















Selection Tool on the Internet at www.maedler.de in the section **MÄDLER®-Tools**

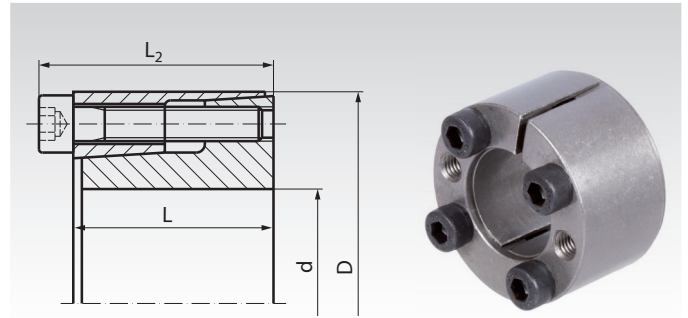
	Type	Smallest Product inner Ø and torque		Biggest Product inner Ø and torque		Assembly- time	Self- centering	Material	Page
	BAR	Ø 5mm	6Nm	Ø 100mm	11.790Nm	medium	yes	Steel	332
	BAR QPQ	Ø 5mm	6Nm	Ø 50mm	1900Nm	medium	yes	Steel QPQ	333
	BAR <small>STAINLESS</small>	Ø 6mm	3Nm	Ø 40mm	400Nm	medium	yes	Stainless Steel	334
	COM-A	Ø 19mm	270Nm	Ø 100mm	9.560Nm	long	no	Steel	335
	COM-A <small>STAINLESS</small>	Ø 20mm	110Nm	Ø 50mm	700Nm	long	no	Stainless Steel	336
	COM-AS	Ø 19mm	320Nm	Ø 100mm	11.300Nm	long	no	Steel	337
	COM-B	Ø 6mm	12Nm	Ø 100mm	14.300Nm	long	yes	Steel	338
	COM-B <small>STAINLESS</small>	Ø 10mm	22Nm	Ø 50mm	910Nm	long	yes	Stainless Steel	339
	COM-C	Ø 19mm	294Nm	Ø 100mm	9.400Nm	long	yes	Steel	340
	COM-CB1	Ø 18mm	310Nm	Ø 100mm	13.100Nm	long	yes	Steel	341
	COM-CB2	Ø 18mm	270Nm	Ø 100mm	9.800Nm	long	yes	Steel	342
	COM-CB3	Ø 14mm	120Nm	Ø 50mm	1.800Nm	long	yes	Steel	343
	COM-D	Ø 19mm	353Nm	Ø 100mm	15.000Nm	long	yes	Steel	344
	COM-L	Ø 25mm	810Nm	Ø 100mm	27.900Nm	long	yes	Steel	345

Type	Smallest Product inner Ø and torque		Biggest Product inner Ø and torque		Assembly- time	Self- centering	Material	Page
 COM-LL	Ø 25mm	900Nm	Ø 100mm	32900Nm	long	yes	Steel	346
 COM-LLH	Ø 42mm	3290Nm	Ø 120mm	38400Nm	long	yes	Steel	347
 COM-R	Ø 6mm	2Nm	Ø 120mm	6170Nm	long	no	Steel	348
 E	Ø 15mm	46Nm	Ø 50mm	1900Nm	short	yes	Steel	349
 E-N <i>STAINLESS</i>	Ø 15mm	46Nm	Ø 50mm	1900Nm	short	yes	Stainless Steel	349
 MSA	Ø 19mm	170Nm	Ø 50mm	1625Nm	short	yes	Steel	350
 MSD	Ø 15mm	55Nm	Ø 50mm	1900Nm	short	yes	Steel	351
 MSD-N <i>STAINLESS</i>	Ø 15mm	45Nm	Ø 50mm	1550Nm	short	yes	Stainless Steel	352
 MSM	Ø 6mm	5Nm	Ø 14mm	48Nm	short	yes	Steel	352
 MSM-N <i>STAINLESS</i>	Ø 6mm	5Nm	Ø 14mm	48Nm	short	yes	Stainless Steel	352
 SIG <i>STAINLESS</i>	Ø 4mm	3Nm	Ø 40mm	105Nm	short	yes	Stainless Steel	353
 SSG	Ø 14mm	61Nm	Ø 60mm	1290Nm	short	yes	Steel	354
 TT 5-16	Ø 5mm	9Nm	Ø 16mm	149Nm	short	yes	Steel	355
 TT 17-35	Ø 17mm	174Nm	Ø 35mm	681Nm	short	yes	Steel	355
 ST	Ø 10mm	39Nm	Ø 65mm	3940Nm	long	non	Steel	356
 ST-B	Ø 11mm	30Nm	Ø 75mm	6000Nm	long	no	Steel	357
 ST-R <i>STAINLESS</i>	Ø 10mm	22Nm	Ø 60mm	1450Nm	long	no	Stainless Steel	358
 ST-K	Ø 15mm	125Nm	Ø 100mm	5590Nm	medium	no	Steel	359
 Taper	Ø 10mm	66Nm	Ø 90mm	2600Nm	short	yes	Grey Cast Iron	360

Clamping Sets BAR

Material: 11SMnPb37.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For medium torques.
- Very good distribution of pressure.
- Very good self-centering.
- Self-releasing at dismounting.
- Also suitable for large hub and shaft tolerances.
- Slight axial offset possible during assembly.



Ordering Details: e.g.: Product No. 615 405 00, Clamping Set BAR 5 mm

Product No.	d mm	D mm	L mm	L ₂ mm	at T _A transmittable		Surface Pressure at Shaft		Surface Pressure at Hub		Tensioning Screw DIN 912-12.9 Fastening Torque T _A		Weight kg
					T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Size	Nm	Amount		
615 405 00	5	16	11	13,5	6	2	150	55	M2,5 x 10	1,2	3	0,012	
615 406 00	6	16	11	13,5	9	3	188	69	M2,5 x 10	1,2	3	0,012	
615 406 35	6,35	16	11	13,5	10	3	180	72	M2,5 x 10	1,2	3	0,012	
615 407 00	7	17	11	13,5	11	3	155	64	M2,5 x 10	1,2	3	0,013	
615 408 00	8	18	11	13,5	12	3	141	62	M2,5 x 10	1,2	3	0,015	
615 409 00	9	20	13	15,5	17	4	132	60	M2,5 x 12	1,2	4	0,020	
615 409 53	9,53	20	13	15,5	18	4	124	59	M2,5 x 12	1,2	4	0,020	
615 410 00	10	20	13	15,5	19	4	120	60	M2,5 x 12	1,2	4	0,019	
615 411 00	11	22	13	15,5	21	4	108	54	M2,5 x 12	1,2	4	0,024	
615 412 00	12	22	13	15,5	24	4	102	55	M2,5 x 12	1,2	4	0,022	
615 414 00	14	26	17	20	40	6	94	50	M3 x 16	2,1	4	0,039	
615 415 00	15	28	17	20	44	6	93	50	M3 x 16	2,1	4	0,044	
615 416 00	16	32	17	21	86	10	158	79	M4 x 16	4,9	4	0,067	
615 417 00	17	35	21	25	88	10	116	56	M4 x 20	4,9	4	0,090	
615 418 00	18	35	21	25	94	11	110	57	M4 x 20	4,9	4	0,087	
615 419 00	19	35	21	25	99	11	104	56	M4 x 20	4,9	4	0,083	
615 420 00	20	38	21	26	179	17	169	89	M5 x 20	10	4	0,10	
615 422 00	22	40	21	26	187	18	146	80	M5 x 20	10	4	0,11	
615 424 00	24	47	26	32	290	24	155	79	M6 x 25	17	4	0,20	
615 425 00	25	47	26	32	300	24	147	78	M6 x 25	17	4	0,19	
615 425 40	25,4	47	26	32	310	24	145	79	M6 x 25	17	4	0,18	
615 428 00	28	50	26	32	480	34	186	105	M6 x 25	17	6	0,22	
615 430 00	30	55	26	32	510	34	174	95	M6 x 25	17	6	0,27	
615 432 00	32	55	26	32	600	38	181	105	M6 x 25	17	6	0,25	
615 435 00	35	60	31	37	820	47	172	100	M6 x 30	17	8	0,36	
615 438 00	38	65	31	37	880	47	157	92	M6 x 30	17	8	0,43	
615 440 00	40	65	31	37	1000	50	171	99	M6 x 30	17	8	0,40	
615 442 00	42	75	36	44	1410	67	177	99	M8 x 35	40	6	0,67	
615 445 00	45	75	36	44	1510	67	165	99	M8 x 35	40	6	0,63	
615 448 00	48	80	36	44	2150	86	206	123	M8 x 35	40	8	0,74	
615 450 00	50	80	36	44	2150	89	190	118	M8 x 35	40	8	0,70	
615 455 00	55	85	42	52	2772	110	270	174	M8 x 40	40	8	0,77	
615 460 00	60	90	42	52	3060	120	248	166	M8 x 40	40	8	0,82	
615 465 00	65	95	42	52	3645	120	253	174	M8 x 40	40	9	0,88	
615 470 00	70	110	48	58	5724	180	283	182	M10 x 45	80	8	1,59	
615 475 00	75	115	48	58	6210	180	268	129	M10 x 45	80	8	1,67	
615 480 00	80	120	54	65	6660	190	260	130	M10 x 50	80	8	1,76	
615 485 00	85	125	54	65	7560	190	273	123	M10 x 50	80	9	1,85	
615 490 00	90	130	58	70	8100	200	233	121	M10 x 55	80	9	1,94	
615 495 00	95	135	58	70	9900	230	271	140	M10 x 55	80	10	2,02	
615 500 00	100	145	58	70	11790	260	265	186	M12 x 55	145	8	2,90	

T = transmittable torque at F_{ax} = 0.
 F_{ax} = transmittable axial force at T = 0.
 P_W = surface pressure onto the shaft.
 P_N = surface pressure onto the hub.
 T_A = fastening torque of the screws.

Fit, Surface

Shaft and hub up to tolerance h8/H8.
 Surface finish for shaft and hub < 12.5µm.

Mounting

The clamping set has to sit inside the bore by at least the measure „L“. Slightly oil the clamping set before mounting, do not use molybdenum disulphide or fat. Tighten the screws evenly and crosswise in several steps.

Demounting

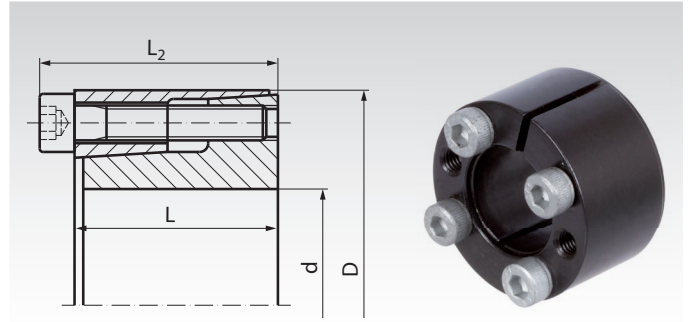
Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front ring, until the ring is released.

Hub Calculation and Selection Tool
 on the Internet at www.maedler.de
 in the section **MÄDLER®-Tools**

Clamping Sets BAR, QPQ-Coated

Material: 11SMnPb37.

- For fixing a hub on a shaft.
- **QPQ coated:** High corrosion resistance, improved fatigue strength, primarily food safe (further information see below).
- For medium torques.
- Self-centering.
- Slight axial offset possible during assembly.



Ordering Details: e.g.: Product No. 615 705 00, Clamping Set BAR QPQ, 5 mm Bore

Product No.	d mm	D mm	L mm	L ₂ mm	at T _A transmittable		Surface Pressure		Tensioning Screw DIN 912-12.9			Weight kg
					T Nm	F _{ax} kN	at Shaft P _W N/mm ²	at Hub P _N N/mm ²	Size	Fastening Torque T _A Nm	Amount	
615 705 00	5	16	11	13,5	6	2	150	55	M2,5 x 10	1,2	3	0,012
615 706 00	6	16	11	13,5	9	3	184	69	M2,5 x 10	1,2	3	0,012
615 706 35	6,35	16	11	13,5	10	3	180	72	M2,5 x 10	1,2	3	0,012
615 708 00	8	18	11	13,5	12	3	141	62	M2,5 x 10	1,2	3	0,015
615 709 00	9	20	13	15,5	17	4	132	60	M2,5 x 12	1,2	4	0,020
615 710 00	10	20	13	15,5	19	4	120	60	M2,5 x 12	1,2	4	0,019
615 711 00	11	22	13	15,5	21	4	108	54	M2,5 x 12	1,2	4	0,024
615 712 00	12	22	13	15,5	24	4	102	55	M2,5 x 12	1,2	4	0,022
615 714 00	14	26	17	20	40	6	94	50	M3 x 16	2,1	4	0,039
615 715 00	15	28	17	20	44	6	93	50	M3 x 16	2,1	4	0,044
615 716 00	16	32	17	21	86	10	158	79	M4 x 16	4,9	4	0,067
615 717 00	17	35	21	25	88	10	116	56	M4 x 20	4,9	4	0,090
615 718 00	18	35	21	25	94	11	110	57	M4 x 20	4,9	4	0,087
615 719 00	19	35	21	25	99	11	104	56	M4 x 20	4,9	4	0,080
615 720 00	20	38	21	26	179	17	169	89	M5 x 20	10	4	0,100
615 722 00	22	40	21	26	187	18	146	90	M5 x 20	10	4	0,110
615 725 00	25	47	26	32	300	24	147	78	M6 x 25	17	4	0,190
615 730 00	30	55	26	32	510	32	174	95	M6 x 25	17	6	0,270
615 735 00	35	60	31	37	820	47	172	100	M6 x 30	17	8	0,360
615 738 00	38	65	31	37	880	47	157	92	M6 x 30	17	8	0,430
615 740 00	40	65	31	37	1000	50	171	99	M6 x 30	17	8	0,400
615 750 00	50	80	36	44	2150	89	190	118	M8 x 35	40	8	0,700

* Screws with special coating.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

What is QPQ Nitro Carburising?

QPQ means:

Q = Quench (nitrocarburising followed by oxidising cooling process).

P = Polish (mechanical polishing up to desired surface finish before nitrocarburising).

Q = Quench (Oxidising to increase the corrosion resistance).

Salt-bath nitro carburising using the TENIFER method is, in many cases, a good alternative to other surface layer treatments as case hardening or hard plating. The principle task of the QPQ surface refinement is to protect machine components of all industries against wear and corrosion, but it also meets other functional requirements as, e.g., improving the endurance strength.

Mounting und Hub Calculation

Notes regarding fit, surface structure, mounting, demounting and hub calculation see page 332.

QPQ Surface Properties

Very good corrosion resistance, better than hard chrome or chem. nickel. Corrosion resistance in the salt spray test SS CASS in accordance with DIN 50021.

Layer thickness of 10 - 25 µm possible. For medium operational demands we recommend a layer thickness of approx. 15 µm at a 90 minute treatment.

Only very small changes in dimensions (only 5 µm), as the surface modification is achieved through diffusion and not application.

Surface hardness same as clamping set material ≥ 350 HV.

Improved wear resistance, no fretting corrosion, no cold shut.

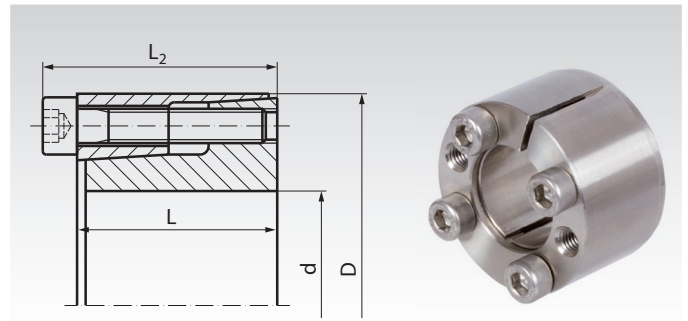
Increased endurance strength, sometimes up to 100% higher.

Is completely safe to use with food as long as there is no contact with any acidic substances with a pH-value of ≤ 4.

Clamping Sets BAR, Stainless

Material: Stainless steel 1.4057.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- Stainless Steel.
- For low torques.
- Very good distribution of pressure.
- Very good self-centering.
- Self-releasing at dismounting.
- Also suitable for large hub and shaft tolerances.
- Slight axial offset possible during assembly.



