

# Centco 4-MLW

## 4-JAW MANUAL CHUCK

2+2 SELF CENTERING  
AND COMPENSATING



### UNIVERSAL

Independent self centering clamping  
in 2 axis via 1 central actuating mechanism

### FLEXIBLE

Clamping of  
every workpiece geometry

Centrifugal force  
compensation

Weight-optimized  
chuck body

### PRECISE

Mechanical  
high precision  
jaw drives

# Centco4-MLW

INCH  
SERRATION

## 4-jaw manual chuck

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Weight-optimized chuck body



### Application/customer benefits

- Independent self centering clamping in 2 axis via 1 central, manual actuating mechanism
- Mechanical centering of the workpiece
- Clamping of every workpiece geometry possible
- Weight-optimized chuck body
- Less workpiece deformation compared to 3-jaw chucks
- Long lifetime due to case hardened parts
- Large range of standard top jaws
- Suitable for OD and ID clamping

### Technical features

- Centrifugal force compensation
- Optimized lubrication system

### Standard equipment

4-jaw manual chuck,  
8 pieces T-nuts and bolts  
Actuation wrench

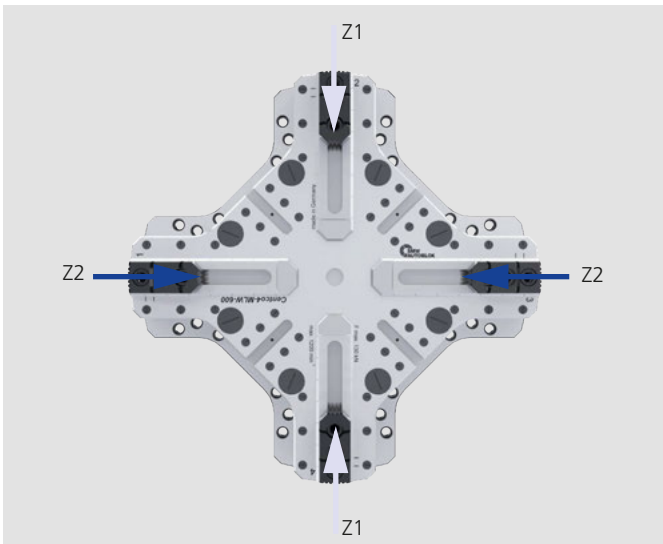
### Ordering example

Centco4-MLW-D-600-4

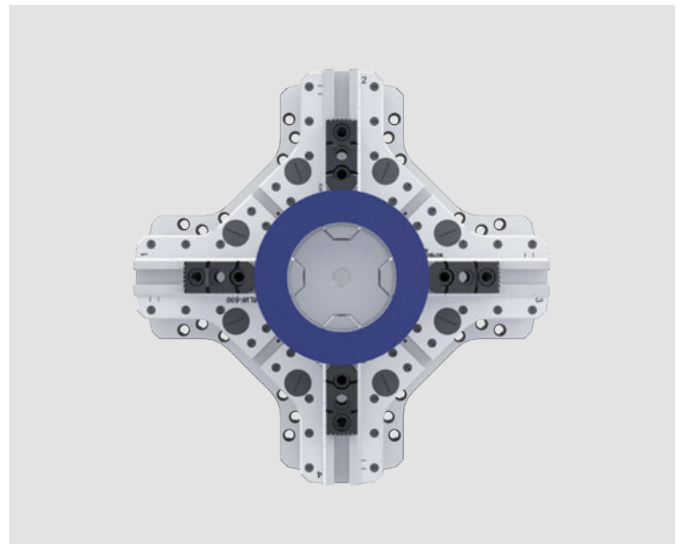
## Function / Application examples

### 2+2 self centering and compensating clamping\*

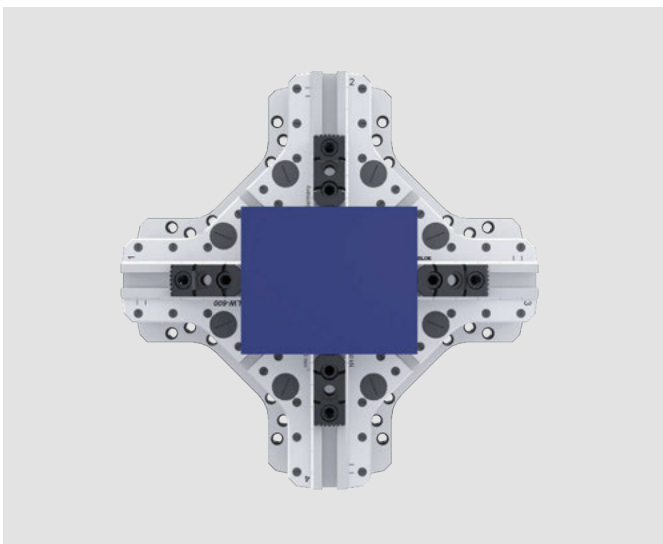
In the beginning the jaw pairs **Z1** + **Z2** only apply a centering force that is necessary to center the workpiece. Only if both jaw pairs **Z1** and **Z2** are in contact with the workpiece, the clamping force necessary for machining is applied.



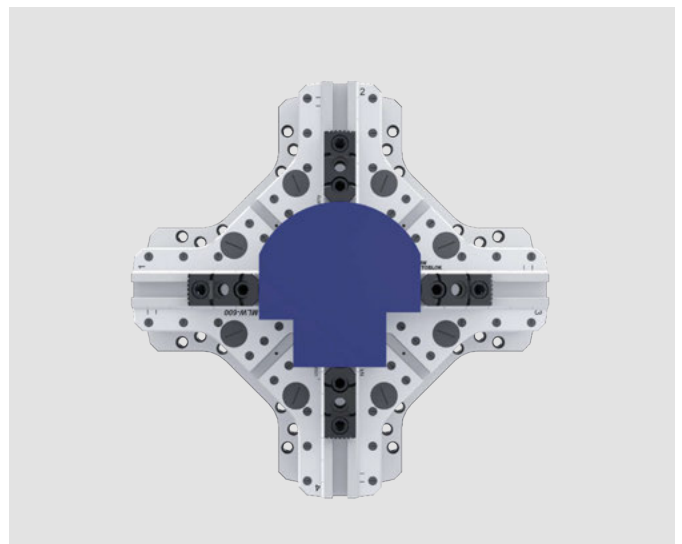
### 2+2 self centering clamping of round or thin-walled workpieces



