0	M160 x 2.0		M185 x 2.0	
B	Ø	67.9	67.9	67.9		88.9	88.9	88.9		115.9	115.9		115.9	
C	Ø	55.4	55.4	55.4		75.4	75.4	75.4		101.4	101.4		101.4	
D	Ø	60	60	60		80	80	80		105.9	105.9		105.9	
E	Ø	50	50	50		66	70	70		92	92		92	
F		81.35	69.35	88.1	92.1	83	96	97.85	101.25	99.6	103.2	125.2	116.2	138.2
G		75.85	48.85	82.6	86.6	60.5	90.5	92.35	95.75	94.1	97.7	119.7	110.7	132.7
H		16.5	15	22.5		17	22.5	24.5		24.5	24.5		27.5	
I		16	16	16		17.15	17.15	17.15		17.15	17.15		17.15	
K		5.5	5.5	5.5		5.5	5.5	5.5		5.5	5.5		5.5	
L		-	34	-		40.5	-	-		-	-		-	
M		-	14.85	-		20	-	-		-	-		-	
N	Ø	-	88	-		120	-	-		-	-		-	

* Can only be used together with threaded chuck adapter 2701546.