

Collet Mandrels

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Collet Flange Mandrels



Advantages

- High concentricity up to 0,01 mm
- Rapid changeover to other clamping diameters
- Pull-back action during clamping; axial backstops adapted to workpiece geometry can be manufactured by the customer or on request by RINGSPANN
- Large expansion range of collets from:
 - 0,6 mm for the size 6
 - 1,2 mm for the sizes 7-27
 - 2,4 mm for the sizes 32-54
- Fine size gradations to cover all clamping diameters between 11,9 and 132 mm, with 10 flange mandrel bodies and 83 collets
- Available from stock
- Higher clamping diameters up to 226 mm available on request
- Standard series for balancing machines (see catalogue 15.1)
- Collets secured against rotation on request

Characteristics

For hand- or power-clamping.

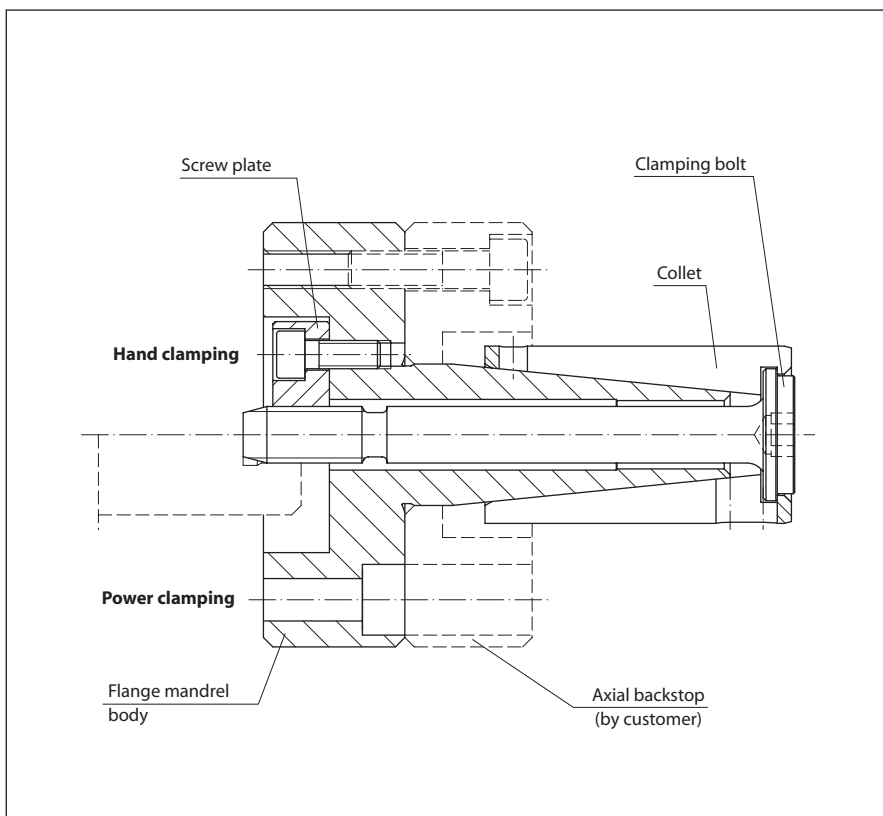
Consists of flange mandrel body with screw plate and collet with clamping bolt.

The flange mandrel body requires a screw plate for hand-clamping. For power-clamping please remove the screw plate.

The cylindrical form of the workpiece bore in the clamping area has to be smaller than the tolerance class IT7, independent of the workpiece bore tolerance.

Technical Data and Dimensions

See pages 4 and 5.



Issue 01/2007

We reserve the right to make technical modifications.