### 2+2 self centering and compensating clamping of rectangular or square workpieces



### 2+2 self centering and compensating clamping of unshaped workpieces



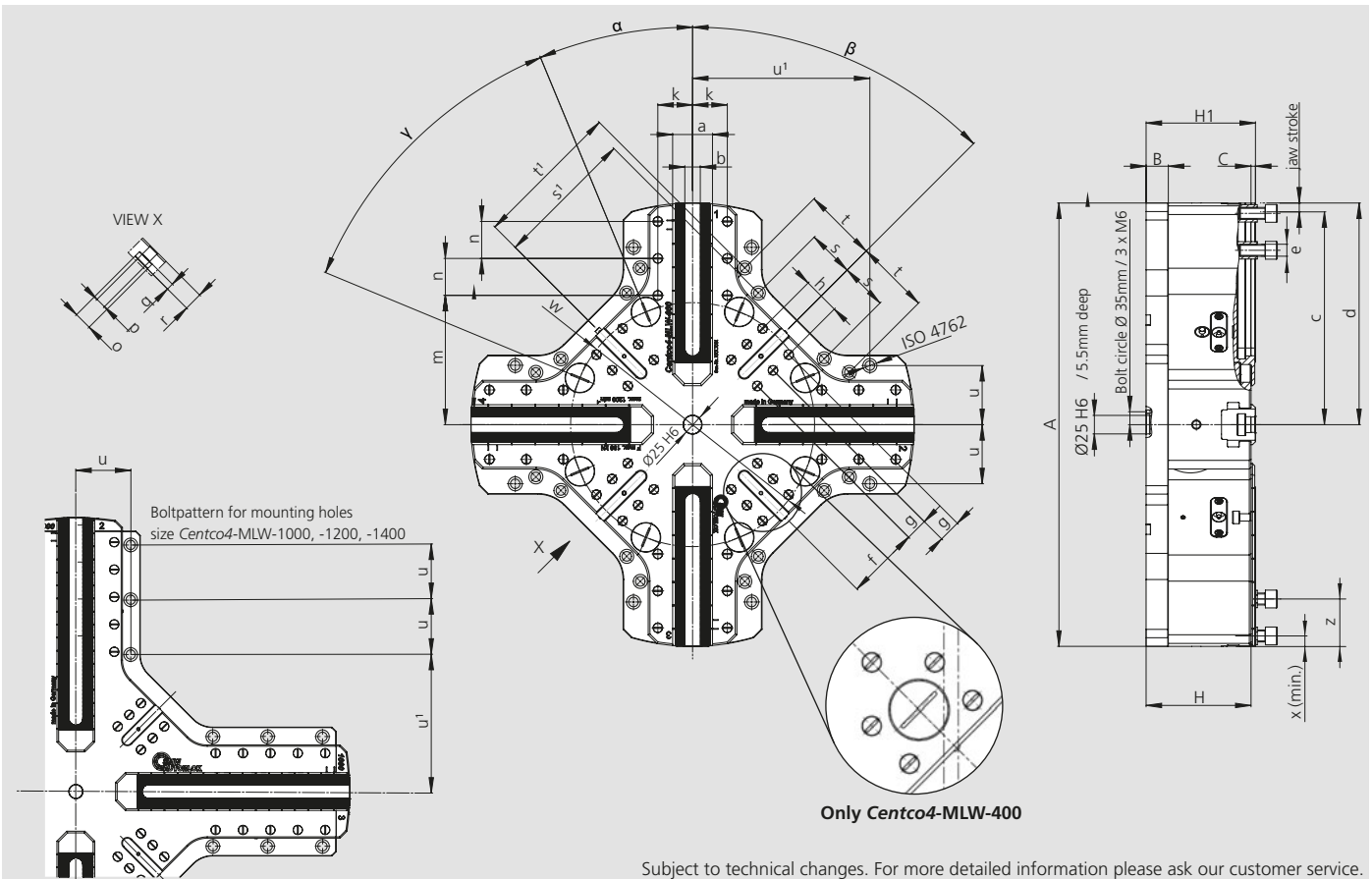
\* **Z1**: Self centering clamping axis 1 / **Z2**: self centering clamping axis 2  
**Z1** is compensating to **Z2**