Ordering Details: e.g.: Product No. 615 994 06, Clamping Set BAR Stainless 6 mm

Product No.	d mm	D mm	L mm	L ₂ mm	at T _A transmittable		Surface Pressure at Shaft		Surface Pressure at Hub		Tensioning Screw DIN 912 Fastening Torque T _A		Weight kg
					T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Size	Nm			
615 994 06	6	16	11	13,5	3	0,9	49	19	M2,5	0,5	0,012		
615 994 07	7	17	11	13,5	3	0,9	42	17	M2,5	0,5	0,013		
615 994 08	8	18	11	13,5	4	0,9	37	17	M2,5	0,5	0,015		
615 994 09	9	20	13	15,5	6	1,2	37	17	M2,5	0,5	0,020		
615 994 10	10	20	13	15,5	6	1,2	33	17	M2,5	0,5	0,019		
615 994 11	11	22	13	15,5	7	1,2	30	15	M2,5	0,5	0,024		
615 994 12	12	22	13	15,5	7	1,2	26	15	M2,5	0,5	0,022		
615 994 14	14	26	17	20	13	1,9	28	15	M3	0,9	0,039		
615 994 15	15	28	17	20	14	1,9	26	14	M3	0,9	0,044		
615 994 16	16	32	17	21	28	3,5	45	23	M4	2,2	0,066		
615 994 17	17	35	21	25	30	3,5	34	17	M4	2,2	0,092		
615 994 18	18	35	21	25	32	3,5	32	17	M4	2,2	0,087		
615 994 19	19	35	21	25	34	3,5	31	17	M4	2,2	0,084		
615 994 20	20	38	21	26	55	5,5	45	24	M5	4,2	0,100		
615 994 22	22	40	21	26	61	5,5	41	23	M5	4,2	0,110		
615 994 24	24	47	26	32	96	8,0	44	23	M6	7,3	0,200		
615 994 25	25	47	26	32	100	8,0	43	23	M6	7,3	0,190		
615 994 28	28	50	26	32	210	15,0	57	32	M6	7,3	0,220		
615 994 30	30	55	26	32	220	15,0	54	29	M6	7,3	0,250		
615 994 32	32	55	26	32	240	15,0	50	29	M6	7,3	0,250		
615 994 35	35	60	29	35	350	20,0	55	32	M6	7,3	0,360		
615 994 38	38	65	29	35	380	20,0	51	29	M6	7,3	0,430		
615 994 40	40	65	29	35	400	20,0	48	29	M6	7,3	0,400		

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit, Surface

Shaft and hub up to tolerance h8/H8.
Surface finish for shaft and hub < 10µm.

Mounting

The clamping set has to sit inside the bore by at least the measure „L“. Slightly oil the clamping set before mounting, do not use molybdenum disulphide or fat. Tighten the screws evenly and crosswise in several steps.

Demounting

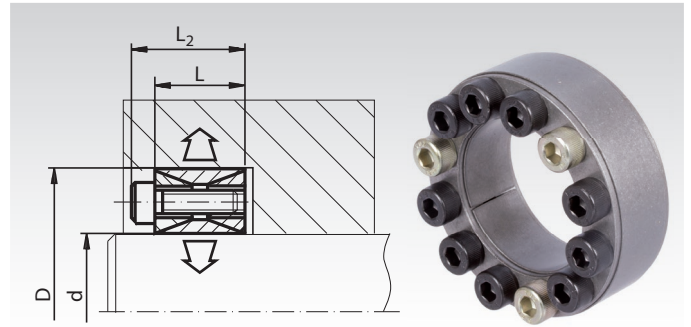
Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front ring, until the ring is released.

Hub Calculation and Selection Tool
on the Internet at www.maedler.de
in the section **MÄDLER®-Tools**

Clamping Sets COM-A

Material: Steel.

- For fixing a hub (e.g. V-belt pulley or similar) on a shaft.
- For medium high torques.
- Not self-centering.
- Self-releasing at dismounting.
- No axial movement during mounting.



Ordering Details: e.g.: Product No. 615 519 00, Clamping Set COM-A, 19 mm

Product No.	d mm	D mm	L mm	L ₂ mm	T Nm	F _{ax} kN	P _w N/mm ²	P _N N/mm ²	Screws 12.9 Number x Size	T _A Nm	Weight kg
615 519 00	19	47	20	26	270	28	221	93	8 x M6	15	0,20
615 520 00	20	47	20	26	290	28	232	98	8 x M6	15	0,22
615 522 00	22	47	20	26	290	30	200	90	8 x M6	15	0,23
615 524 00	24	50	20	26	380	32	216	103	8 x M6	15	0,23
615 525 00	25	50	20	26	400	33	200	100	8 x M6	15	0,23
615 528 00	28	55	20	26	520	36	208	104	10 x M6	15	0,27
615 530 00	30	55	20	26	520	37	183	99	10 x M6	15	0,26
615 532 00	32	60	20	26	690	43	209	112	12 x M6	15	0,30
615 535 00	35	60	20	26	770	44	196	113	12 x M6	15	0,30
615 538 00	38	65	20	26	940	49	202	116	14 x M6	15	0,35
615 540 00	40	65	20	26	980	49	190	115	14 x M6	15	0,32
615 542 00	42	75	24	32	1560	74	233	129	12 x M8	37	0,57
615 545 00	45	75	24	32	1700	74	216	127	12 x M8	37	0,55
615 548 00	48	80	24	32	1830	74	214	122	12 x M8	37	0,60
615 550 00	50	80	24	32	1830	75	196	118	12 x M8	37	0,56
615 555 00	55	85	24	32	2490	89	218	140	14 x M8	37	0,65
615 560 00	60	90	24	32	2640	92	192	126	14 x M8	37	0,66
615 565 00	65	95	24	32	3240	99	202	136	16 x M8	37	0,72
615 570 00	70	110	28	38	4700	124	218	135	14 x M10	70	1,27
615 575 00	75	115	28	38	4800	135	185	119	14 x M10	70	1,33
615 580 00	80	120	28	38	5400	137	185	124	14 x M10	70	1,35
615 585 00	85	125	28	38	6300	146	195	130	16 x M10	70	1,45
615 590 00	90	130	28	38	6500	148	178	124	16 x M10	70	1,55
615 595 00	95	135	28	38	7800	165	193	134	18 x M10	70	1,65
615 600 00	100	145	33	45	9560	187	195	135	14 x M12	127	2,20

More sizes up to d=1,000mm for 1,980,000Nm are available.

Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_w = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

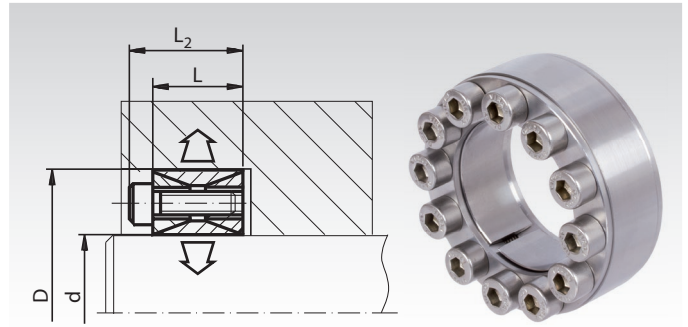
Due to the cone angle, the clamping set is usually released once all screws have been fully unfastened. There are three large auxiliary threads cut into the front ring, which serve to remove this ring.

Clamping Sets COM-A, Stainless

Material: Stainless steel 1.4057.



- For fixing a hub (e.g. V-belt pulley or similar) on a shaft.
- For low torques.
- Not self-centering.
- Self-releasing at dismounting.
- No axial movement during mounting.



Ordering Details: e.g.: Product No. 615 995 20, Clamping Set COM-A, stainless, 20 mm

Product No.	d mm	D mm	L mm	L ₂ mm	T Nm	F _{ax} kN	P _w N/mm ²	P _N N/mm ²	Screws A2 DIN 912	T _A Nm	Weight kg
615 995 20	20	47	20	26	110	11	133	57	M6	8	0,21
615 995 22	22	47	20	26	120	11	121	57	M6	8	0,20
615 995 24	24	50	20	26	150	12	125	60	M6	8	0,22
615 995 25	25	50	20	26	155	12	120	60	M6	8	0,22
615 995 28	28	55	20	26	170	12	107	55	M6	8	0,27
615 995 30	30	55	20	26	185	12	100	55	M6	8	0,25
615 995 32	32	60	20	26	265	16	125	67	M6	8	0,30
615 995 35	35	60	20	26	290	16	114	67	M6	8	0,29
615 995 38	38	65	20	26	390	20	131	77	M6	8	0,33
615 995 40	40	65	20	26	410	20	125	77	M6	8	0,32
615 995 45	45	75	24	32	635	28	129	78	M8	18	0,53
615 995 50	50	80	24	32	700	28	116	73	M8	18	0,56

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_w = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness max. 16µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

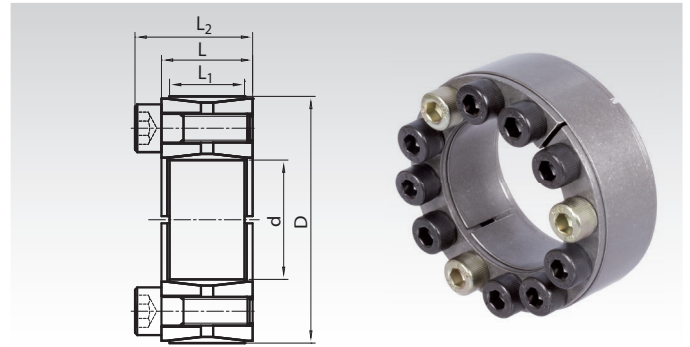
Demounting

Due to the cone angle, the clamping set is usually released once all screws have been fully unfastened. There are three large auxiliary threads cut into the front ring, which serve to remove this ring.

Clamping Sets COM-AS

Material: Steel.

- For fixing a hub (e.g. V-belt pulley or similar) on a shaft.
- For medium high torques. Like COM-A, but with slotted rings.
- Not self-centering.
- Self-releasing at dismounting.
- No axial movement during mounting.



Ordering Details: e.g.: Product No. 615 300 19, Clamping Set COM-AS, 19 mm

Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Screws 12.9 Number x Size	T _A Nm	Weight kg
615 300 19	19	47	20	17	26	320	33	225	98	8 x M6	15	0,20
615 300 20	20	47	20	17	26	340	33	237	103	8 x M6	15	0,22
615 300 22	22	47	20	17	26	340	35	204	95	8 x M6	15	0,23
615 300 24	24	50	20	17	26	450	38	220	108	8 x M6	15	0,23
615 300 25	25	50	20	17	26	470	39	204	105	8 x M6	15	0,23
615 300 28	28	55	20	17	26	610	42	212	109	10 x M6	15	0,27
615 300 30	30	55	20	17	26	610	44	187	104	10 x M6	15	0,26
615 300 32	32	60	20	17	26	810	51	213	118	12 x M6	15	0,30
615 300 35	35	60	20	17	26	910	52	200	119	12 x M6	15	0,30
615 300 38	38	65	20	17	26	1110	58	206	122	14 x M6	15	0,35
615 300 40	40	65	20	17	26	1160	58	194	121	14 x M6	15	0,32
615 300 42	42	75	24	20	32	1840	87	238	135	12 x M8	37	0,57
615 300 45	45	75	24	20	32	2000	87	220	133	12 x M8	37	0,55
615 300 48	48	80	24	20	32	2200	87	218	128	12 x M8	37	0,60
615 300 50	50	80	24	20	32	2200	89	200	124	12 x M8	37	0,56
615 300 55	55	85	24	20	32	2900	105	222	147	14 x M8	37	0,65
615 300 60	60	90	24	20	32	3100	109	196	132	14 x M8	37	0,66
615 300 65	65	95	24	20	32	3800	117	206	143	16 x M8	37	0,72
615 300 70	70	110	28	24	38	5500	146	222	142	14 x M10	70	1,27
615 300 75	75	115	28	24	38	5700	159	189	125	14 x M10	70	1,33
615 300 80	80	120	28	24	38	6400	162	189	130	14 x M10	70	1,35
615 300 85	85	125	28	24	38	7400	172	199	137	16 x M10	70	1,45
615 300 90	90	130	28	24	38	7700	175	182	130	16 x M10	70	1,55
615 300 95	95	135	28	24	38	9200	195	197	141	18 x M10	70	1,65
615 301 00	100	145	33	26	45	11300	221	199	142	14 x M12	127	2,2

More sizes up to d=1,000mm for 2,336,000Nm are available.

Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.

Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

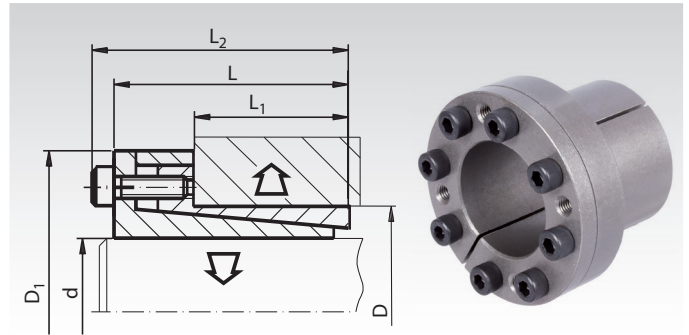
Demounting

Due to the cone angle, the clamping set is usually released once all screws have been fully unfastened. There are three large auxiliary threads cut into the front ring, which serve to remove this ring.

Clamping Sets COM-B

Material: Steel.

- For fixing a hub (e.g. timing belt pulley or similar) on a shaft.
- For medium torques.
- Also suitable for small hub diameters.
- Self-centering.
- Self-locking.
- No axial movement during mounting.



Ordering Details: e.g.: Product No. 615 606 00, Clamping Set COM-B, 6 mm

Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	D ₁ mm	T Nm	F _{ax} kN	P _w N/mm ²	P _N N/mm ²	Screw 12.9 Number x Size	T _A Nm	Weight kg
615 606 00	6	14	21	10	24	25	12	4	185	80	3 x M3	2	0,05
615 608 00	8	15	25	12	29	27	29	7	207	111	3 x M4	5	0,07
615 609 00	9	16	26	14	30	28	42	10	197	110	4 x M4	5	0,07
615 610 00	10	16	26	14	30	28	48	10	179	112	4 x M4	5	0,07
615 611 00	11	18	26	14	30	32	51	10	165	102	4 x M4	5	0,07
615 612 00	12	18	26	14	30	32	55	10	152	100	4 x M4	5	0,08
615 614 00	14	23	26	14	30	38	68	10	130	80	4 x M4	5	0,11
615 615 00	15	24	36	16	42	45	133	18	194	121	3 x M6	17	0,22
615 616 00	16	24	36	16	42	45	140	18	180	118	3 x M6	17	0,22
615 618 00	18	26	38	18	44	47	200	22	180	125	4 x M6	17	0,23
615 619 00	19	27	38	18	44	49	210	22	172	121	4 x M6	17	0,25
615 620 00	20	28	38	18	44	50	220	22	160	115	4 x M6	17	0,26
615 622 00	22	32	45	25	51	54	250	22	113	78	4 x M6	17	0,35
615 624 00	24	34	45	25	51	56	270	22	106	76	4 x M6	17	0,36
615 625 00	25	34	45	25	51	56	280	22	101	76	4 x M6	17	0,34
615 628 00	28	39	45	25	51	61	450	32	130	93	6 x M6	17	0,42
615 630 00	30	41	45	25	51	62	500	32	133	95	6 x M6	17	0,43
615 632 00	32	43	45	25	51	65	540	35	115	86	6 x M6	17	0,49
615 635 00	35	47	52	32	58	69	800	44	106	81	8 x M6	17	0,55
615 638 00	38	50	52	32	58	72	900	45	105	79	8 x M6	17	0,62
615 640 00	40	53	52	32	58	75	900	45	92	68	8 x M6	17	0,64
615 642 00	42	55	52	32	58	78	1000	47	90	70	8 x M6	17	0,85
615 645 00	45	59	70	45	78	86	1800	80	105	81	8 x M8	41	1,05
615 648 00	48	62	70	45	78	87	1950	81	102	78	8 x M8	41	1,13
615 650 00	50	65	70	45	78	92	2020	81	96	72	8 x M8	41	1,26
615 655 00	55	71	80	55	88	98	2730	95	89	68	9 x M8	41	1,53
615 660 00	60	77	80	55	88	104	2870	98	76	61	9 x M8	41	1,66
615 665 00	65	84	80	55	88	111	3190	99	73	57	9 x M8	41	1,90
615 670 00	70	90	96	65	106	119	5150	147	88	69	9 x M10	83	3,0
615 675 00	75	95	96	65	106	126	5710	153	82	66	9 x M10	83	3,1
615 680 00	80	100	96	65	106	131	8260	196	103	82	12 x M10	83	3,3
615 685 00	85	106	96	65	106	137	8670	204	97	77	12 x M10	83	3,6
615 690 00	90	112	96	65	106	144	8800	206	88	74	12 x M10	83	4,0
615 695 00	95	120	96	65	106	149	11300	237	103	82	14 x M10	83	4,7
615 700 00	100	125	96	65	106	154	14300	285	114	90	18 x M10	83	5,2

More sizes up to d=130mm for 24,800Nm are available.

Price and delivery time on request.

T = transmittable torque at $F_{ax} = 0$.

F_{ax} = transmittable axial force at $T = 0$.

P_w = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.

Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

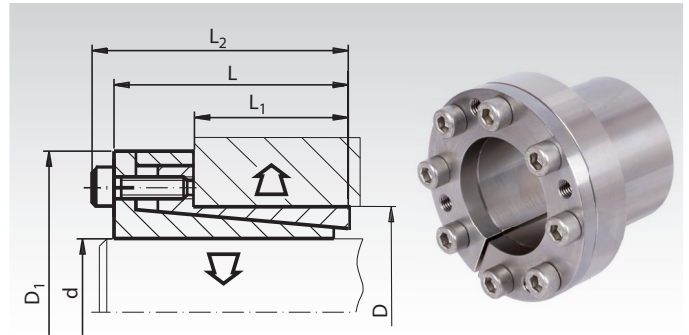
Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front flange, until the flange is released.

Clamping Sets COM-B, Stainless

Material: Stainless steel 1.4057.



- For fixing a hub (e.g. timing belt pulley or similar) on a shaft.
- For low torques.
- Also suitable for small hub diameters.
- Self-centering.
- Self-locking.
- No axial movement during mounting.



