

STÜWE®

# EXTERNAL LOCKING UNIT TYPE AS

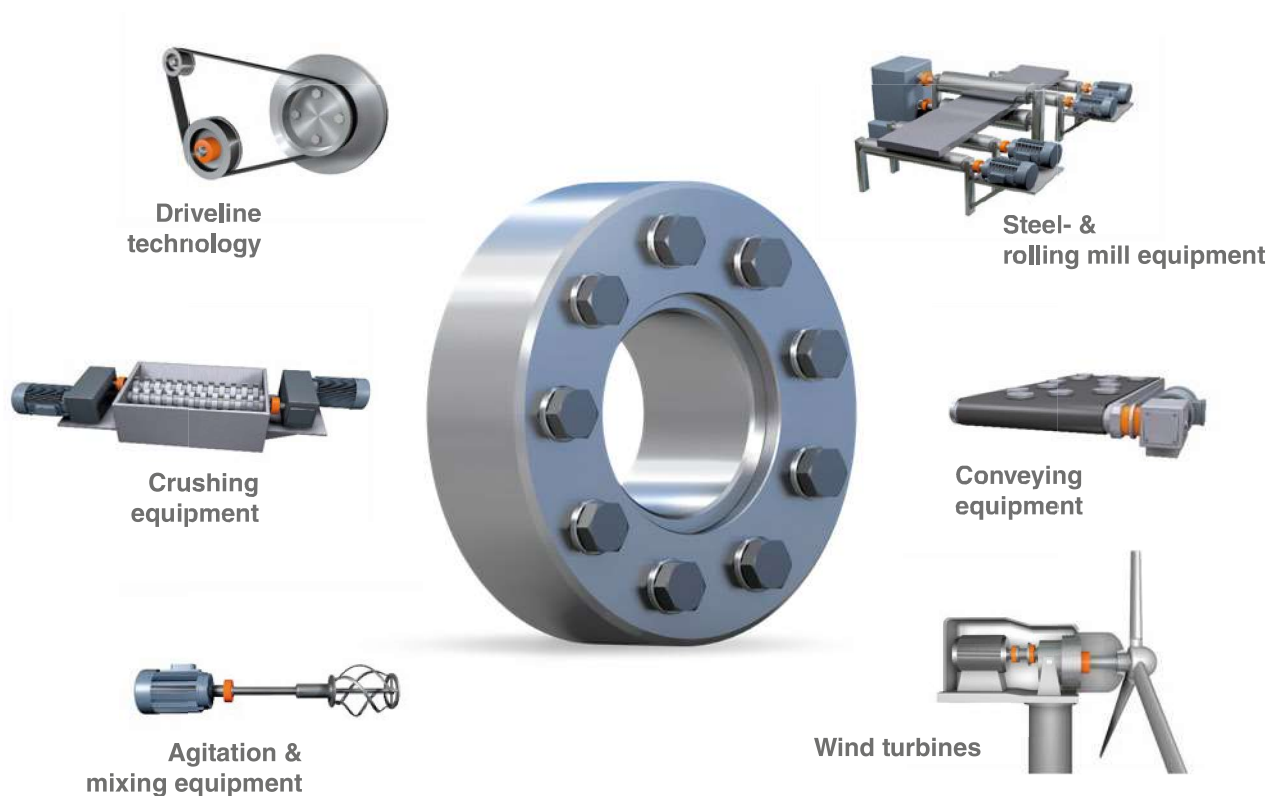


# EXTERNAL LOCKING UNIT TYPE AS – GENERAL INFORMATION

## Application Description

Type AS external locking units are used for the fixing of removable attachments such as brake discs, sheaves or pulleys to all forms of shaft. This type of fixture is characterized in particular by its easy and free positioning, non-destructive installation and removal and high transmissible loads. Differentiation is made in the standard delivery programme between the following four models so that an optimum variance exists for the achievement of your ideal connection.

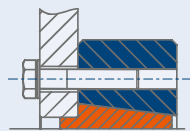
## Areas of Use



# EXTERNAL LOCKING UNIT TYPE AS – SERIES



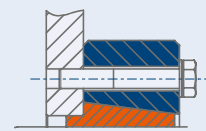
**Model A:**  
Thread in the outer ring



**Model AB:**  
Thread in the outer ring  
and centring device

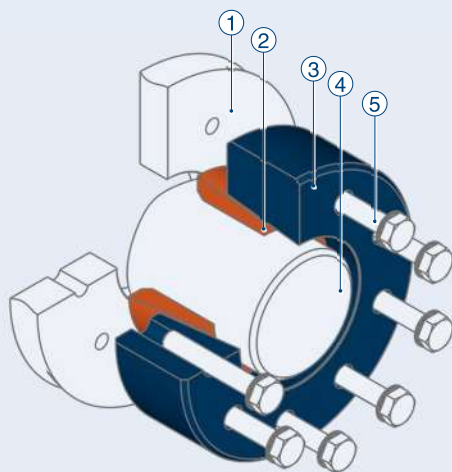


**Model C:**  
Thread in the  
attachment



**Model BC:**  
Thread in the attachment  
and centring device

Description	Shaft diameter	Transmissible torque	Features
12	9 - 100 mm	0.02 - 15.8 kNm	Average torques; without bending moment
22	11 - 440 mm	0.05 - 426 kNm	High torques + bending moment
23	40 - 440 mm	3.3 - 562 kNm	Extremely high torques + bending moment

