

# CCS

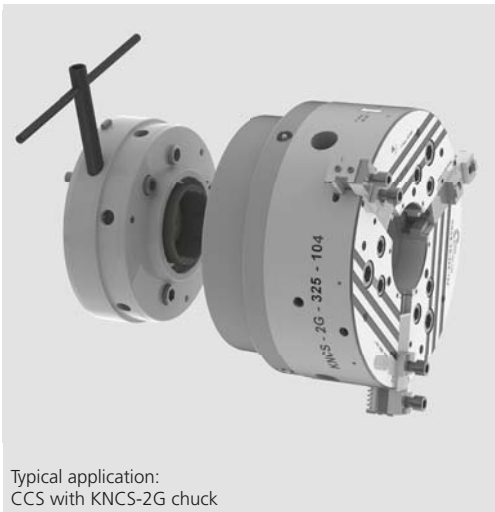
## CHUCK SWITCHING SYSTEM

Highest repeatability and change-over accuracy  
Automatic coupling of chuck in a single actuation  
Large through hole  
Optical control for the locking status  
Protected against contamination



## Manual chuck switching system

- Highest repeatability and change-over accuracy
- Automatic coupling of chuck in a single actuation
- 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
- Automatic coupling of chuck in a single actuation
- Large through hole
- Optical control for the locking status
- Protected against contamination
- Automatic „push off“ of the adapter flange when opening the CCS