Ordering Details: e.g.: Product No. 615 995 10, Clamping Set COM-B, stainless, 10 mm

Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	D ₁ mm	T Nm	F _{ax} kN	P _w N/mm ²	P _N N/mm ²	Screw A2 DIN 912	T _A Nm	Weight kg
615 996 10	10	16	27	14	31	29	22	4	82	51	M4	2	0,12
615 996 12	12	18	28	14	32	32	26	4	69	46	M4	2	0,14
615 996 14	14	23	28	14	32	38	30	4	59	36	M4	2	0,15
615 996 15	15	24	37	16	43	44	73	10	107	67	M6	8	0,22
615 996 16	16	24	37	16	43	44	78	10	101	67	M6	8	0,22
615 996 18	18	26	39	18	45	47	87	10	79	55	M6	8	0,23
615 996 19	19	27	39	18	45	49	92	10	75	53	M6	8	0,25
615 996 20	20	28	39	18	45	50	97	10	71	51	M6	8	0,25
615 996 22	22	32	46	25	52	54	105	10	47	32	M6	8	0,32
615 996 24	24	34	46	25	52	56	175	15	64	45	M6	8	0,34
615 996 25	25	34	46	25	52	56	180	15	62	45	M6	8	0,35
615 996 28	28	39	46	25	52	61	200	15	55	40	M6	8	0,41
615 996 30	30	41	46	25	52	62	220	15	51	38	M6	8	0,41
615 996 32	32	43	46	25	52	65	310	19	64	48	M6	8	0,48
615 996 35	35	47	53	32	59	66	340	19	46	34	M6	8	0,55
615 996 38	38	50	53	32	59	72	370	19	42	32	M6	8	0,58
615 996 40	40	53	53	32	59	75	390	19	40	30	M6	8	0,63
615 996 45	45	59	70	45	78	86	820	36	48	36	M8	18	1,03
615 996 50	50	65	70	45	78	92	910	36	43	33	M8	18	1,27

Hub Calculation and Selection Tool
on the Internet at www.maedler.de
in the section **MÄDLER®-Tools**

T = transmittable torque at F_{ax} = 0.
F_{ax} = transmittable axial force at T = 0.
P_w = surface pressure onto the shaft.
P_N = surface pressure onto the hub.
T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness max. 16µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front flange, until the flange is released.

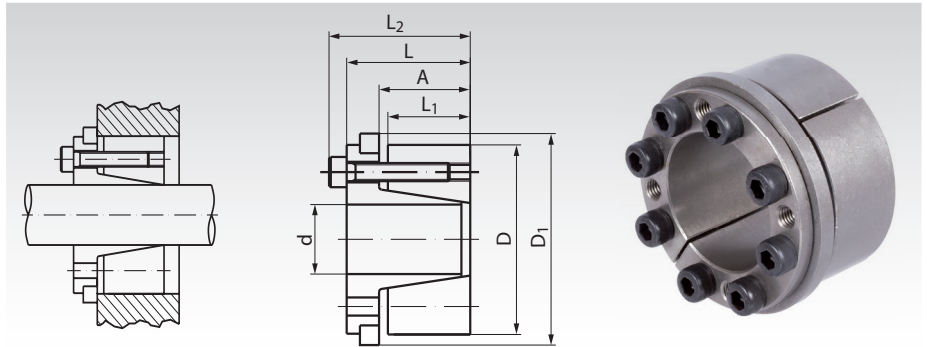
Clamping sets COM-C

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For medium to high torques.
- Self-centering.
- No axial offset.

Concentricity: 0.02 to 0.04 mm.

Ordering Details: e.g.: Product No. 615 571 19, Clamping set COM-C, 19 mm



Product No.	d mm	D mm	L ₁ mm	A mm	L mm	L ₂ mm	D ₁ mm	at T _A transmittable		Surface Pressure		Screws DIN 912 Number x size	T _A Nm	Weight kg
								T Nm	F _{ax} kN	Shaft P _w N/mm ²	Hub P _N N/mm ²			
615 571 19	19	47	26	31	39	45	53	294	20	228	96	4x M6x20	17	0,45
615 571 20	20	47	26	31	39	45	53	320	33	172	74	6x M6x20	17	0,37
615 571 22	22	47	26	31	39	45	53	366	33	158	74	6x M6x20	17	0,40
615 571 24	24	50	26	31	39	45	56	380	34	139	67	6x M6x20	17	0,45
615 571 25	25	50	26	31	39	45	56	430	35	144	72	6x M6x20	17	0,44
615 571 28	28	55	26	31	39	45	61	480	35	128	66	6x M6x20	17	0,50
615 571 30	30	55	26	31	39	45	61	530	35	120	68	6x M6x20	17	0,45
615 571 32	32	60	26	31	39	45	66	680	43	138	76	8x M6x20	17	0,59
615 571 35	35	60	26	31	39	45	66	780	43	134	79	8x M6x20	17	0,53
615 571 38	38	65	26	31	39	45	71	860	45	125	70	8x M6x20	17	0,62
615 571 40	40	65	26	31	39	45	71	860	45	115	67	8x M6x20	17	0,60
615 571 42	42	75	30	36	47	55	81	1350	60	138	77	6x M8x30	41	1,05
615 571 45	45	75	30	36	47	55	81	1450	60	129	77	6x M8x30	41	0,98
615 571 48	48	80	30	36	47	55	86	1550	60	125	73	6x M8x30	41	1,30
615 571 50	50	80	30	36	47	55	86	1570	70	109	69	6x M8x30	41	1,00
615 571 55	55	85	30	36	47	55	91	2400	80	142	95	8x M8x30	41	1,10
615 571 60	60	90	30	36	47	55	96	2500	80	125	86	8x M8x30	41	1,20
615 571 65	65	95	30	36	47	55	102	2700	90	113	78	8x M8x30	41	1,25
615 571 70	70	110	40	46	61	71	117	4500	130	120	77	8x M10x35	83	2,40
615 571 75	75	115	40	46	61	71	122	5000	130	119	79	8x M10x35	83	2,70
615 571 80	80	120	40	46	61	71	127	5300	130	109	74	8x M10x35	83	2,70
615 571 85	85	125	40	46	61	71	132	7000	160	129	89	10x M10x35	83	3,00
615 571 90	90	130	40	46	61	71	137	7400	160	123	83	10x M10x35	83	3,00
615 571 95	95	135	40	46	61	71	142	7500	170	109	81	10x M10x35	83	3,00
615 572 00	100	145	46	52	70	82	153	9400	190	112	78	8x M12x40	145	5,50

More sizes up to d=180mm for 34,600Nm are available.

Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_w = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness hub/shaft max.
12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use MoS2 or grease.
Tighten the screws evenly and crosswise in several steps to the set torque.

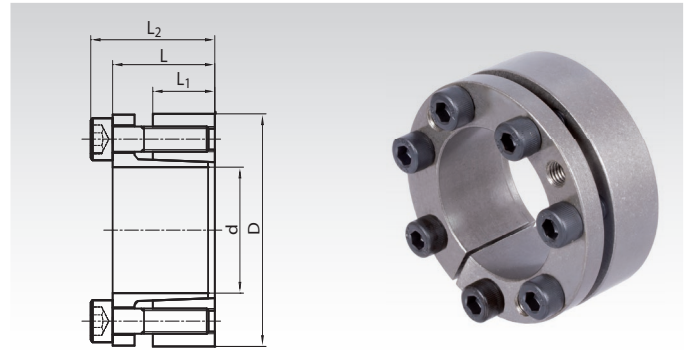
Demounting

Remove all tensioning screws and screw them into the unused forcing threads of the front flange evenly and crosswise in several steps, until the flange is released.

Clamping Sets COM-CB1

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For medium high torques.
- Self-centering.
- Self-locking.
- Axial movement during mounting.



Ordering Details: e.g.: Product No. 615 573 18, Clamping Set COM-CB1, 18 mm

Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Screws 12.9 Number x Size	T _A Nm	Weight kg
615 573 18	18	47	28	17	34	310	28	278	121	5 x M6	14	0,29
615 573 19	19	47	28	17	34	331	29	261	116	5 x M6	14	0,29
615 573 20	20	47	28	17	34	370	35	294	125	5 x M6	14	0,29
615 573 22	22	47	28	17	34	370	37	247	114	5 x M6	14	0,29
615 573 24	24	50	28	17	34	470	40	255	125	5 x M6	14	0,30
615 573 25	25	50	28	17	34	600	44	308	152	6 x M6	14	0,29
615 573 28	28	55	28	17	34	600	46	243	123	6 x M6	14	0,35
615 573 30	30	55	28	17	34	610	46	217	120	6 x M6	14	0,35
615 573 32	32	60	28	17	34	940	58	286	150	8 x M6	14	0,40
615 573 35	35	60	28	17	34	1030	58	262	150	8 x M6	14	0,40
615 573 38	38	65	28	17	34	1140	60	248	144	8 x M6	14	0,40
615 573 40	40	65	28	17	34	1170	60	227	141	8 x M6	14	0,40
615 573 42	42	75	33	20	41	2150	100	315	179	7 x M8	35	0,70
615 573 45	45	75	33	20	41	2220	100	293	172	7 x M8	35	0,70
615 573 48	48	80	33	20	41	2340	100	284	168	7 x M8	35	0,75
615 573 50	50	80	33	20	41	2400	100	242	149	7 x M8	35	0,70
615 573 55	55	85	33	20	41	3080	110	270	174	8 x M8	35	0,77
615 573 60	60	90	33	20	41	3400	120	248	166	8 x M8	35	0,84
615 573 65	65	95	33	20	41	4050	120	253	174	9 x M8	35	0,88
615 573 70	70	110	40	24	50	6360	180	283	182	8 x M10	70	1,58
615 573 75	75	115	40	24	50	6900	180	268	129	8 x M10	70	1,60
615 573 80	80	120	40	24	50	7400	190	260	130	8 x M10	70	1,70
615 573 85	85	125	40	24	50	8400	190	273	142	9 x M10	70	2,0
615 573 90	90	130	40	24	50	9000	200	233	121	9 x M10	70	2,2
615 573 95	95	135	40	24	50	11000	230	271	140	10 x M10	70	1,9
615 574 00	100	145	44	26	56	13100	260	265	186	8 x M12	125	3,0

More sizes up to d=200mm for 69,000Nm are available.

Price and delivery time on request.

T = transmittable torque at $F_{ax} = 0$.

F_{ax} = transmittable axial force at $T = 0$.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

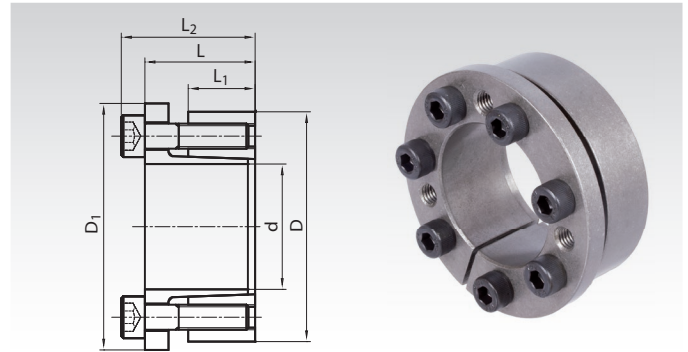
Demounting

Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front flange, until the flange is released.

Clamping Sets COM-CB2

Material: Steel.

- For fixing a hub (e.g. spur toothed gear or similar) on a shaft.
- For medium high torques.
- Self-centering.
- Self-locking.
- No axial movement during mounting.



Ordering Details: e.g.: Product No. 615 575 18, Clamping Set COM-CB2, 18 mm

Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	D ₁ mm	T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Screws 12.9 Number x Size	T _A Nm	Weight kg
615 575 18	18	47	28	17	34	54	270	28	212	94	5 x M6	17	0,30
615 575 19	19	47	28	17	34	54	274	28	215	93	5 x M6	17	0,30
615 575 20	20	47	28	17	34	54	280	28	218	94	5 x M6	17	0,32
615 575 22	22	47	28	17	34	54	300	28	200	95	5 x M6	17	0,32
615 575 24	24	50	28	17	34	57	330	28	178	89	5 x M6	17	0,35
615 575 25	25	50	28	17	34	57	420	34	210	105	6 x M6	17	0,32
615 575 28	28	55	28	17	34	62	480	34	196	98	6 x M6	17	0,37
615 575 30	30	55	28	17	34	62	510	35	177	96	6 x M6	17	0,37
615 575 32	32	60	28	17	34	67	730	40	222	116	8 x M6	17	0,39
615 575 35	35	60	28	17	34	67	770	44	194	112	8 x M6	17	0,39
615 575 38	38	65	28	17	34	72	830	45	181	103	8 x M6	17	0,46
615 575 40	40	65	28	17	34	72	940	50	182	109	8 x M6	17	0,46
615 575 42	42	75	33	20	41	82	1590	70	234	130	7 x M8	41	0,72
615 575 45	45	75	33	20	41	82	1630	70	213	124	7 x M8	41	0,70
615 575 48	48	80	33	20	41	87	1740	70	198	119	7 x M8	41	0,80
615 575 50	50	80	33	20	41	87	1830	80	195	120	7 x M8	41	0,77
615 575 55	55	85	33	20	41	92	2210	80	192	125	8 x M8	41	0,80
615 575 60	60	90	33	20	41	97	2410	80	178	120	8 x M8	41	0,88
615 575 65	65	95	33	20	41	102	3090	90	192	131	9 x M8	41	0,93
615 575 70	70	110	40	24	50	117	4620	130	208	134	8 x M10	83	1,60
615 575 75	75	115	40	24	50	122	4900	130	191	123	8 x M10	83	1,76
615 575 80	80	120	40	24	50	127	5000	130	176	119	8 x M10	83	1,81
615 575 85	85	125	40	24	50	132	6300	150	195	135	9 x M10	83	1,90
615 575 90	90	130	40	24	50	137	6800	150	187	131	9 x M10	83	2,0
615 575 95	95	135	40	24	50	142	7700	160	191	132	10 x M10	83	2,1
615 576 00	100	145	44	26	56	152	9800	190	202	141	8 x M12	145	2,8

More sizes up to d=200mm for 48,000Nm are available.

Price and delivery time on request.

T = transmittable torque at $F_{ax} = 0$.

F_{ax} = transmittable axial force at $T = 0$.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

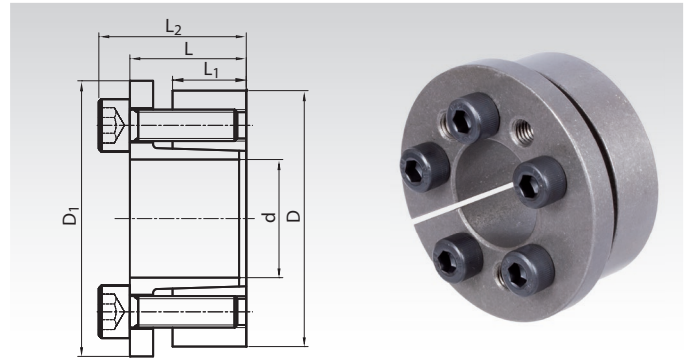
Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front flange, until the flange is released.

Clamping Sets COM-CB3

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- 3 Ranges of sizes, for middle, higher and very high torques.
- Compact size in axial direction.
- Self-centering.
- Self-locking.
- No axial movement during mounting.

Ordering Details: e.g.: Product No. 615 577 14, Clamping Set COM-CB3, 14 mm



Product No.	d	D	L	L ₁	L ₂	D ₁	T	F _{ax}	P _W	P _N	Screws 12.9	T _A	Weight
Light series	mm	mm	mm	mm	mm	mm	Nm	kN	N/mm ²	N/mm ²	Number x Size	Nm	kg
615 577 14	14	55	30	17	38	62	120	17	207	56	3 x M8	25	0,49
615 577 16	16	55	30	17	38	62	136	18	175	53	3 x M8	25	0,48
615 577 18	18	55	30	17	38	62	150	18	163	56	3 x M8	25	0,47
615 577 19	19	55	30	17	38	62	170	19	158	58	3 x M8	25	0,47
615 577 20	20	55	30	17	38	62	160	17	141	53	3 x M8	25	0,46
615 577 22	22	55	30	17	38	62	290	26	189	77	3 x M8	35	0,45
615 577 24	24	55	30	17	38	62	290	24	165	73	3 x M8	35	0,43
615 577 25	25	55	30	17	38	62	300	24	160	73	3 x M8	35	0,42
615 577 28	28	55	30	17	38	62	430	31	173	89	3 x M8	41	0,40
615 577 30	30	55	30	17	38	62	450	30	158	86	3 x M8	41	0,38
Medium series													
615 578 24	24	65	30	17	38	72	430	40	237	87	5 x M8	30	0,63
615 578 25	25	65	30	17	38	72	440	40	221	86	5 x M8	30	0,62
615 578 28	28	65	30	17	38	72	610	40	248	107	5 x M8	35	0,59
615 578 30	30	65	30	17	38	72	590	40	222	103	5 x M8	35	0,57
615 578 32	32	65	30	17	38	72	660	40	202	100	5 x M8	35	0,56
615 578 35	35	65	30	17	38	72	950	50	243	131	5 x M8	41	0,52
615 578 38	38	65	30	17	38	72	1000	50	218	127	5 x M8	41	0,49
615 578 40	40	65	30	17	38	72	1090	50	213	131	5 x M8	41	0,47
Heavy series													
615 579 30	30	80	33	20	41	87	800	50	239	90	7 x M8	30	1,02
615 579 32	32	80	33	20	41	87	860	50	226	90	7 x M8	30	1,01
615 579 35	35	80	33	20	41	87	1100	60	239	105	7 x M8	35	0,98
615 579 38	38	80	33	20	41	87	1200	60	223	106	7 x M8	35	0,94
615 579 40	40	80	33	20	41	87	1200	60	203	102	7 x M8	35	0,91
615 579 42	42	80	33	20	41	87	1500	70	228	120	7 x M8	41	0,88
615 579 45	45	80	33	20	41	87	1600	70	215	121	7 x M8	41	0,84
615 579 48	48	80	33	20	41	87	1700	70	197	118	7 x M8	41	0,78
615 579 50	50	80	33	20	41	87	1800	70	195	122	7 x M8	41	0,74

T = transmittable torque at $F_{ax} = 0$.
 F_{ax} = transmittable axial force at $T = 0$.
 P_W = surface pressure onto the shaft.
 P_N = surface pressure onto the hub.
 T_A = fastening torque of the screws.

