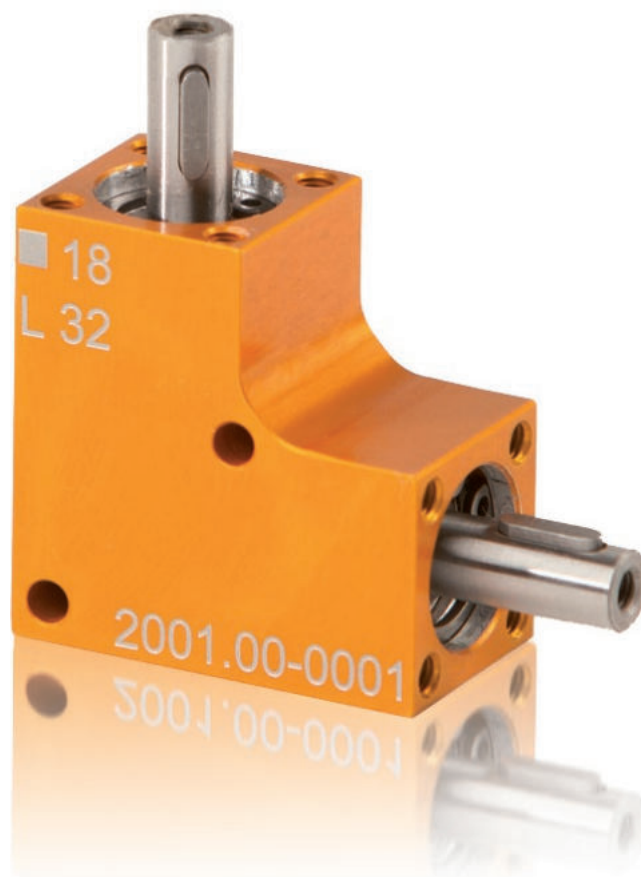


Bevel Gearboxes



WE GET IDEAS MOVING

The spirit of innovation and a sense of ideas beyond the familiar has made us into a pioneering company over more than 185 years.

For a quarter of a century, we have been offering customized drive solutions for office and workplace workstations, as well as for shading systems and building technology.

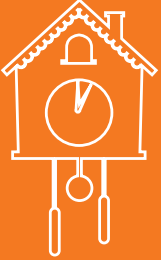
Through our tradition of innovation, we have succeeded in establishing ourselves as a specialist and problem-solver in numerous areas.



Over 185 years' experience



More than 60 standard solutions for four different market segments



100% Made in Black Forest

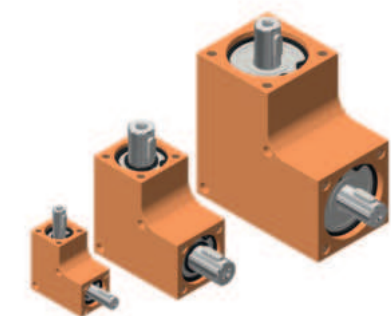


THE RIGHT PRODUCT FOR EACH APPLICATION

Bevel Gears

Page 04	200X L-Gearbox Angular gear Ket-Bee
Page 08	200X LxC-Gearbox Angular gear Ket-Bee
Page 12	200X T-Gearbox Angular gear Ket-Bee
Page 16	200X TxC-Gearbox Angular gear Ket-Bee
Page 20	200X TxD-Gearbox Angular gear Ket-Bee
Page 24	3014 Deflection gearbox
Page 26	3039 Deflection gearbox
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Page 36	3869/3870/3871/3872 Bevel gearbox
Page 38	3872 Bevel gearbox Ket-Flex
Page 40	3874 Bevel gearbox
Page 43	3875 Bevel gearbox
Page 44	3900/3901 Bevel gearbox with throughgoing spindle

Angular gear Ket-Bee 200X L-Gearbox
2x Solid shaft

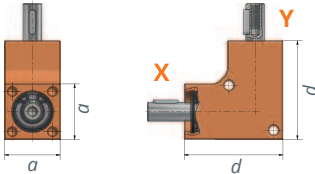


A bevel gearbox family consisting of 10 sizes for versatile use as an angular gearbox. The gearbox is characterised by a compact design with maximum torque, sturdiness and smooth power transmission. The uncomplicated mounting is made possible by a simple screw fixing.

Special features

- Maintenance-free and silent running thanks to hardened steel bevel gears
- Aluminium housing, anodized (orange or silver)
- Ratio 1:1
- Permitted operating temp. -20°C to +60°C
- Backlash at drive shaft 3° ± 1°
- Duty cycle 20 % at 5 min (1 min ON, 4 min OFF)
- Lifetime of 1000 hours with:
 - full load and
 - input speed of 500 rpm and
 - duty cycle 20 % with 5 min

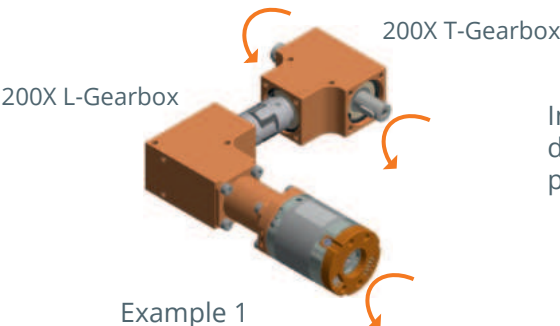


Ket-Bee	L-Gearbox 90°																																				
	Max. torque (Speed-dependent)																																				
2000.00-	0.04 to 0.28	Nm	□ 15 mm	26 mm																																	
2001.00-	0.05 to 0.35	Nm	□ 18 mm	32 mm																																	
2002.00-	0.15 to 0.75	Nm	□ 20 mm	35 mm																																	
2003.00-	0.50 to 2.50	Nm	□ 24 mm	42 mm																																	
2004.00-	0.75 to 4	Nm	□ 26 mm	46 mm																																	
2005.00-	1 to 5	Nm	□ 30 mm	53 mm																																	
2006.00-	1.50 to 8	Nm	□ 32 mm	56 mm																																	
2007.00-	2 to 10	Nm	□ 35 mm	60 mm																																	
2008.00-	2.5 to 12	Nm	□ 40 mm	68 mm																																	
2009.00-	3 to 14	Nm	□ 45 mm	77 mm																																	
Gearboxtype																																					
L L-Gearbox: Angular gearbox 90°																																					
Housing: Material & Optics																																					
0 Alu, orange anodized (standard)																																					
1 Alu, silver anodized																																					
																																					
* Color according to customer requirements on request																																					
Configuration of shaft																																					
A X, Y: Solid shaft with feather key (at 2000 gearbox no feather key possible)																																					
Shaft Ø in mm per gearboxtype (Dimension m)																																					
XX Example: „06“ for 2001.00																																					
<table><tr><td>m: for 2000</td><td>m: for 2001</td><td>m: for 2002</td><td>m: for 2003</td><td>m: for 2004</td><td>m: for 2005</td><td>m: for 2006</td><td>m: for 2007</td><td>m: for 2008</td><td>m: for 2009</td><td></td></tr><tr><td>04</td><td>06</td><td>06</td><td>08</td><td>08</td><td>08</td><td>10</td><td>12</td><td>12</td><td>12</td><td>mm</td></tr><tr><td></td><td></td><td>08</td><td>10</td><td>12</td><td>12</td><td>12</td><td></td><td></td><td></td><td></td></tr></table>					m: for 2000	m: for 2001	m: for 2002	m: for 2003	m: for 2004	m: for 2005	m: for 2006	m: for 2007	m: for 2008	m: for 2009		04	06	06	08	08	08	10	12	12	12	mm			08	10	12	12	12				
m: for 2000	m: for 2001	m: for 2002	m: for 2003	m: for 2004	m: for 2005	m: for 2006	m: for 2007	m: for 2008	m: for 2009																												
04	06	06	08	08	08	10	12	12	12	mm																											
		08	10	12	12	12																															
Ratio R																																					
R1 i = 1:1																																					
2002.00-	L	0	A	06	R1	Example: 2002.00-L0A06R1																															

Item.-Nr.	Speed n in rpm	Max. torque M in Nm	Radial and axial load* F _R in N F _A in N		Part weight in kg
2000.00-L0AXXR1	100/500/1000	0.28/0.08/0.04	48	48	0.03
2001.00-L0AXXR1	100/500/1000	0.35/0.1/0.05	60	60	0.05
2002.00-L0AXXR1	100/500/1000	0.75/0.3/0.15	100	100	0.07
2003.00-L0AXXR1	100/500/1000	2.5/1/0.5	120	120	0.14
2004.00-L0AXXR1	100/500/1000	4 /1.5/0.75	140	140	0.19
2005.00-L0AXXR1	100/500/1000	5/2/1	240	240	0.27
2006.00-L0AXXR1	100/500/1000	8/3/1.5	550	550	0.33
2007.00-L0AXXR1	100/500/1000	10/4/2	550	550	0.40
2008.00-L0AXXR1	100/500/1000	12/5/2.5	600	600	0.57
2009.00-L0AXXR1	100/500/1000	14/6/3	750	750	0.80

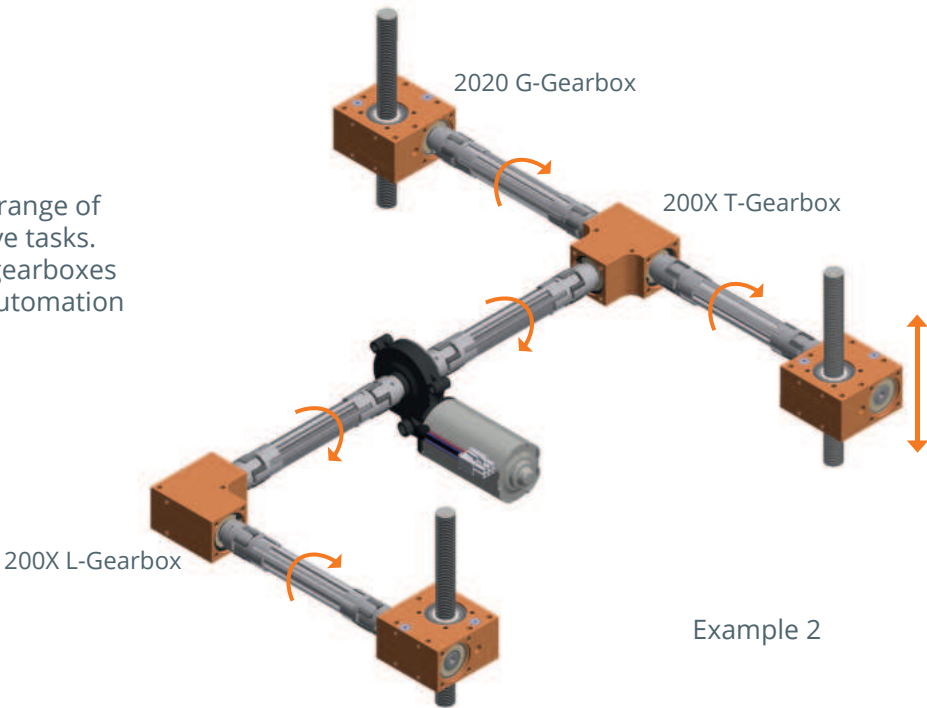
* The values of F_R apply only when F_A = 0 N
The values of F_A apply only when F_R = 0 N

Application example

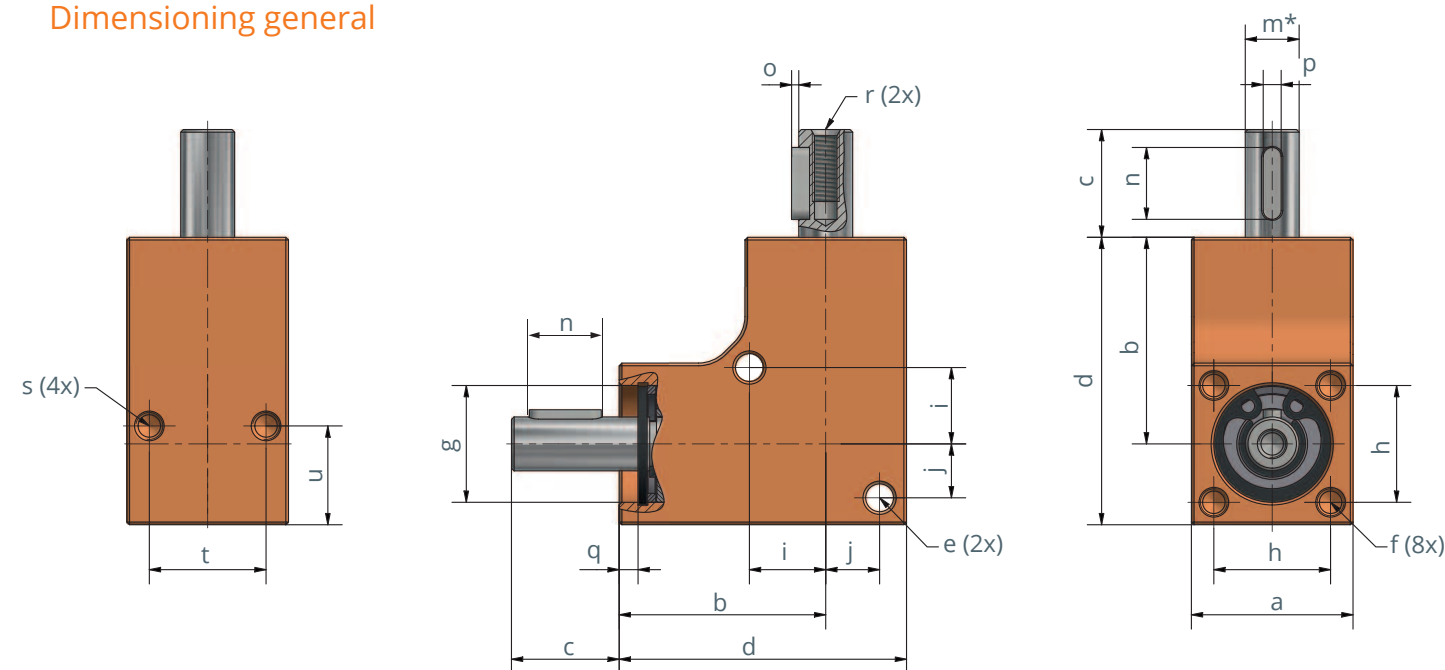


In our Ket-Bee family we offer gearboxes for a simple 90° deflection (200x L-gearbox) as well as for a splitting of the power transmission to two drives (200x T-gearbox).

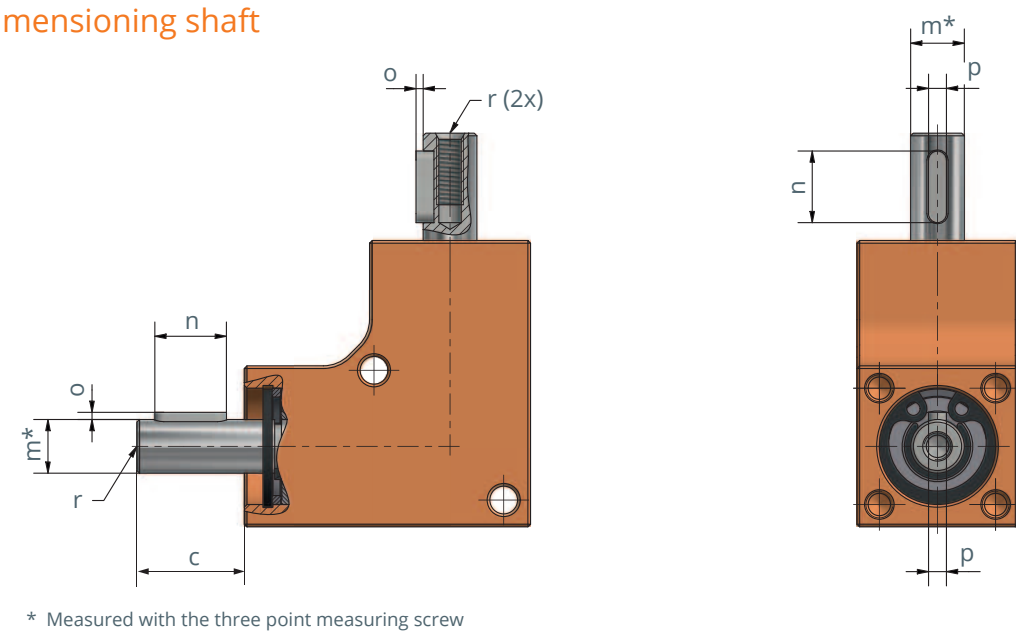
Our standard components offer a wide range of options for efficiently implementing drive tasks. Thanks to numerous variants of worm gearboxes from the Ket-Motion series, almost all automation tasks can be mastered with ease.