# 4-jaw manual chuck

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Weight-optimized chuck body

# Centco4-MLW-D

INCH  
SERRATION



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

SMW-AUTOBLOK Type Centco4-MLW-D			400-4 163180	600-4 163210	750-4 163240	1000-4 163270	1200-4 163470	1400-4 163520
Outside diameter	A	mm	400	600	750	1000	1200	1400
Base plate height	B	mm	25	30	30	36	36	36
Chuck height	C	mm	5	6	6	6	6	6
	H	mm	118	142	142	170	170	170
Jaw width	H1	mm	123	148	148	176	176	176
	a	mm	49	54	54	69	69	69
Slot width	b	mm	17	21	21	25.5	25.5	25.5
Min.	c	mm	179.5	288	363	486	586	686
Max.	d	mm	186	300	375	500	600	700
Bolt ISO4762-12.9	e	mm	M12	M16	M16	M20	M20	M20
	f	mm	80	99	99	138	138	138
	g	mm	2 x 30	2 x 30	2 x 30	2 x 30	2 x 30	2 x 30
	h	mm	50	50	50	60	60	60
	k	mm	37	47	47	70	70	70
	m	mm	145	175	200	255	255	255
	n	mm	30	2 x 50	3 x 50	4 x 50	6 x 50	8 x 50
T-slot width	o	mm	-	24	24	30	30	30
T-slot width	p	mm	-	14	14	18	18	18
Height of width o	q	mm	-	9.2	9.2	12.2	12.2	12.2
Total depth T-slot	r	mm	-	25	25	30	30	30
	s/s'	mm	63 / 152.1	63 / 189	63 / 189	-	-	-
	t/t'	mm	-	100 / 200	100 / 200	-	-	-
	u/u'	mm	-	80 / 240	80 / 240	100 / 250	100 / 250	100 / 250
	w	mm	235 / 4 x 90°	330.2	330.2	-	-	-
Min.	x	mm	13.7	12	12	14	14	14
Min. / max.	z	mm	25 / 115	36 / 190	36 / 265	42 / 358	42 / 457	42 / 558
	alpha	deg.	45	17.5	17.5	-	-	-
	beta	deg.	45	45	45	45	45	45
	gamma	deg.	-	45	45	-	-	-
Serration		inch	1/16"	1/16"	1/16"	3/32"	3/32"	3/32"
Max. speed		min <sup>-1</sup>	2500	1200	1000	800	700	600
Max. total clamping force at max. actuating torque (Md)		kN	110	130	130	180	180	180
		Nm	120	200	200	200	200	200
Stroke per jaw		mm	6.5	12	12	14	14	14
Compensation stroke per jaw		mm	5	10	10	12	12	12
Weight (without jaws)		kg	77	165	201	410	480	530
Moment of inertia		kg-m <sup>2</sup>	1.3	5.5	9.83	36.4	55.6	80

# Centco4-MLW-D

INCH  
SERRATION

- Ordering review / Equipment review
- Jaws\*

## Ordering review

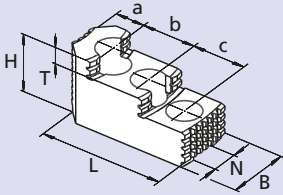
SMW-AUTOBLOK Type Centco4-MLW-D	400-4	600-4	750-4	1000-4	1200-4	1400-4
Id.-No.	163180	163210	163240	163270	163470	163520

## Equipment review

SMW-AUTOBLOK - Assembling tool	400-4	600-4	750-4	1000-4	1200-4	1400-4
Id.-No.	OBM6801			OBM6401		

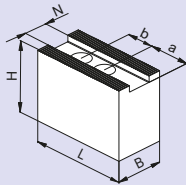
## Jaws

### MHB-D (INCH SERRATION) Hard, reversible stepped top jaws



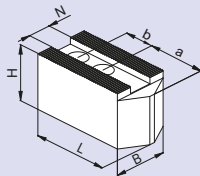
Centco4-MLW-D	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	MHB-D 200	MHB-D 251	MHB-D 251	MHB-D 500	MHB-D 500	MHB-D 500
Id. No.	12082038	12083038	12083038	12084548	12084548	12084548
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	40	45	45	60	60	60
H	45	56	56	75	75	75
L	82	106.2	106.2	140.8	140.8	140.8
T	10.5	13.5	13.5	19	19	19
N	17	21	21	25.5	25.5	25.5
a	19	26	26	38	38	38
b	23	30	30	38	38	38
c	23	30	30	38	38	38
kg / set	2.3	2.9	2.9	9.5	9.5	9.5

### MWB-D (INCH SERRATION) Soft top jaws Tall version



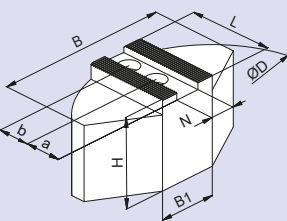
Centco4-MLW-D	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	MWB-D 200	MWB-D 250	MWB-D 250	MWB-D 400	MWB-D 400	MWB-D 400
Id. No.	5318837	5319680	5319680	5319831	5319831	5319831
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	40	50	50	60	60	60
H	60	80	80	90	90	90
L	90	120	120	170	170	170
N	17	21	21	25.5	25.5	25.5
a	43	62	62	90	90	90
b	22	28	28	35	35	35
kg / set	4.1	9.2	9.2	21.6	21.6	21.6