Hub Calculation and Selection Tool
 on the Internet at www.maedler.de
 in the section **MÄDLER®-Tools**

Fit

Shaft h8, Hub H8.
 Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front flange, until the flange is released.

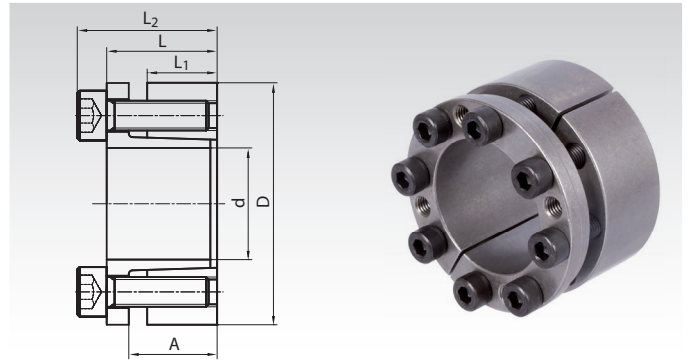
Clamping Sets COM-D

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For high torques.
- Self-centering.
- Slight axial offset possible during assembly.

Concentricity: 0.02 to 0.04 mm.

Ordering Details: e.g.: Product No. 615 570 19,
Clamping set COM-D, 19 mm



Product No.	d mm	D mm	L ₁ mm	A mm	L mm	L ₂ mm	at T _A transmittable		Surface Pressure		Screws DIN 912 12.9 Number x size	T _A Nm	Weight kg
							T Nm	F _{ax} kN	P _w N/mm ²	P _N N/mm ²			
615 570 19	19	47	26	31	39	45	353	31	228	98	6x M6x25	17	0,39
615 570 20	20	47	26	31	39	45	530	52	274	118	6x M6x25	17	0,37
615 570 22	22	47	26	31	39	45	582	52	247	116	6x M6x25	17	0,35
615 570 24	24	50	26	31	39	45	650	53	244	120	6x M6x25	17	0,40
615 570 25	25	50	26	31	39	45	680	54	216	110	6x M6x25	17	0,38
615 570 28	28	55	26	31	39	45	760	56	200	105	6x M6x25	17	0,45
615 570 30	30	55	26	31	39	45	850	56	192	109	6x M6x25	17	0,43
615 570 32	32	60	26	31	39	45	1130	70	228	121	8x M6x25	17	0,53
615 570 35	35	60	26	31	39	45	1220	71	206	120	8x M6x25	17	0,50
615 570 38	38	65	26	31	39	45	1370	71	198	114	8x M6x25	17	0,60
615 570 40	40	65	26	31	39	45	1410	72	184	112	8x M6x25	17	0,56
615 570 42	42	75	30	36	47	55	2170	100	219	122	6x M8x30	41	0,95
615 570 45	45	75	30	36	47	55	2330	100	204	122	6x M8x30	41	0,92
615 570 48	48	80	30	36	47	55	2480	100	194	117	6x M8x30	41	1,10
615 570 50	50	80	30	36	47	55	2560	100	182	116	6x M8x30	41	1,00
615 570 55	55	85	30	36	47	55	3700	130	222	141	8x M8x30	41	1,10
615 570 60	60	90	30	36	47	55	3800	140	192	130	8x M8x30	41	1,16
615 570 65	65	95	30	36	47	55	4600	140	194	131	8x M8x30	41	1,20
615 570 70	70	110	40	46	61	71	7700	220	209	133	8x M10x35	83	2,30
615 570 75	75	115	40	46	61	71	8100	220	192	126	8x M10x35	83	2,50
615 570 80	80	120	40	46	61	71	8600	220	182	121	8x M10x35	83	2,70
615 570 85	85	125	40	46	61	71	11600	270	214	148	10x M10x35	83	2,90
615 570 90	90	130	40	46	61	71	12000	270	200	135	10x M10x35	83	3,20
615 570 95	95	135	40	46	61	71	13000	280	196	134	10x M10x35	83	3,50
615 571 00	100	145	46	52	70	82	15000	300	173	120	8x M12x40	145	4,00

More sizes up to d=180mm for 58,900Nm are available.

Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_w = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness hub/shaft max.
12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use MoS2 or grease.
Tighten the screws evenly and crosswise in several steps to the set torque.

Demounting

Remove all tensioning screws and screw them into the unused forcing threads of the front tensioning ring, until it is released.

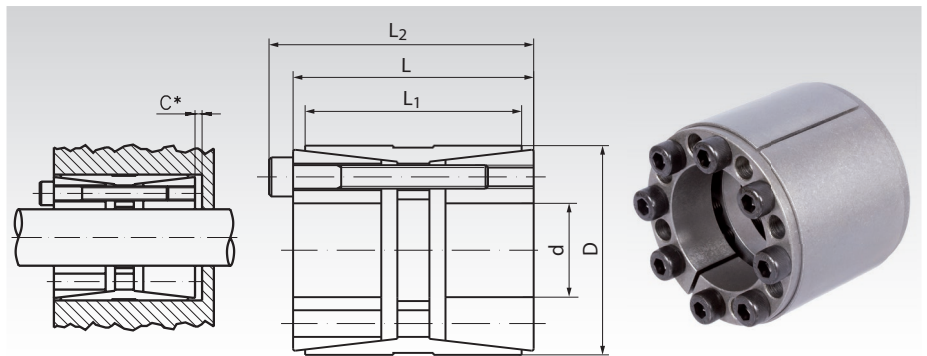
Clamping Sets COM-L

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For very high torques.
- Self-centering.
- Slight axial offset possible during assembly.

Concentricity: 0.02 to 0.04 mm.

Ordering Details: e.g.: Product No. 615 511 25,
Clamping set COM-L, 25 mm



Product No.	d mm	D mm	L ₁ mm	L mm	C* mm	L ₂ mm	at T _A transmittable		Surface Pressure	Surface Pressure	Screws DIN 912 12.9 Number x size	T _A Nm	Weight kg
							T Nm	F _{ax} kN	Shaft P _w N/mm ²	Hub P _N N/mm ²			
615 511 25	25	55	32	40	4	46	810	65	288	98	6x M6x35	17	0,35
615 511 28	28	55	32	40	4	46	950	65	268	102	6x M6x35	17	0,42
615 511 30	30	55	32	40	4	46	970	68	241	98	6x M6x35	17	0,40
615 511 35	35	60	44	54	5	60	1240	70	157	83	7x M6x45	17	0,60
615 511 38	38	75	44	54	5	62	2780	145	263	117	7x M8x50	41	1,15
615 511 40	40	75	44	54	5	62	3020	146	293	121	7x M8x50	41	0,59
615 511 42	42	75	44	54	5	62	3150	151	248	116	7x M8x50	41	1,25
615 511 45	45	75	44	54	5	62	3390	151	261	121	7x M8x50	41	0,74
615 511 48	48	80	56	64	4	72	3920	159	161	96	8x M8x55	41	1,30
615 511 50	50	80	56	64	4	72	4110	163	156	97	8x M8x55	41	1,26
615 511 55	55	85	56	64	4	72	4370	164	137	89	8x M8x55	41	1,36
615 511 60	60	90	56	64	4	72	6320	211	167	111	10x M8x55	41	1,46
615 511 65	65	95	56	64	4	72	7100	217	160	109	10x M8x55	41	1,55
615 511 70	70	110	70	78	4	88	11730	314	184	117	10x M10x60	83	2,9
615 511 75	75	115	70	78	5	88	11900	340	159	104	10x M10x60	83	3,0
615 511 80	80	120	70	78	5	88	16400	392	196	130	12x M10x60	83	3,3
615 511 85	85	125	70	78	5	88	16600	400	175	119	12x M10x60	83	3,4
615 511 90	90	130	70	78	5	88	18000	400	169	116	12x M10x60	83	3,5
615 511 95	95	135	70	78	5	88	19000	412	160	112	12x M10x60	83	3,7
615 512 00	100	145	90	100	6	112	27900	559	165	113	12x M12x80	145	5,5

* When using in a stepped bore, the clearance C is to be foreseen for demounting.

More sizes up to d=300mm for 444,000Nm are available.

Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_w = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness hub/shaft max.
12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use MoS2 or grease.
Tighten the screws evenly and crosswise in several steps to the set torque.
To ease mounting the outer ring and the rear tensioning ring can be fixed with screws via the forcing thread.

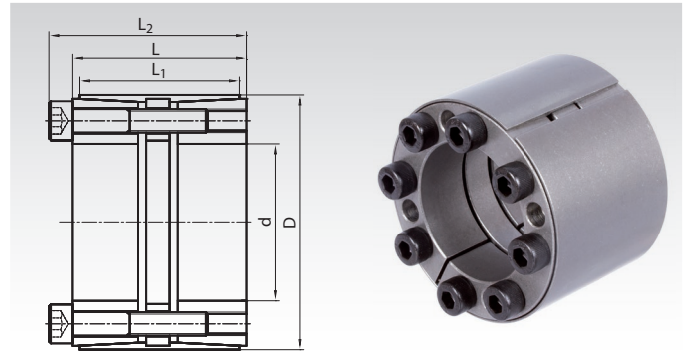
Demounting

Remove all tensioning screws and screw them into the unused forcing threads of the front tensioning ring, until it is released.
Then screw in the screws into the unused forcing threads of the outer ring, until the rear tensioning ring is released.

Clamping Sets COM-LL

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For very high torques.
- Self-centering.
- Self-locking.
- Axial movement during mounting.



Ordering Details: e.g.: Product No. 615 513 25, Clamping Set COM-LL, 25 mm

Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Screws 12.9 Number x Size	T _A Nm	Weight kg
615 513 25	25	50	45	39	51	900	70	245	122	6 x M6	17	0,50
615 513 28	28	55	45	39	51	1010	70	219	111	6 x M6	17	0,60
615 513 30	30	55	45	39	51	1100	70	204	111	6 x M6	17	0,60
615 513 35	35	60	45	39	51	1340	76	175	102	8 x M6	17	0,70
615 513 38	38	65	45	39	51	1810	120	161	94	10 x M6	17	0,70
615 513 40	40	65	45	39	51	1920	120	153	94	10 x M6	17	0,70
615 513 42	42	75	64	56	72	2970	141	188	105	8 x M8	41	1,00
615 513 45	45	75	64	56	72	3150	141	175	105	8 x M8	41	0,90
615 513 48	48	80	64	56	72	4000	166	164	98	8 x M8	41	1,40
615 513 50	50	80	64	56	72	4850	192	159	102	8 x M8	41	1,26
615 513 55	55	85	64	56	72	5810	220	140	93	9 x M8	41	1,36
615 513 60	60	90	64	56	72	7460	249	170	117	10 x M8	41	1,46
615 513 65	65	95	64	56	72	8400	256	163	114	10 x M8	41	1,55
615 513 70	70	110	78	70	88	13800	371	188	123	10 x M10	83	2,9
615 513 75	75	115	78	70	88	14000	401	162	109	10 x M10	83	3,0
615 513 80	80	120	78	70	88	19400	463	200	137	12 x M10	83	3,3
615 513 85	85	125	78	70	88	19600	472	179	125	12 x M10	83	3,4
615 513 90	90	130	78	70	88	21200	472	172	122	12 x M10	83	3,5
615 513 95	95	135	78	70	88	22400	486	163	118	12 x M10	83	3,7
615 514 00	100	145	100	90	112	32900	660	168	119	12 x M12	145	5,5

More sizes up to d=300mm for 524,000Nm are available.

Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

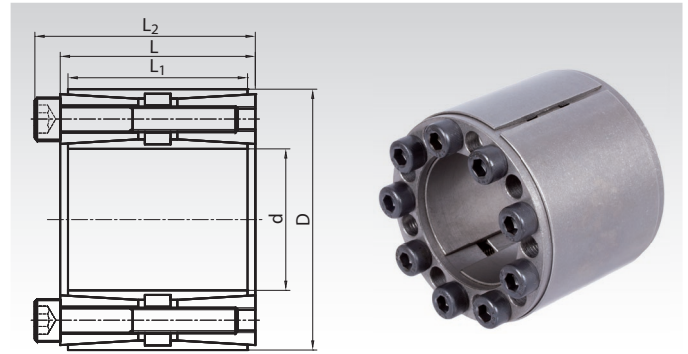
Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front flange, until the flange is released.

Clamping Sets COM-LLH

Material: Steel.

- For fixing a hub (e.g. sprocket or similar) on a shaft.
- For very high torques.
- Very good distribution of pressure.
- High resistant against bending forces.
- Self-centering.
- Self-locking.
- No axial movement during mounting.

Ordering Details: e.g.: Product No. 615 580 42, Clamping Set COM-LLH, 42 mm



Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Screws 12.9 Number x Size	T _A Nm	Weight kg
615 580 42	42	75	64	56	72	3290	147	175	103	8 x M8	41	1,25
615 580 45	45	75	64	56	72	3500	147	157	95	8 x M8	41	1,30
615 580 48	48	80	64	56	72	3670	149	143	90	8 x M8	41	1,50
615 580 50	50	80	64	56	72	3800	161	141	91	8 x M8	41	1,40
615 580 55	55	85	64	56	72	4430	167	140	88	8 x M8	41	1,50
615 580 60	60	90	64	56	72	5590	182	130	96	10 x M8	41	1,50
615 580 65	65	95	64	56	72	6020	182	134	91	10 x M8	41	1,60
615 580 70	70	110	78	70	88	10200	290	162	100	10 x M10	83	3,0
615 580 75	75	115	78	70	88	11660	308	157	101	10 x M10	83	3,1
615 580 80	80	120	78	70	88	14000	351	166	109	12 x M10	83	3,5
615 580 85	85	125	78	70	88	16200	374	170	113	12 x M10	83	3,5
615 580 90	90	130	78	70	88	16780	380	159	107	12 x M10	83	3,8
615 580 95	95	135	78	70	88	18410	389	158	107	12 x M10	83	4,0
615 581 00	100	145	100	90	112	26600	533	158	109	12 x M12	145	6,0
615 581 10	110	155	100	90	112	29200	533	142	101	12 x M12	145	6,2
615 581 20	120	165	100	90	112	38400	641	157	114	14 x M12	145	6,8

More sizes up to d=600mm for 977,000Nm are available.
Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.
F_{ax} = transmittable axial force at T = 0.
P_W = surface pressure onto the shaft.
P_N = surface pressure onto the hub.
T_A = fastening torque of the screws.

Hub Calculation and Selection Tool
on the Internet at www.maedler.de
in the section MÄDLER®-Tools

Fit

Shaft h8, Hub H8.
Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

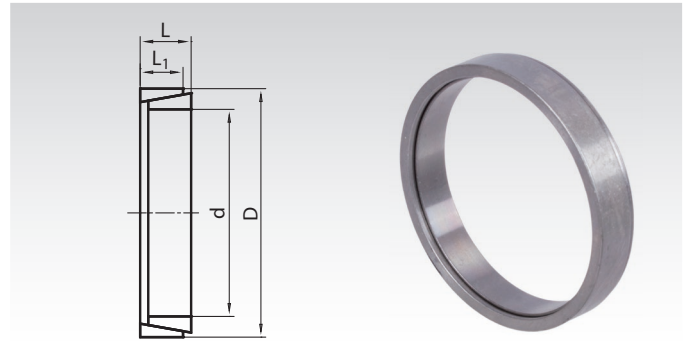
Demounting

Remove all tensioning screws and screw them into the (usually unused) forcing thread of the front flange, until the flange is released.

Clamping Sets COM-R

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For lower to medium torques.
- Not self-centering.
- Loose clamping rings. For use with customer's pressure sleeves and customer's screws.
- Up to 4 clamping sets can be used in line.
- Versatile usage, for customized solutions.