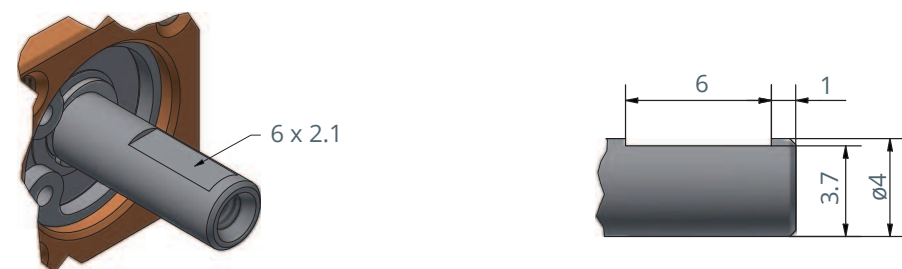
Dimensioning general



Dimensioning shaft



Dimensioning of the shaft of gearbox type 2000.00-L0A04R1

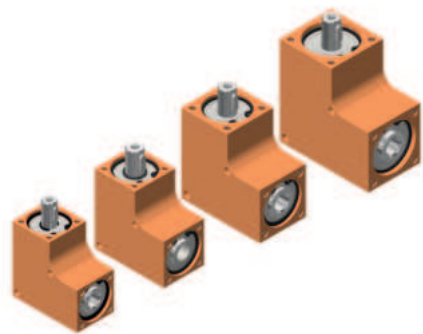


Gearbox-type	Dimensions in mm												
	a	b	d	e	f	g	h	i	j	q	s	t	u
2000	15	18.5	26	ø2.6	M2.5x5	ø11	11	8	4.5	1.1	M2.5x5	11	9
2001	18	23	32	ø3.1	M3x10	ø13	13	8.5	6	2.1	M3x6	13	11
2002	20	25	35	ø3.1	M3x10	ø16	15	10	7	2.05	M3x6	15	10
2003	24	30	42	ø4.1	M4x10	ø19	18	12	8	2	M4x8	18	16
2004	26	33	46	ø4.1	M4x10	ø21	20	13	9	2	M4x8	20	16
2005	30	38	53	ø4.1	M4x10	ø24	22	15	11	2.1	M4x8	22	16
2006	32	40	56	ø4.1	M4x10	ø28	24	17	12	2.1	M4x8	24	16
2007	35	42.5	60	ø4.1	M4x10	ø30	26	17.5	13.5	2.1	M4x8	26	16
2008	40	48	68	ø5.1	M4x10	ø32	30	20	15	2	M5x10	30	20
2009	45	54.5	77	ø5.1	M4x10	ø37	35	22.5	17.5	3.3	M5x10	35	20

Gearboxtype	ø Shaft	Shaft-length	Dimension featherkey			Threaded hole inside	Item- Nr.
	m*		n	o	p	r	
2000	ø4j5	10	-	-	-	M2.5x5	2000.00-L0A04R1
2001	ø6j6	12	8	0.8	2	M3x8	2001.00-L0A06R1
2002	ø6j6	12	8	0.8	2	M3x6	2002.00-L0A06R1
	ø8j6	12	8	0.8	2	M3x8	2002.00-L0A08R1
2003	ø8j6	16	10	1.2	3	M4x8	2003.00-L0A08R1
	ø10j6	16	12	1.5	4	M4x8	2003.00-L0A10R1
2004	ø8j6	16	10	1.2	3	M4x8	2004.00-L0A08R1
	ø12j6	16	12	1.5	4	M5x8	2004.00-L0A12R1
2005	ø8j6	16	10	1.2	3	M4x8	2005.00-L0A08R1
	ø12j6	16	12	1.5	4	M5x8	2005.00-L0A12R1
2006	ø10j6	16	10	1.2	3	M4x8	2006.00-L0A10R1
	ø12j6	16	12	1.5	4	M5x8	2006.00-L0A12R1
2007	ø12j6	16	12	1.5	4	M5x8	2007.00-L0A12R1
2008	ø12j6	16	12	1.5	4	M5x8	2008.00-L0A12R1
2009	ø12j6	16	12	1.5	4	M5x8	2009.00-L0A12R1

Angular gear Ket-Bee 200X LxC-Gearbox

1x solid shaft, 1x blind hollow shaft



A bevel gearbox family consisting of 4 sizes for versatile use as an angular gearbox.
The gearbox is characterised by a compact design with maximum torque, sturdiness and smooth power transmission. The uncomplicated mounting is made possible by a simple screw fixing.

Special features

- Combination: Solid shaft / blind hollow shaft
- Maintenance-free and silent running thanks to hardened steel bevel gears
- Aluminium housing, anodized (orange or silver)
- Ratio 1:1
- Permitted operating temp. -20°C to +60°C
- Backlash at drive shaft 3° ± 1°
- Duty cycle 20 % at 5 min (1 min ON, 4 min OFF)
- Lifetime of 1000 hours with:
 - full load and
 - input speed of 500 rpm and
 - duty cycle 20 % with 5 min

Ket-Bee L-Gearbox 90°													
	Max. torque (Speed dependent)												
2006.00-	1.50 to 8	Nm	□ 32 mm	56 mm									
2007.00-	2 to 10	Nm	□ 35 mm	60 mm									
2008.00-	2.5 to 12	Nm	□ 40 mm	68 mm									
2009.00-	3 to 14	Nm	□ 45 mm	77 mm									
Gearboxtype													
L L-Gearbox: Angulat gearbox 90°													
Housing: Material & Optics													
0 Alu, orange anodized (standard)													
1 Alu, silber anodized													
 * Color according to customer requirements on request													
Configuration of shaft													
C X: with blind hollow shaft; Y solid shaft													
Shaft Ø in mm per gearboxtype (Dimension m)													
XX Example: „10“ for 2006.00													
<table><tr><td>m: for 2006</td><td>m: for 2007</td><td>m: for 2008</td><td>m: for 2009</td></tr><tr><td>10</td><td>12</td><td>12</td><td>12</td></tr></table>						m: for 2006	m: for 2007	m: for 2008	m: for 2009	10	12	12	12
m: for 2006	m: for 2007	m: for 2008	m: for 2009										
10	12	12	12										
Ratio R													
R1 i = 1:1													
2006.00-	L	0	C	10	R1								
Example: 2006.00-L0C10R1													

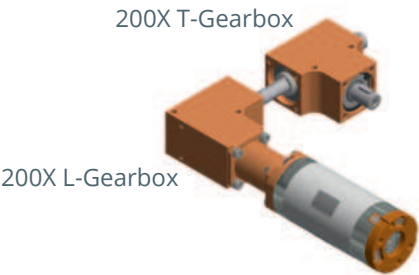
Item.-Nr.	Speed n in rpm	Max. torque M in Nm	Radial- and axial load* F _R in N	F _A in N	Part weight in kg
2006.00-L0C10R1	100/500/1000	8/3/1.5	550	550	0.33
2007.00-L0C12R1	100/500/1000	10/4/2	550	550	0.40
2008.00-L0C12R1	100/500/1000	12/5/2.5	600	600	0.57
2009.00-L0C12R1	100/500/1000	14/6/3	750	750	0.80

* The values of F_R apply only when F_A = 0 N
The values of F_A apply only when F_R = 0 N

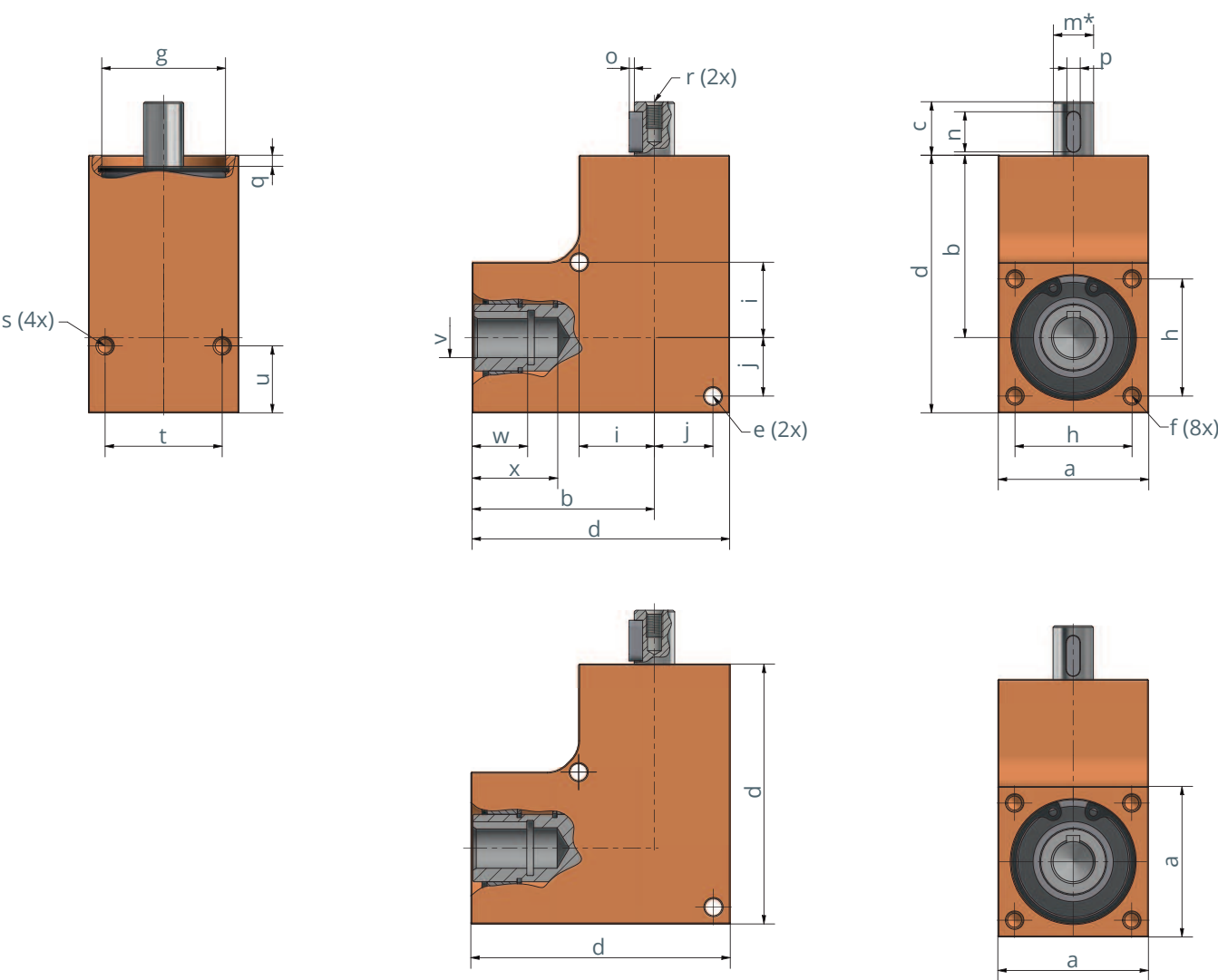
Application example

Our standard components offer a wide range of options for efficiently implementing drive tasks. Thanks to numerous variants of worm gearboxes from the Ket-Motion series, almost all automation tasks can be mastered with ease.

In our Ket-Bee family we offer gearboxes for a simple 90° deflection (200x L-gearbox) as well as for a splitting of the power transmission to two drives (200x T-gearbox).

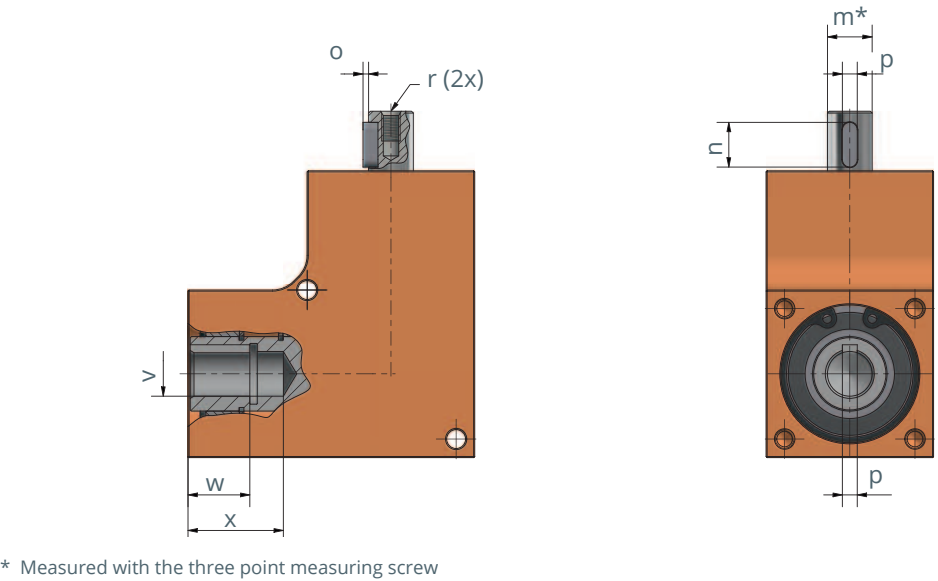


Dimensioning general



Gearbox-type	Dimensions in mm												
	a	b	d	e	f	g	h	i	j	q	s	t	u
2006	4kt32	40	56	ø4.1	M4x10	ø28	24	17	12	2.1	M4x8	24	16
2007	4kt35	42.5	60	ø4.1	M4x10	ø30	26	17.5	13.5	2.1	M4x8	26	16
2008	4kt40	48	68	ø5.1	M5x10	ø37	30	20	15	2	M5x8	30	20
2009	4kt45	54.5	77	ø5.1	M5x10	ø37	35	22.5	17.5	3.3	M5x10	35	20

Dimensioning shaft

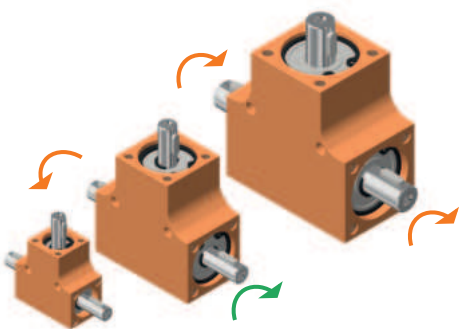


* Measured with the three point measuring screw

Gearboxtype	ø Shaft	Shaft-length	Dimension featherkey			Threaded hole inside				Item.- Nr.
	m*	c	n	o	p	r	v	w	x	
2006	ø10j6	16	10	1.2	3	M4x8	ø10H7	15	20.5	2006.00-LXC10RX
2007	ø12j6	16	12	1.5	4	M5x8	ø10H7	16	23.5	2007.00-LXC12RX
2008	ø12j6	16	12	1.5	4	M5x8	ø12H7	16.5	25.5	2008.00-LXC12RX
2009	ø12j6	16	12	1.5	4	M5x8	ø12H7	16.5	25.5	2009.00-LXC12RX

Angular gear Ket-Bee 200X T-Gearbox

3x Shaft in synchronization/counter-rotation

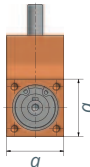
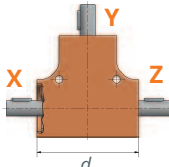


A bevel gearbox family with through-going shaft consisting of 10 sizes for versatile use as an angular gearbox. The gearbox is characterised by a compact design with maximum torque, sturdiness and smooth power transmission.