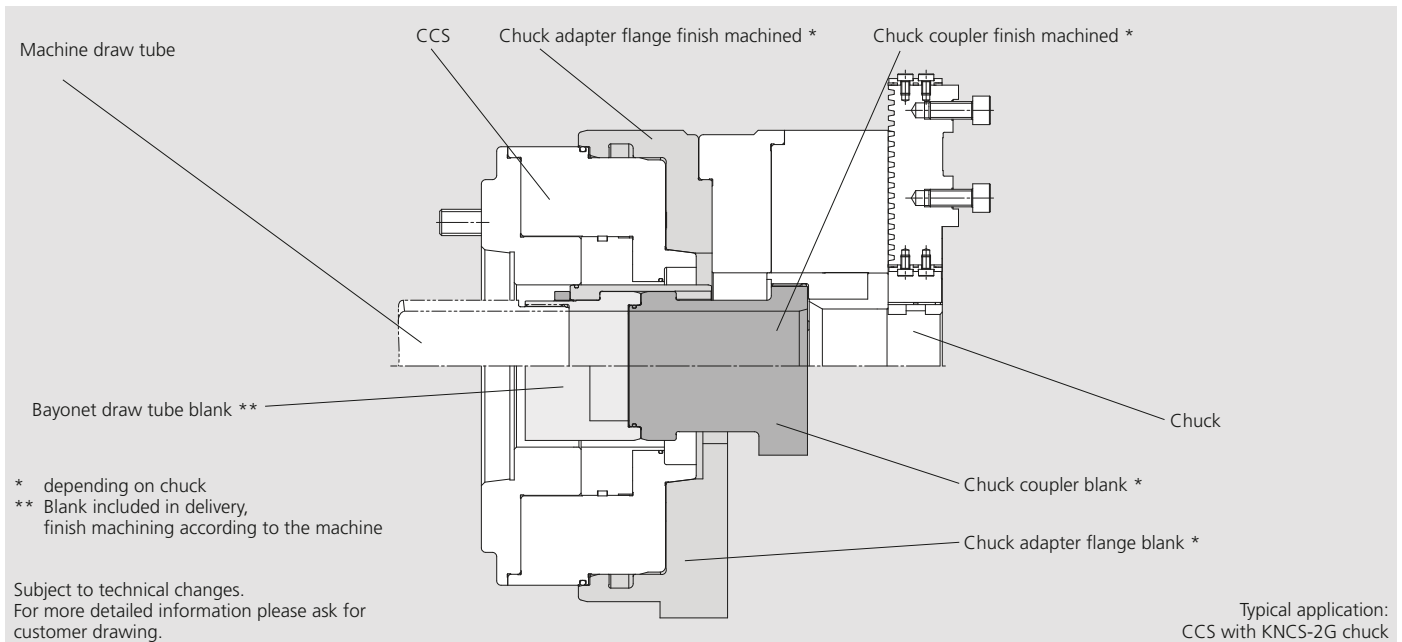
### Standard equipment

Chuck switching system  
Coupling sleeve  
Key  
Bayonet draw tube blank

### Ordering example

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

## Ordering review



SMW-AUTOBLOK Type	CCS		CCS		CCS		
	A06-A06	Z170-A06	A08-A08	Z220-A08	A11-A11	Z300-A11	
<b>Mounting</b>							
<b>Chuck switching system CCS HSP</b> (open center)	Id. No.	054600	055015	054840	055016	054960	055017
<b>Chuck switching system CCS VSP</b> (closed center)	Id. No.	055010	055018	055011	055019	055012	055020
Chuck adapter flange blank	Id. No.	054617		054860		054980	
Chuck adapter flange Z140	Id. No.	on request		on request		on request	
Chuck adapter flange Z170	Id. No.	054622		055086		-	
Chuck adapter flange Z220	Id. No.	055022		054864		055087	
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		-	

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- Large through hole
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CHUCK SWITCHING SYSTEM

### 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:

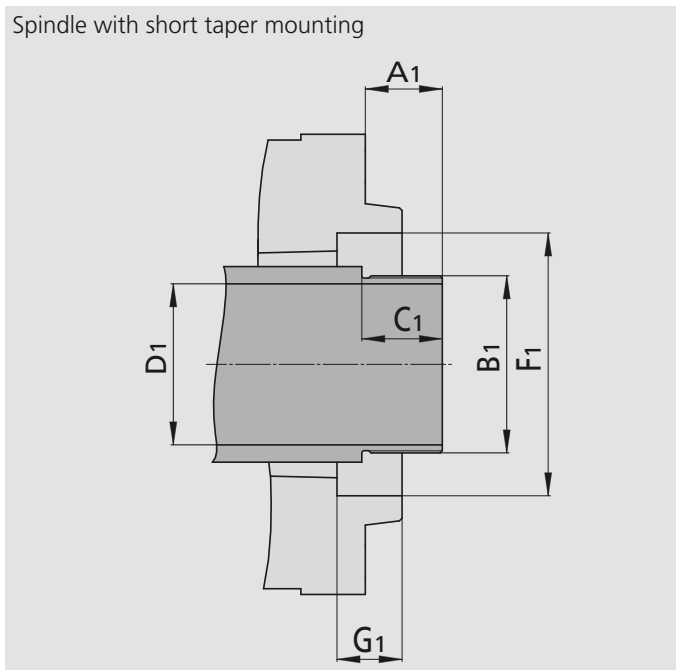
All surfaces to be clean and free of burrs.

Carry out several measurements at different and opposed positions.

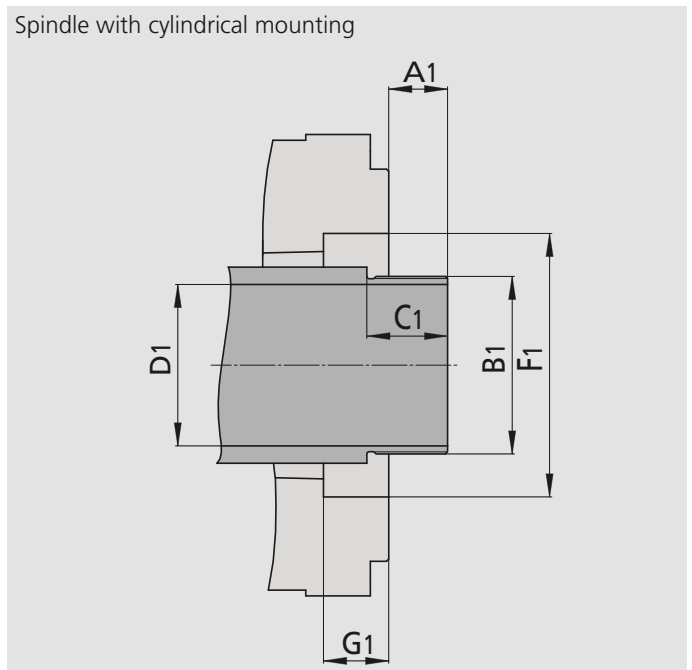
If the draw tube dimensions are within the dimensions (see table below) the existing draw tube can be used.