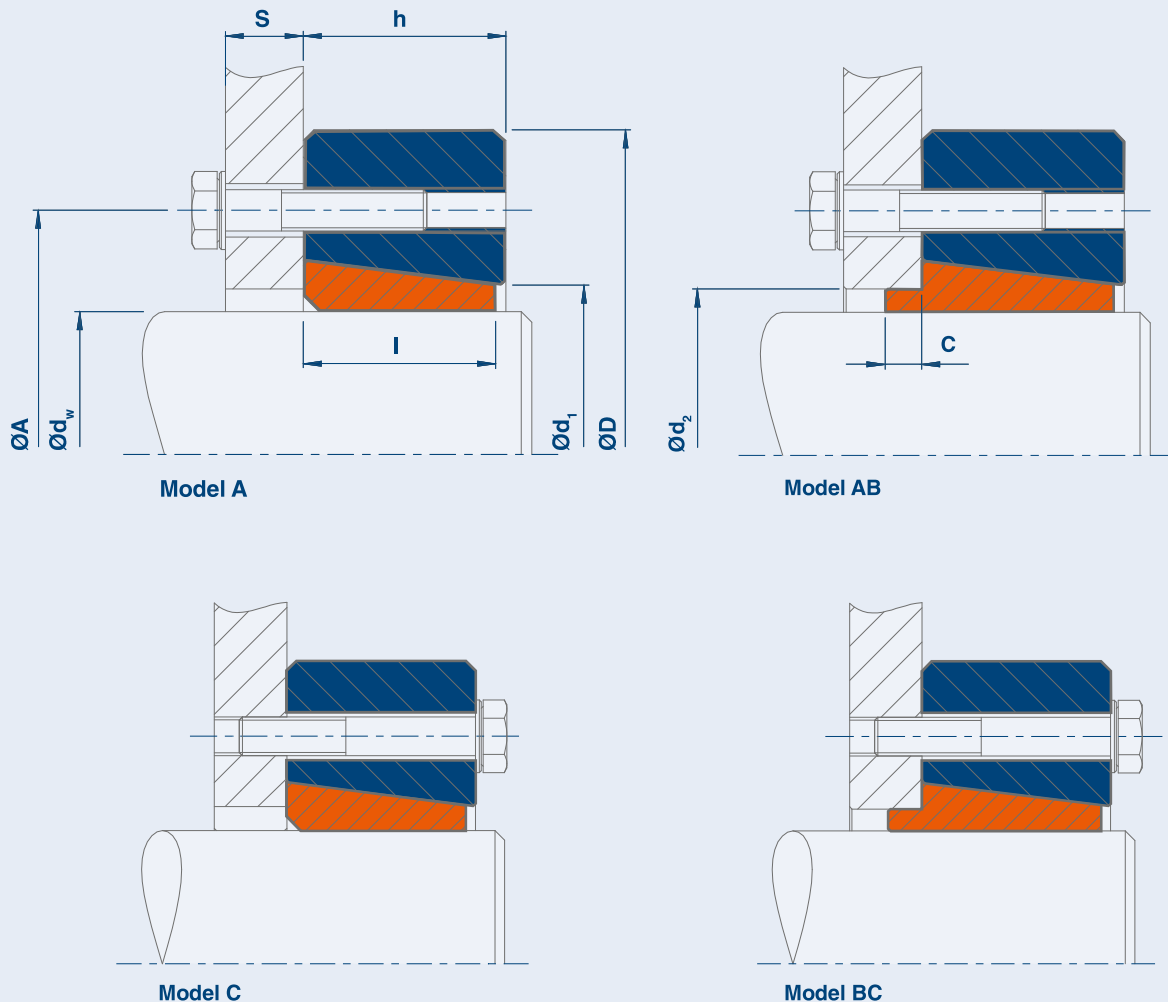


- ① Attachment (for example, a sheave)
- ② Inner ring\*
- ③ Outer ring\*
- ④ Shaft
- ⑤ Locking bolts  
including washer as necessary

\*Included with the delivery

All types may be protected against environmental influences by zinc and nickel coating or by a paint which has an appropriate corrosion protection class. We are able to achieve both desired colours which conform with the RAL colour range and products with lubricants in accordance with NSF H1. More detailed information on this may be found in this catalogue on page 151.

# STÜWE® External Locking Unit Type AS Series 12



## Code

- $M_t$  Maximum transmissible torque of an external locking unit for  $P_{ax} = 0$
- $M_a$  Required tightening torque of the locking bolts (see also "Installation and Removal Instructions")

### Information on fits:

$\text{Ø}d_w$ : h9  
 $\text{Ø}d_2$ : H7/g6

**all models:**  
 $S > 1.4 \times \text{Bolts-Ø}$

**Roughness of all mating surfaces:**  
 $Ra < 3.2 \mu\text{m}$

For the transmission of torque only. For the transmission of both torque and bending moments select series 22 or 23.