Special features

- Maintenance-free and silent running thanks to hardened steel bevel gears
- Aluminium housing, anodized
- Ratio 1:1
- Permitted operating temp. -20°C to +60°C
- Backlash at drive shaft 3° ± 1°
- Duty cycle 20 % at 5 min (1 min ON, 4 min OFF)
- Lifetime of 1000 hours with:
 - full load and
 - input speed of 500 rpm and
 - duty cycle 20% with 5 min



Ket-Bee	T-Gearbox																									
	Max. torque (Speed dependent)																									
2000.00-	0.04 bis 0.28	Nm	□ 15 mm	26 mm																						
2001.00-	0.05 bis 0.35	Nm	□ 18 mm	32 mm																						
2002.00-	0.15 bis 0.75	Nm	□ 20 mm	35 mm																						
2003.00-	0.5 bis 2.5	Nm	□ 24 mm	42 mm																						
2004.00-	0.75 bis 4	Nm	□ 26 mm	46 mm																						
2005.00-	1 bis 5	Nm	□ 30 mm	53 mm																						
2006.00-	1.5 bis 8	Nm	□ 32 mm	56 mm																						
2007.00-	2 bis 10	Nm	□ 35 mm	60 mm																						
2008.00-	2.5 bis 12	Nm	□ 40 mm	68 mm																						
2009.00-	3 bis 14	Nm	□ 45 mm	77mm																						
Gearbox type																										
T T-gearbox: Through-going shaft																										
Housing: Material & Optics																										
0 Alu, orange anodized (standard)																										
1 Alu, silber anodized																										
																										
* Color according to customer requirements																										
Configuration of shaft & direction of rotation																										
A Solid shafts with feather key/ X,Z in synchronisation <i>* at 2000 gearbox no feather key</i>																										
B Solid shafts with feather key/ X,Z in counter rotation <i>* only for types 2006 to 2009</i>																										
Shaft Ø in mm per gearbox-type (Dimension m)																										
XX Example:																										
„06“ for 2001																										
<table><tr><td>mi. for 2000</td><td>mi. for 2001</td><td>mi. for 2002</td><td>mi. for 2003</td><td>mi. for 2004</td><td>mi. for 2005</td><td>mi. for 2006</td><td>mi. for 2007</td><td>mi. for 2008</td><td>mi. for 2009</td><td></td></tr><tr><td>04</td><td>06</td><td>06</td><td>08</td><td>08</td><td>08</td><td>10</td><td>12</td><td>12</td><td>12</td><td>mm</td></tr></table>					mi. for 2000	mi. for 2001	mi. for 2002	mi. for 2003	mi. for 2004	mi. for 2005	mi. for 2006	mi. for 2007	mi. for 2008	mi. for 2009		04	06	06	08	08	08	10	12	12	12	mm
mi. for 2000	mi. for 2001	mi. for 2002	mi. for 2003	mi. for 2004	mi. for 2005	mi. for 2006	mi. for 2007	mi. for 2008	mi. for 2009																	
04	06	06	08	08	08	10	12	12	12	mm																
Ratio R																										
R1 i = 1:1																										
2002.00-	T	0	A	06																						
R1																										
Example: 2002.00-T0A06R1																										

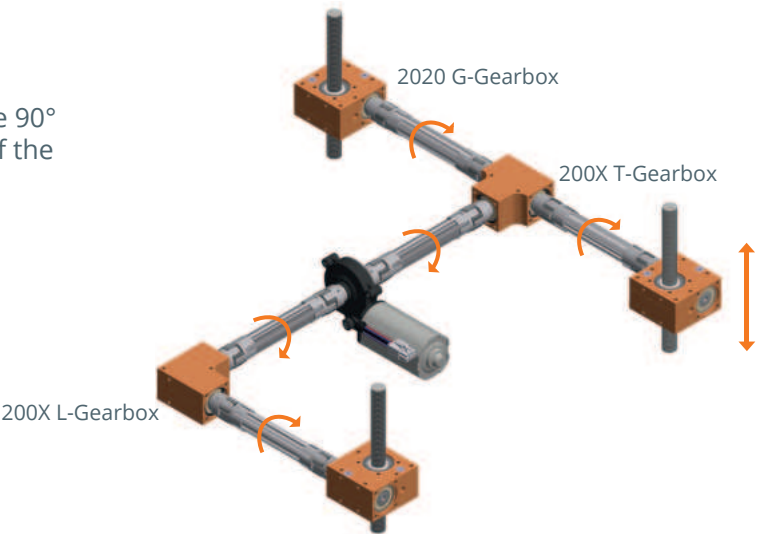
Item.-Nr.	Synchronization A Counter-rotation B	Speed n in rpm	Max. torque* M in Nm	Radial- and axial load** F _R in N / F _A in N	Part weight in kg
2000.00-T0A04R1	Synchronization	100/500/1000	0.28/0.08/0.04	48	0.03
2001.00-T0A06R1	Synchronization	100/500/1000	0.35/0.1/0.05	60	0.06
2002.00-T0A06R1	Synchronization	100/500/1000	0.75/0.3/0.15	100	0.07
2003.00-T0A08R1	Synchronization	100/500/1000	2.5/1/0.5	120	0.13
2004.00-T0A08R1	Synchronization	100/500/1000	4/1.5/0.75	140	0.17
2005.00-T0A08R1	Synchronization	100/500/1000	5/2/1	240	0.19
2006.00-T0A10R1 2006.00-T0B10R1	Synchronization Counter-rotation	100/500/1000	8/3/1.5	550	0.24
2007.00-T0A12R1 2007.00-T0B12R1	Synchronization Counter-rotation	100/500/1000	10/4/2	550	0.40
2008.00-T0A12R1 2008.00-T0B12R1	Synchronization Counter-rotation	100/500/1000	12/5/2.5	600	0.59
2009.00-T0A12R1 2009.00-T0B12R1	Synchronization Counter-rotation	100/500/1000	14/6/3	750	0.80

* Attention: With 200X.00-TXB variants, the drive torque is distributed over 2 axes
** The values of F_R apply only when F_A = 0 N
The values of F_A apply only when F_R = 0 N

Application example

In our Ket-Bee family, we offer gearboxes for a simple 90° deflection (200x L-gearbox) as well as for a splitting of the power transmission to two drives (200x T-gearbox).

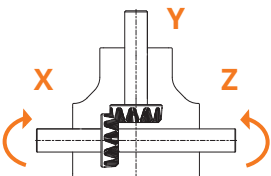
Our standard components offer a wide range of options for efficiently implementing drive tasks. Thanks to numerous variants of worm gearboxes from the Ket-Motion series, almost all automation tasks can be mastered with ease.



Configuration of shaft & direction of rotation

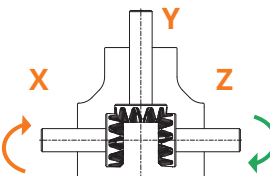
Gearbox-type 200X.00-TXA

A: X, Y, Z = Solid shafts with feather key
X, Z Shafts in **synchronisation**



Gearbox-type 200X.00-TXB

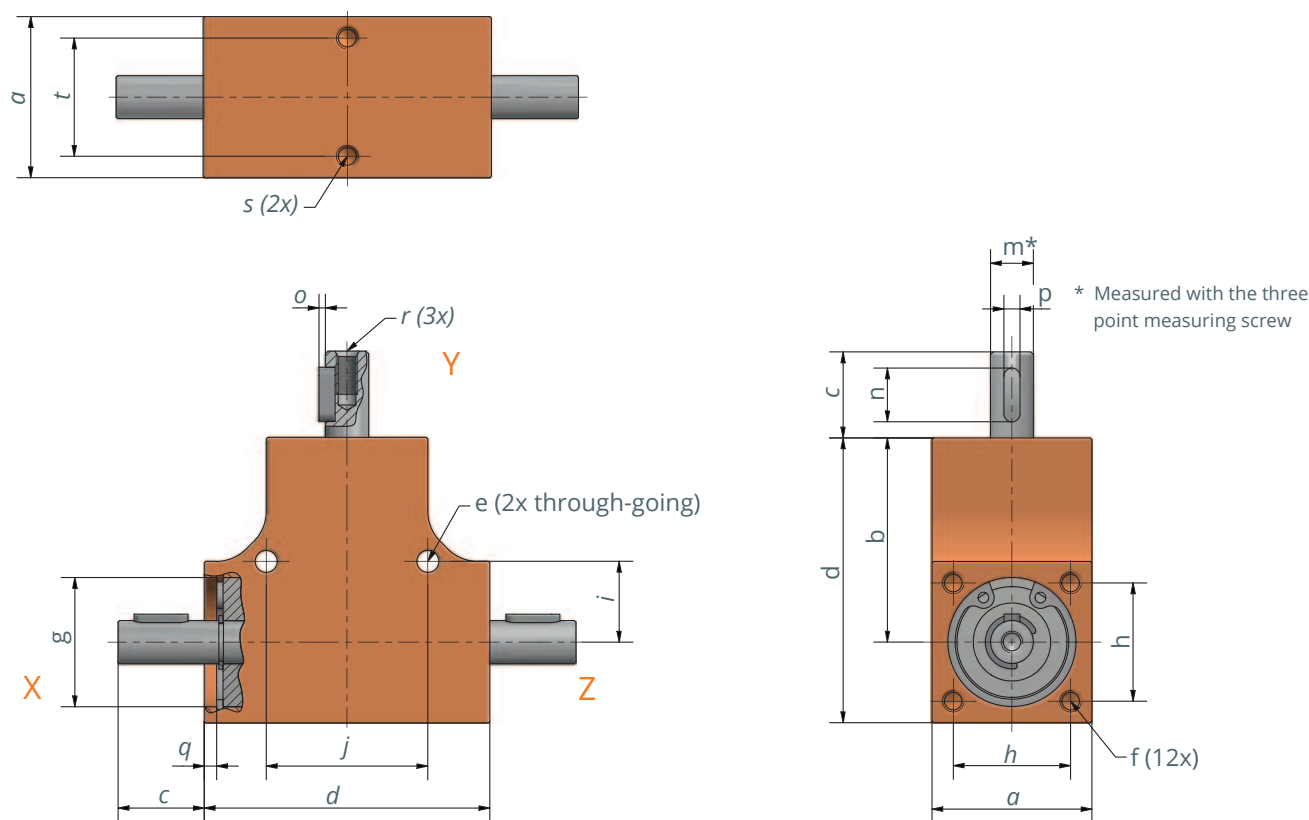
B: X, Y, Z = Solid shafts with feather key
X, Z Shafts in **counter-rotation**



Attention: With 200X.00-TXB variants the drive torque is distributed over 2 axes

Only for gearboxes from 2006 to 2009

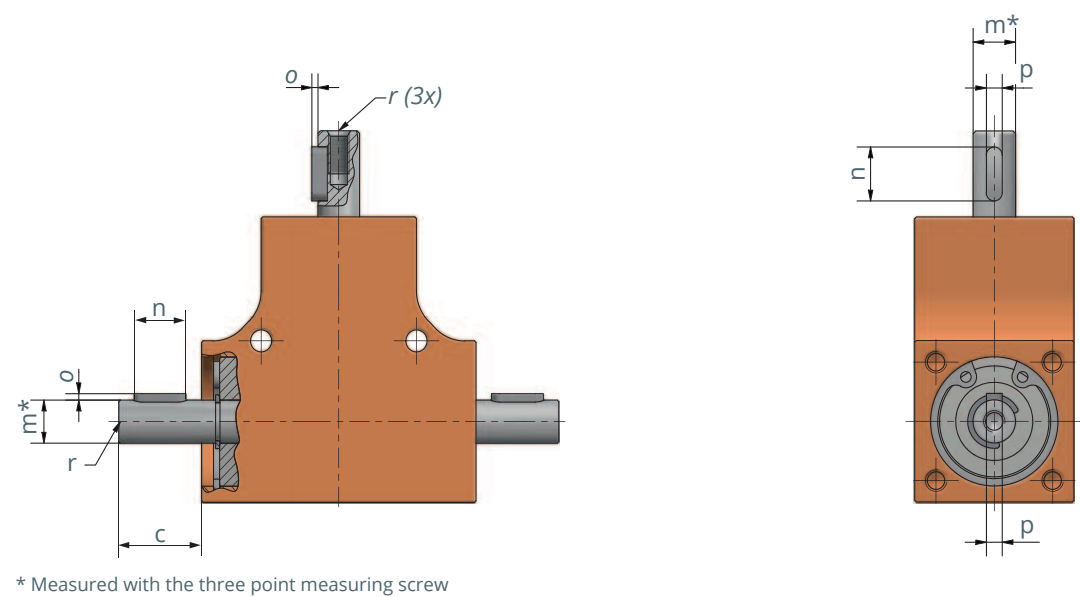
Dimensioning general



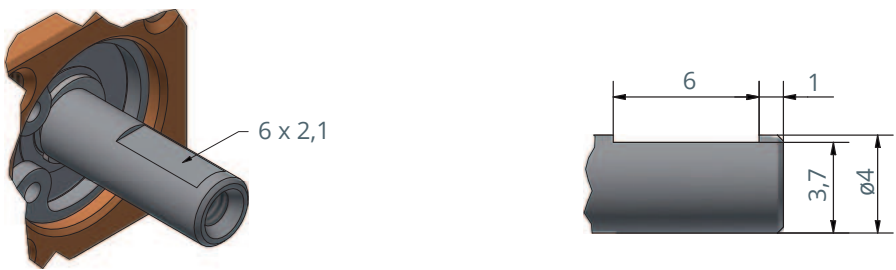
The position of the feather keys is not exactly aligned at 90° in the standard to each other. Possible on request if required.

Gearbox-type	Dimensions in mm											
	a	b	d	e	f	g	h	i	j	q	s	t
2000	15	18.5	26	ø2.6	M2.5x4	ø11	11	8	16	1.1	M2.5x4	11
2001	18	23	32	ø3.1	M3x4	ø13	13	8.5	17	3.1	M3x4	13
2002	20	25	35	ø3.1	M3x6	ø16	15	10	20	2.25	M3x6	15
2003	24	30	42	ø4.1	M4x6	ø19	18	12	24	2	M4x6	18
2004	26	33	46	ø4.1	M4x8	ø22	20	14	26	2	M4x8	20
2005	30	38	53	ø4.1	M4x8	ø24	22	15	30	2.3	M4x8	22
2006	32	40	56	ø4.1	M4x10	ø28	24	17	34	2.8	M4x8	24
2007	35	42.5	60	ø4.1	M4x10	ø30	26	17.5	35	3.2	M4x8	26
2008	40	48	68	ø5.1	M5x10	ø32	30	20	40	3.5	M5x10	30
2009	45	54.5	77	ø5.1	M5x10	ø37	35	22.5	45	5	M5x10	35

Dimensioning shaft



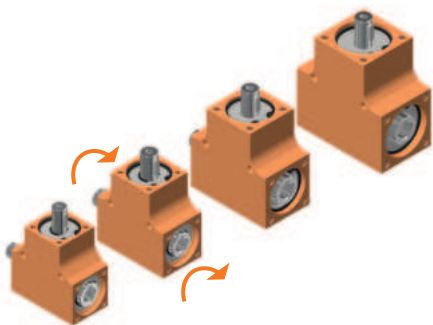
Dimensioning of the shaft of gearbox type 2000.00-T0A04R1



Gearboxtype	ø Shaft	Shaft-length	Dimension featherkey			Threaded hole inside	Item- Nr.
	m*	c	n	o	p	r	
2000	ø4j5	10	-	-	-	M2.5x5	2000.00-T0A04R1
2001	ø6j6	12	8	0.8	2	M3x8	2001.00-T0A06R1
2002	ø6j6	12	8	0.8	2	M3x6	2002.00-T0A06R1
2003	ø8j6	16	10	1.2	3	M4x8	2003.00-T0A08R1
2004	ø8j6	16	10	1.2	3	M4x8	2004.00-T0A08R1
2005	ø8j6	16	10	1.2	3	M4x8	2005.00-T0A08R1
2006	ø10j6	16	10	1.2	3	M4x8	2006.00-T0A10R1 2006.00-T0B10R1
2007	ø12j6	16	12	1.5	4	M5x8	2007.00-T0A12R1 2007.00-T0B12R1
2008	ø12j6	16	12	1.5	4	M5x8	2008.00-T0A12R1 2008.00-T0B12R1
2009	ø12j6	16	12	1.5	4	M5x8	2009.00-T0A12R1 2009.00-T0B12R1

Angular gear Ket-Bee 200X TxC-Gearbox

Blind hollow shaft and solid shaft in synchronization



A bevel gearbox family consisting of 4 sizes for versatile use as an angular gearbox.

The gearbox is characterised by a compact design with maximum torque, sturdiness and smooth power transmission. Simple screw fastening enables uncomplicated installation.

Special features

- Combination: Blind hollow shaft and solid shaft in synchronisation
- Maintenance-free and silent running thanks to hardened steel bevel gears
- Aluminium housing, anodized
- Ratio 1:1
- Permitted operating temp. -20°C to +60°C
- Backlash at drive shaft 3° ± 1°
- Duty cycle 20 % at 5 min (1 min ON, 4 min OFF)
- Lifetime of 1000 hours with:
 - full load and
 - input speed of 500 rpm and
 - duty cycle 20% with 5 min

Item.-Nr.	Speed <i>n</i> in rpm	Max. torque <i>M</i> in Nm	Radial- and axial load* <i>F_R</i> in N <i>F_A</i> in N	Part weight in kg
2006.00-T0C10R1	100/500/1000	8/3/1.5	550 550	0.24
2007.00-T0C12R1	100/500/1000	10/4/2	550 550	0.40
2008.00-T0C12R1	100/500/1000	12/5/2.5	600 600	0.59
2009.00-T0C12R1	100/500/1000	14/6/3	750 750	0.80

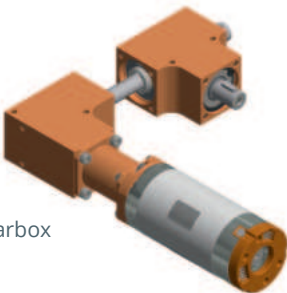
* The values of *F_R* apply only when *F_A* = 0 N
The values of *F_A* apply only when *F_R* = 0 N

Application example

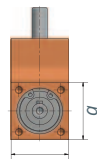
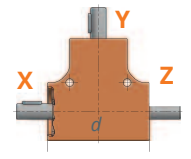
In our Ket-Bee family, we offer gearboxes for a simple 90° deflection (200x L-gearbox) as well as for a splitting of the power transmission to two drives (200x T-gearbox).