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	CCS A06-A06	CCS A08-A08	CCS A11-A11
A1 min./max.	25 / 50.5	25 / 53	28 / 69
B1 max.	M56x1.5	M77x1.5	M100x1.5
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

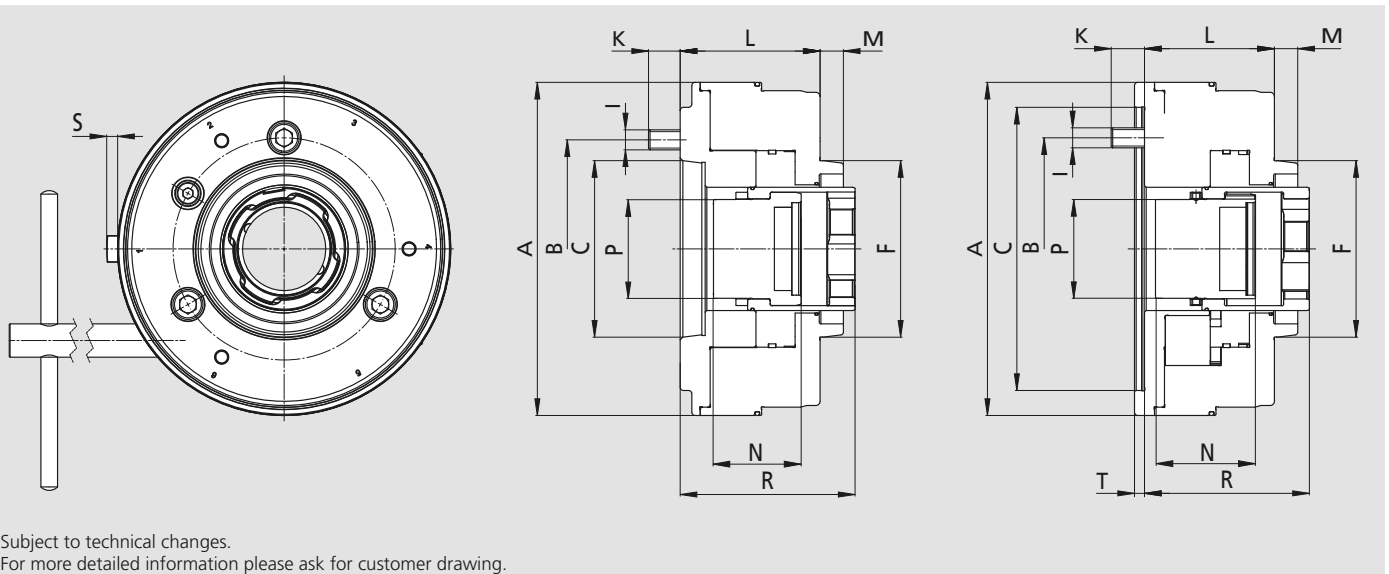
Check dimensions	CCS Z170-A06	CCS Z220-A08	CCS Z300-A11
A1 min./max.	19 / 44.5	19 / 47	22 / 63
B1 max.	M56x1.5	M77x1.5	M100x1.5
C1 min.	18	20	22
D1 max. (Ø)	50	70	92
F1 min. (Ø)	70	90	-
G1 min. (depth)	8	10	-

# CCS

CHUCK SWITCHING SYSTEM  
for open center (Type HSP)

## Manual chuck switching system (CCS-HSP)

- Highest repeatability and change-over accuracy
- Automatic coupling of chuck in a single actuation
- Large through hole
- Optical control for the locking status



Subject to technical changes.  
For more detailed information please ask for customer drawing.

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	Size	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. 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
<b>Moment of inertia</b>	kg·m <sup>2</sup>	0.084	0.085	0.217	0.223	0.581	0.585
<b>weight without flange and chuck</b>	kg	15.9	16.0	26.2	26.5	45.1	45.9
<b>max. possible through hole Ø</b>	mm	50	50	70	70	92	92
<b>max. chuck size **</b>	Ø	260	260	325	325	500	500
<b>Torque for wrench Md at CCS</b>	Nm	22	22	40	40	55	55
<b>max. speed</b>	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 separate approval from SMW-AUTOBLOK is necessary!  
The same applies for special machining processes or when clamping heavy or long workpieces!