## External Locking Unit Type AS – Series 12

Type	d <sub>w</sub> * mm	M <sub>t</sub> kNm	B** Grade 10.9	M <sub>a</sub> Nm	A mm	D mm	l mm	h mm	C mm	d <sub>1</sub> mm	d <sub>2</sub> mm	kg
AS 10 - 12	11	0.02	3 x M6 x 18	12	25	39	9	10	1.5	13	12	0.1
	10	0.02										
	9	0.02										
AS 12 - 12	13	0.05	3 x M6 x 20	12	28	44	12	13	1.5	16	14	0.1
	12	0.05										
	11	0.05										
AS 15 - 12	16	0.13	3 x M8 x 25	29	36	52	14	15	2	21	18	0.2
	15	0.13										
	14	0.13										
AS 20 - 12	20	0.20	3 x M8 x 30	29	42	60	16	17	2	25	22	0.3
	18	0.20										
	16	0.20										
AS 25 - 12	25	0.34	5 x M8 x 30	29	48	66	18	19	2	32	27	0.4
	22	0.34										
	20	0.34										
AS 30 - 12	30	0.55	6 x M8 x 35	29	56	76	20	21	2	38	32	0.6
	28	0.55										
	25	0.55										
AS 40 - 12	40	1.06	6 x M10 x 35	58	70	96	24	25	3	47	43	1.2
	35	1.06										
	30	1.06										
AS 50 - 12	50	2.20	7 x M12 x 45	100	84	112	29	30	3	58	53	2.0
	45	1.80										
	40	1.00										
AS 60 - 12	60	3.23	9 x M12 x 50	100	94	120	32	34	3	66	63	2.3
	55	3.23										
	50	2.30										
AS 70 - 12	70	5.80	8 x M16 x 60	240	112	148	38	40	4	79	74	4.2
	65	5.80										
	60	4.50										
AS 80 - 12	80	8.64	9 x M16 x 65	240	130	170	42	44	4	94	84	6.1
	75	8.64										
	70	6.90										
AS 90 - 12	90	12.00	12 x M16 x 70	240	144	185	48	50	4	104	94	8.0
	85	12.00										
	80	10.70										
AS 100 - 12	100	15.80	14 x M16 x 75	240	156	197	52	54	4	113	104	9.5
	95	15.80										
	90	15.80										

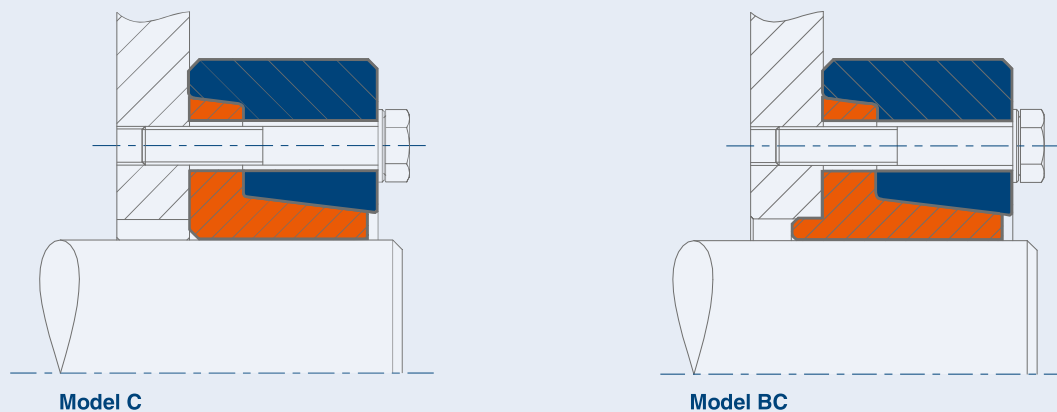
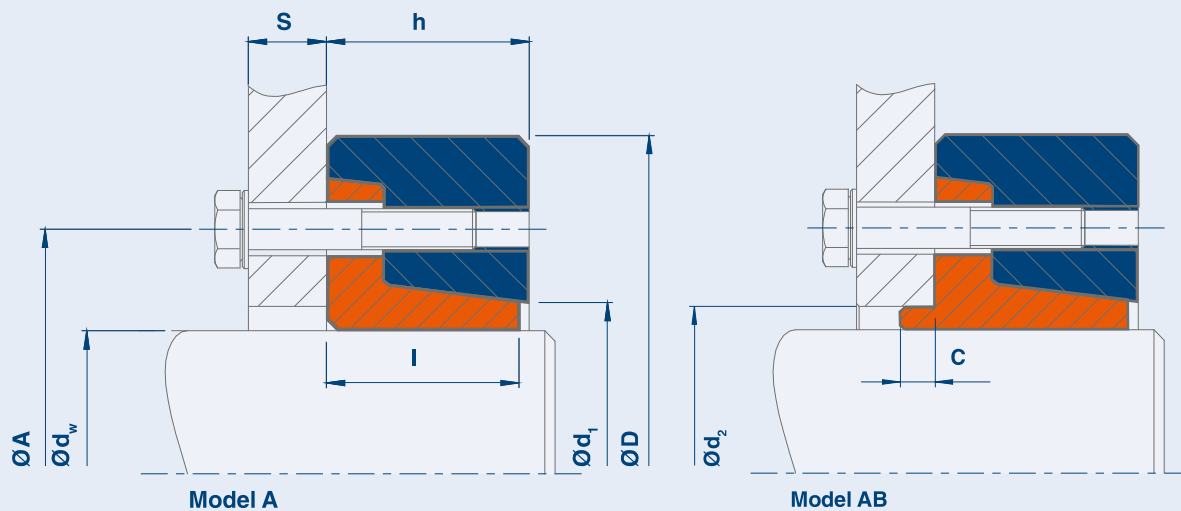
Further sizes on request, subject to technical changes.