Collet Centre Mandrels



Advantages

- High concentricity up to 0,01 mm
- Rapid changeover to other clamping diameters
- Pull-back action during clamping; axial backstops adapted to workpiece geometry can be manufactured by the customer or on request by RINGSPANN
- Large expansion range of collets from:
 - 0,6 mm for the size 6
 - 1,2 mm for the sizes 7-27
 - 2,4 mm for the sizes 32-54
- Fine size gradations to cover all clamping diameters between 11,9 and 132 mm, with 10 centre mandrel bodies and 83 collets
- Available from stock
- Higher clamping diameters up to 226 mm available on request

Characteristics

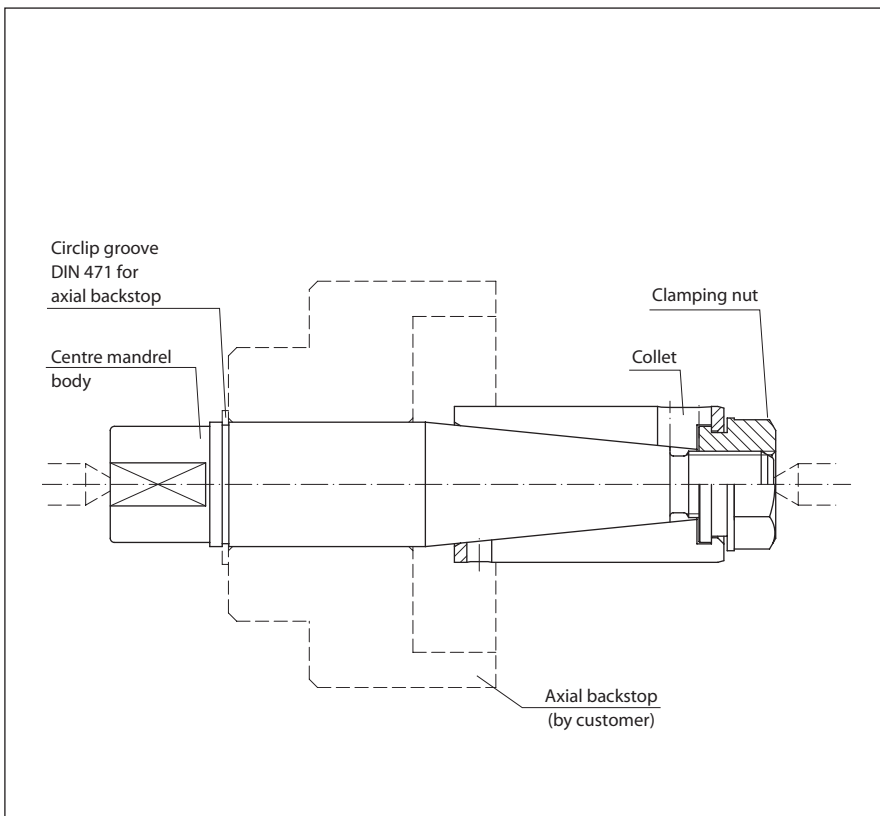
For hand- or power-clamping.

Consists of centre mandrel body and collet with clamping nut.

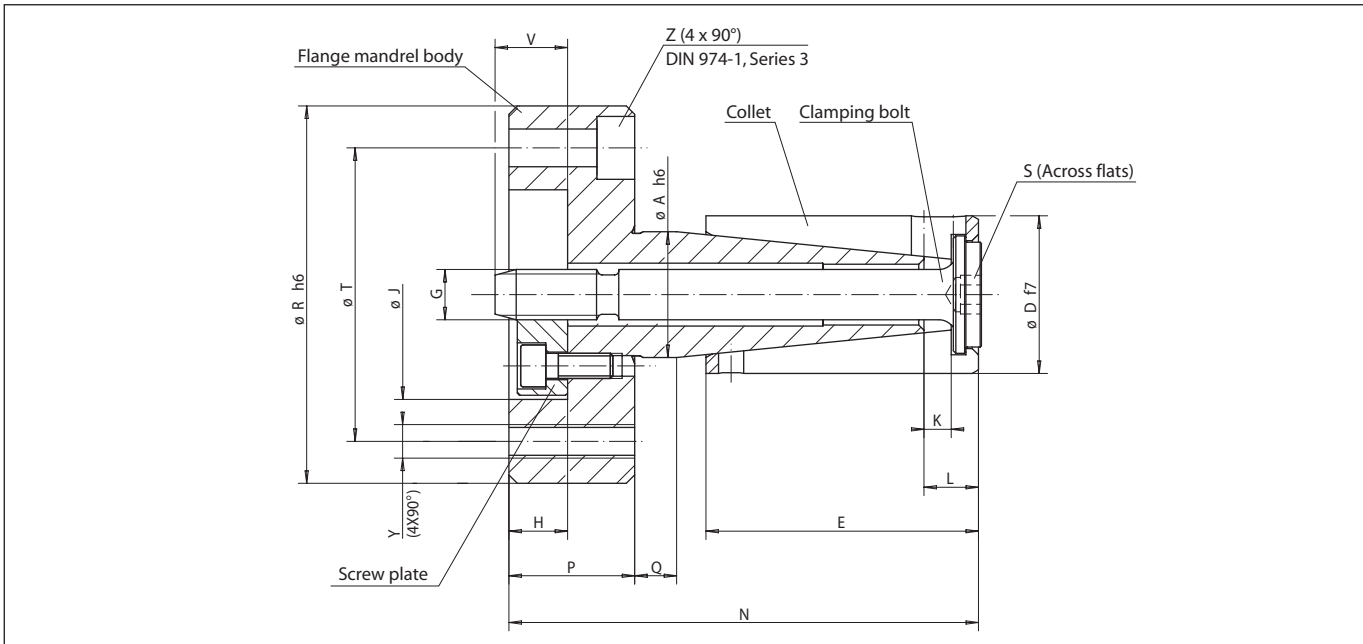
The cylindrical form of the workpiece bore in the clamping area has to be smaller than the tolerance class IT7, independent of the workpiece bore tolerance.