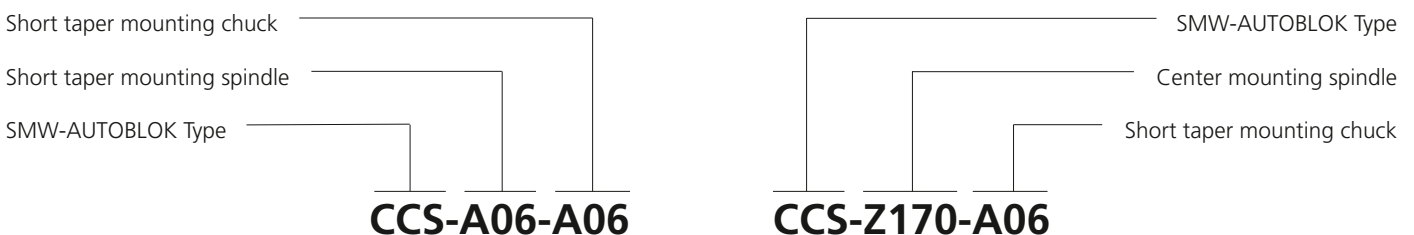
### Technical data for outside clamping (pull)

Actuating force F max. (axial force of the cylinder)	kN	53	53	95	95	120	120
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### Technical data for inside clamping (push)

Actuating force F max. (axial force of the cylinder)	kN	35	35	60	60	80	80
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\* The **codes** on the **description of the type** have the following meaning:

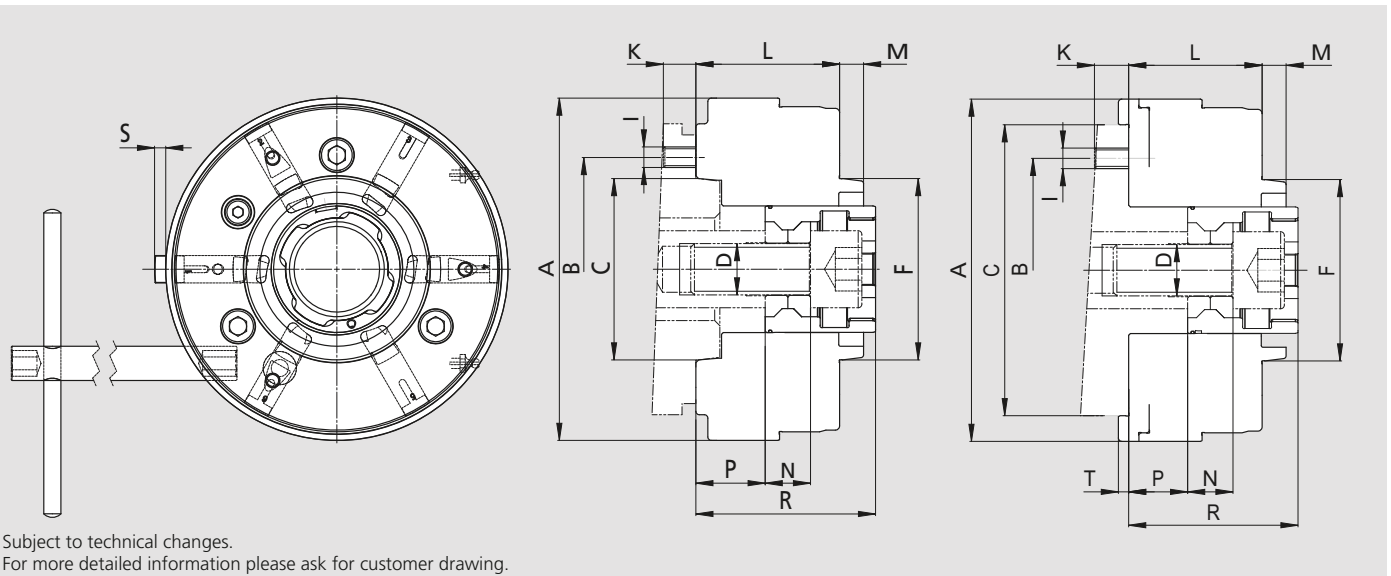


# Manual chuck switching system (CCS-VSP)

# CCS

- Highest repeatability and change-over accuracy
- Automatic coupling of chuck in a single actuation
- Optical control for the locking status

CHUCK SWITCHING SYSTEM  
for closed center (Type VSP)



Subject to technical changes.  
For more detailed information please ask for customer drawing.