### AWB-D (INCH SERRATION) Soft top jaws Low version



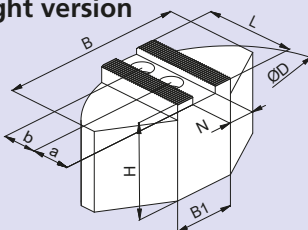
Centco4-MLW-D	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	AWB-D 200	AWB-D 250	AWB-D 250	AWB-D 400	AWB-D 400	AWB-D 400
Id. No.	5318838	5319681	5319681	5319834	5319834	5319834
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	40	50	50	60	60	60
H	40	50	50	60	60	60
L	110	120	120	170	170	170
N	17	21	21	25.5	25.5	25.5
a	53	70	70	115	115	115
b	22	28	28	35	35	35
kg / set	2.7	5.4	5.4	14.5	14.5	14.5

### SBS-D (INCH SERRATION) Soft pie jaws



Centco4-MLW-D	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	SBS-D 200	SBS-D 200	SBS-D 200	SBS-D 400	SBS-D 400	SBS-D 400
Id. No.	5318839	5319684	5319684	5319832	5319832	5319832
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	140	180	180	330	330	330
B1	64	50	50	190	190	190
D	200	250	250	440	440	440
H	60	70	70	85	85	85
L	70	80	80	155	155	155
N	17	21	21	25.5	25.5	25.5
a	35	30	30	85	85	85
b	22	29	29	35	35	35
kg / set	10.3	18.3	18.3	71	71	71

### SBA-D (INCH SERRATION) Soft pie jaws aluminium light version

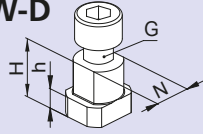


Centco4-MLW-D	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	SBA-D 200	SBA-D 250	SBA-D 250	SBA-D 400	SBA-D 400	SBA-D 400
Id. No.	5318840	5319685	5319685	5319833	5319833	5319833
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	120	160	160	330	330	330
B1	40	50	50	190	190	190
D	200	250	250	440	440	440
H	58	78	78	98	98	98
L	72.5	87.5	87.5	160	160	160
N	17	21	21	25.5	25.5	25.5
a	35	40	40	85	85	85
b	22	29	29	35	35	35
kg / set	3.7	7.2	7.2	32	32	32

\* SMW-AUTOBLOK is recommending not to clamp any diameters, that are larger than the chuck O.D.

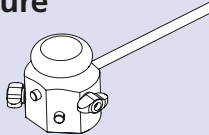
■ T-Nuts

**NST T-Nuts**  
suitable for Centco4-MLW-D



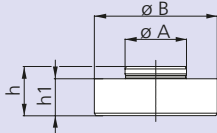
Centco4-MLW-D	400-4	600-4	750-4	1000-4	1200-4	1400-4
T-nut type	NST17	NST21	NST21	NST25	NST25	NST25
Id. No.	016021	014788	014788	014812	014812	014812
N	17	21	21	25.5	25.5	25.5
H	23	27	27	29	29	29
h	9	10	10	11	11	11
Cyl.-screw ISO 4762-12.9	G M12 x 30	M16 x 35	M16 x 35	M20 x 40	M20 x 40	M20 x 40
Torque Md max. (Nm)	70	150	150	250	250	250

**Jaw pre positioning fixture**



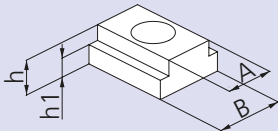
Centco4-MLW	400-4	600-4	750-4	1000-4	1200-4	1400-4
Id. No.	163518	163514	163514	163515	163516	163517

**Center pin**



Centco4-MLW	400-4	600-4	750-4	1000-4	1200-4	1400-4
Id. No.	163239					
Ø A	25 h6					
Ø B	50 g6					
h	20					
h1	15					