\*Hole diameter can be freely chosen within given limitations.

\*\*Locking bolts: standard DINENISO4014/4017/4014: Length for model C and BC, alternative DINENISO4762  
M16 and upwards with washers: DIN EN ISO 7416

**When ordering please state:** (Type x Ød<sub>w</sub> x desired model) flange width S for model A and AB  
e.g. AS 70 - 12 x 65 x A S=8 mm

# STÜWE® External Locking Unit Type AS Series 22



## Code

$M_t$  Maximum transmissible torque of an external locking unit for  $P_{ax} = 0$

$M_a$  Required tightening torque of the locking bolts (see also "Installation and Removal Instructions")

### Information on fits:

$\text{Ø}d_w$ : h9  
 $\text{Ø}d_2$ : H7/g6

all models:  
 $S > 1.4 \times \text{Bolts-Ø}$

Roughness of all mating surfaces:  
 $Ra < 3.2 \mu\text{m}$

## External Locking Unit Type AS – Series 22

Type	d <sub>w</sub> * mm	M <sub>t</sub> kNm	B** Grade 10.9	M <sub>a</sub> Nm	A mm	D mm	l mm	h mm	C mm	d <sub>1</sub> mm	d <sub>2</sub> mm	kg
AS 12 - 22	12	0.05	3 x M6 x 20	12	24	35	10	7	1.5	13	14	0.1
	11	0.05										
AS 14 - 22	14	0.07	3 x M6 x 20	12	26	38	10	7.3	1.5	15	16	0.1
	13	0.07										
AS 16 - 22	16	0.08	3 x M6 x 25	12	28	41	13.5	9	2	17	18	0.1
	15	0.08										
AS 18 - 22	18	0.13	4 x M6 x 25	12	30	44	13.5	9	2	19	20	0.1
	17	0.13										
AS 20 - 22	20	0.14	4 x M6 x 25	12	32	47	13.5	9	2	21	22	0.2
	19	0.14										
AS- 25 - 22	25	0.20	5 x M6 x 30	12	36	50	17	17	2	26	27	0.2
	24	0.20										
	22	0.20										
AS 30 - 22	30	0.30	6 x M6 x 30	12	44	60	18	19	3	32	32	0.3
	28	0.30										
	26	0.30										
AS 35 - 22	36	0.50	5 x M8 x 35	29	52	72	20	21	3	38	38	0.5
	35	0.50										
	32	0.45										
AS 40 - 22	44	0.75	6 x M8 x 35	29	61	80	22	23	3	47	46	0.7
	40	0.75										
	38	0.72										
AS 50 - 22	50	1.3	8 x M8 x 40	29	68	90	24	25	3	53	53	0.9
	45	1.3										
	42	1.0										
AS 55 - 22	55	1.6	8 x M8 x 40	29	72	100	26	27	3	58	58	1.2
	52	1.6										
	45	1.6										
AS 60 - 22	60	2.0	9 x M8 x 40	29	80	110	26	27	3	66	63	1.4
	55	2.0										
	50	2.0										
AS 70 - 22	70	2.1	9 x M8 x 40	29	86	115	26	27	4	72	74	1.5
	65	2.1										
	60	2.1										
AS 80 - 22	80	4.0	10 x M10 x 45	58	100	141	28	29	4	84	84	2.5
	75	4.0										
	70	4.0										
AS 90 - 22	90	5.7	12 x M10 x 50	58	114	155	34	35	4	94	94	3.6
	85	5.7										
	80	5.7										
AS 100 - 22	100	8.4	12 x M12 x 60	100	124	170	39	40	4	104	104	4.6
	95	8.4										
	90	8.4										
AS 110 - 22	110	9.2	12 x M12 x 70	100	136	185	45	46	5	114	116	6.2
	105	9.2										
	100	9.2										

\*Hole diameter can be freely chosen within given limitations.