Our standard components offer a wide range of options for efficiently implementing drive tasks. Thanks to numerous variants of worm gearboxes from the Ket-Motion series, almost all automation tasks can be mastered with ease.

200X T-Gearbox



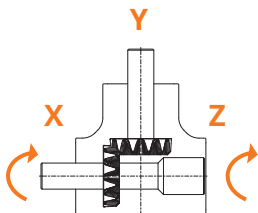
200X L-Gearbox

Ket-Bee	T-Gearbox			
				
		Max. torque (Speed dependent)		
2006.00-	1.5 bis 8	Nm	□ 32 mm	56 mm
2007.00-	2 bis 10	Nm	□ 35 mm	60 mm
2008.00-	2.5 bis 12	Nm	□ 40 mm	68 mm
2009.00-	3 bis 14	Nm	□ 45 mm	77 mm
Gearbox-type				
	T	T-gearbox: Continuous shaft		
Housing: Material & Optics				
	0	Alu, orange anodized (standard)		
	1	Alu, silver anodized		
 * Color according to customer requirements				
Configuration of shaft & direction of rotation				
	C	X,Z: Solid shaft & blind hollow shaft in Synchronisation Y: Solid shafts with feather key		
Shaft Ø in mm per gearbox-type (Dimension m)				
	XX	Example: „10“ for 2006.00		
		m: for 2006 10	m: for 2007 12	m: for 2008 12
			m: for 2009 12	mm
Ratio R				
	R1	i = 1:1		
2006.00-	T	0	C	10
			R1	Example: 2006.00-L0C10R1

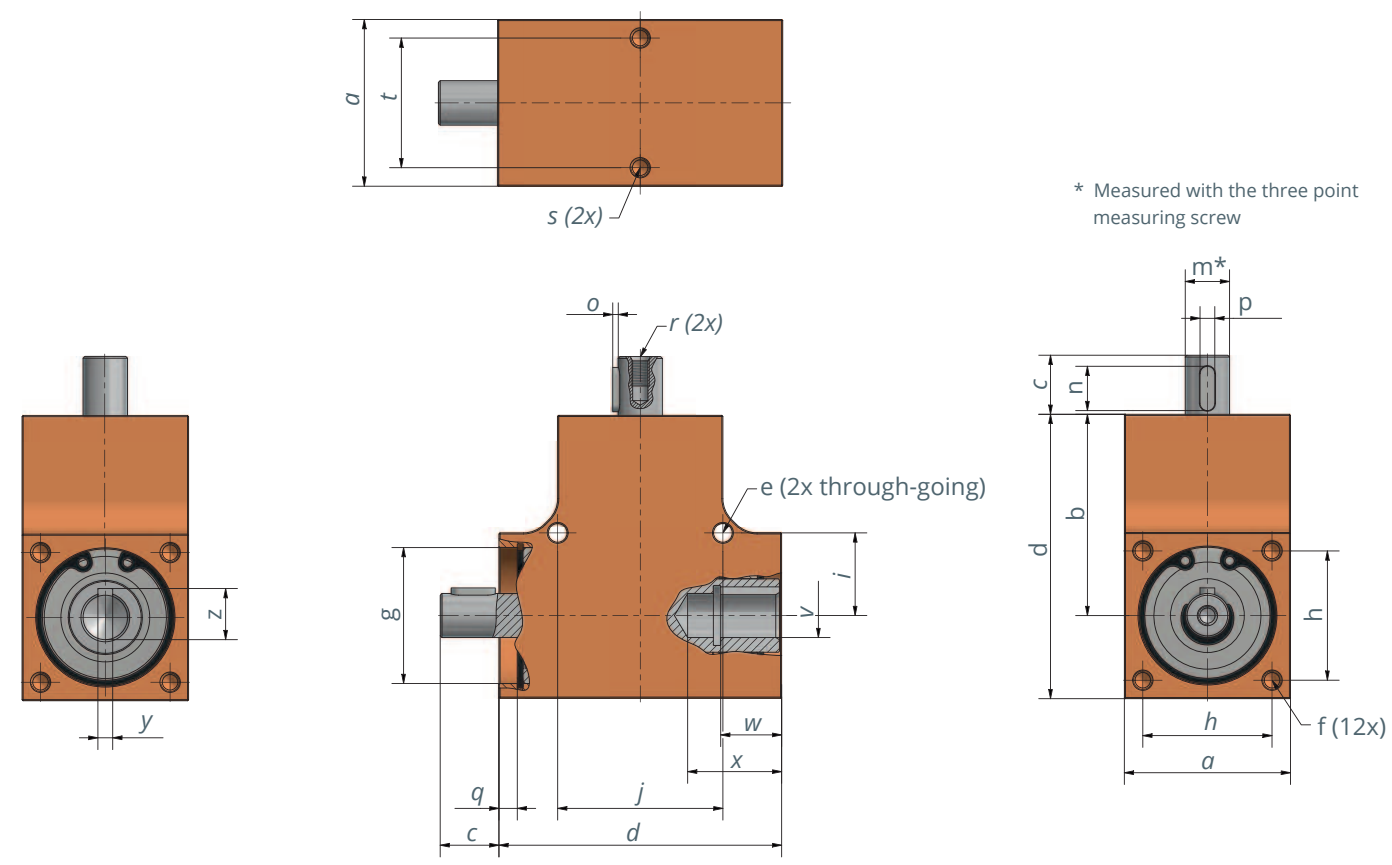
Configuration of shaft & direction of rotation

Gearbox-type 200X.00-TXC

A: X, Y = Solid shaft with feather key, Z= Blind hollow shaft
X, Z = Shafts in **synchronisation**



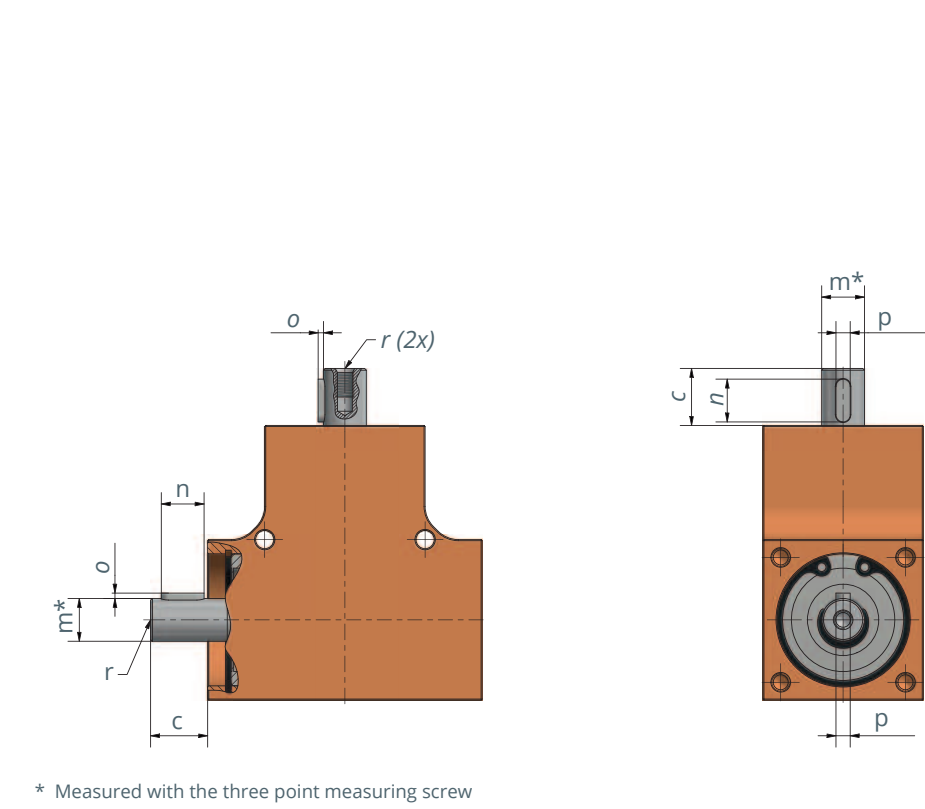
Dimensioning general



The position of the feather keys is not exactly aligned at 90° in the standard to each other. Possible on request if required.

Gearbox-type	Dimensions in mm											
	a	b	d	e	f	g	h	i	j	q	s	t
2006	4kt32	40	56	ø4.1	M4x10	ø28	24	17	34	2.8	M4x8	24
2007	4kt35	42.5	60	ø4.1	M4x10	ø30	26	17.5	35	3.3	M4x8	26
2008	4kt40	48	68	ø5.1	M5x10	ø32	30	20	40	3.7	M5x10	30
2009	4kt45	54.5	77	ø5.1	M5x10	ø37	35	22.5	45	5	M5x10	35

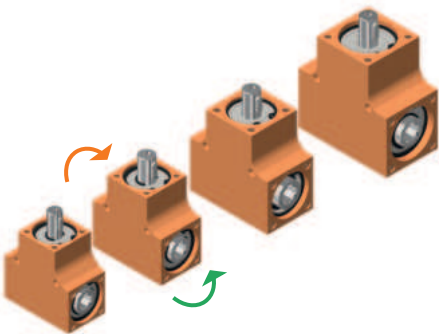
Dimensioning shaft



Gearbox-type	ø Shaft	Shaft length	Dimensions featherkey			Threaded hole inside						Item.- Nr.
	m*	c	n	o	p	r	v	w	x	y	z	
2006	ø10j6	16	10	1.2	3	M4x8	ø10H7	0	18.6	4JS9	11.8	2006.00-TOC12R1
2007	ø12j6	16	12	1.5	4	M5x8	ø10H7	0	18.6	4JS9	11.8	2007.00-TOC12R1
2008	ø12j6	16	12	1.5	4	M5x8	ø12H7	14.4	20.5	4JS9	13.8	2008.00-TOC12R1
2009	ø12j6	16	12	1.5	4	M5x8	ø12H7	14.5	20.5	4JS9	13.8	2009.00-TOC12R1

Angular gear Ket-Bee 200X TxD-Gearbox

1x solid shaft, 2x blind hollow shaft in counter rotation



A bevel gearbox family consisting of 10 sizes for versatile use as an angular gearbox.
The gearbox is characterised by a compact design with maximum torque, sturdiness and smooth power transmission. Simple screw fastening enables uncomplicated installation.

Special features

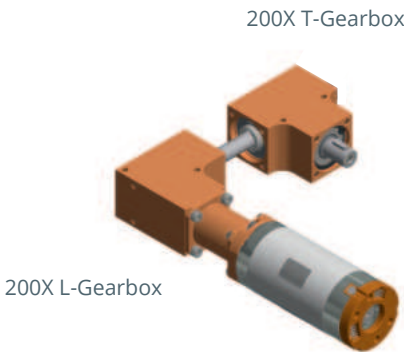
- Combination: 1x solid shaft, 2x blind hollow shaft in counter rotation
- Maintenance-free and silent running thanks to hardened steel bevel gears
- Aluminium housing, anodized
- Ratio 1:1
- Permitted operating temp. -20°C to +60°C
- Backlash at drive shaft 3° ± 1°
- Duty cycle 20 % at 5 min (1 min ON, 4 min OFF)
- Lifetime of 1000 hours with:
 - full load and
 - input speed of 500 rpm and
 - duty cycle 20% with 5 min

Item.-Nr.	Speed <i>n</i> in min ⁻¹	Max. torque <i>M</i> * in Nm	Radial- and axial load** <i>F_R</i> in N <i>F_A</i> in N	Part weight in kg
2006.00-T0D10R1	100/500/1000	8/3/1.5	550 550	0.24
2007.00-T0D12R1	100/500/1000	10/4/2	550 550	0.40
2008.00-T0D12R1	100/500/1000	12/5/2.5	600 600	0.59
2009.00-T0D12R1	100/500/1000	14/6/3	750 750	0.80

* **Attention:** With 200X.00-TXB variants, the drive torque is distributed over 2 axes
** The values of *F_R* apply only when *F_A* = 0 N
The values of *F_A* apply only when *F_R* = 0 N

Application example

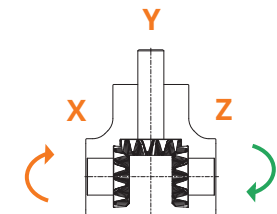
In our Ket-Bee family, we offer gearboxes for a simple 90° deflection (200x L-gearbox) as well as for a splitting of the power transmission to two drives (200x T-gearbox).
Our standard components offer a wide range of options for efficiently implementing drive tasks. Thanks to numerous variants of worm gearboxes from the Ket-Motion series, almost all automation tasks can be mastered with ease.



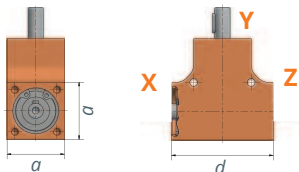
Configuration of shaft & direction of rotation

Gearbox-type 200X.00-TXD

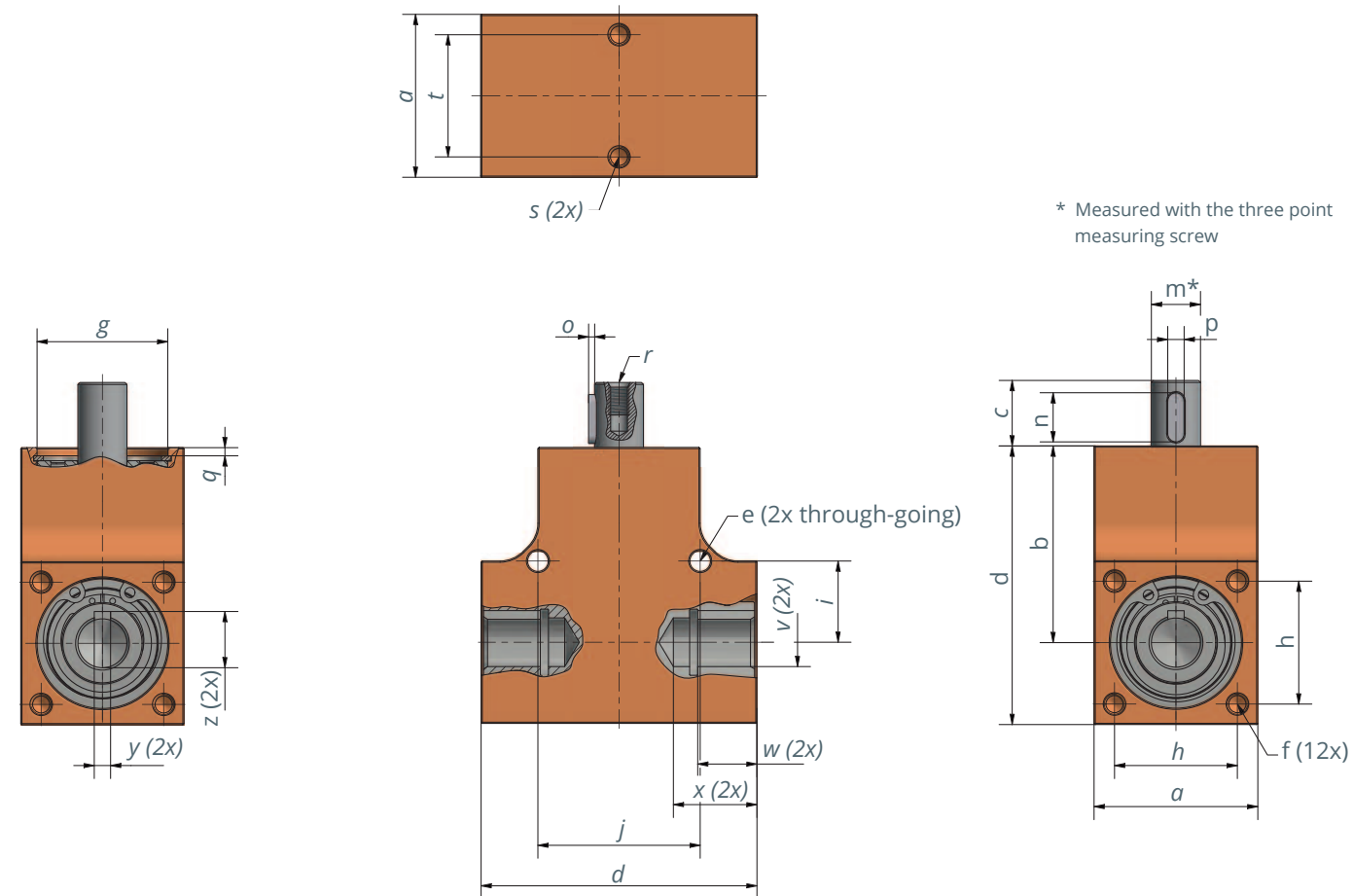
A: Y = Solid shaft with feather key
X, Z = Blind hollow shaft in counter rotation