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	Size	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. 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
<b>Moment of inertia</b>	kg·m <sup>2</sup>	0.085	0.086	0.240	0.260	0.600	0.620
<b>weight without flange and chuck</b>	kg	17.1	17.3	28.3	28.6	48.9	49.8
<b>max. chuck size **</b>	∅	260	260	400	400	500	500
<b>Torque for wrench Md at CCS</b>	Nm	22	22	40	40	55	55
<b>max. speed</b>	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 separate approval from SMW-AUTOBLOK is necessary!

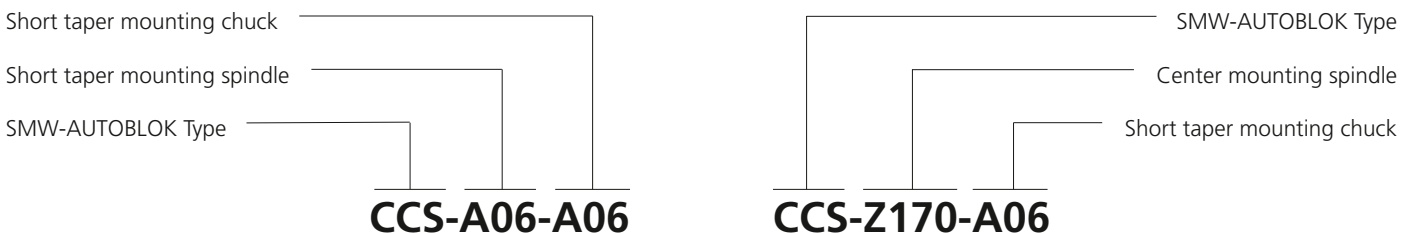
### Technical data for outside clamping (pull)

Actuating force F max. (axial force of the cylinder)	kN	53	53	95	95	120	120
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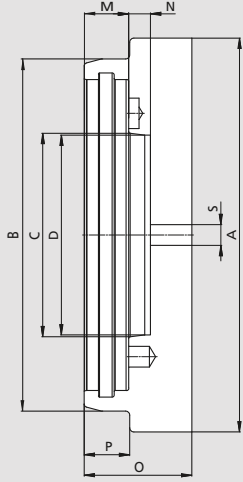
### Technical data for inside clamping (push)

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:



### Technical data chuck adapter flange finish blank

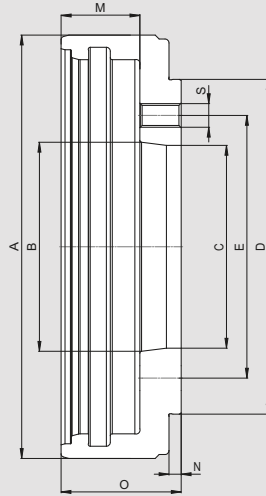


Subject to technical changes.  
For more detailed information please ask for customer drawing.

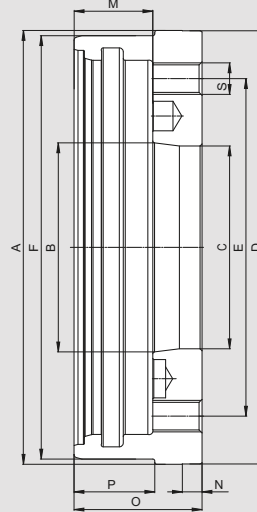
SMW-AUTOBLOK Type	CCS-A06-A06 CCS-Z170-A06	CCS-A08-A08 CCS-Z220-A08	CCS-A11-A11 CCS-Z300-A11
chuck adapter flange blank	054617	054860	054980
A	∅ 220.3	300.3	380.3
B	∅ 215	280	340
C	∅ 106.375 (A06)	139.719 (A08)	196.869 (A11)
D	∅ 103	136	193
M	40	40.75	43
N	16.5	19	21
O	75	80	104
P	41	42	44
S	∅ 20	20	20

### Technical data chuck adapter flange finish machined

Dimension for:  
054622  
054864  
054984



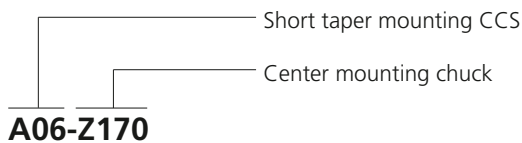
Dimension for:  
055022  
055023  
055024



Subject to technical changes.  
For more detailed information please ask for customer drawing.

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

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







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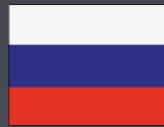
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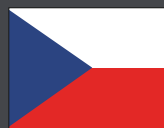
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