Technical Data and Dimensions

See pages 6 and 7.



Collet Flange Mandrels



Technical Data and Dimensions

Flange mandrel body with screw plate		Collet with clamping bolt Type	Clamping range D_{f7} from - to mm	Transmissible torque		Necessary actuating on the clamping bolt		A	E	G	H	J	K	L	N	P	Q	R	S	T	V	Y	Z
Type	Art.-no. 3169.			Mm ¹⁾	Mo ²⁾	Drawbar force F N	Actuating torque M Nm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
MDF 6	007.006	MBB 6	11,90 - 15,00	11	18	5 000	5	11	23	M 5	9	37	3	8	52	20	5	70	3	50	9	M8	8
MDF 7	007.003	MBB 7	14,70 - 20,90	14	22	5 000	5	14	35	M 5	9	37	6	11	67	20	5	70	3	50	19	M8	8
MDF 12	012.005	MBB 12	20,70 - 27,90	49	73	12 000	20	20	45	M 8	9	37	6	12	81	20	10	70	5	50	17	M8	8
MDF 18	018.008	MBB 18	27,70 - 32,80	65	97	12 000	24	26	45	M 8	9	37	6	12	80	20	10	70	5	50	20	M8	8
MDF 19	018.009	MBB 19	32,60 - 42,80	129	193	20 000	51	30	65	M12	14	50	6	13	112	30	10	90	8	70	14	M8	8
MDF 27	027.004	MBB 27	42,60 - 51,80	168	251	20 000	62	39	65	M12	14	50	6	13	112	30	10	90	8	70	14	M8	8
MDF 32	032.004	MBB 32	51,60 - 64,00	304	455	30 000	113	49	90	M16	19	60	12	22	147	30	15	120	12	95	18	M10	10
MDF 43	043.006	MBB 43	63,60 - 72,00	373	558	30 000	134	60	90	M16	19	60	12	22	147	30	15	140	12	115	18	M12	12
MDF 44	043.007	MBB 44	71,60 - 82,00	422	632	30 000	140	66	120	M16	19	60	12	22	177	30	15	140	12	115	18	M12	12
MDF 54	054.004	MBB 54	81,60 - 132,00	481	720	30 000	159	77	120	M16	19	60	12	22	177	30	15	140	12	115	18	M12	12

¹⁾ with axial backstop ²⁾ without axial backstop

Workpiece Clamping

The clamping surface of the workpiece must not be positioned completely within the area of dimension "L". The larger portion of the clamping surface should be positioned over the tapered section of the flange mandrel body.

The workpiece can either be positioned directly against the flange mandrel body or against a special axial backstop designed to fit the workpiece geometry. Axial backstop can be manufactured by customer or on request by RINGSPANN.