Attention: With 200X.00-TXD variants the drive torque is distributed over 2 axes

Ket-Bee		T-Gearbox			
					
		Max. torque (Speed dependent)			
2006.00-		1.5 to 8	Nm	□32 mm	56 mm
2007.00-		2 to 10	Nm	□35 mm	60 mm
2008.00-		2.5 to 12	Nm	□40 mm	68 mm
2009.00-		3 to 14	Nm	□45 mm	77 mm
Gearbox-type					
	T	T-gearbox			
Housing: Material & Optics					
	0	Alu, orange anodized (standard)			
	1	Alu, silver anodized			
 * Color according to customer requirements					
Configuration of shaft & direction of rotation					
	D	X,Z: blind hollow shaft in counter rotation Y: Solid shafts with feather key			
Shaft Ø in mm per gearbox-type (Dimension m)					
	XX	Example: „10“ for 2006.00			
		m: for 2006 10	m: for 2007 12	m: for 2008 12	m: for 2009 12 mm
Ratio R					
	R1	i = 1:1			
2006.00-	T	0	D	10	R1
Example: 2006.00-L0D10R1					

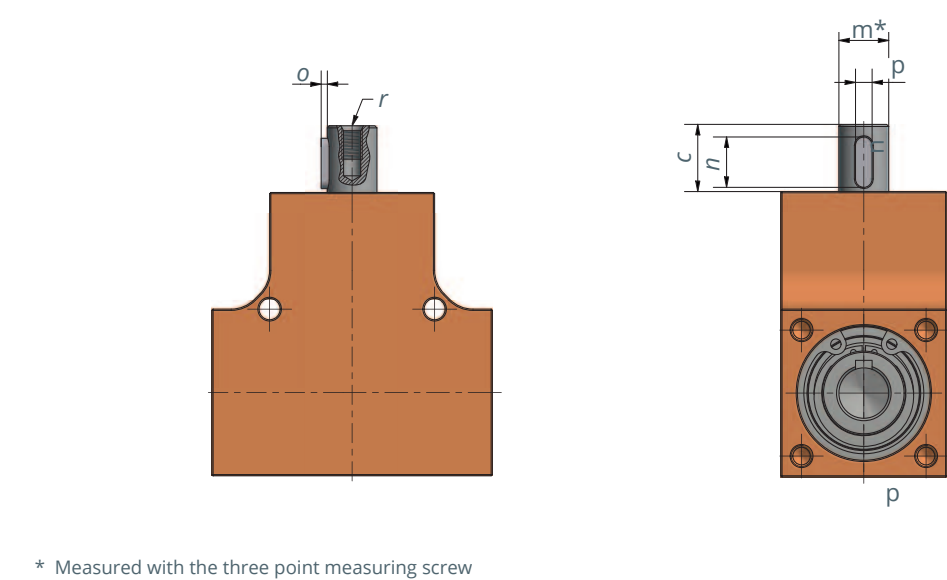
Dimensioning general



The position of the feather keys is not exactly aligned at 90° in the standard to each other. Possible on request if required.

Gearbox-type	Dimensions in mm											
	<i>a</i>	<i>b</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>	<i>j</i>	<i>q</i>	<i>s</i>	<i>t</i>
2006	4kt32	40	56	ø4.1	M4x10	ø28	24	17	34	2.1	M4x8	24
2007	4kt35	42.5	60	ø4.1	M4x10	ø30	26	17.5	35	2.1	M4x8	26
2008	4kt40	48	68	ø5.1	M5x10	ø32	30	20	40	2	M5x10	30
2009	4kt45	54.5	77	ø5.1	M5x10	ø37	35	22.5	45	3.3	M5x10	35

Dimensioning shaft



Gearbox-type	ø Shaft	Shaft-length	Dimension featherkey			Threaded hole inside						Item.- Nr.
	<i>m</i> *	<i>c</i>	<i>n</i>	<i>o</i>	<i>p</i>	<i>r</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	
2006	ø10j6	16	10	1.2	3	M4x8	ø10H7	16	0	3jS9	11.4	2006.00-T0D10R1
2007	ø12j6	16	12	1.5	4	M5x8	ø10H7	16	0	4jS9	11.8	2007.00-T0D12R1
2008	ø12j6	16	12	1.5	4	M5x8	ø12H7	14.5	20.5	4jS9	13.8	2008.00-T0D12R1
2009	ø12j6	16	12	1.5	4	M5x8	ø12H7	16.5	25.5	4jS9	13.8	2009.00-T0D12R1

Deflection gearbox 3014

Description

Bevel gearbox family for use as a deflection gearbox in up to three directions.
Deflection of rotational movement possible at angles of 90°, 120°, 135°. Upon request the number of drive wheels can be varied.
Simple screw mounting on the adaptor facilitates uncomplicated assembly.

Special features

- Maintenance-free
- Case hardened steel bevel wheels
- Housing made of reinforced glass-fibre or aluminium at an angle of 90°/120°/135°
- Downward ratio 1.3:1, ratio in direction of deflection 1:1
- Designed for the manual operation

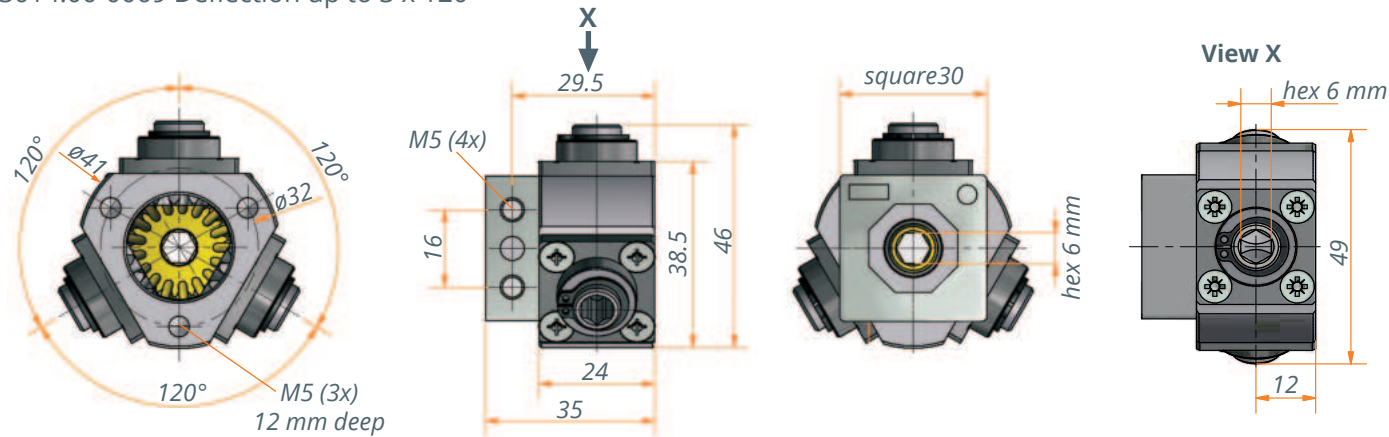
Technical data

Model	3014.00-0069	3014.00-0070	3014.00-0071	3014.00-0082
Ratio in direction of deflection	1:1	1:1	1:1	1:1
90° downward ratio	1.3:1	1.3:1	1.3:1	1.3:1
Input/Output	hex 6 mm	hex 6 mm	hex 6 mm	hex 6 mm
Number of bevel wheels	4	4	3	3
Max. drive torque	3 Nm	3 Nm	3 Nm	3 Nm
Housing/angle	3 x 120°	2 x 135°	120°	135°
Material	Aluminium	Aluminium	Plastic	Plastic

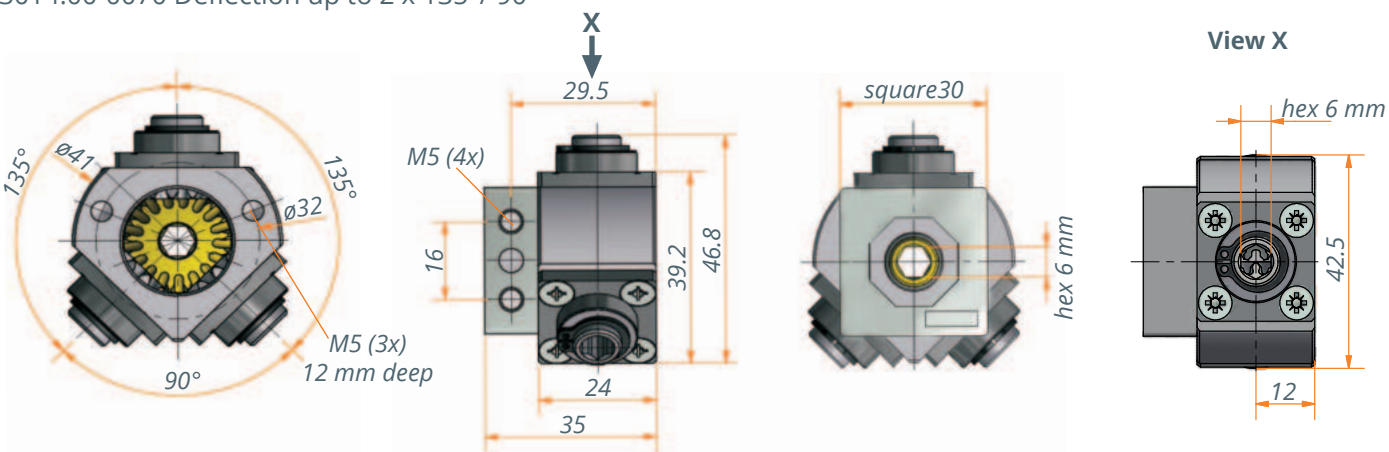
Application example



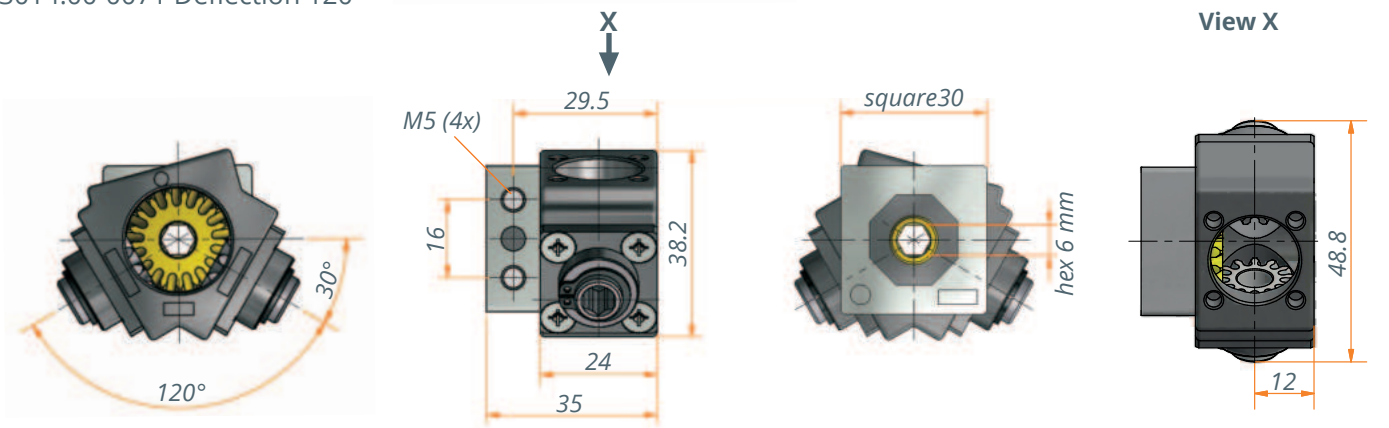
3014.00-0069 Deflection up to 3 x 120°



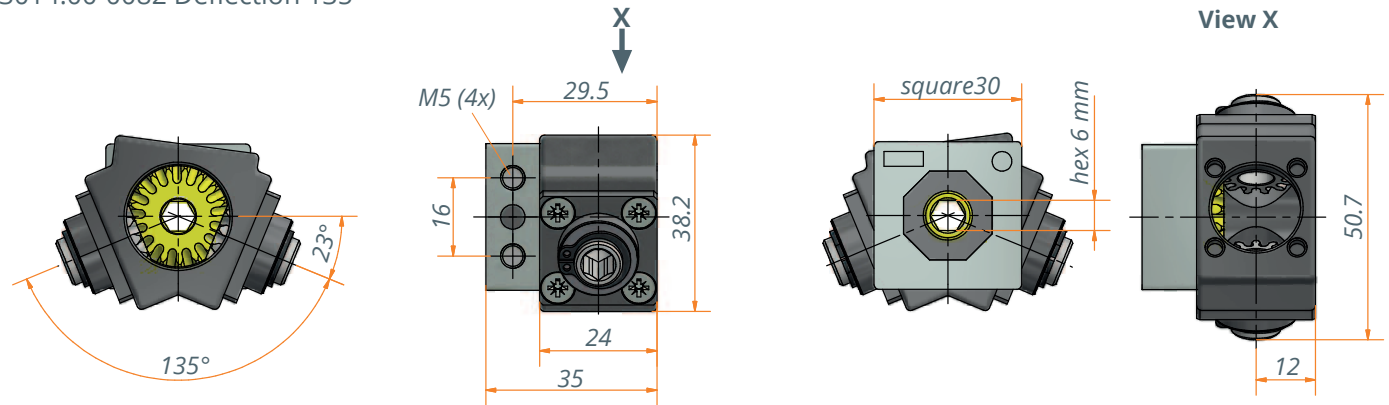
3014.00-0070 Deflection up to 2 x 135°/ 90°



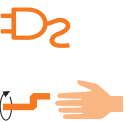
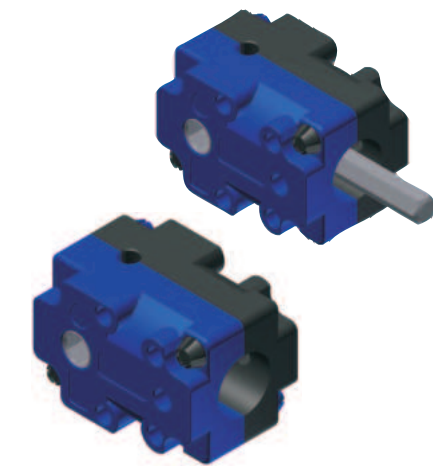
3014.00-0071 Deflection 120°



3014.00-0082 Deflection 135°



Deflection gearbox 3039



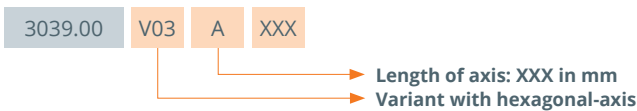
Description

Bevel gearbox for the deflection of a rotary movement at an angle of 90°
The gearbox can be supplied both with a hexagonal axle with a specific length or without an axle.
Simple mounting is made possible by a flexible screw fixing.

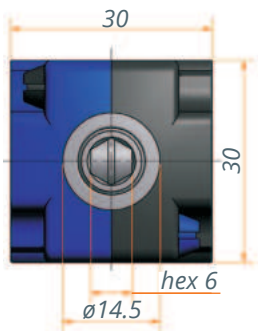
Special features

- Maintenance-free
- Case-hardened steel bevel wheels
- Syntetic gear housing
- Ratio 1:1
- Suitable for both manual and electric motor drives

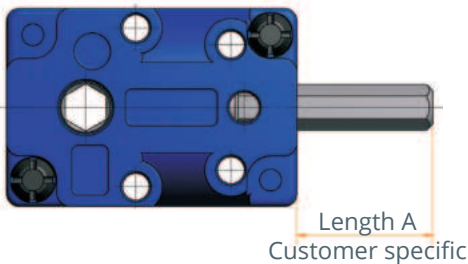
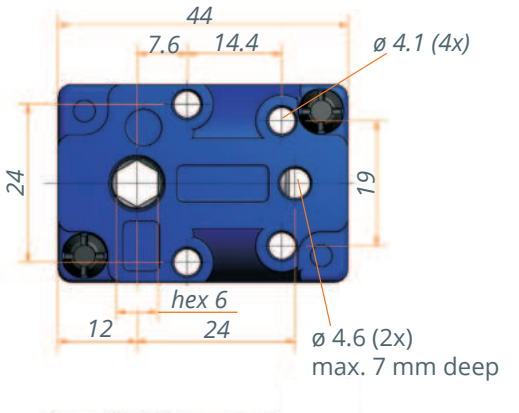
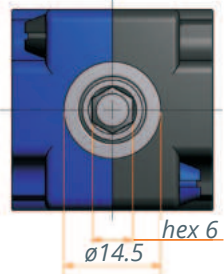
Variant key



3039.00-0001



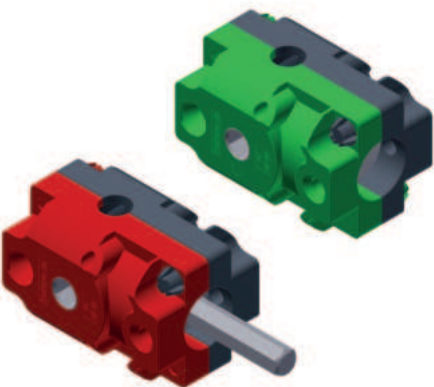
3039.00-V03AXXX



Technical data

Model	3039.00-0001	3039.00-V03AXXX
Ratio	1:1	1:1
Input/Output	hex 6 mm	hex 6 mm
Number of bevel wheels	2	2
Max. drive torque	4 Nm	4 Nm
Length A	-	Customer specific
Housing	Synthetic	Synthetic

Deflection gearbox 3045



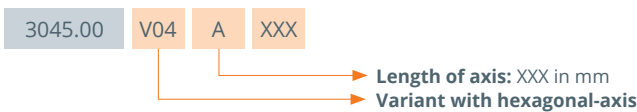
Description

Bevel gearbox for the deflection of a rotary movement at an angle of 90°. The gearbox can be supplied both with a hexagonal axle with a specific length or without an axle. Simple mounting is made possible by a flexible screw fixing.