\*\*Locking bolts: standard DINENISO4014/4017/4014: Length for model C and BC, alternative DINENISO4762  
M16 and upwards with washers: DIN EN ISO 7416

**When ordering please state:** (Type x Ø<sub>w</sub> x desired model) flange width S for model A and AB,  
e.g. AS 40 - 22 x 44 x A S=8 mm

## External Locking Unit Type AS – Series 22

Type	d <sub>w</sub> * mm	M <sub>t</sub> kNm	B** Grade 10.9	M <sub>a</sub> Nm	A mm	D mm	l mm	h mm	C mm	d <sub>1</sub> mm	d <sub>2</sub> mm	kg
AS 125 - 22	125	21	12 x M16 x 75	240	160	215	47	49	5	133	126	8.8
	120	21										
	115	21										
AS 140 - 22	140	26	14 x M16 x 80	240	172	230	52	53	5	145	146	11
	135	26										
	130	26										
AS 155 - 22	160	31	15 x M16 x 80	240	192	263	54	55	5	162	166	15
	155	31										
	150	31										
AS 170 - 22	170	36	16 x M16 x 90	240	204	290	61	62	5	175	176	21
	165	36										
	160	36										
AS 180 - 22	180	43	18 x M16 x 90	240	218	300	61	62	5	185	186	22
	175	43										
	170	43										
AS 190 - 22	190	60	15 x M20 x 110	470	232	320	77	78	5	195	196	31
	185	60										
	180	60										
AS 200 - 22	200	67	16 x M20 x 110	470	246	340	75	78	5	209	206	35
	195	67										
	190	67										
AS 220 - 22	220	93	14 x M24 x 130	820	270	370	95	96	5	230	226	53
	210	93										
	200	93										
AS 240 - 22	240	117	16 x M24 x 140	820	296	405	98	100	5	248	246	64
	230	117										
	220	117										
AS 260 - 22	260	126	16 x M24 x 150	820	318	430	106	106	5	266	266	80
	250	126										
	240	126										
AS 280 - 22	280	151	18 x M24 x 160	820	340	460	118	118	5	288	286	95
	270	151										
	260	151										
AS 300 - 22	300	178	20 x M24 x 170	820	360	485	125	126	5	309	306	110
	290	178										
	280	178										
AS 320 - 22	320	248	20 x M27 x 170	1210	380	520	125	126	5	328	330	134
	300	248										
	280	248										
AS 340 - 22	340	275	21 x M27 x 180	1210	402	570	134	136	5	351	350	180
	320	275										
	300	275										
AS 360 - 22	360	290	21 x M27 x 180	1210	424	590	142	144	8	367	370	200
	340	290										
	320	290										
AS 390 - 22	390	363	20 x M30 x 190	1640	458	630	146	148	8	398	400	222
	370	363										
	350	363										
AS 420 - 22	420	407	21 x M30 x 210	1640	490	650	166	168	8	424	430	263
	400	407										
	380	407										
AS 440 - 22	440	426	21 x M30 x 220	1640	512	670	174	176	8	448	450	309
	420	426										
	400	426										

Further sizes on request, subject to technical changes.

\*Hole diameter can be freely chosen within given limitations.

\*\*Locking bolts: standard DINENISO4017/4014: Length for model C and BC, alternative DINENISO4762

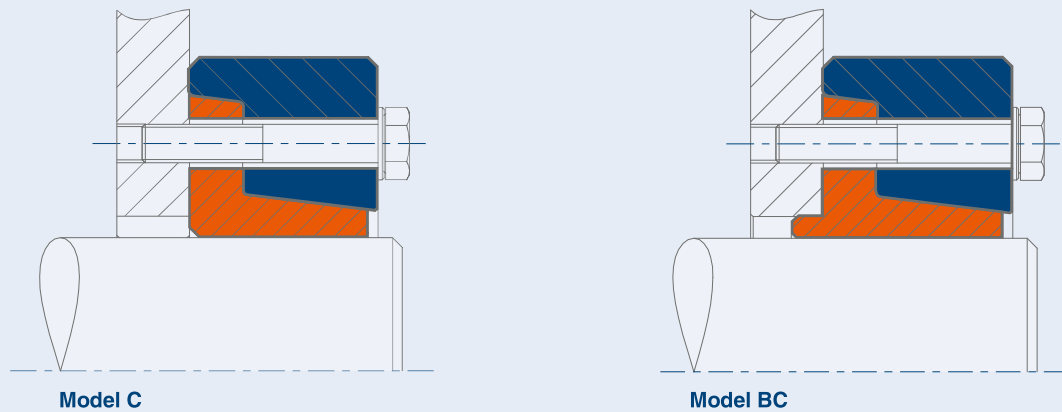
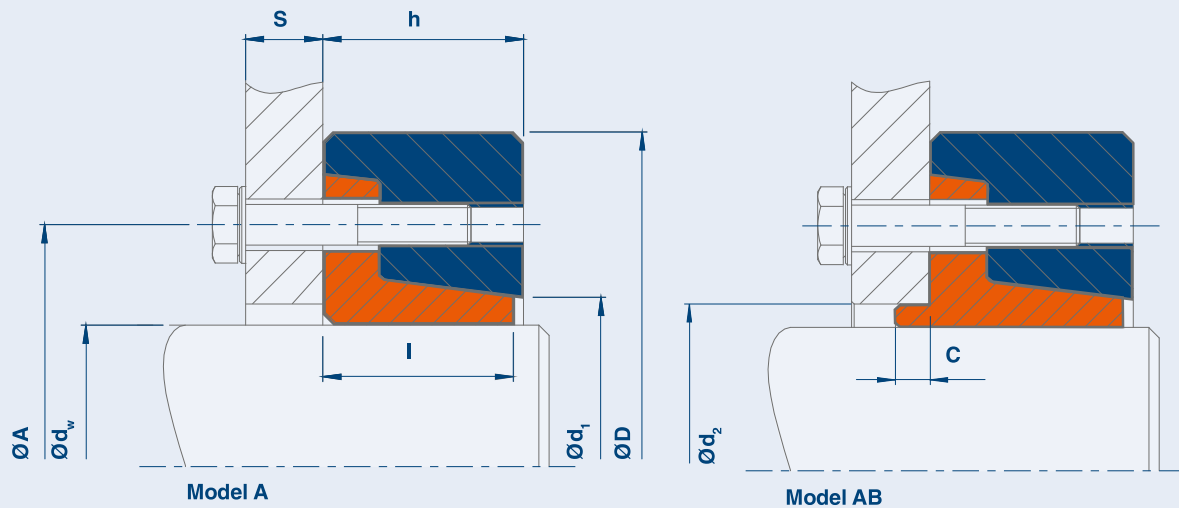
M16 and upwards with washers: DIN EN ISO 7416