Collet Flange Mandrels

Article-no. of collets with clamping bolt

Type	Clamping range D_{f7} from - to mm	Art.-no. 0169.
MBB 6	11,90 - 12,50	006.001.011,90
	12,40 - 13,00	006.001.012,40
	12,90 - 13,50	006.001.012,90
	13,40 - 14,00	006.001.013,40
	13,90 - 14,50	006.001.013,90
MBB 7	14,40 - 15,00	006.001.014,40
	14,70 - 15,90	007.001.014,70
	15,70 - 16,90	007.001.015,70
	16,70 - 17,90	007.001.016,70
	17,70 - 18,90	007.001.017,70
MBB 12	18,70 - 19,90	007.001.018,70
	19,70 - 20,90	007.001.019,70
	20,70 - 21,90	012.001.020,70
	21,70 - 22,90	012.001.021,70
	22,70 - 23,90	012.001.022,70
MBB 18	23,70 - 24,90	012.001.023,70
	24,70 - 25,90	012.001.024,70
	25,70 - 26,90	012.001.025,70
	26,70 - 27,90	012.001.026,70
	27,70 - 28,90	018.001.027,70
MBB 19	28,70 - 29,90	018.001.028,70
	29,70 - 30,90	018.001.029,70
	30,60 - 31,80	018.001.030,60
	31,60 - 32,80	018.001.031,60
	32,60 - 33,80	018.002.032,60
MBB 18	33,60 - 34,80	018.002.033,60
	34,60 - 35,80	018.002.034,60
	35,60 - 36,80	018.002.035,60
	36,60 - 37,80	018.002.036,60
	37,60 - 38,80	018.002.037,60
MBB 19	38,60 - 39,80	018.002.038,60
	39,60 - 40,80	018.002.039,60
	40,60 - 41,80	018.002.040,60
	41,60 - 42,80	018.002.041,60

Type	Clamping range D_{f7} from - to mm	Art.-no. 0169.
MBB 27	42,60 - 43,80	027.001.042,60
	43,60 - 44,80	027.001.043,60
	44,60 - 45,80	027.001.044,60
	45,60 - 46,80	027.001.045,60
	46,60 - 47,80	027.001.046,60
	47,60 - 48,80	027.001.047,60
	48,60 - 49,80	027.001.048,60
	49,60 - 50,80	027.001.049,60
	50,60 - 51,80	027.001.050,60
	51,60 - 54,00	032.001.051,60
MBB 32	53,60 - 56,00	032.001.053,60
	55,60 - 58,00	032.001.055,60
	57,60 - 60,00	032.001.057,60
	59,60 - 62,00	032.001.059,60
MBB 43	61,60 - 64,00	032.001.061,60
	63,60 - 66,00	043.001.063,60
	65,60 - 68,00	043.001.065,60
	67,60 - 70,00	043.001.067,60
MBB 44	69,60 - 72,00	043.001.069,60
	71,60 - 74,00	043.002.071,60
	73,60 - 76,00	043.002.073,60
	75,60 - 78,00	043.002.075,60
MBB 44	77,60 - 80,00	043.002.077,60
	79,60 - 82,00	043.002.079,60