Special features

- Maintenance-free
- Case-hardened steel bevel wheels
- Synthetic gear housing
- Ratio 1 : 1 (red-black) and 2 : 1 (green-black)
- Suitable for both manual and electric motor drives

Variant key

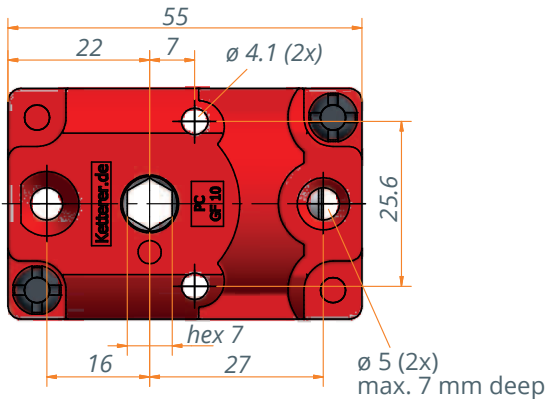
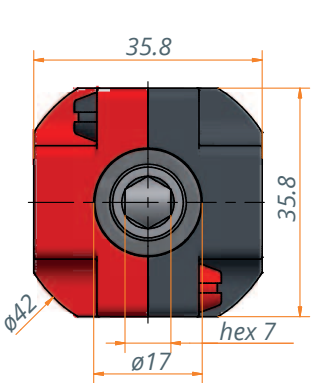


Technical data

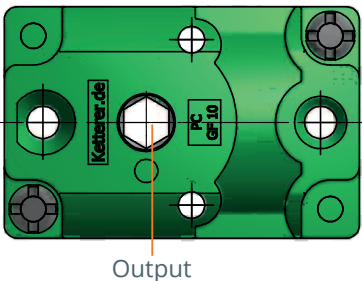
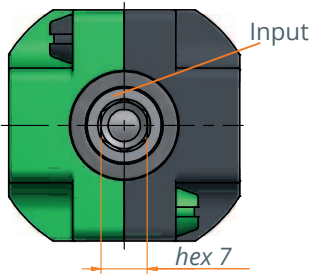
Model	3045.00-3001	3045.00-3002	3045.00-V04AXXX
Ratio	1:1	2:1*	1:1
Input/Output	hex 7 mm	hex 7 mm	hex 7 mm
Number of bevel wheels	2	2	2
Max. drive torque	5,5 Nm	5,5 Nm	5,5 Nm
Length A	-	-	Customer specific
Housing material	Synthetic	Synthetic	Synthetic

* Input to output

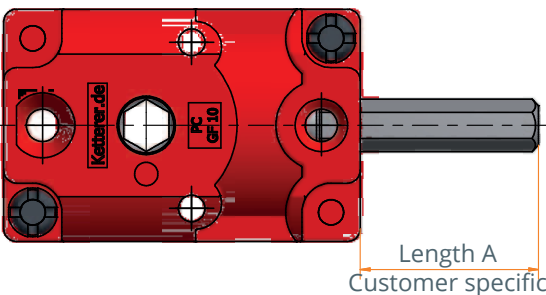
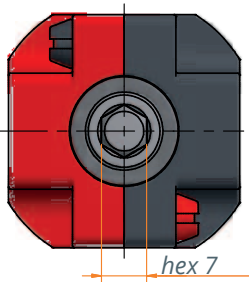
3045.00-3001 - Ratio 1:1



3045.00-3002 - Ratio 2:1 (Input : Output)



3045.00-V04AXXX - Ratio 1:1



Bevel gearbox 3056

Description

Compact bevel gearbox for the deflection of a rotary movement at an angle of 90°. Ideally suited for the adjustment of large parasols. Special bevel gear toothing ensures smooth running of the gearbox. Drive and output can be modified for custom applications. The gearbox can be combined with any spindle.

Special features

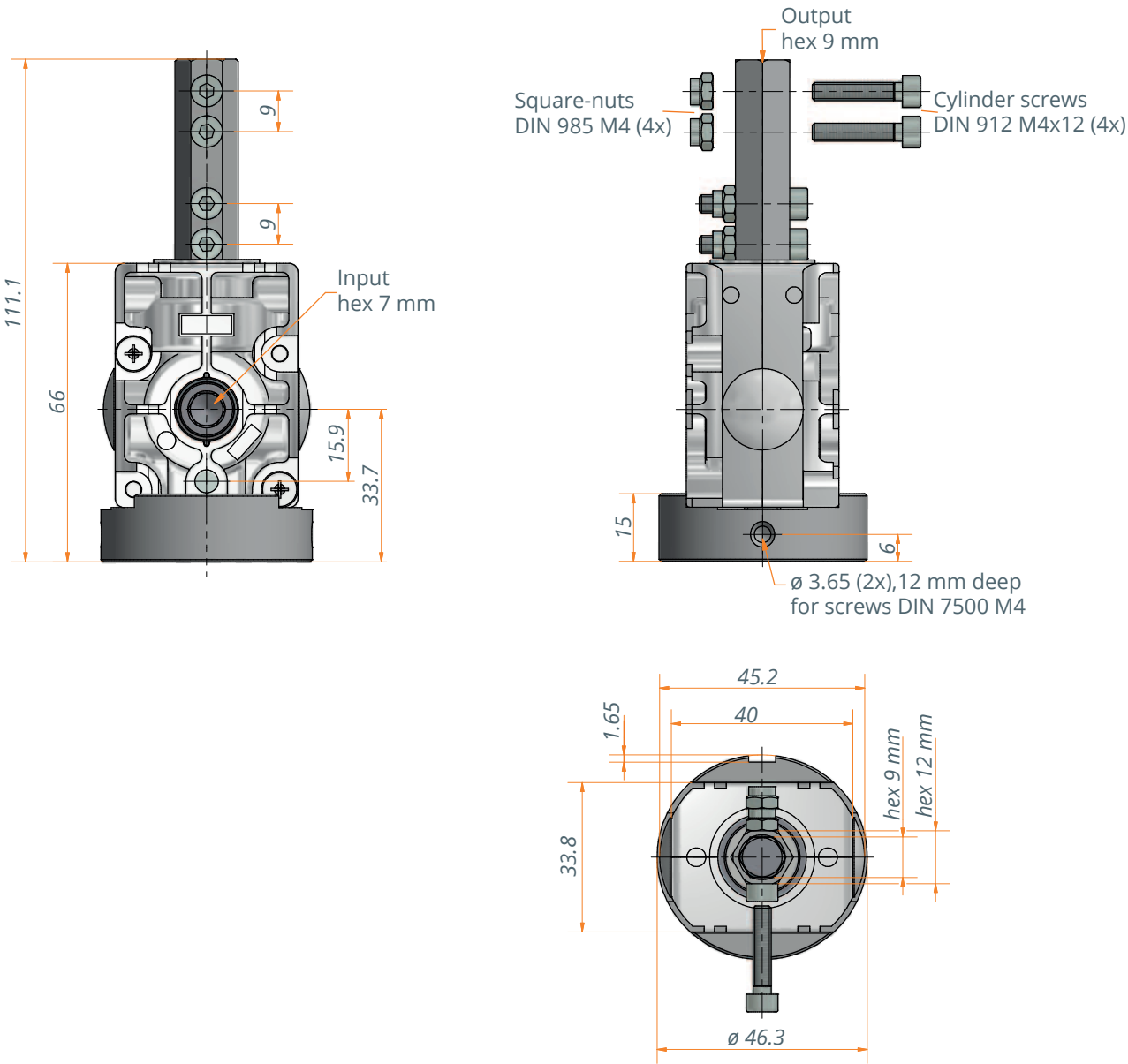
- Maintenance-free
- Case-hardened bevel wheels
- Housing made of zinc die-casting
- Ratio 1:2, on request also 1:1 possible
- Designed for the manual operation



Technical data

Model	3056.00-2000
Ratio	1:2
Input	hex 6 mm
Output	hex 9 mm
Number of bevel wheels	2
Housing material	Zinc die-casting
Max. drive torque	6 Nm
Max. traction load static short term*	8,000 N
Max. pressure load static short term*	5,000 Nm

* Peak load, e.g. caused by gusts of wind



Technical notes

- Attention: Spindle is not in scope of delivery, can be produced to customer requirements
- Depending of the spindle pitch the self-locking of the system must be checked

Application example



Bevel gearbox 3057

Description

Compact bevel gearbox for the deflection of a rotary movement at an angle of 90°. Ideally suited for the adjustment of large parasols. Special bevel gear toothing ensures smooth running of the gearbox. Drive and output can be modified for custom applications. The gearbox can be combined with any spindle.

Special features

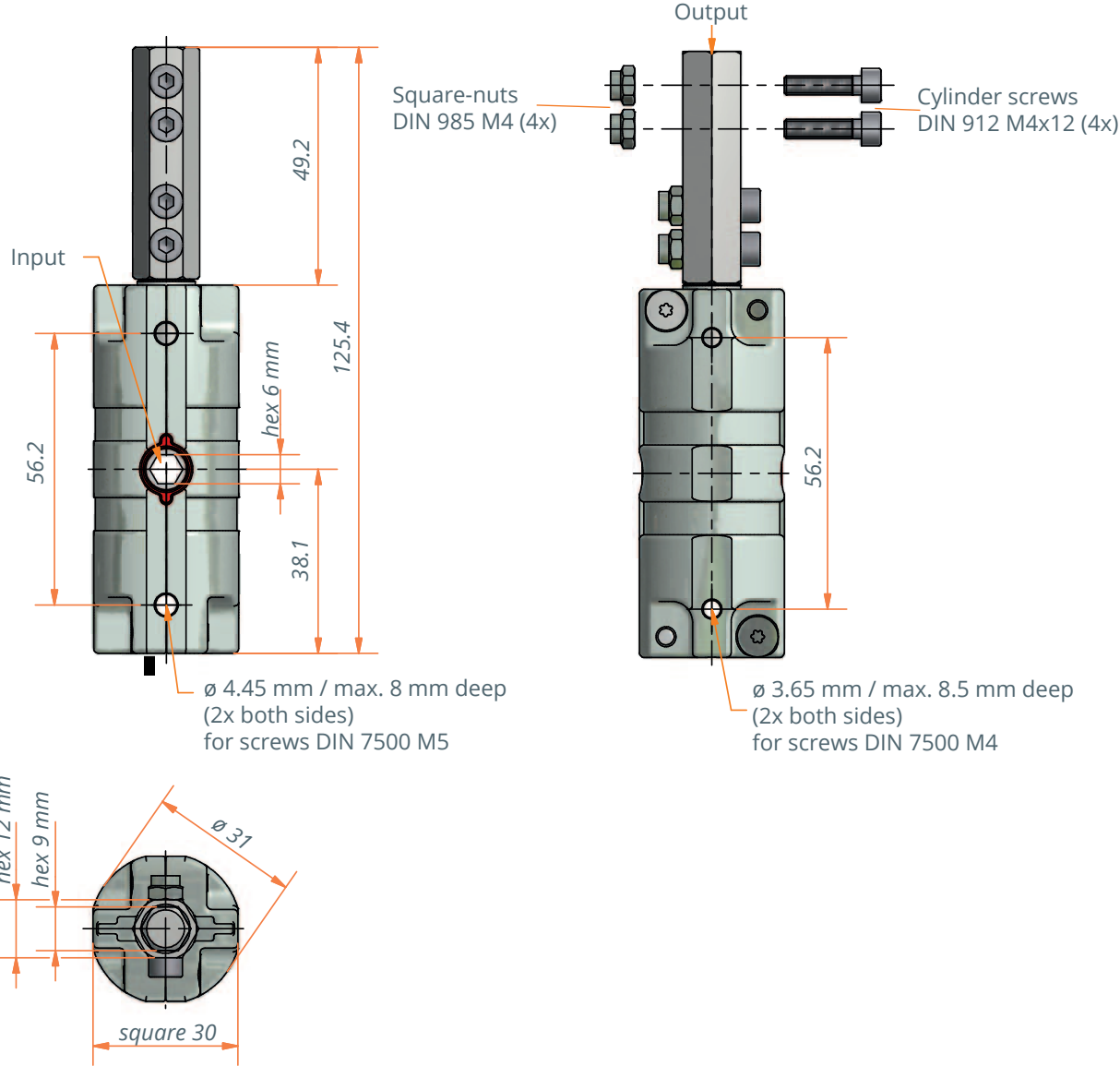
- Maintenance-free
- Case-hardened bevel wheels
- Housing made of zinc die-casting
- Ratio 1 : 2
- Designed for the manual operation



Technical data

Model	3057.00-0010
Ratio	1:2
Input	hex 6 mm
Output	hex 6 mm
Number of bevel wheels	2
Housing material	Zinc die-casting
Max. drive torque	2,5 Nm
Max. traction load static short term*	8,000 N
Max. pressure load static short term*	5,000 Nm

* Peak load, e.g. caused by gusts of wind



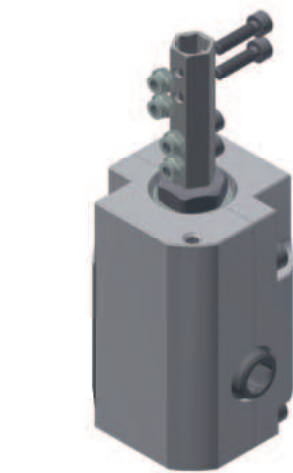
Technical notes

- Attention: Spindle is not in scope of delivery, can be produced to customer requirements
- Depending of the spindle pitch the self-locking of the system must be checked

Application example



Bevel gearbox 3058



Description

Compact bevel gearbox for the deflection of a rotary movement at an angle of 90°. Ideally suited for the adjustment of large parasols. Special bevel gear toothing ensures smooth running of the gearbox. Drive and output can be modified for custom applications. The gearbox can be combined with any spindle.