**When ordering please state:** (Type x Ød<sub>w</sub> x desired model) flange width S for model A and AB

e.g. AS 300 - 22 x 290 x A S=50 mm



# STÜWE® External Locking Unit Type AS Series 23



## Code

$M_t$  Maximum transmissible torque of an external locking unit for  $P_{ax} = 0$

$M_a$  Required tightening torque of the locking bolts (see also "Installation and Removal Instructions")

### Information on fits:

$\text{Ø}d_w$ : h9  
 $\text{Ø}d_2$ : H7/g6

all models:  
 $S > 1.4 \times \text{Bolts-Ø}$

Roughness of all mating surfaces:  
 $Ra < 3.2 \mu\text{m}$

## External Locking Unit TYPE AS – Series 23

Type	d <sub>w</sub> <sup>*</sup> mm	M <sub>t</sub> kNm	B <sup>**</sup> Grade 10.9	M <sub>a</sub> Nm	A mm	D mm	l mm	h mm	C mm	d <sub>1</sub> mm	d <sub>2</sub> mm	kg
AS 50 - 23	50	3.3	7 x M12 x 45	100	84	115	29	30	3	58	53	2.0
	45	2.2										
	40	1.4										
AS 60 - 23	60	4.7	9 x M12 x 50	100	94	120	32	34	3	66	63	2.2
	55	3.5										
	50	2.3										
AS 70 - 23	70	9.4	8 x M16 x 60	240	112	148	38	40	4	79	74	3.9
	65	7.6										
	60	5.8										
AS 80 - 23	80	12	9 x M16 x 65	240	130	167	42	44	4	94	84	5.4
	75	10										
	70	8										
AS 90 - 23	90	18	12 x M16 x 70	240	144	185	48	50	4	104	94	7.4
	85	15										
	80	12										
AS 100 - 23	100	23	14 x M16 x 75	240	156	197	52	54	4	113	104	8.7
	95	19										
	90	16										
AS 110 - 23	110	27	10 x M20 x 90	470	166	215	56	58	5	124	116	11.0
	105	26										
	100	22										
AS 120 - 23	120	43	14 x M20 x 90	470	186	230	62	65	5	134	126	13.6
	115	38										
	110	33										
AS 140 - 23	140	56	16 x M20 x 100	470	216	290	73	76	5	160	146	29.0
	130	50										
	120	39										
AS 160 - 23	160	77	14 x M24 x 110	820	234	320	80	80	5	185	166	36.1
	150	77										
	140	64										
AS 180 - 23	180	104	16 x M24 x 130	820	276	340	91	94	5	205	186	45.3
	170	101										
	160	85										
AS 200 - 23	200	144	16 x M27 x 140	1210	290	370	95	96	5	226	206	53.7
	190	133										
	180	114										
AS 220 - 23	220	178	18 x M27 x 140	1210	320	405	96	96	5	246	226	64.3
	210	178										
	200	159										
AS 240 - 23	240	211	20 x M27 x 150	1210	340	430	109	110	5	267	246	81.0
	230	211										
	220	211										
AS 260 - 23	260	232	21 x M27 x 160	1210	356	460	118	118	5	289	286	109.4
	250	232										
	240	232										
AS 280 - 23	280	234	21 x M27 x 180	1210	360	485	124	125	5	304	306	116
	270	234										
	260	234										

\*Hole diameter can be freely chosen within given limitations.