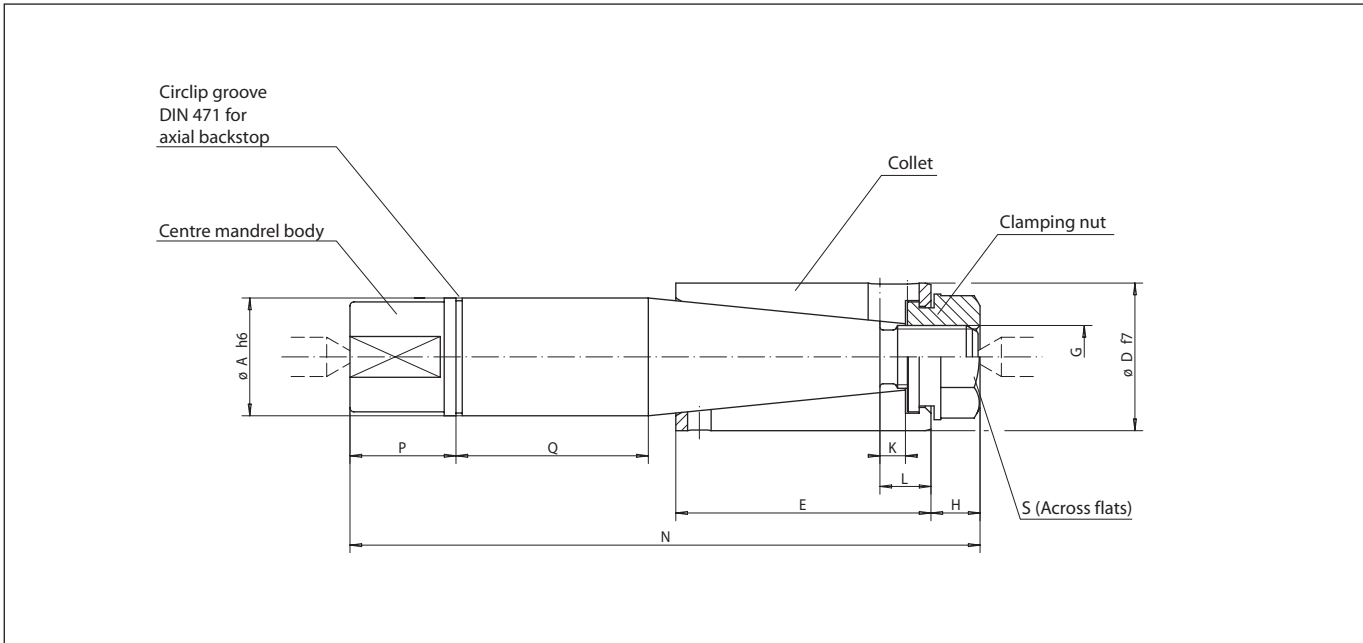
Type	Clamping range D_{f7} from - to mm	Art.-no. 0169.
MBB 54	81,60 - 84,00	054.001.081,60
	83,60 - 86,00	054.001.083,60
	85,60 - 88,00	054.001.085,60
	87,60 - 90,00	054.001.087,60
	89,60 - 92,00	054.001.089,60
	91,60 - 94,00	054.001.091,60
	93,60 - 96,00	054.001.093,60
	95,60 - 98,00	054.001.095,60
	97,60 - 100,00	054.001.097,60
	99,60 - 102,00	054.001.099,60
	101,60 - 104,00	054.003.101,60
	103,60 - 106,00	054.003.103,60
	105,60 - 108,00	054.003.105,60
	107,60 - 110,00	054.003.107,60
	109,60 - 112,00	054.003.109,60
	111,60 - 114,00	054.004.111,60
	113,60 - 116,00	054.004.113,60
	115,60 - 118,00	054.004.115,60
117,60 - 120,00	054.004.117,60	
119,60 - 122,00	054.004.119,60	
121,60 - 124,00	054.005.121,60	
123,60 - 126,00	054.005.123,60	
125,60 - 128,00	054.005.125,60	
127,60 - 130,00	054.005.127,60	
129,60 - 132,00	054.005.129,60	

Example for ordering for clamping diameter 17 mm

Information by ordering	Item	Type	Article-no.
	Flange mandrel body with screw plate	MDF 7	3169.007.003
	Collet with clamping bolt	MBB 7	0169.007.001.016,70



Collet Centre Mandrels



Technical Data and Dimensions

Centre mandrel body		Collet with clamping bolt Type	Clamping range D_{f7} from - to mm	Transmissible torque		Tightening torque required at clamping nut M Nm	A mm	E mm	G	H mm	K max. stroke mm	L mm	N mm	P mm	Q mm	S mm
Type	Art.-no. 2110.			Mm ¹⁾ Nm	Mo ²⁾ Nm											
MDS 6	007.017	MBM 6	11,90 - 15,00	11	18	5	11	23	M 5 x 0,5	6,7	3	7,5	77	16	26	11
MDS 7	007.006	MBM 7	14,70 - 20,90	14	22	7	14	35	M 6 x 0,75	7	6	11	90	16	26	11
MDS 12	012.002	MBM 12	20,70 - 27,90	49	73	25	20	45	M 10 x 1	8	6	12	110	20	31	17
MDS 18	018.006	MBM 18	27,70 - 32,80	65	97	37	26	45	M 10 x 1	8	6	12	110	20	31	17
MDS 19	018.009	MBM 19	32,60 - 42,80	129	193	67	30	65	M 16 x 1,5	13	6	13	160	27	49	27
MDS 27	027.004	MBM 27	42,60 - 51,80	168	251	78	39	65	M 16 x 1,5	13	6	13	160	27	49	27
MDS 32	032.002	MBM 32	51,60 - 64,00	304	455	153	49	90	M 24 x 1,5	18	12	22	230	38	72	41
MDS 43	043.001	MBM 43	63,60 - 72,00	373	558	175	60	90	M 24 x 1,5	18	12	22	230	38	72	41
MDS 44	043.002	MBM 44	71,60 - 82,00	422	632	204	66	120	M 30 x 1,5	23	12	22	300	46	99	55
MDS 54	054.001	MBM 54	81,60 - 132,00	481	720	222	77	120	M 30 x 1,5	23	12	22	300	46	99	55