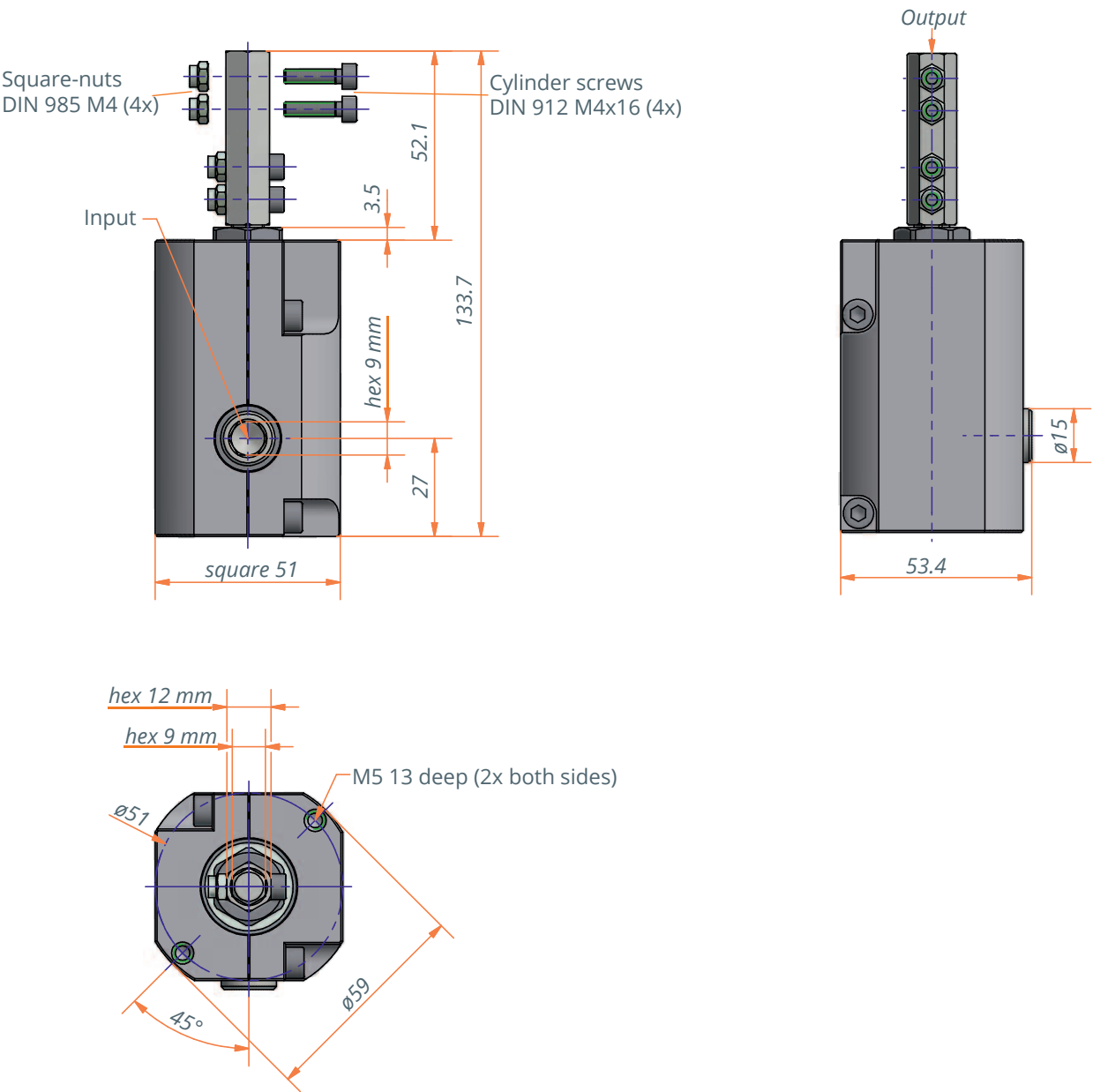
Special features

- Optimized corrosions properties
- Maintenance-free
- Case-hardened bevel wheels with optimized corrosion protection
- Housing made of zinc die-casting
- Ratio 1:4
- Designed for the manual operation

Technical data

Model	3058.00-0005
Ratio	1:4
Input	hex 9 mm
Output	hex 9 mm
Number of bevel wheels	2
Housing material	Aluminium
Max. drive torque	10 Nm
Max. traction load static short term*	10,000 N
Max. pressure load static short term*	12,000 N

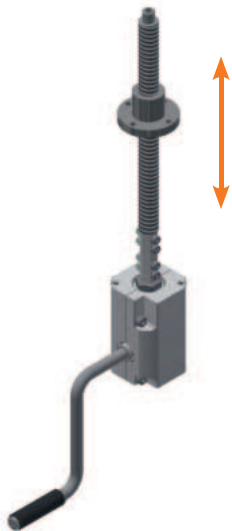
*Peak load, e.g. caused by gusts of wind



Technical notes

- Attention: Spindle is not in scope of delivery, can be produced to customer requirements
- Depending of the spindle pitch the self-locking of the system must be checked

Application example



Bevel gearbox 3869/3870/3871/3872

Description

Bevel gearboxes for the deflection of a rotary movement. Ideal for use as a transfer gearbox or ancillary gearbox for electric motors, e.g. for blinds or actuators in special mechanical engineering. Special bevel gear toothing ensures smooth running of the gearbox.

The gearbox can be combined with any spindle. The modular structure of the gearbox allows special customer requests to be met even with small numbers of items.

Special features

- Maintenance-free
- Hardened, bearing seated steel gear cogs
- Housing made of zinc die-casting
- Ratio 1:1
- Up to four inputs are possible
- On require hex 6 mm, blind hole or through hole possible
- Lifetime 20,000 load changes: bei 10 Nm, 110 U/min, with the duty cycle 30 s ON 240 s OFF and at + 25 °C

Variant key

one output
3870.00-1000

input 

two opposite outputs
3871.00-1000

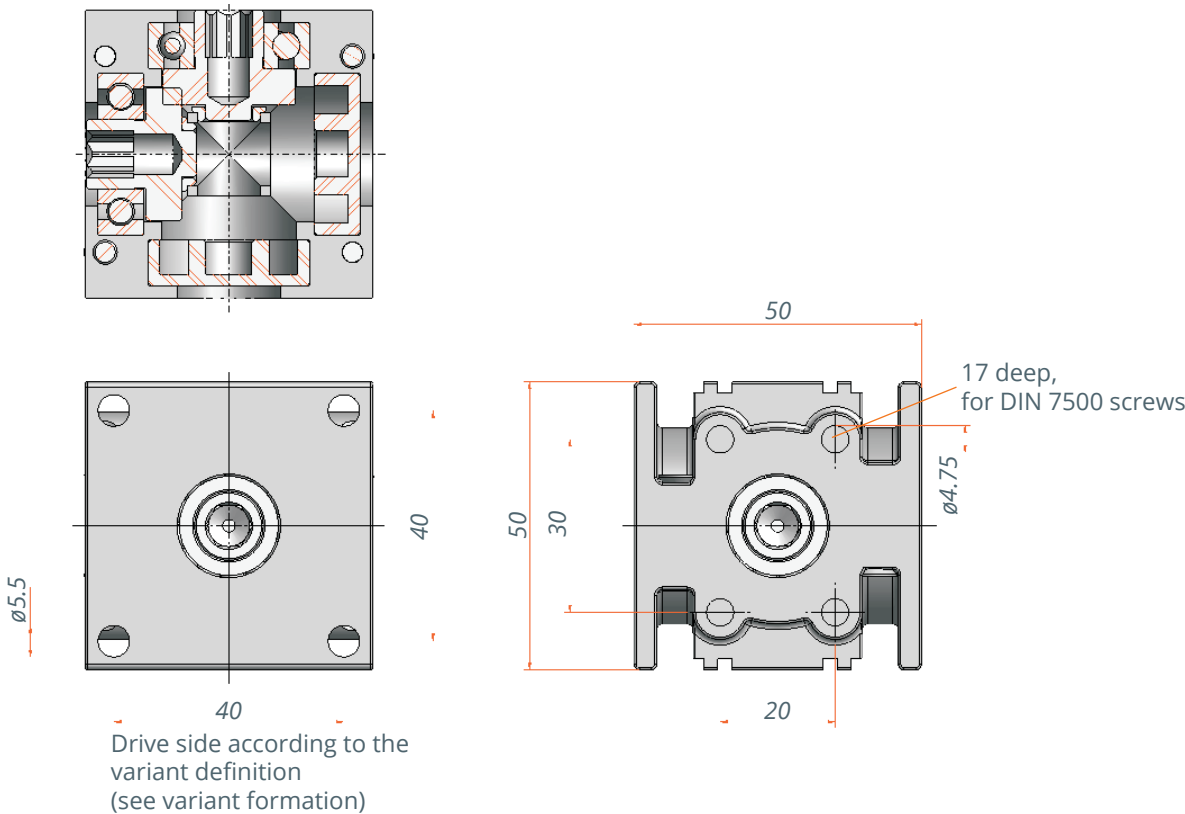
input 

two outputs 90°
3869.00-1000

input 

three outputs
3872.00-1000

input 

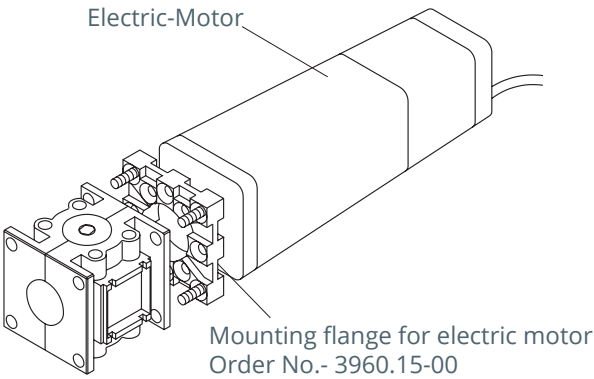


Technical data

Model	3869.00-1000	3870.00-1000	3871.00-1000	3872.00-1000
Ratio	1:1	1:1	1:1	1:1
Input	hex 7 mm	hex 7 mm	hex 7 mm	hex 7 mm
Output	hex 7 mm	hex 7 mm	hex 7 mm	hex 7 mm
Number of bevel gears	3	2	3	4
Max. drive torque	10 Nm	10 Nm	10 Nm	10 Nm
Housing material	Zinc die-casting	Zinc die-casting	Zinc die-casting	Zinc die-casting

Technical notes

- The drive side can be selected arbitrarily
- Higher torques are possible at reduced speeds



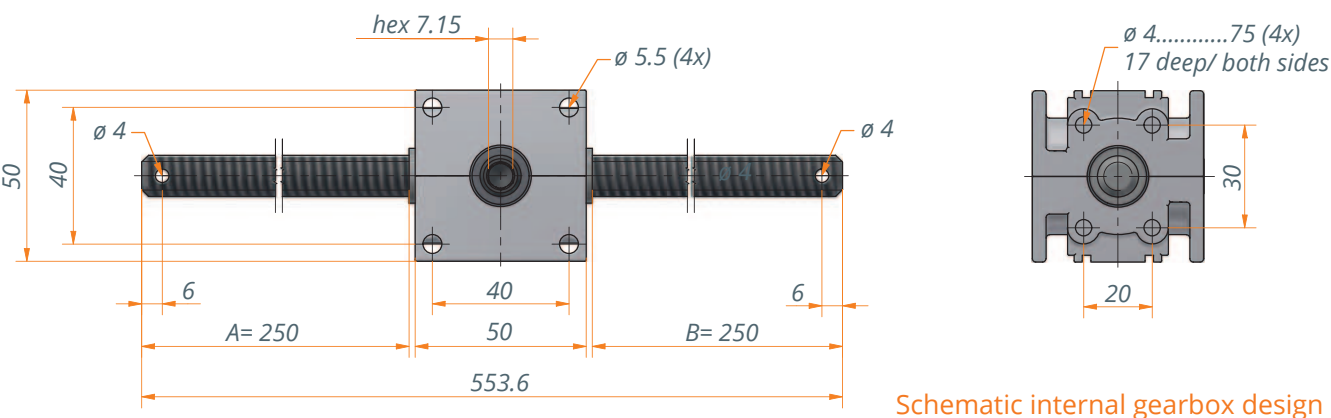
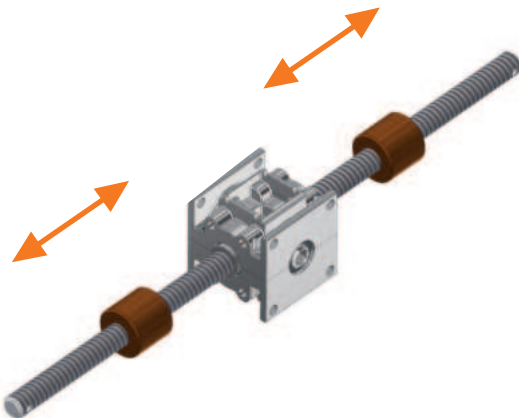
Bevel gear Ket-Flex 3872

Description

Our Ket-Flex bevel gearbox with lateral spindle output is the optimal solution for conveyor systems. It can be used for aisle adjustments, curve adjustments or for lateral guide adjustments. The side spindles allow easy adaptation to different dimensional requirements, e.g. for conveyor belts

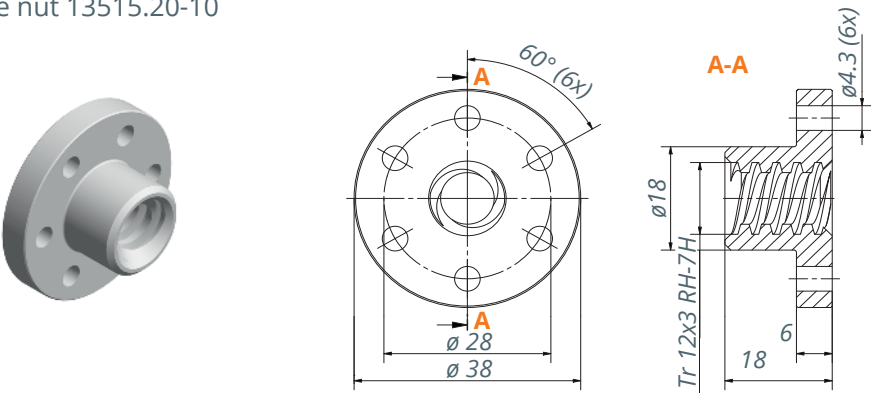
Special features

- Maintenance-free
- Case-hardened bevel wheels
- Housing made of zinc die-casting
- Ratio i= 1:1
- Service life 20,000 load changes: at 10 Nm and 110 rpm with duty cycle 30 s ON 240 s OFF at +25°C
- Max. Torque 10 Nm (higher torques are possible at reduced speeds)
- Customized adaptations of the spindle length and the spindle type are possible



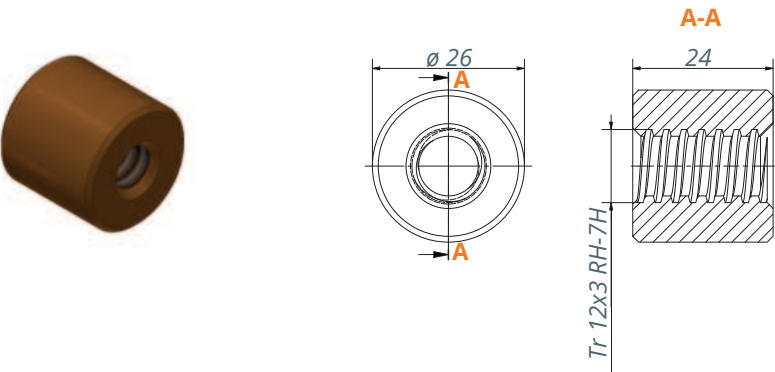
Matching Spindle nut

Flange nut 13515.20-10



Material: POM-C
Type of spindle: TR 12x3 RH

Round nut 12502.00-02



Material: Special brass
Type of spindle: TR 12x3 RH

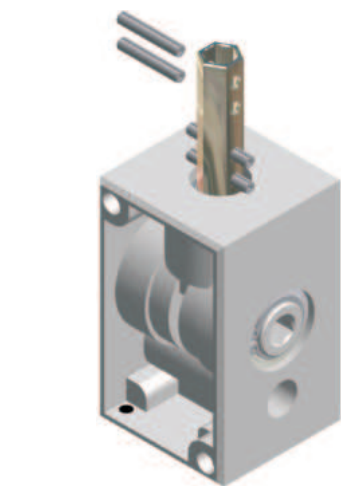
Technical data

Preferred variant	3872.00-0077
Number of bevel gears	3
Material Spindle*	1.0715 (11SMn30)
Type of spindle*	Tr12x3 RH
Length A*	250 mm
Length B*	250 mm

* The features can be customized according to customer specifications, as well as the spindle end machining.