**Slot-nuts**



Id.-No.	209210	209194	209173
A	12	14	16
B	20	20	20
h	10	10	10
h1	5.5	5.5	5.5
Id.-No. Cyl.-screw (not included)	010166	010166	010166

**Important for maintenance and safe operation, to be ordered with the chuck**

## Grease K67

Special grease for manual and power chucks



Cartridge 14 Oz. (DIN 1284)  
Grease content 500g  
Id. No. 10731223

Can 1000 g  
Id. No. 10731224

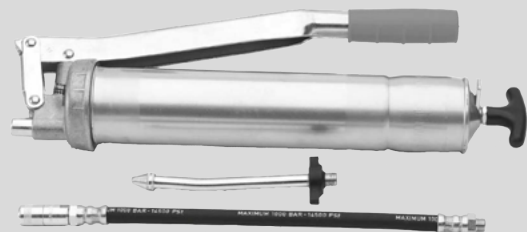


- High adhesion
- High resistance against coolant
- High load bearing capacity
- Low friction coefficient
- High gripping force
- Avoids tribocorrosion

## Grease gun

Grease gun (DIN 1283) for cartridges 14 Oz. (DIN 1284)

■ Also refillable from grease can 1000 g



**Lubrication set Id. No. 083726**

Supply range

- Grease gun
- 1 Adapter flexible for high pressure grease nipple
- 1 Adapter for cone grease nipple

# Notes

A series of horizontal lines for writing notes, alternating between light blue and medium blue colors. The lines are evenly spaced and cover the majority of the page below the header.



**Germany**

SMW-AUTOBLOK Spannsysteme GmbH  
Postfach 1151 • D-88070 Meckenbeuren  
Wiesentalstraße 28 • D-88074 Meckenbeuren  
Tel.: +49 (0) 7542 - 405 - 0  
Vertrieb Inland ▶ [vertrieb@smw-autoblok.de](mailto:vertrieb@smw-autoblok.de)  
Fax: +49 (0) 7542 - 3886  
Sales International ▶ [sales@smw-autoblok.de](mailto:sales@smw-autoblok.de)  
Fax: +49 (0) 7542 - 405 - 181

**U.S.A.**

SMW-AUTOBLOK Corporation  
285 Egidi Drive - Wheeling, IL 60090  
Tel. +1 847 - 215 - 0591  
Fax +1 847 - 215 - 0594  
E-mail ▶ [autoblok@smwautoblok.com](mailto:autoblok@smwautoblok.com)

**Japan**

SMW-AUTOBLOK Japan Inc.  
1-56 Hira, Nishi-Ku  
461-Nagoya  
Tel. +81 (0) 52 - 504 - 0203  
Fax +81 (0) 52 - 504 - 0205  
E-mail ▶ [japan@smwautoblok.co.jp](mailto:japan@smwautoblok.co.jp)

**China**

SMW-AUTOBLOK (Shanghai) Work Holding Co.,Ltd.  
Building 6, No.72, JinWen Road, KongGang  
Industrial Zone, ZhuQiao Town, Pudong District  
201323, Shanghai P.R. China  
Tel. +86 21 - 5810 - 6396  
Fax +86 21 - 5810 - 6395  
E-mail ▶ [china@smwautoblok.cn](mailto:china@smwautoblok.cn)

**Mexico**

SMW-AUTOBLOK Mexico, S.A. de C.V.  
Acceso III No. 16 Int.9,  
Condominio Quadrum  
Industrial Benito Juarez  
Querétaro, Qro. C.P. 76120  
Tel. +52 (442) 209 - 5118  
Fax +52 (442) 209 - 5121  
E-mail ▶ [smwmex@smwautoblok.mx](mailto:smwmex@smwautoblok.mx)

**India**

SMW-AUTOBLOK Workholding Pvt. Ltd.,  
Plot No. 4, Weikfield Industrial Estate,  
Gat No. 1251, Sanaswadi, Tal - Shirur,  
Dist - Pune. 412 208  
Tel. +91 2137 - 616 974  
Fax +91 2137 - 616 972  
E-mail ▶ [info@smwautoblok.in](mailto:info@smwautoblok.in)