Ordering Details: e.g.: Product No. 615 000 06, Clamping Set COM-R, 6 mm

Product No.	d mm	D mm	L mm	L ₁ mm	T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	F _A kN	Weight kg
615 000 06	6	9	4,5	3,7	2	0,83	116	76	4	0,002
615 000 07	7	10	4,5	3,7	3	0,85	101	67	5	0,002
615 000 08	8	11	4,5	3,7	5	1,22	125	94	6	0,002
615 000 09	9	12	4,5	3,7	8	1,83	146	109	15	0,002
615 000 10	10	13	4,5	3,7	10	1,83	130	101	16	0,002
615 000 12	12	15	4,5	3,7	11	1,91	115	90	16	0,002
615 000 14	14	18	6,3	5,3	23	3,31	120	94	26	0,005
615 000 15	15	19	6,3	5,3	25	3,34	113	88	27	0,005
615 000 16	16	20	6,3	5,3	28	3,40	110	89	27	0,006
615 000 17	17	21	6,3	5,3	29	3,59	102	82	27	0,006
615 000 18	18	22	6,3	5,3	33	3,68	102	82	33	0,007
615 000 19	19	24	6,3	5,3	47	4,96	133	105	33	0,007
615 000 20	20	25	6,3	5,3	55	5,54	140	109	33	0,009
615 000 22	22	26	6,3	5,3	65	5,88	132	113	34	0,007
615 000 24	24	28	6,3	5,3	73	5,89	130	110	34	0,008
615 000 25	25	30	6,3	5,3	73	6,02	117	97	37	0,009
615 000 28	28	32	6,3	5,3	85	6,13	112	97	40	0,010
615 000 30	30	35	6,3	5,3	90	6,14	99	84	40	0,012
615 000 32	32	36	6,3	5,3	127	7,99	126	112	44	0,011
615 000 35	35	40	7,0	6,0	166	9,20	121	107	54	0,016
615 000 38	38	44	7,0	6,0	186	9,84	113	98	60	0,021
615 000 40	40	45	8,0	6,6	226	10,8	113	103	70	0,021
615 000 42	42	48	8,0	6,6	226	11,3	106	91	75	0,026
615 000 45	45	52	10,0	8,6	364	16,2	108	98	110	0,045
615 000 48	48	55	10,0	8,6	589	24	160	139	110	0,043
615 000 50	50	57	10,0	8,6	608	25	152	131	110	0,045
615 000 55	55	62	10,0	8,6	700	25	146	130	120	0,049
615 000 60	60	68	12,0	10,4	830	28	120	106	160	0,07
615 000 65	65	73	12,0	10,4	970	30	117	102	170	0,09
615 000 70	70	79	14,0	12,2	1.310	37	119	105	210	0,12
615 000 75	75	84	14,0	12,2	1.440	39	114	99	230	0,12
615 000 80	80	91	17,0	15,0	2.160	54	123	103	300	0,21
615 000 85	85	96	17,0	15,0	2.450	58	122	107	320	0,21
615 000 90	90	101	17,0	15,0	2.700	60	119	104	330	0,22
615 000 95	95	106	17,0	15,0	2.900	61	114	105	340	0,23
615 001 00	100	114	21,0	18,7	4.160	83	119	104	460	0,39
615 001 10	110	124	21,0	18,7	5.000	91	116	102	475	0,42
615 001 20	120	134	21,0	18,7	6.170	103	122	107	475	0,46

More sizes up to d=500mm for 270,000Nm are available.

Price and delivery time on request.

Several sets in line

Several sets can be mounted in line. T and F_A shown in the table are for one set.

At 2 sets: T_{ges.} = T x 1,6.

At 3 sets: T_{ges.} = T x 1,9.

At 4 sets: T_{ges.} = T x 2,1.

Calculation the screws

The screw size can be chosen. The number of screws must be calculated.

Number of screws = F_{A ges.} : F_Σ

F_{A ges.} = Number of sets x F_A

F_A see data table above.

F_Σ see data table on the right.

Axial Screw Force F_Σ and Fastening torque

Screw	Axial Screw Force F _Σ in kN			Fastening Torque T _A in Nm		
	8.8	10.9	12.9	8.8	10.9	12.9
M4	3,9	5,8	6,7	3,0	4,4	5,1
M5	6,4	9,4	11,0	5,9	8,7	10
M6	9,0	12,2	15,5	10	15	18
M8	16,5	24,3	28,4	25	36	43
M10	26,3	38,7	42,2	49	72	84
M12	38,4	56,5	66,0	85	125	145
M14	52,5	77,5	90,5	135	200	235

Fit

Shaft h8, Hub H8.

Surface roughness max. 12.5µm.

T = transmittable torque.

F_{ax} = transmittable axial force.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

F_A = required axial preload force.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

Remove all tensioning screws. Then, due to the cone angle, the clamping set is usually released. If not, use a wheel puller or use carefully a rubber hammer to loosen the wheel from the clamping rings.

Clamping Bushes E and E-N

Material E: High-quality steel.
Material E-N: Stainless steel 1.405.



The clamping bush consists of a double-walled steel sleeve filled with a pressure medium, and a flange part. Inside the flange there is a screw and a piston with seal to build up compression.

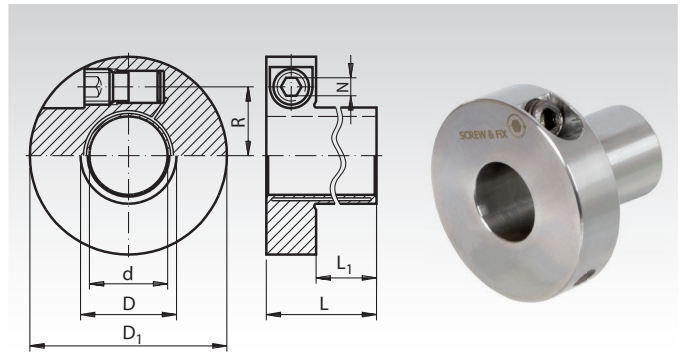
Function: When the thrust screw is tightened, the sleeve expands uniformly against shaft and hub, creating a rigid connection through frictional force. When the thrust screw is loosened, the bush returns to its initial position and can be easily disassembled.

Concentricity: 0.02 mm.

Tolerances: Shaft h7 for $d = 15$ mm.
 Shaft k6-h7 for $d = 19, 22, 24, 28$ and 38 mm.
 Shaft h8 for the other diameters d .
 Hub H7.

Temperature range: -30 °C to 85 °C.

Ordering Details: e.g.: Product No. 615 915 00, Clamping Bush E, 15 mm



$P_W \approx 90\text{N/mm}^2$
 $P_N \approx 70\text{N/mm}^2$

Product No. Design E Steel	Dimensions					at T_A transmittable			Screw 12.9*			Moment of Inertia J $\text{kgm}^2 \cdot 10^{-3}$	Weight kg	
	d mm	D mm	D_1 mm	L mm	L_1 mm	Torque T Nm	Axial Force F_{ax} kN	Radial Force F_r kN	Size DIN 915	R mm	N mm			T_A Nm
615 915 00	15	18	46	39	25	46	6,1	0,5	M10	15,1	5	5	0,043	0,16
615 915 87	15,875	19	47	40	26	53	6,7	0,5	M10	15,6	5	5	0,047	0,17
615 919 00	19	23	50,5	42	28	85	8,9	1	M10	17,4	5	5	0,064	0,20
615 919 05	19,05	23	50,5	42	28	85	8,9	1	M10	17,4	5	5	0,064	0,20
615 920 00	20	24	51,5	44	30	110	11	1	M10	18	5	5	0,070	0,21
615 922 00	22	27	55,5	46	32	130	11	1,2	M10	19,3	5	5	0,097	0,25
615 924 00	24	29	57,5	47	33	190	15	1,4	M10	20,3	5	5	0,112	0,27
615 925 00	25	30	58	49	35	230	18	1,5	M10	20,8	5	5	0,117	0,27
615 925 40	25,4	31	59	49	35	190	15	1,5	M10	21,2	5	5	0,127	0,29
615 928 00	28	34	63	52	38	280	20	1,8	M10	22,6	5	5	0,170	0,34
615 930 00	30	36	64,5	54	40	380	25	2	M10	23,6	5	5	0,189	0,35
615 931 75	31,75	39	68,5	56	42	430	27	2,2	M10	24,8	5	5	0,249	0,42
615 932 00	32	39	68,5	56	42	440	27	2,2	M10	24,8	5	5	0,249	0,42
615 935 00	35	42	73	59	45	640	36	2,5	M10	26,4	5	5	0,325	0,48
615 938 00	38	46	84,5	72	52	890	46	2,8	M16	31	8	21	0,761	0,84
615 940 00	40	48	86,5	75	55	1100	55	3	M16	32	8	21	0,844	0,88
615 945 00	45	54	93	78	58	1400	62	3,5	M16	34,8	8	21	1,170	1,05
615 950 00	50	60	98,5	80	60	1900	76	4,5	M16	37,5	8	21	1,524	1,20

Product No. Design E-N Stainless	Dimensions					at T_A transmittable			Screw A4*			Moment of Inertia J $\text{kgm}^2 \cdot 10^{-3}$	Weight kg	
	d mm	D mm	D_1 mm	L mm	L_1 mm	Torque T Nm	Axial Force F_{ax} kN	Radial Force F_r kN	Size DIN 915	R mm	N mm			T_A Nm
615 999 15	15	18	46	39	25	46	6,1	0,5	M10	15,1	5	5	0,043	0,16
615 999 20	20	24	51,5	44	30	110	11	1,0	M10	18	5	5	0,070	0,21
615 999 25	25	30	58	49	35	230	18	1,5	M10	20,8	5	5	0,117	0,27
615 999 30	30	36	64,5	54	40	380	25	2	M10	23,6	5	5	0,189	0,35
615 999 35	35	42	73	59	45	640	36	2,5	M10	26,4	5	5	0,325	0,48
615 999 40	40	48	86,5	75	55	1100	55	3	M16	32	8	21	0,844	0,88
615 999 45	45	54	93	78	58	1400	62	3,5	M16	34,8	8	21	1,170	1,05
615 999 50	50	60	98,5	80	60	1900	76	4,5	M16	37,5	8	21	1,524	1,20

T = transmittable torque at axial force of 0, if the screws are fastened with T_A .
 F_{ax} = transmittable axial force at torque of 0, if the screws are fastened with T_A .

F_r = maximum transmittable radial force.
 T_A = required fastening torque for the screws.
 * With coated surface.

Properties

The unique hydraulic principle leads to many advantages:

- very fast mounting/demounting with only **one thrust screw**.
- radial fastening of the thrust screw allows space saving installation conditions.
- very small assembly dimensions.
- good concentricity, even after several mountings.

Dimensioning

For the maximum torque, the shaft must be strong enough (min. strength 350 N/mm², for example C45).

The hub diameter must be big enough.

Recommend minimum hub diameter:

Hub from Steel: $ND = 1,4 \times D$.

Hub from grey cast iron: $ND = 2,0 \times D$.

Hub from Aluminium: $ND = 2,5 \times D$.

Mounting

Before mounting always check whether the threads are lubricated (OKS 260 or Molykote D).

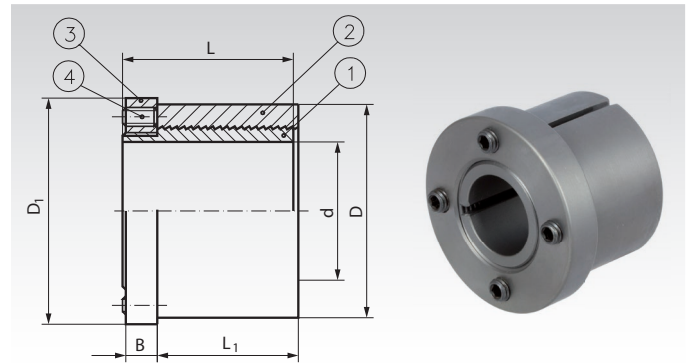
Clamping Bushes MSA

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For medium high torques and axial forces.
- Minimal space requirement.
- Self-centering.
- Not self-locking.
- Little axial movement during mounting.

Concentricity: approx. 0.02 mm.

Tolerance: Shaft h11 up to k6, Hub H7 up to H11.



Ordering Details: e.g.: Product No. 615 019 00, Clamping Set MSA, Slotted, 19 mm

Product No.	d mm	D mm	D ₁ mm	L mm	L ₁ mm	B mm	T Nm	F _{ax} kN	P _N N/mm ²	Screws Number x Size	T _A Nm	Weight kg
615 019 00	19	42	49	36	27	9,5	170	18	42	4 M6 x 12	8	0,33
615 020 00	20	42	49	36	27	9,5	180	18	42	4 M6 x 12	8	0,32
615 022 00	22	42	49	36	27	9,5	200	18	42	4 M6 x 12	8	0,31
615 024 00	24	46	53	37	27	10,5	325	27	58	6 M6 x 12	8	0,37
615 025 00	25	46	53	37	27	10,5	340	27	58	6 M6 x 12	8	0,36
615 028 00	28	55	63	44	32	12,5	490	35	66	4 M8 x 16	18	0,64
615 030 00	30	55	63	44	32	12,5	525	35	66	4 M8 x 16	18	0,61
615 032 00	32	60	67	49	37	12,5	650	41	60	5 M8 x 16	18	0,81
615 035 00	35	60	67	49	37	12,5	720	41	61	5 M8 x 16	18	0,75
615 038 00	38	67	75	57	45	12,5	950	50	54	6 M8 x 16	18	1,13
615 040 00	40	67	75	57	45	12,5	1000	50	54	6 M8 x 16	18	1,06
615 042 00	42	67	75	57	45	12,5	1050	50	54	6 M8 x 16	18	1,01
615 045 00	45	70	77	63	50	13,5	1280	57	53	7 M8 x 16	18	1,17
615 048 00	48	77	83	68,8	55	14	1560	65	50	8 M8 x 16	18	1,62
615 050 00	50	77	83	68,5	55	14	1625	65	50	8 M8 x 16	18	1,53

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_N = surface pressure onto the hub.

T_A = fastening torque of the screws.

Operating factor f_b for various operating conditions

The values for the maximum transmittable torque and the maximum permissible axial force for the clamping bush at static load are stated in the table below. With dynamic load these values have to be reduced, i.e. divided by the operating factors listed in the adjoining table.

Drive Unit	Type of Load		
	Uniform Load	Moderate Shock	Strong Shock
Electric motors, turbines	1 - 1.25	1.25 - 1.5	1.5 - 1.75
Multi-cylinder piston engines	1.25 - 1.5	1.5 - 1.75	1.75 - 2
One-cylinder piston engines	1.75 - 2	2 - 2.25	2.25 - 3

Description

Mechanical, all-steel clamping elements, containing no hydraulic pressure medium. Both inner part (1) and outer part (2) have a cylindrical buttress thread with a lengthwise slot. The inner ring (3) connected to the inner part has threaded studs (4), that create a tensioning effect when tightened. The bushes are designed for very high loads in radial as well as in axial direction. If a clamping bush without slot on the outside part is to be welded onto a workpiece, we would ask you to contact us first. Feather key grooves in the shaft do not cause any problems; simply remove the frictional corrosion.

Dimensioning

For the maximum torque, the shaft must be strong enough (min. strength 350 N/mm², for example C45).
The hub diameter must be big enough.
Recommend minimum hub diameter:
Hub from Steel: ND = 1,4 x D.
Hub from grey cast iron: ND = 2,0 x D.
Hub from Aluminium: ND = 2,5 x D.

Clamping Bushes MSD

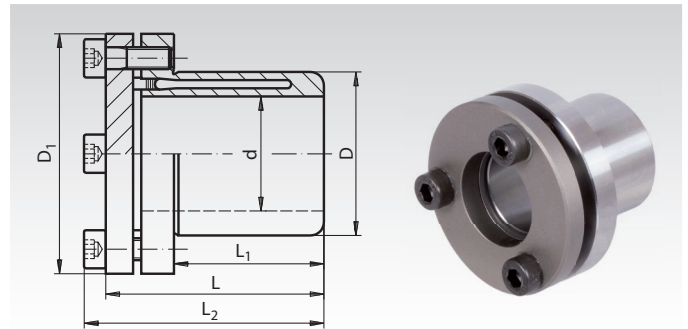
Material: High-quality steel.

The MSD clamping bush consists of a double-walled, hardened steel sleeve filled with a special pressure medium, a seal, a piston, a compression flange and fastening screws. When tightening the screws, the sleeves expand evenly against shaft and hub, creating a rigid connection. When the screws are loosened, the bush returns to its initial position and can be easily demounted.

Temperature range: -30 °C to 85 °C. **Concentricity:** $\approx 0.03 - 0.06$ mm.
Tolerance: Shaft h8 - k6 (for Product No. 615 215 00 only h7),
 Hub H7.

$P_W \approx 90\text{N/mm}^2$ $P_N \approx 70\text{N/mm}^2$

Ordering Details: e.g.: Product No. 615 215 00, Clamping Bush MSD, 15 mm

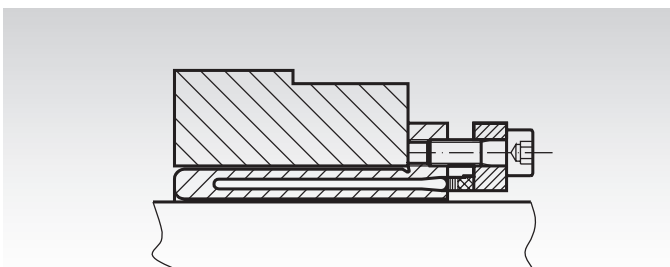


Product No.	Dimensions						at T_A transmittable		Screws DIN 912, 12.9			Moment of Inertia J $\text{kgm}^2 \cdot 10^{-3}$	Weight kg
	d mm	D mm	D ₁ mm	L mm	L ₁ mm	L ₂ mm	T Nm	Force F_{ax} kN	Amount	Size	T_A Nm		
615 215 00	15	23	38	30	17	35	55	7,3	3	M5	6	0,018	0,10
615 219 00	19	28	45	37	21	42	100	10,6	3	M5	8	0,046	0,17
615 220 00	20	28	45	37	22	42	125	12,5	3	M5	8	0,046	0,16
615 222 00	22	32	49	37	22	42	135	12,3	4	M5	8	0,065	0,19
615 224 00	24	34	49	40	25	45	200	16,7	4	M5	8	0,067	0,20
615 225 00	25	34	49	43	27	48	250	20,0	4	M5	8	0,071	0,19
615 228 00	28	39	55	45	29	50	300	21,4	4	M5	8	0,120	0,26
615 230 00	30	41	57	47	32	52	420	28,0	4	M5	8	0,142	0,29
615 232 00	32	43	60	52	34	57	420	26,3	4	M5	8	0,195	0,35
615 235 00	35	47	63	55	37	60	650	37,1	6	M5	8	0,250	0,40
615 238 00	38	50	65	59	41	64	750	39,5	6	M5	8	0,310	0,43
615 240 00	40	53	70	63	43	68	940	47,0	6	M5	8	0,441	0,55
615 242 00	42	55	70	65	45	70	940	44,8	6	M5	8	0,467	0,55
615 245 00	45	59	77	69	49	75	1290	57,3	6	M6	13	0,686	0,71
615 248 00	48	62	80	73	52	79	1570	65,4	6	M6	13	0,833	0,78
615 250 00	50	65	83	76	53	82	1900	76,0	6	M6	13	1,045	0,86

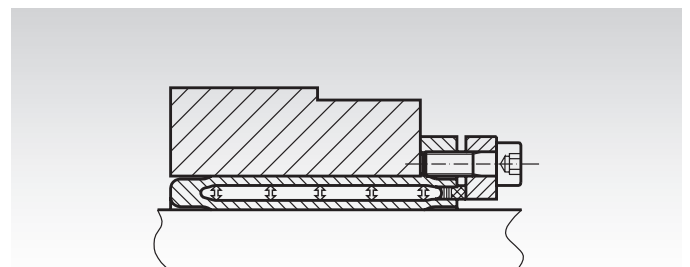
T = transmittable torque at axial force of 0, if the screws are fastened with T_A .
 F_{ax} = transmittable axial force at torque of 0, if the screws are fastened with T_A .
 T_A = required fastening torque for the screws.