\*\*Locking bolts: standard DINENISO4017/4014: Length for model C and BC, alternative DINENISO4762  
M16 and upwards with washers: DIN EN ISO 7416

**When ordering please state:** (Type x Ød<sub>w</sub> x desired model) flange width S for model A and AB  
e.g. AS 180 - 23 x 175 x A S=50

## External Locking Unit Type AS – Series 23

Type	d <sub>w</sub> * mm	M <sub>t</sub> kNm	B** Grade 10.9	M <sub>a</sub> Nm	A mm	D mm	l mm	h mm	C mm	d <sub>1</sub> mm	d <sub>2</sub> mm	kg
AS 300 - 23	300	247	21 x M27 x 180	1210	380	520	128	126	5	315	330	141
	290	247										
	280	247										
AS 320 - 23	320	299	24 x M27 x 180	1210	402	550	134	136	5	336	350	161
	310	299										
	300	299										
AS 340 - 23	340	315	24 x M27 x 180	1210	424	570	140	142	8	355	370	177
	330	315										
	320	315										
AS 360 - 23	360	410	24 x M30 x 190	1640	454	610	144	147	8	383	400	210
	350	410										
	340	410										
AS 390 - 23	390	439	24 x M30 x 200	1640	486	630	164	167	8	428	430	250
	380	439										
	360	439										
AS 420 - 23	420	457	24 x M30 x 220	1640	506	670	172	175	10	448	450	292
	410	457										
	390	457										
AS 440 - 23	440	562	28 x M30 x 220	1640	534	700	172	175	10	468	470	318
	420	562										
	400	562										

Further sizes on request, subject to technical changes.

\*Hole diameter can be freely chosen within given limitations.

\*\*Locking bolts: standard DINENISO4017/4014: Length for model C and BC, alternative DINENISO4762  
M16 and upwards with washers: DIN EN ISO 7416

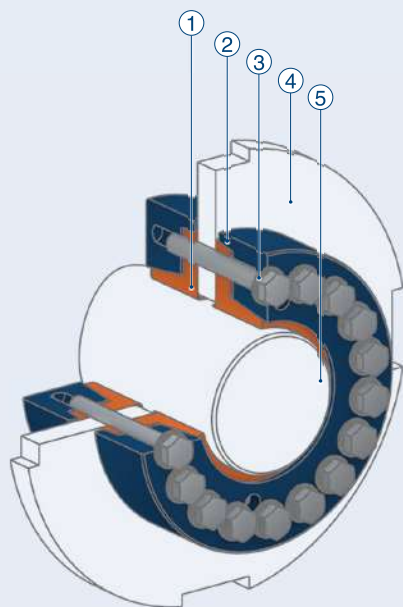
**When ordering please state:** (Type x Ød<sub>w</sub> x desired model) flange width S for model A and AB  
e.g. AS 320 - 23 x 320 x A S=90 mm

**You have not found what you are looking for in our comprehensive range of standard-products?  
We will be happy to promptly prepare any form of custom-made product and development innovation  
even using special materials such as 1.3974. Please feel free to contact us.**

# EXTERNAL LOCKING UNIT TYPE AS – SPECIAL SOLUTIONS

## STÜWE® Individual solution DAS

double AS for disc-shaped attachments with very heavy loads

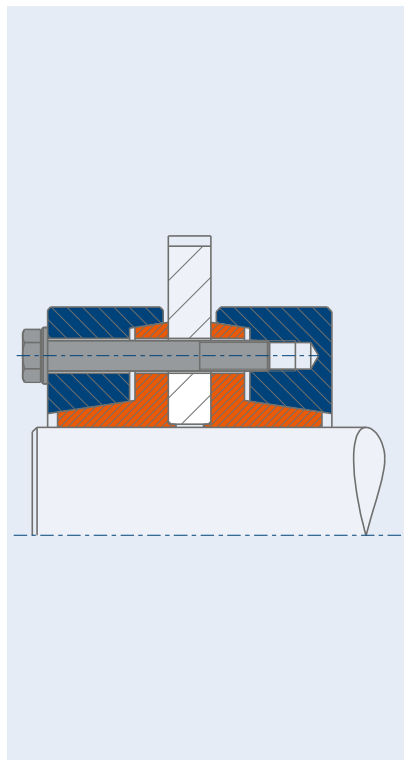


### Benefits

- Higher transmissible loads
- More accurate positioning of the disc

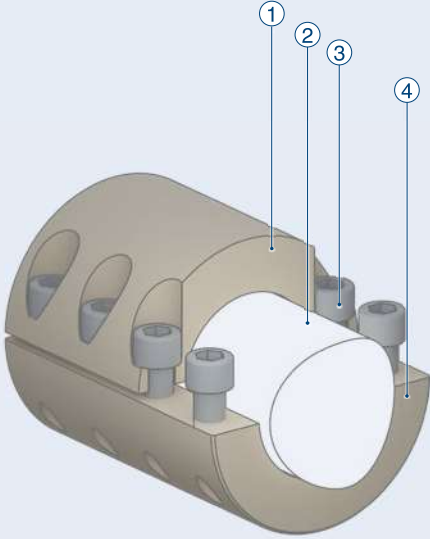
- ① Inner ring\*
- ② Outer ring\*
- ③ Locking bolts\* including washer as necessary\*
- ④ Disc-shaped attachment (e.g. a brake disc)
- ⑤ Shaft