**Turkey**

SMW AUTOBLOK Makina San. Ve Tic. Ltd. Şti.  
Yenişehir Mah, Osmanlı Blv, Volume Kurtköy Ofis  
No:9, Kat:1, D:4, PK: 34912, Pendik, İstanbul  
Tel. +90 216 629 - 2019  
E-mail ▶ [info@smwautoblok.com.tr](mailto:info@smwautoblok.com.tr)

**Sweden / Norway**

SMW-AUTOBLOK Scandinavia AB  
Kasernvägen 2  
SE - 281 35 Hässleholm  
Tel. +46 (0) 761 420 111  
E-mail ▶ [info@smw-autoblok.se](mailto:info@smw-autoblok.se)

**Italy**

AUTOBLOK s.p.a.  
Via Duca D'Aosta n.24  
Fraz. Novaretto  
I-10040 Caprie - Torino  
Tel. +39 011 - 9638411  
Tel. +39 011 - 9632020  
Fax +39 011 - 9632288  
E-mail ▶ [info@smwautoblok.it](mailto:info@smwautoblok.it)

**France**

SMW-AUTOBLOK  
17, Avenue des Frères Montgolfier - Z.I. Mi-Plaine  
F-69680 Chassieu  
Tel. +33 (0) 4 - 727 - 918 18  
Fax +33 (0) 4 - 727 - 918 19  
E-mail ▶ [autoblok@smwautoblok.fr](mailto:autoblok@smwautoblok.fr)

**Great Britain**

SMW-AUTOBLOK Telbrook Ltd.  
7 Wilford Industrial Estate  
Ruddington Lane, Wilford  
GB-Nottingham, NG11 7EP  
Tel. +44 (0) 115 - 982 1133  
E-mail ▶ [info@smw-autoblok-telbrook.co.uk](mailto:info@smw-autoblok-telbrook.co.uk)

**Spain**

SMW-AUTOBLOK IBERICA, S.L.  
Ursalto 4 - Pab. 9-10 Pol. 27  
20014 Donostia - San Sebastián (Gipuzkoa)  
Tel.: +34 943 - 225 079  
Fax: +34 943 - 225 074  
E-mail ▶ [info@smwautoblok.es](mailto:info@smwautoblok.es)

**Russia**

SMW-AUTOBLOK Russia  
B. Tulskeya str., 10, bld.3, off. 323,  
115191 Moscow (Russia)  
Tel. +7 495 -231-1011  
Fax +7 495 -231-1011  
E-mail ▶ [info@smw-autoblok.ru](mailto:info@smw-autoblok.ru)

**Taiwan**

AUTOBLOK Company Ltd.  
No.6, Shuyi Rd., South Dist.,  
Taichung, Taiwan  
Tel. +886 4-226 10826  
Fax +886 4-226 12109  
E-mail ▶ [taiwan@smwautoblok.tw](mailto:taiwan@smwautoblok.tw)

**Czech Republic / Slovakia**

SMW-AUTOBLOK s.r.o.  
Merhautova 20  
CZ - 613 00 Brno  
Tel. +420 513 034 157  
Fax +420 513 034 158  
E-mail ▶ [info@smw-autoblok.cz](mailto:info@smw-autoblok.cz)

**Poland**

SMW-AUTOBLOK Poland Sp. z o.o.  
Ul Ligocka 103 - Building 8  
40-568 Katowice  
Tel. +48 (0) 664 673 428  
E-mail ▶ [info@smwautoblok.pl](mailto:info@smwautoblok.pl)

**Korea**

SMW-AUTOBLOK KOREA CO., LTD.  
1108 ho, Baeksang Startower 1st,  
65, Digital-ro 9-gil, Geumcheon-gu  
Seoul, ROK-08511, Korea  
Tel. +82 2 6267 9505  
Fax +82 2 6267 9507  
E-mail ▶ [info-korea@smw-autoblok.net](mailto:info-korea@smw-autoblok.net)