The dimensions refer to bushes before assembly.

Mounting



For mounting, the clamping bush MSD is placed between shaft and hub.



After the screws have been tightened, there is a contact between the surface of hub and shaft.

Advantages

The hydraulic principle leads to many advantages:

- fast mounting/demounting.
- sensitive adjustment of the hub can be carried out during assembly.
- low fastening torque and few screws allow very simple assembly.
- good concentricity.
- small dimensions allow little outside diameter of the hub.
- The clamping bushes are as standard equipped with Allen screws, but hexagon-head screws can also be supplied.

Dimensioning

For the maximum torque, the shaft must be strong enough (min. strength 350 N/mm², for example C45).

The hub diameter must be big enough.
 Recommend minimum hub diameter:
 Hub from Steel: $ND = 1,4 \times D$.
 Hub from grey cast iron: $ND = 2,0 \times D$.
 Hub from Aluminium: $ND = 2,5 \times D$.

Clamping Bushes MSD-N

Material: Stainless steel 1.4021.

The MSD-N clamping bush is identical with the MSD bush, but is made from stainless steel. It has been used in many industries for years, as, e.g., the food, medical, automotive, chemical, printing and process engineering industries.

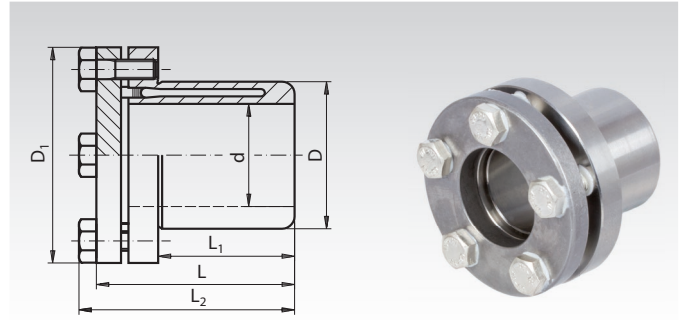
Concentricity 0.03 - 0.06 mm.

Tolerance: Shaft h9 (Ø 15 mm only h8), Hub H7.

Temperature range: -30 °C to 85 °C.

$P_W \approx 90\text{N/mm}^2$ $P_N \approx 70\text{N/mm}^2$

Ordering Details: e.g.: Product No. 615 993 15, Clamping Bush MSD-N, 15 mm



Product No.	Dimensions						at T_A transmittable Torque Force		Screws DIN 933, A4			Moment of Inertia J $\text{kgm}^2 \cdot 10^{-3}$	Weight kg
	d mm	D mm	D_1 mm	L mm	L_1 mm	L_2 mm	T Nm	F_{ax} kN	Amount	Size	T_A Nm		
615 993 15	15	23	38	30	17	34	45	6	4	M 5	4,5	0,018	0,10
615 993 20	20	28	45	37	22	41	100	10	5	M 5	4,5	0,046	0,16
615 993 25	25	34	49	43	27	46	210	16,8	7	M 5	4,5	0,071	0,19
615 993 30	30	41	57	47	32	51	350	23,3	7	M 5	4,5	0,142	0,29
615 993 40	40	53	70	63	43	67	750	37,5	9	M 5	4,5	0,441	0,55
615 993 50	50	65	83	76	53	80	1550	62	9	M 6	7,8	1,045	0,86

T = transmittable torque at axial force of 0, if the screws are fastened with T_A .

F_{ax} = transmittable axial force at torque of 0, if the screws are fastened with T_A .

T_A = required fastening torque for the screws.

The dimensions refer to bushes before assembly.

Miniature Clamping Bushes MSM and MSM-N

Material: Version MSM: Mild steel.

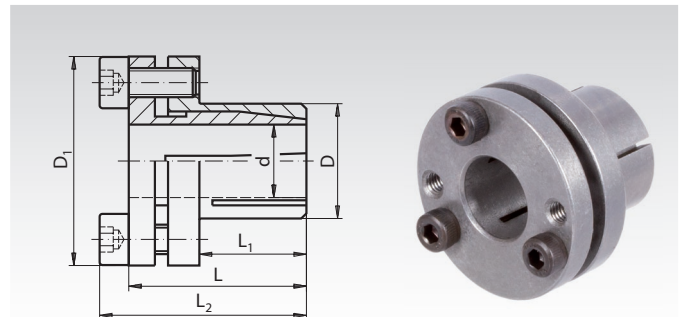
Version MSM-N: Stainless steel 1.4305.



Concentricity: about 0.02 mm.

Tolerance: Shaft k6-h10, Hub H8.

$P_W \approx 90\text{N/mm}^2$ $P_N \approx 70\text{N/mm}^2$



Ordering Details: e.g.: Product No. 615 206 00, Miniature Clamping Bush MSM, 6 mm

Product No.	Dimensions						at T_A transmittable Torque Force		Screws DIN 912, 12.9			Moment of Inertia J $\text{kgm}^2 \cdot 10^{-3}$	Weight kg
	d mm	D mm	D_1 mm	L mm	L_1 mm	L_2 mm	T Nm	F_{ax} kN	Amount	Size	T_A Nm		
615 206 00	6	14	25	19	10	22	5	1,7	2	M3	2	2,1	0,03
615 208 00	8	15	27	21,5	12	25,5	17	4,4	2	M4	4	3,3	0,04
615 209 00	9	16	28	24	14	28	20	4,4	2	M4	4	4,4	0,05
615 210 00	10	16	28	24	14	28	23	4,4	2	M4	4	4,3	0,05
615 212 00	12	18	30	25,5	14	29,5	27	4,4	2	M4	4	6,1	0,06
615 214 00	14	22	35	27,5	15	31,5	48	6,5	3	M4	4	13,2	0,08
MSM-N Stainless									Screws DIN 912, A4				
615 992 06	6	14	25	19	10	22	5	1,7	3	M3	1,2	2,1	0,03
615 992 08	8	15	27	21,5	12	25,5	17	4,4	3	M4	2,7	3,3	0,04
615 992 10	10	16	28	24	14	28	23	4,4	3	M4	2,7	4,3	0,05
615 992 12	12	18	30	25,5	14	29,5	27	4,4	3	M4	2,7	6,1	0,06
615 992 14	14	22	35	27,5	15	31,5	48	6,5	4	M4	2,7	13,2	0,08

T = transmittable torque at axial force of 0, if the screws are fastened with T_A .

F_{ax} = transmittable axial force at torque of 0, if the screws are fastened with T_A .

T_A = required fastening torque for the screws.

The dimensions refer to bushes before assembly.

Mounting

The bush is mounted quickly. Just place the bush inside the hub and push both onto the shaft. Fasten with a torque wrench.

Demounting

Remove tensioning screws. Put screws in forcing thread and fasten them until the bush is pressed off.

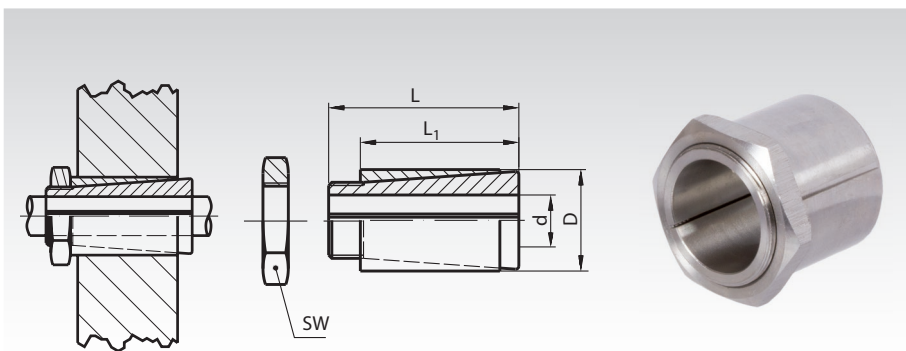
Clamping Sets SIG

Material: Stainless steel 1.4301.



- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For lower torques.
- Minimal space requirement.
- The connection can be disassembled with a puller.

Required tolerances: Shaft: h8.
Bore of the part to be clamped: H8.
Surface roughness max. 12.5µm.



Ordering Details: e.g.: Product No. 615 104 00, Clamping Set SIG, 4 mm

Product No.	d mm	D mm	L mm	L ₁ mm	Torque T Nm	Thread	SW mm	Fastening Torque Nm	Weight g
615 104 00	4	8	15	12,5	3	M6x0,5	8	4	3,8
615 105 00	5	10	15	12,5	4	M8x0,5	10	5	6,5
615 106 00	6	10	15	12,5	7	M8x0,5	10	8	5,3
615 106 35	6,35	10	15	12,5	7	M8x0,5	10	8	5,0
615 107 00	7	12	15	12,0	8	M10x0,75	12	9	6,3
615 108 00	8	14	22	19,0	14	M12x1	16	15	17,5
615 109 00	9	14	22	19,0	14	M12x1	16	15	15,0
615 109 52	9,52	14	22	19,0	14	M12x1	16	15	12,8
615 110 00	10	17	22	18,5	18	M15x1	18	19	29,0
615 111 00	11	17	22	18,5	18	M15x1	18	19	28,0
615 112 00	12	17	22	18,5	18	M15x1	18	19	26,2
615 114 00	14	20	28	23,0	24	M17x1	20	25	35,3
615 115 00	15	20	28	23,0	24	M17x1	20	25	36,4
615 115 88	15,88	23	28	23,0	26	M20x1	26	27	48,4
615 116 00	16	23	28	23,0	26	M20x1	26	27	50,7
615 117 00	17	23	28	23,0	26	M20x1	26	27	45,0
615 119 00	19	25	28	23,0	29	M22x1	27	30	46,9
615 120 00	20	28	28	23,0	31	M25x1	30	32	67
615 125 00	25	32	35	27	45	M28x1	34	42	89
615 130 00	30	37	35	27	52	M33x1	38	47	105
615 135 00	35	43	40	29	57	M39x1,5 ¹⁾	48	52	179
615 140 00	40	50	40	29	95	M45x1,5 ²⁾	55	58	249

¹⁾ In preparation: M39x1,25.

²⁾ In preparation: M45x1,25.

Dimensioning

For the maximum torque, the shaft must be strong enough (min. strength 350 N/mm², for example C45).

The hub diameter must be big enough.

Recommend minimum hub diameter:

Hub from Steel: $ND = 1,4 \times D$.

Hub from grey cast iron: $ND = 2,0 \times D$.

Hub from Aluminium: $ND = 2,5 \times D$.

Mounting

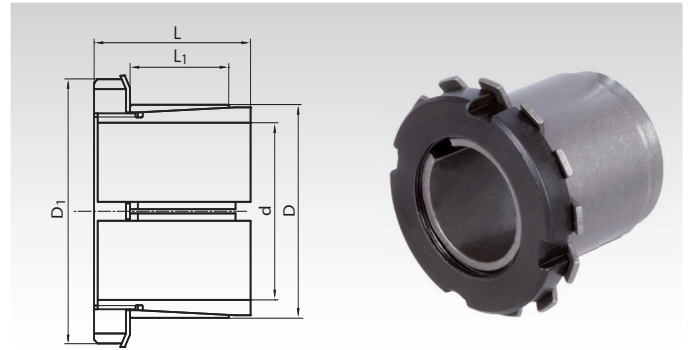
- The clamping set has to be mounted without lubrication to achieve the torques stated above.
- The clamping set has to be fully in contact with the shaft.
- The clamping set must not get in contact with any fixed components (e.g. bearing housing or crankcase).
- Tighten the nut with a torque wrench to the torque value as per the table.

Hub Calculation and Selection Tool
on the Internet at www.maedler.de
in the section **MÄDLER®-Tools**

Clamping Sets SSG

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For low to medium torques.
- Also suitable for small hub diameters.
- Self-centering.
- Self-locking.
- Axial movement during mounting.



Ordering Details: e.g.: Product No. 615 200 14, Clamping Set SSG, 14 mm

Product No.	d mm	D mm	L mm	L ₁ mm	D ₁ mm	T Nm	F _{ax} kN	P _W N/mm ²	P _N N/mm ²	Nut 8.8 Thread	T _A Nm	Weight kg
615 200 14	14	25	30	20	32	61	9	81	43	M20x1	95	0,08
615 200 15	15	25	30	20	32	72	9	82	46	M20x1	95	0,08
615 200 16	16	25	30	20	32	73	9	75	45	M20x1	95	0,07
615 200 17	17	25	32	20	32	82	9	72	46	M20x1	95	0,09
615 200 18	18	30	32	20	38	98	10	78	44	M25x1,5	160	0,12
615 200 19	19	30	32	20	38	102	11	73	44	M25x1,5	160	0,12
615 200 20	20	30	32	20	38	110	11	69	44	M25x1,5	160	0,11
615 200 22	22	35	36	25	45	165	13	71	45	M30x1,5	220	0,18
615 200 24	24	35	36	25	45	178	14	65	45	M30x1,5	220	0,16
615 200 25	25	35	36	25	45	178	14	58	43	M30x1,5	220	0,19
615 200 28	28	40	42	30	52	248	17	54	40	M35x1,5	340	0,24
615 200 30	30	40	42	30	52	273	17	51	40	M35x1,5	340	0,24
615 200 32	32	45	44	30	58	347	21	59	45	M40x1,5	480	0,32
615 200 35	35	45	44	30	58	406	22	57	47	M40x1,5	480	0,32
615 200 38	38	50	45	30	65	510	25	62	46	M45x1,5	680	0,35
615 200 40	40	50	45	30	65	520	27	54	44	M45x1,5	680	0,33
615 200 42	42	55	46	30	70	650	29	68	52	M50x1,5	870	0,43
615 200 45	45	55	46	30	70	660	31	57	48	M50x1,5	870	0,40
615 200 48	48	60	46	30	75	810	34	58	48	M55x2	970	0,45
615 200 50	50	60	46	30	75	850	34	58	49	M55x2	970	0,40
615 200 55	55	65	46	30	80	1020	37	59	50	M60x2	1100	0,44
615 200 60	60	70	48	30	85	1290	43	62	52	M65x2	1300	0,55

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_W = surface pressure onto the shaft.

P_N = surface pressure onto the hub.

T_A = fastening torque of slotted nut.

Fit

Shaft h8, Hub H8.

Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the slotted nut and bend the lock washer.

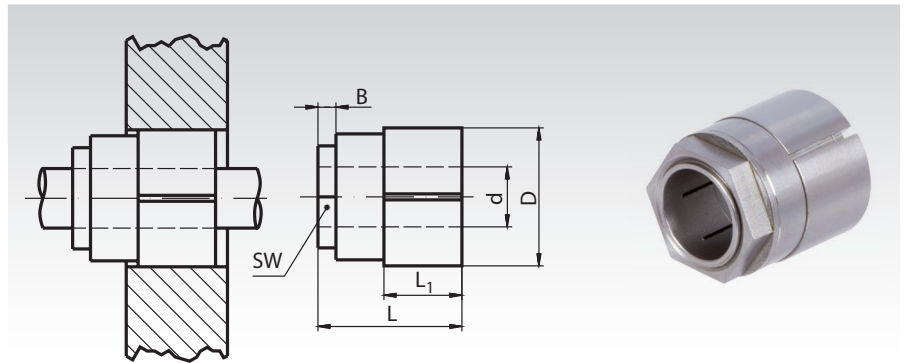
Demounting

Re-bend the lock washer. Remove the nut. Then, due to the cone angle, the clamping set is usually released. If not, use a wheel puller or use carefully a rubber hammer to loosen the wheel from the clamping rings.

Clamping Sets TT 5-16 mm

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For high torques.
- Self-centering.
- Axial offset during mounting (can be compensated by correct positioning).