- The spindle nuts can be manufactured individually according to customer specifications

Bevel gearbox 3874



Description

Compact bevel gearbox for the deflection of a rotary movement at an angle of 90°. Ideally suited for the adjustment of large parasols. Special bevel gear toothing ensures smooth running of the gearbox. Drive and output can be modified for custom applications. The gearbox can be combined with any spindle

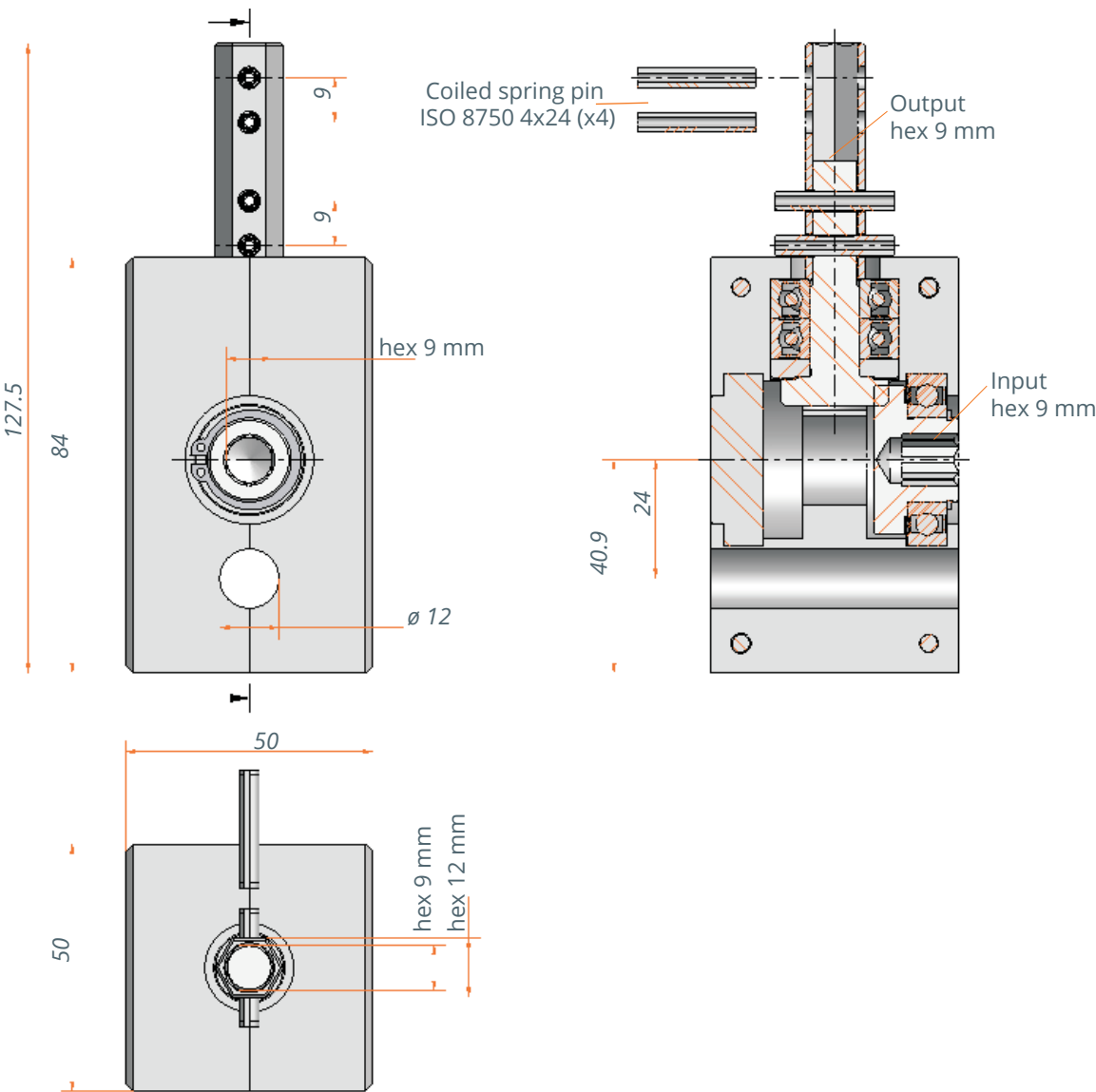
Special features

- Maintenance-free
- Case-hardened bevel wheels
- Housing made of zinc die-casting
- Construction size 50 x 50 x 84 mm
- Ratio 1:1.5
- Max. output torque 4 Nm
- Designed for the manual operation

Technical data

Model	3874
Ratio	1:1.5
Input	hex 9 mm
Output	hex 9 mm
Number of bevel wheels	2
Housing material	Zinc die-casting
Max. drive torque	4 Nm
Max. tensile load static short term*	7,000 N
Max. pressure load static short term*	9,000 N

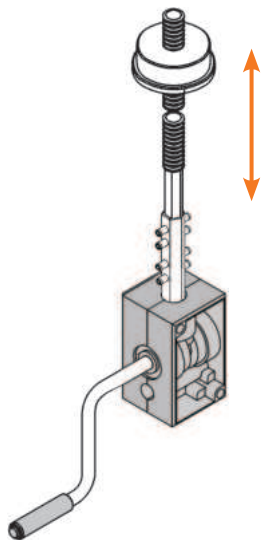
* Peak load, e.g. caused by gusts of wind



Technical notes

- Attention: Spindle is not in scope of delivery, can be produced to customer requirements
- Depending of the spindle pitch the self-locking of the system must be checked

Application example



Bevel gearbox 3875

Description

Bevel gearbox for the deflection of a rotary movement at an angle of 90°. Ideally suited for the adjustment of large parasols. Special bevel gear toothing ensures smooth running of the gearbox. Drive and output can be modified for custom applications. The gearbox can be combined with any spindle.

Special features

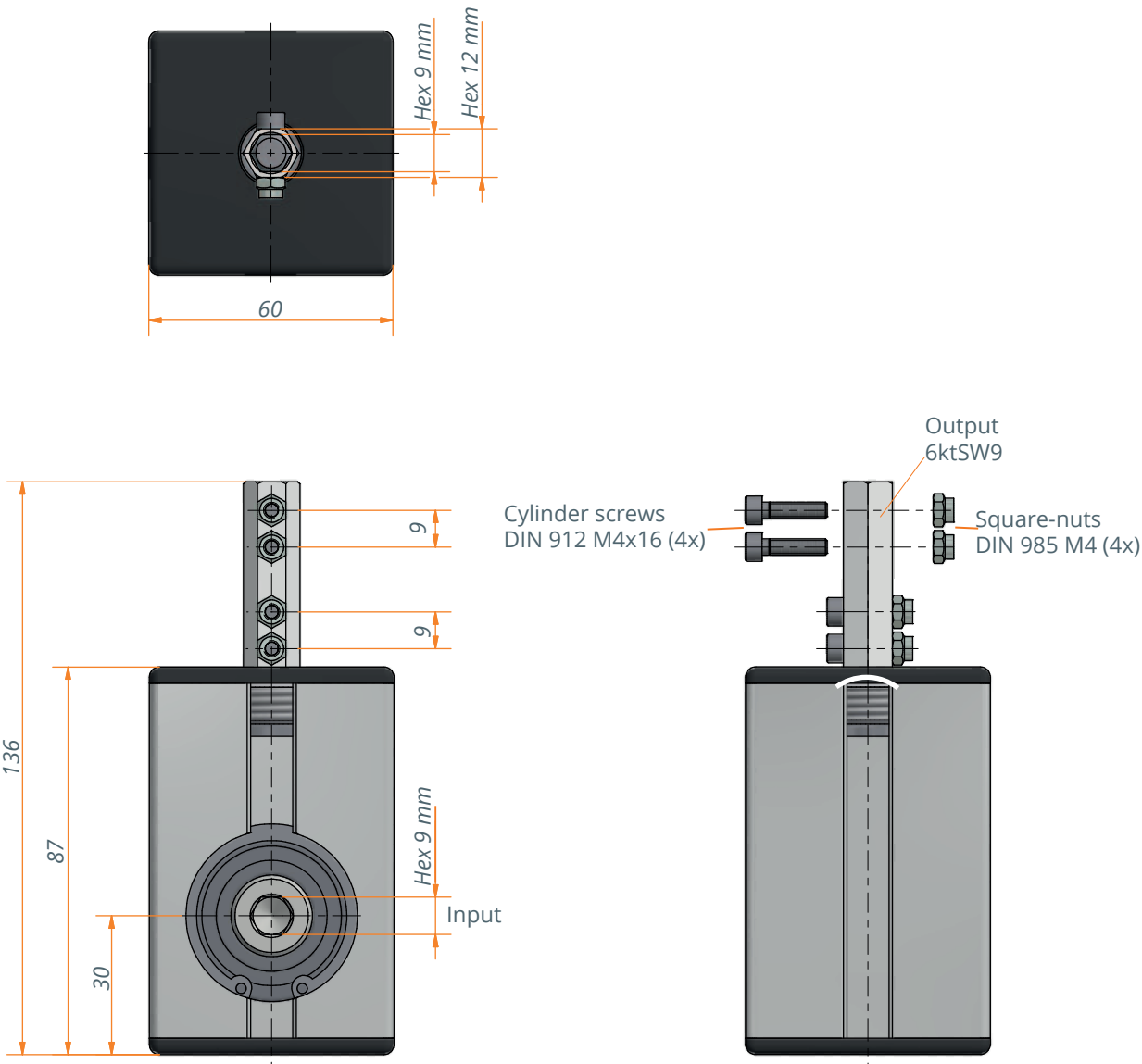
- Maintenance-free
- Case-hardened bevel wheels
- Housing made of aluminium profile
- Construction size 60 x 60 mm
- Ratio 1:1.5
- Max. drive torque 8 Nm
- Designed for the manual operation



Technical data

Model	3875.00-1000
Ratio	1:1.5
Input	Hex 9 mm
Output	Hex 9 mm
Number of cog wheels	2
Housing material	Aluminium profil
Max. drive torque	8 Nm
Max. tensile load static short term*	7,500 N
Max. pressure load static short term*	9,000 N

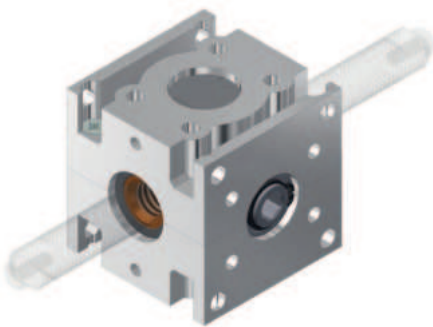
* Peak load, e.g. caused by gusts of wind



Technical notes

- Depending of the spindle pitch the self-locking of the system must be checked

Bevel gearbox with throughgoing spindle 3900/3901



Description

Bevel gearbox for continuous non-rotating spindles, for thrust and pull movements. The gearbox is particularly suitable for use as a lifting system for skylights, winter gardens and greenhouses as well as for special machine engineering. A special bevel gearing ensures quiet operation of the gear. The gearbox can be supplied with different thread types. Spindles can be custom manufactured to customer specifications.

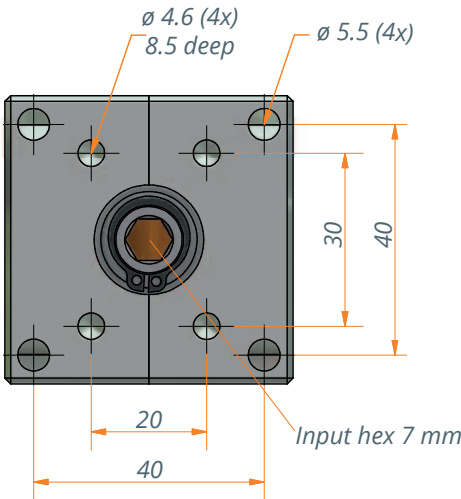
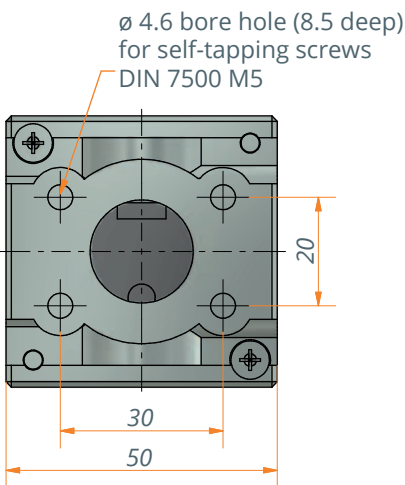
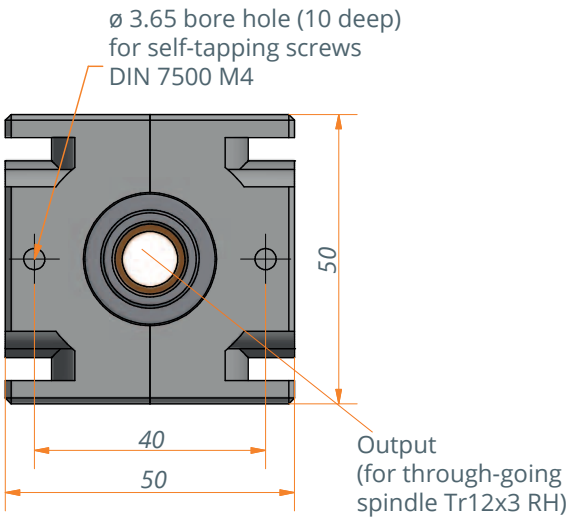
Special features

- Maintenance-free
- Case-hardened bevel wheels
- Housing made of zinc die-casting
- Ratio 1,44:1 or 1,5:1
- Designed for electromotive drive, but also ideal for manual drive

Technical data

Model	3900	3901
Ratio	1.44:1	1.5:1
Input	hex 7 mm	hex 7 mm
Type of thread*	Tr12x3 RH	Tr12x3 RH
Max. lifting force	800 N	800 N

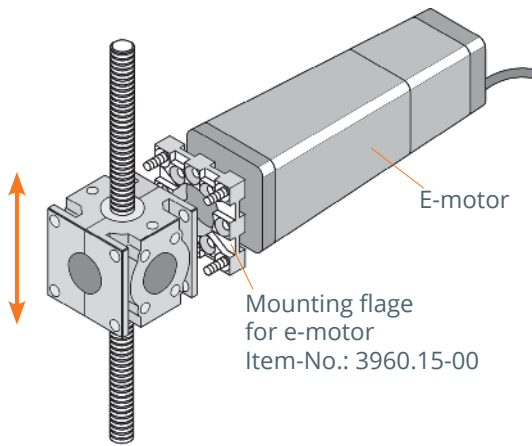
* Spindle has to be ordered separately



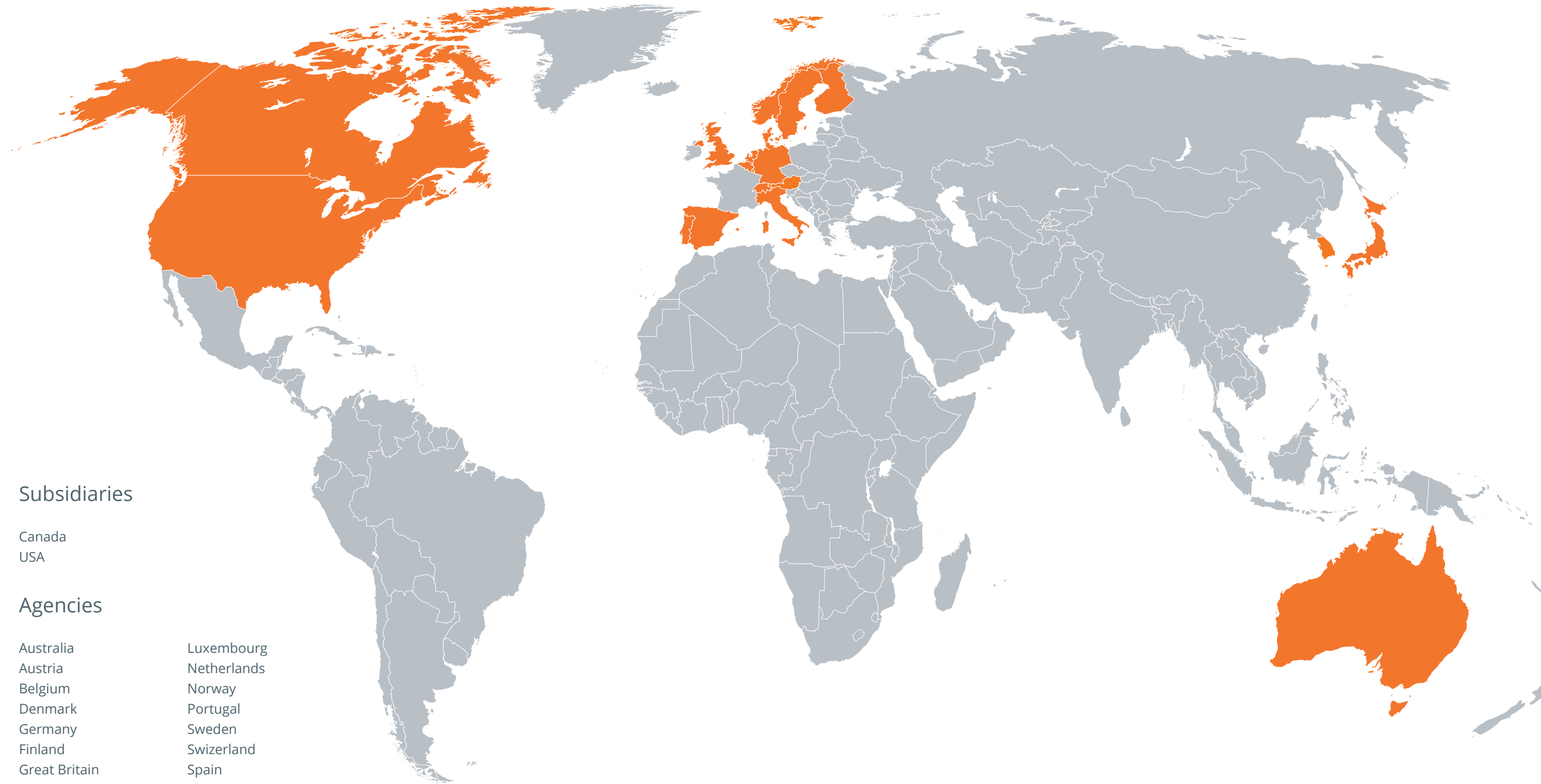
Technical notes

- Attention: Spindle is not in scope of delivery, can be produced to customer requirements
- The drive side can be selected as required
- Depending of the spindle pitch the self-locking of the system must be checked

Application example



USED AROUND THE WORLD



Subsidiaries

Canada
USA

Agencies

Australia	Luxembourg
Austria	Netherlands
Belgium	Norway
Denmark	Portugal
Germany	Sweden
Finland	Switzerland
Great Britain	Spain
Italy	South Korea
Japan	

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