\*Included with the delivery



# STÜWE® Clamping Element GAS

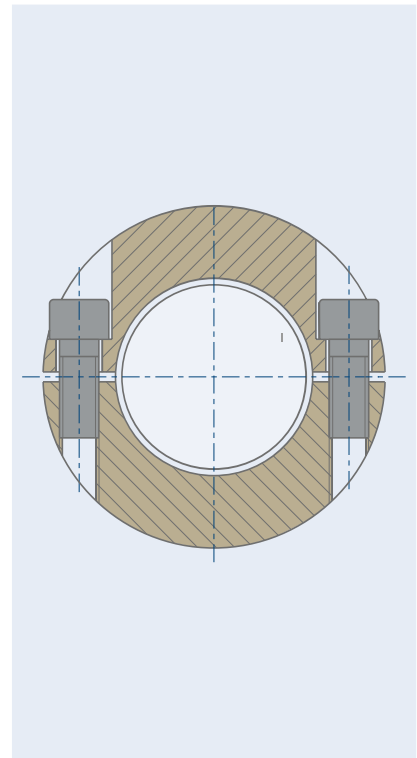
divided AS for the transmission of axial loads



- Radial installation and removal
- Space-saving installation
- Unattached to other components

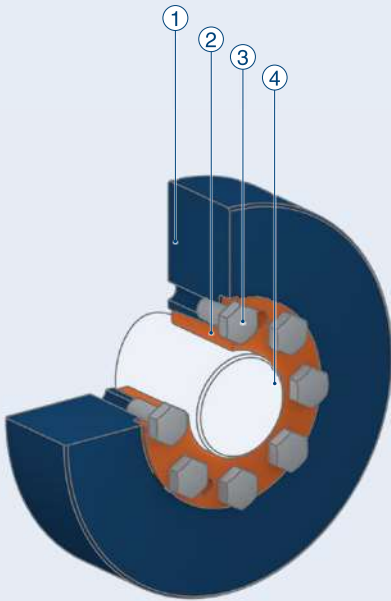
- ① Upper section\*
- ② Shaft
- ③ Locking bolts\*
- ④ Lower section\*

\*Included with the delivery



# STÜWE® AS as an Oscillating Weight

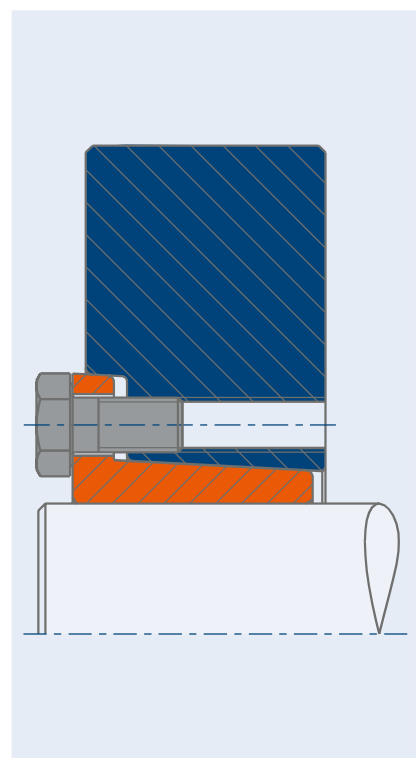
clamped swinging element as an energy store



- Design based on mass inertia
- Individual customizing

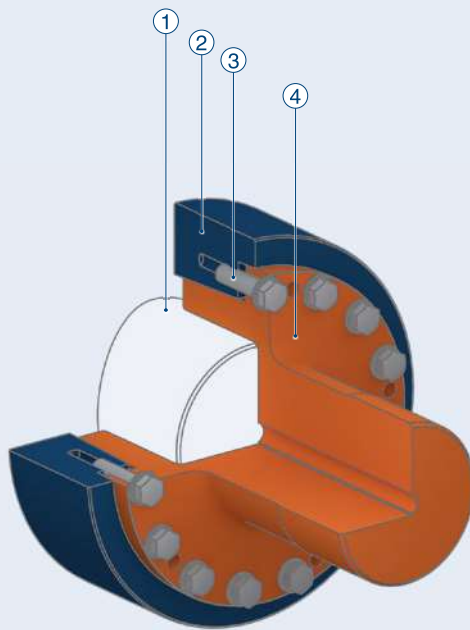
- ① Outer ring\*
- ② Inner ring\*
- ③ Locking bolts\* including washer as necessary\*
- ④ Shaft

\*Included with the delivery



# STÜWE® Adapter Flange AD

Adaption of clamping and bolt connections



## Benefits

- Less components
- Even shafts of unequal size can be connected
- Bridging of wide spaces
- Clamping element integrated

- ① Shaft
- ② Outer ring\*
- ③ Locking bolts\* including washer as necessary\*
- ④ Inner ring\*

\*Included with the delivery