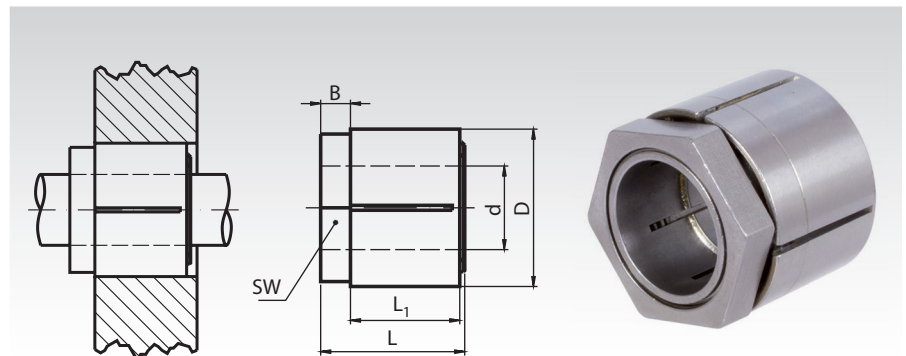
Ordering Details: e.g.: Product No. 615 501 05,
Clamping set TT, 5 mm

Product No.	d mm	D mm	L mm	L ₁ mm	B mm	Torque T max. Nm	Axial force max. kN	Surface pressure on the hub N/mm ²	Diameter across flats SW mm	Tightening Torque T _A Nm	Weight g
615 501 05	5	16	19	10	3	11	4	73	13	10	19
615 501 06	6	16	19	10	3	13	4	73	13	10	18
615 501 07	7	20	22	11	3	35	10	119	16	28	34
615 501 08	8	20	22	11	3	40	10	119	16	28	33
615 501 09	9	20	22	11	3	45	10	119	16	28	32
615 501 10	10	23	26	13	5	65	13	116	19	44	49
615 501 11	11	23	26	13	5	72	13	116	19	44	47
615 501 12	12	23	26	13	5	79	13	116	19	44	45
615 501 14	14	26	29	16	5	118	17	107	22	66	65
615 501 15	15	26	29	16	5	126	17	107	22	66	62
615 501 16	16	26	29	16	5	135	17	107	22	66	59

Clamping Sets TT 17-35 mm

Material: Steel.

- For fixing a hub (e.g. drive wheel, rotor or similar) on a shaft.
- For high torques.
- Self-centering.
- Axial offset during mounting (can be compensated by correct positioning).



Ordering Details: e.g.: Product No. 615 501 17,
Clamping set TT, 17 mm

Product No.	d mm	D mm	L mm	L ₁ mm	B mm	Torque T max. Nm	Axial force max. kN	Surface pressure on the hub N/mm ²	Diameter across flats SW mm	Tightening Torque T _A Nm	Weight g
615 501 17	17	32	30	22	6	208	25	92	30	110	119
615 501 18	18	32	30	22	6	221	25	92	30	110	114
615 501 19	19	32	30	22	6	233	25	92	30	110	109
615 501 20	20	35	33	24	7	298	30	94	32	150	144
615 501 22	22	35	33	24	7	328	30	94	32	150	132
615 501 24	24	38	35	25	8	398	33	93	36	185	166
615 501 25	25	38	35	25	8	415	33	93	36	185	159
615 501 28	28	45	41	29	11	505	36	73	46	300	293
615 501 30	30	45	41	29	11	541	36	73	46	300	272
615 501 32	32	50	44	30	12	590	37	65	50	265	377
615 501 35	35	50	44	30	12	645	37	65	50	265	340

Fit, Surfaces

Size 5 to 16: Shaft and hub ± 0.04 mm.
Size 17 to 35: Shaft and hub ± 0.08 mm.

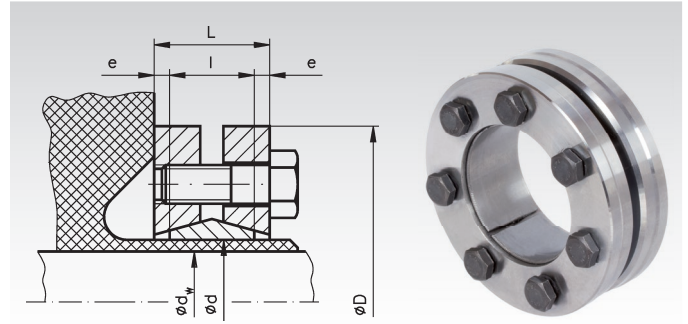
Mounting

It is essential to degrease the shaft and hub.
Install clamping sets as delivered, never lubricate them.
Tighten the nut with a torque wrench to the torque value
as per the table.

Shrink Disks ST

Material: 42CrMo4 quenched.

- For very high torques.
- No axial shaft-hub movement.
- Quick mounting.
- Quick demounting.



Ordering Details: e.g.: Product No. 615 814 00, Shrink Disk Inner-Ø 14 mm

Product No.	Inner-Ø d mm	Shaft-Ø ¹⁾ d _w mm	Torque ²⁾ T Nm	Axial Load ²⁾ F _{ax} Nm	D mm	l mm	L mm	e mm	Screws DIN 931 No. x Size	Fastening Torque T _A Nm	Contact- pressure P _N N/mm ²	Weight kg
615 814 00	14	10	39	10	38	10	15	2,5	4x M5	3	343	0,1
		11	51	12								
		12	63	14								
615 816 00	16	12	66	14	41	12	17	2,5	4x M5	3	313	0,1
		13	78	16								
		14	96	18								
615 818 00	18	14	83	16	44	12	17	2,5	4x M5	4	298	0,1
		15	102	18								
		16	132	20								
615 824 00	24	19	220	32	50	15	21	3	6x M5	5	357	0,2
		20	272	35								
		21	325	37								
615 830 00	30	24	390	38	60	18	23	2,5	7x M5	5	292	0,3
		25	435	41								
		26	465	43								
615 836 00	36	28	442	50	72	19	25	3	5x M6	12	307	0,4
		30	575	58								
		31	633	58								
615 838 00	38	29	660	62	72	21	27	3	6x M6	12	341	0,5
		30	720	65								
		31	750	64								
615 844 00	44	32	740	62	80	22	26	2	7x M6	12	283	0,6
		35	940	72								
		36	1010	75								
615 850 00	50	38	1275	89	90	22	30	4	8x M6	12	320	0,8
		40	1430	96								
		42	1635	103								
615 855 00	55	42	1170	79	100	23	31	4	8x M6	12	250	1,1
		45	1500	88								
		48	1870	97								
615 862 00	62	48	2220	125	110	23	32	4,5	12x M6	12	330	1,3
		50	2600	132								
		52	2900	135								
615 868 00	68	50	2010	97	115	23	33	5	10x M6	12	260	1,4
		55	2505	106								
		60	3140	120								
615 875 00	75	55	2515	119	138	25	33	4	7x M8	30	272	2,4
		60	3195	137								
		65	3940	155								

¹⁾ Shaft-Ø of the customer's machine (for example). ²⁾ Transmittable values with shaft-Ø d_w of the customer's machine.

More sizes up to inner-Ø d=300mm, for shaft diameter 240mm and 292,000Nm are available.

Price and delivery time on request.

Mounting

Clean and slightly lubricate the contact surfaces of shaft and hub. Place clamping set on the hub. Fasten the tensioning screws evenly, step by step until the fastening torque T_A of the table is reached. To reach the value stated in the table several fastening steps are required. The figures for T and F_{ax} stated in the table were calculated for an assembly with oil.

Attention: Do not use any lubricant containing molybdenum sulphide.

Demounting: Evenly unscrew all tensioning screws one by one. Do not fully remove the screws from the thread. The clamping element usually disengages on its own.

Tolerances, Surface Roughness

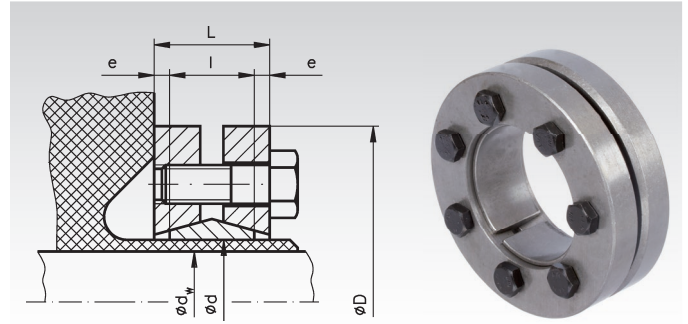
One good turn is sufficient.
Highest permissible surface roughness: R_t=12.5µm.

Tolerances for d_w/d: h8/H8.

Shrink Disks ST-B

Material: Steel.

- For high torques.
- No axial shaft-hub movement.
- Quick mounting.
- Quick demounting.



Ordering Details: e.g.: Product No. 615 870 14, Shrink Disk ST-B, Inner-Ø 14 mm

Product No.	Inner-Ø d mm	Shaft-Ø ¹⁾		Torque ²⁾ T Nm	Axial Load ²⁾		D mm	l mm	L mm	e mm	Screws DIN 931 No. x Size	Fastening Torque T _A Nm	Contact- pressure P _N N/mm ²	Weight kg
		d _w mm			F _{ax} Nm									
615 870 14	14	11	30	6,3	7	11	2	4x M5	4	193	0,10			
		12	50									9,2		
615 870 16	16	13	70	10	11	15	2	5x M5	4	133	0,10			
		14	90									13		
615 870 24	24	19	170	26	14	19,5	2,75	6x M5	4	292	0,21			
		20	200									26		
		21	240									28		
615 870 30	30	24	300	29	16	21,5	2,75	7x M5	4	231	0,32			
		25	340									31		
		26	370									32		
615 870 36	36	28	440	50	18	23,5	2,75	5x M6	12	307	0,48			
		30	550									56		
		31	610									60		
615 870 44	44	32	660	63	20	25,5	2,75	7x M6	12	314	0,64			
		35	800									75		
		36	830									75		
615 870 50	50	38	980	78	22	27,5	2,75	8x M6	12	301	0,80			
		40	1110									82		
		42	1150									83		
615 870 55	55	42	1390	90	23	30,5	3,75	8x M6	12	249	1,15			
		45	1550									93		
		48	1880									94		
615 870 62	62	48	1900	97	23	30,5	3,75	10x M6	12	293	1,30			
		50	1940									105		
		52	2300									110		
615 870 68	68	50	2300	111	23	30,5	3,75	10x M6	12	247	1,32			
		55	2600									115		
		60	2600									115		
615 870 75	75	55	3020	123	25	32,5	3,75	7x M8	30	284	1,70			
		60	3070									124		
		65	3170									132		
615 870 80	80	60	3910	141	25	32,5	3,75	7x M8	30	253	1,90			
		65	3940									153		
		70	4600									160		
615 870 85	85	65	4650	165	30	39	4,5	10x M8	30	276	3,50			
		70	4660									170		
		75	6000									191		

¹⁾ Shaft-Ø of the customer's machine (for example). ²⁾ Transmittable values with shaft-Ø d_w of the customer's machine.

More sizes up to inner-Ø d=300mm, for shaft diameter 240mm and 292,000Nm are available.

Price and delivery time on request.

Mounting

Clean and slightly lubricate the contact surfaces of shaft and hub. Place clamping set on the hub. Fasten the tensioning screws evenly, step by step until the fastening torque T_A of the table is reached. To reach the value stated in the table several fastening steps are required. The figures for T and F_{ax} stated in the table were calculated for an assembly with oil.

Attention: Do not use any lubricant containing molybdenum sulphide.

Demounting: Evenly unscrew all tensioning screws one by one. Do not fully remove the screws from the thread. The clamping element usually disengages on its own.

Tolerances, Surface Roughness

One good turn is sufficient.

Highest permissible surface roughness: R_t=12.5µm.

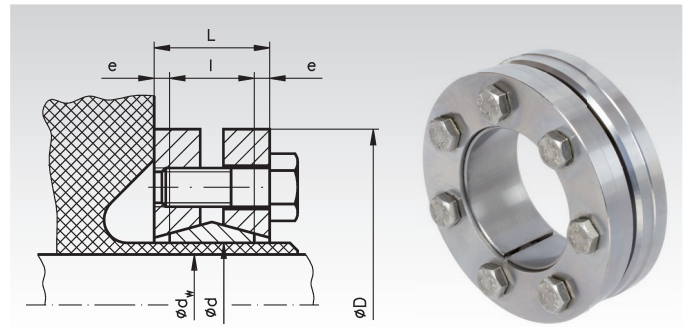
Tolerances for d_w/d: H8/h8.

Shrink Disks ST-R, Stainless

Material: Stainless steel 1.4057.



- For medium torques.
- No axial shaft-hub movement.
- Quick mounting.
- Quick demounting.



Ordering Details: e.g.: Product No. 615 998 14, Shrink Disk ST-R, Inner-Ø 14 mm

Product No.	Inner-Ø d mm	Shaft-Ø ¹⁾ d _w mm	Torque ²⁾ T Nm	D mm	l mm	L mm	e mm	Screws DIN 931 No. x Size	Fastening Torque T _A Nm	Contact- pressure P _N N/mm ²	Weight kg
615 998 14	14	10	22	37	9	12	1,5	3x M4	2	229	0,10
		11	28								
		12	39								
615 998 16	16	12	50	41	12	15	1,5	4x M5	4	250	0,12
		13	66								
		14	79								
615 998 24	24	19	141	50	15	21	3	6x M5	4	268	0,21
		20	185								
		21	220								
615 998 30	30	24	212	60	18	23	2,5	7x M5	4	180	0,31
		25	240								
		26	265								
615 998 36	36	26	325	72	19	25	3,0	5x M6	7	215	0,53
		28	405								
		30	485								
615 998 44	44	32	340	80	22	28	3,0	7x M6	7	220	0,62
		35	480								
		36	525								
615 998 50	50	38	635	90	22	29,5	3,75	8x M6	7	225	0,81
		40	740								
		42	850								
615 998 55	55	42	595	100	23	30,5	3,75	8x M6	7	174	1,10
		45	745								
		48	900								
615 998 62	62	48	1150	110	23	32	4,5	12x M6	7	230	1,35
		50	1275								
		52	1450								
615 998 68	68	50	905	115	23	33	5,0	10x M6	7	175	1,45
		55	1060								
		60	1450								

¹⁾ Shaft-Ø of the customer's machine (for example). ²⁾ Transmittable values with shaft-Ø d_w of the customer's machine.

More sizes up to inner-Ø d=125mm, for shaft diameter 95mm and 8,555Nm are available.

Price and delivery time on request.

Mounting

Clean and slightly lubricate the contact surfaces of shaft and hub. Place clamping set on the hub. Fasten the tensioning screws evenly, step by step until the fastening torque T_A of the table is reached. To reach the value stated in the table several fastening steps are required. The figures for T and F_{ax} stated in the table were calculated for an assembly with oil.

Attention: Do not use any lubricant containing molybdenum sulphide.

Demounting: Evenly unscrew all tensioning screws one by one. Do not fully remove the screws from the thread. The clamping element usually disengages on its own.

Tolerances, Surface Roughness

One good turn is sufficient.
Highest permissible surface roughness: R_t=16µm.

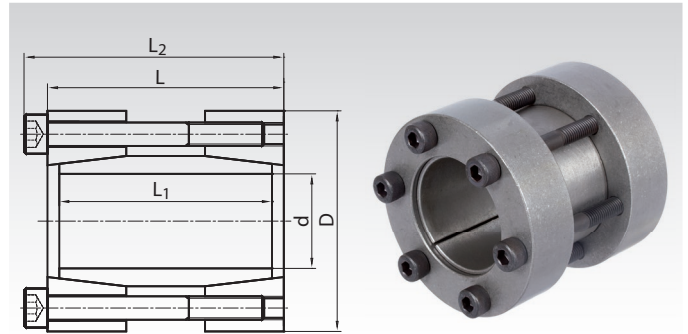
Tolerances for d_w/d:

For d from 14 - 30mm: H6/j6.
For d from 35 - 50 mm: H6/h6.
For d from 55 - 68 mm: H6/g6.

Clamping Sets (Rigid Couplings) ST-K

Material: Steel.

- For connecting two shafts, as a rigid coupling.
- For medium torques.
- Easy mounting.
- Self-releasing at dismounting.
- No axial movement during mounting.



Ordering Details: e.g.: Product No. 615 880 15, Clamping Set ST-K, 15 mm

Product No.	d mm	D mm	L mm	L ₁ mm	L ₂ mm	T Nm	F _{ax} kN	P _W N/mm ²	Screws 12.9 Number x Size	T _A Nm	Weight kg
615 880 15	15	45	50	44	56	125	16	126	4 x M6	17	0,40
615 880 16	16	45	50	44	56	131	17	117	4 x M6	17	0,40
615 880 17	17	50	50	44	56	210	23	118	4 x M6	17	0,50
615 880 18	18	50	50	44	56	220	24	109	4 x M6	17	0,46
615 880 19	19	50	50	44	56	230	24	96	4 x M6	17	0,50
615 880 20	20	50	50	44	56	240	25	93	4 x M6	17	0,50
615 880 22	22	55	60	54	66	270	25	107	4 x M6	17	0,60
615 880 24	24	55	60	54	66	290	25	96	4 x M6	17	0,60
615 880 25	25	55	60	54	66	470	35	95	6 x M6	17	0,66
615 880 28	28	60	60	54	66	490	35	84	6 x M6	17	0,70
615 880 30	30	60	60	54	66	540	37	79	6 x M6	17	0,73
615 880 32	32	75	60	54	68	730	43	77	6 x M8	41	1,30
615 880 35	35	75	75	69	83	810	45	82	4 x M8	41	1,34
615 880 38	38	75	75	69	83	860	46	75	4 x M8	41	1,30
615 880 40	40	75	75	69	83	880	46	64	4 x M8	41	1,40
615 880 42	42	90	75	69	83	1430	66	65	4 x M8	41	2,0
615 880 45	45	90	85	79	93	1490	66	73	6 x M8	41	2,5
615 880 48	48	90	85	79	93	1640	68	70	6 x M8	41	2,4
615 880 50	50	90	85	79	93	1670	68	64	6 x M8	41	2,0
615 880 55	55	105	85	79	93	2520	90	63	8 x M8	41	3,3
615 880 60	60	105	85	79	93	2760	92	59	8 x M8	41	2,6
615 880 65	65	105	85	79	93	2930	92	53	8 x M8	41	3,0
615 880 70	70	125	100	94	110	3800	106	50	6 x M10	83	5,4
615 880 75	75	125	100	94	110	3850	107	47	6 x M10	83	5,0
615 880 80	80	125	100	94	110	4030	109	65	8 x M10	83	4,7
615 880 85	85	130	100	94	110	4260	121	64	8 x M10	83	5,5
615 880 90	90	135	100	94	110	4820	122	72	8 x M10	83	7,0
615 880 95	95	140	120	114	130	5170	124	67	8 x M10	83	7,5
615 881 00	100	150	120	114	132	5590	127	66	8 x M12	142	7,8

More sizes up to d=110mm for 7,400Nm are available.

Price and delivery time on request.

T = transmittable torque at F_{ax} = 0.

F_{ax} = transmittable axial force at T = 0.

P_W = surface pressure onto the shaft.

T_A = Fastening torque of the screws.

Fit

Shaft h8, Hub H8.
Surface roughness max. 12.5µm.

Mounting

Slightly oil the clamping set before mounting, do not use molybdenum disulphide or grease. Tighten the screws evenly and crosswise in several steps.

Demounting

Due to the cone angle, the clamping set is usually released once all screws have been fully unfastened.

Taper Bushes

Material: GG20.

Bores ISO E8, feather keyways in accordance with DIN 6885/1. Screws included in delivery.

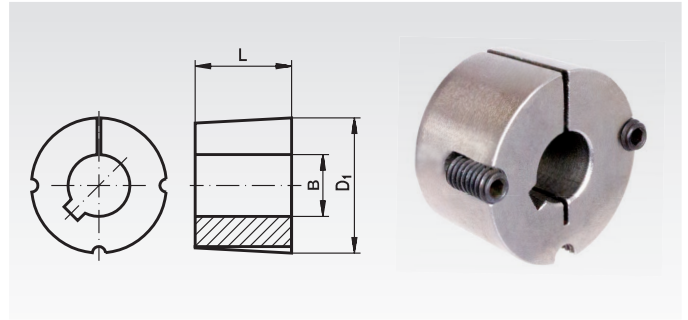
Shaft tolerance +0.05/-0.125 mm.

Can be used with or without parallel key, depending on the required torque.

Other bush sizes and bores available at short notice (some in stock).

Assembly instructions see page 824.

Ordering Details: e.g.: Product No. 622 501 10, Taper Bush 1008, 10 mm Bore



Product No.	Taper bush type	Bore B mm	Key-way mm	L mm	D ₁ mm	Weight g	Product No.	Taper bush type	Bore B mm	Key-way mm	L mm	D ₁ mm	Weight g
622 501 10	1008	10	3	22,3	35,0	160	622 504 12	1610	12	4	25,4	57,0	416
622 501 11	1008	11	4	22,3	35,0	140	622 504 14	1610	14	5	25,4	57,0	412
622 501 12	1008	12	4	22,3	35,0	120	622 504 15	1610	15	5	25,4	57,0	408
622 501 14	1008	14	5	22,3	35,0	118	622 504 16	1610	16	5	25,4	57,0	402
622 501 15	1008	15	5	22,3	35,0	116	622 504 18	1610	18	6	25,4	57,0	390
622 501 16	1008	16	5	22,3	35,0	112	622 504 19	1610	19	6	25,4	57,0	380
622 501 18	1008	18	6	22,3	35,0	100	622 504 20	1610	20	6	25,4	57,0	373
622 501 19	1008	19	6	22,3	35,0	98	622 504 22	1610	22	6	25,4	57,0	366
622 501 20	1008	20	6	22,3	35,0	94	622 504 24	1610	24	8	25,4	57,0	356
622 501 22	1008	22	6	22,3	35,0	80	622 504 25	1610	25	8	25,4	57,0	348
622 501 24 ¹⁾	1008	24	8 ¹⁾	22,3	35,0	70	622 504 28	1610	28	8	25,4	57,0	324
622 501 25 ¹⁾	1008	25	8 ¹⁾	22,3	35,0	68	622 504 30	1610	30	8	25,4	57,0	304
622 502 10	1108	10	3	22,3	38,0	180	622 504 32	1610	32	10	25,4	57,0	280
622 502 11	1108	11	4	22,3	38,0	165	622 504 35	1610	35	10	25,4	57,0	264
622 502 12	1108	12	4	22,3	38,0	154	622 504 38	1610	38	10	25,4	57,0	240
622 502 14	1108	14	5	22,3	38,0	148	622 504 40	1610	40	12	25,4	57,0	210
622 502 16	1108	16	5	22,3	38,0	140	622 504 42	1610	42	12	25,4	57,0	200
622 502 18	1108	18	6	22,3	38,0	132	622 508 20	1615	20	6	38,1	57,0	552
622 502 19	1108	19	6	22,3	38,0	126	622 508 22	1615	22	6	38,1	57,0	540
622 502 20	1108	20	6	22,3	38,0	122	622 508 24	1615	24	8	38,1	57,0	520
622 502 22	1108	22	6	22,3	38,0	112	622 508 25	1615	25	8	38,1	57,0	510
622 502 24	1108	24	8	22,3	38,0	96	622 508 30	1615	30	8	38,1	57,0	446
622 502 25	1108	25	8	22,3	38,0	92	622 508 32	1615	32	10	38,1	57,0	414
622 502 28 ¹⁾	1108	28	8 ¹⁾	22,3	38,0	88	622 508 35	1615	35	10	38,1	57,0	380
622 503 10	1210	10	3	25,4	47,0	282	622 508 38	1615	38	10	38,1	57,0	346
622 503 11	1210	11	4	25,4	47,0	280	622 508 40	1615	40	12	38,1	57,0	340
622 503 12	1210	12	4	25,4	47,0	278	622 508 42 ²⁾	1615	42	12 ²⁾	38,1	57,0	260
622 503 14	1210	14	5	25,4	47,0	274	622 505 12	2012	12	4	31,8	70,0	810
622 503 16	1210	16	5	25,4	47,0	262	622 505 14	2012	14	5	31,8	70,0	800
622 503 18	1210	18	6	25,4	47,0	250	622 505 15	2012	15	5	31,8	70,0	785
622 503 19	1210	19	6	25,4	47,0	244	622 505 16	2012	16	5	31,8	70,0	770
622 503 20	1210	20	6	25,4	47,0	240	622 505 18	2012	18	6	31,8	70,0	762
622 503 22	1210	22	6	25,4	47,0	224	622 505 19	2012	19	6	31,8	70,0	756
622 503 24	1210	24	8	25,4	47,0	208	622 505 20	2012	20	6	31,8	70,0	750
622 503 25	1210	25	8	25,4	47,0	208	622 505 22	2012	22	6	31,8	70,0	736
622 503 28	1210	28	8	25,4	47,0	184	622 505 24	2012	24	8	31,8	70,0	724
622 503 30	1210	30	8	25,4	47,0	168	622 505 25	2012	25	8	31,8	70,0	714
622 503 32	1210	32	10	25,4	47,0	160	622 505 28	2012	28	8	31,8	70,0	684
622 513 14	1215	14	5	38,1	47,0	380	622 505 30	2012	30	8	31,8	70,0	658
622 513 16	1215	16	5	38,1	47,0	370	622 505 32	2012	32	10	31,8	70,0	630
622 513 18	1215	18	6	38,1	47,0	350	622 505 35	2012	35	10	31,8	70,0	604
622 513 19	1215	19	6	38,1	47,0	340	622 505 38	2012	38	10	31,8	70,0	566
622 513 20	1215	20	6	38,1	47,0	335	622 505 40	2012	40	12	31,8	70,0	538
622 513 22	1215	22	6	38,1	47,0	320	622 505 42	2012	42	12	31,8	70,0	510
622 513 24	1215	24	8	38,1	47,0	290	622 505 45	2012	45	14	31,8	70,0	460
622 513 25	1215	25	8	38,1	47,0	285	622 505 48	2012	48	14	31,8	70,0	404
622 513 28	1215	28	8	38,1	47,0	260	622 505 50	2012	50	14	31,8	70,0	372
622 513 30	1215	30	8	38,1	47,0	230							
622 513 32	1215	32	10	38,1	47,0	200							

¹⁾ With flat keyway 1.3mm.

²⁾ With flat keyway 2.2mm.

Taper Bushes

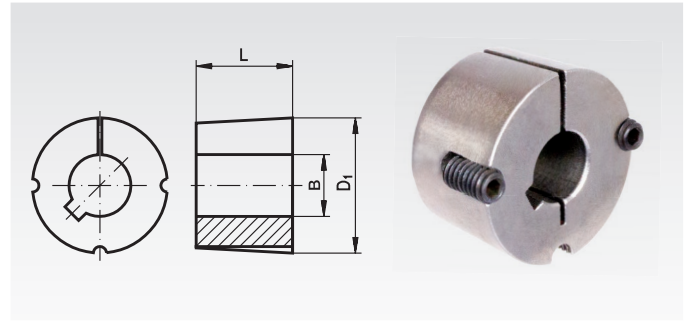
Material: GG20.

Bores ISO E8, feather keyways in accordance with DIN 6885/1.
Screws included in delivery.

Shaft tolerance +0.05/-0.125 mm.

Can be used with or without parallel key, depending on the required torque.

Other bush sizes and bores available at short notice (some in stock).



Ordering Details: e.g.: Product No. 622 506 16, Taper Bush 2517, 16 mm Bore

Product No.	Taper bush type	Bore B mm	Key-way mm	L mm	D ₁ mm	Weight g	Product No.	Taper bush type	Bore B mm	Key-way mm	L mm	D ₁ mm	Weight g
622 506 16	2517	16	5	44,5	85,0	1800	622 511 40	3030	40	12	76,2	108,0	3820
622 506 18	2517	18	6	44,5	85,0	1700	622 511 45	3030	45	14	76,2	108,0	3550
622 506 19	2517	19	6	44,5	85,0	1620	622 511 50	3030	50	14	76,2	108,0	3420
622 506 20	2517	20	6	44,5	85,0	1602	622 511 60	3030	60	18	76,2	108,0	2950
622 506 22	2517	22	6	44,5	85,0	1568	622 511 65	3030	65	18	76,2	108,0	2680
622 506 24	2517	24	8	44,5	85,0	1566	622 511 70	3030	70	20	76,2	108,0	2060
622 506 25	2517	25	8	44,5	85,0	1556	622 511 75	3030	75	20	76,2	108,0	1640
622 506 28	2517	28	8	44,5	85,0	1520	622 509 35	3525	35	10	64,9	127,0	4910
622 506 30	2517	30	8	44,5	85,0	1488	622 509 38	3525	38	10	64,9	127,0	4850
622 506 32	2517	32	10	44,5	85,0	1450	622 509 40	3525	40	12	64,9	127,0	4800
622 506 35	2517	35	10	44,5	85,0	1396	622 509 50	3525	50	14	64,9	127,0	4440
622 506 38	2517	38	10	44,5	85,0	1346	622 509 60	3525	60	18	64,9	127,0	4050
622 506 40	2517	40	12	44,5	85,0	1316	622 509 75	3525	75	20	64,9	127,0	3370
622 506 42	2517	42	12	44,5	85,0	1274	622 509 80	3525	80	22	64,9	127,0	3050
622 506 45	2517	45	14	44,5	85,0	1204	622 510 50	3535	50	14	88,9	127,0	6050
622 506 48	2517	48	14	44,5	85,0	1126	622 510 55	3535	55	16	88,9	127,0	5810
622 506 50	2517	50	14	44,5	85,0	1080	622 510 60	3535	60	18	88,9	127,0	5500
622 506 55	2517	55	16	44,5	85,0	958	622 510 65	3535	65	18	88,9	127,0	5200
622 506 60	2517	60	18	44,5	85,0	810	622 510 70	3535	70	20	88,9	127,0	4880
622 506 65 ¹⁾	2517	65	18 ¹⁾	44,5	85,0	650	622 510 75	3535	75	20	88,9	127,0	4460
622 507 25	3020	25	8	50,8	108,0	2910	622 510 80	3535	80	22	88,9	127,0	4080
622 507 28	3020	28	8	50,8	108,0	2790	622 510 90	3535	90	25	88,9	127,0	3210
622 507 30	3020	30	8	50,8	108,0	2840							
622 507 32	3020	32	10	50,8	108,0	2800							
622 507 35	3020	35	10	50,8	108,0	2745							
622 507 38	3020	38	10	50,8	108,0	2700							
622 507 40	3020	40	12	50,8	108,0	2635							
622 507 42	3020	42	12	50,8	108,0	2594							
622 507 45	3020	45	14	50,8	108,0	2515							
622 507 48	3020	48	14	50,8	108,0	2425							
622 507 50	3020	50	14	50,8	108,0	2370							
622 507 55	3020	55	16	50,8	108,0	2234							
622 507 60	3020	60	18	50,8	108,0	2000							
622 507 65	3020	65	18	50,8	108,0	1888							
622 507 70	3020	70	20	50,8	108,0	1700							
622 507 75	3020	75	20	50,8	108,0	1485							

¹⁾ With flat keyway 3.3mm.

Other bush sizes on request.

*Assembly Instructions
Page 824*

Spare screws for Taper Bushes

Material: Steel.

Supply: One screw (order quantity as needed).

Taper bushes have two or (from size 3030) three screws depending on size.

Ordering Details: e.g.: Product No. 622 501 99, Spare Screw , Taper Bush 1008 and 1108

Product No.	to match Taper bush	Size inch	Screw type	Tightening Torque Nm	Weight g
622 501 99	1008 and 1108	1/4"	Set screw with internal hexagon	5.6	1.9
622 503 99	1210 to 1615	3/8"	Set screw with internal hexagon	20	5.2
622 505 99	2012 and 2017	7/16"	Set screw with internal hexagon	30	11
622 506 99	2517 and 2525	1/2"	Set screw with internal hexagon	50	16.4
622 507 99	3020 and 3030	5/8"	Set screw with internal hexagon	90	33.2
622 510 99	3525 and 3535	1/2"	Screw with internal hexagon	90	49.7

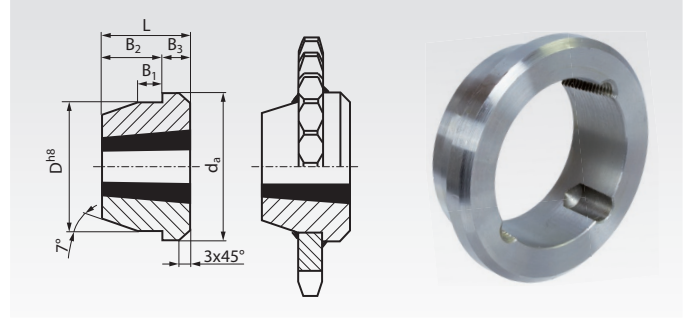
Welding Hubs for Taper Bushes

Material: Steel (St52 or comparable), good weldable.

Hub for fixing a chain plate wheel or similar parts with a low priced taper bush onto a shaft.
Taper bush and chain plate wheel have to be ordered separately.
Recommended bore tolerance: H8.

Before welding, a taper bush should be mounted with a piece of shaft into the welding hub to avoid deforming by heat.

Other sizes for taper bushes up to type 5050 are available at short delivery time.



Ordering Details: e.g.: Product No. 140 901 01, Welding Hub for Taper Bush 1210

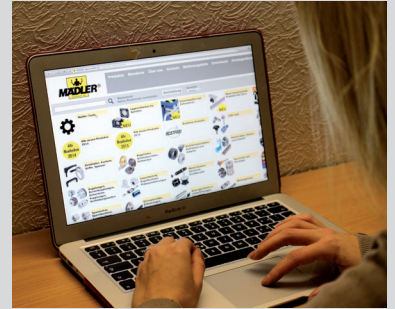
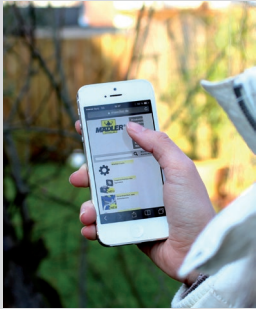
Product No.	For Taper Bush Type	d _a mm	D ^{h8} mm	B ₁ mm	B ₂ mm	B ₃ mm	L mm	Weight kg
140 901 01	1210	73	60	10	16	9	25	0,31
140 901 02	1215	76	60	11	22	16	38	0,50
140 901 03	1610	83	70	10	16	9	25	0,37
140 901 04	1615	83	70	11	22	16	38	0,60
140 901 05	2012	96	90	12	22	10	32	0,72
140 901 06	2517	127	110	13	26	19	45	1,8
140 901 07	3020	152	130	18	27	24	51	2,6
140 901 08	3030	152	130	19	51	25	76	3,6
140 901 09	3525	184	155	25	40	25	65	7,3
140 901 10	3535	184	155	25	57	32	89	6,4



Taper Bushes page 360

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