¹⁾ with axial backstop ²⁾ without axial backstop

Workpiece Clamping

The clamping surface of the workpiece must not be positioned completely within the area of dimension "L". The larger portion of the clamping surface should be positioned over the tapered section of the flange mandrel body.

The workpiece can be positioned against a special axial backstop designed to fit the workpiece geometry. Axial backstop can be manufactured by customer or on request by RINGSPANN.

Collet Centre Mandrels

Article-no. of collets with clamping nut

Type	Clamping range D_{f7} from - to mm	Article-no. 0169.
MBM 6	11,90 - 12,50	006.002.011,90
	12,40 - 13,00	006.002.012,40
	12,90 - 13,50	006.002.012,90
	13,40 - 14,00	006.002.013,40
	13,90 - 14,50	006.002.013,90
MBM 7	14,40 - 15,00	006.002.014,40
	14,70 - 15,90	007.002.014,70
	15,70 - 16,90	007.002.015,70
	16,70 - 17,90	007.002.016,70
	17,70 - 18,90	007.002.017,70
MBM 12	18,70 - 19,90	007.002.018,70
	19,70 - 20,90	007.002.019,70
	20,70 - 21,90	012.002.020,70
	21,70 - 22,90	012.002.021,70
	22,70 - 23,90	012.002.022,70
MBM 18	23,70 - 24,90	012.002.023,70
	24,70 - 25,90	012.002.024,70
	25,70 - 26,90	012.002.025,70
	26,70 - 27,90	012.002.026,70
	27,70 - 28,90	018.003.027,70
MBM 19	28,70 - 29,90	018.003.028,70
	29,70 - 30,90	018.003.029,70
	30,60 - 31,80	018.003.030,60
	31,60 - 32,80	018.003.031,60
	32,60 - 33,80	018.004.032,60
MBM 18	33,60 - 34,80	018.004.033,60
	34,60 - 35,80	018.004.034,60
	35,60 - 36,80	018.004.035,60
	36,60 - 37,80	018.004.036,60
	37,60 - 38,80	018.004.037,60
MBM 18	38,60 - 39,80	018.004.038,60
	39,60 - 40,80	018.004.039,60
	40,60 - 41,80	018.004.040,60
	41,60 - 42,80	018.004.041,60

Type	Clamping range D_{f7} from - to mm	Article-no. 0169.
MBM 27	42,60 - 43,80	027.002.042,60
	43,60 - 44,80	027.002.043,60
	44,60 - 45,80	027.002.044,60
	45,60 - 46,80	027.002.045,60
	46,60 - 47,80	027.002.046,60
MBM 32	47,60 - 48,80	027.002.047,60
	48,60 - 49,80	027.002.048,60
	49,60 - 50,80	027.002.049,60
	50,60 - 51,80	027.002.050,60
	51,60 - 54,00	032.002.051,60
MBM 43	53,60 - 56,00	032.002.053,60
	55,60 - 58,00	032.002.055,60
	57,60 - 60,00	032.002.057,60
	59,60 - 62,00	032.002.059,60
	61,60 - 64,00	032.002.061,60
MBM 44	63,60 - 66,00	043.003.063,60
	65,60 - 68,00	043.003.065,60
	67,60 - 70,00	043.003.067,60
	69,60 - 72,00	043.003.069,60
	71,60 - 74,00	043.004.071,60
MBM 44	73,60 - 76,00	043.004.073,60
	75,60 - 78,00	043.004.075,60
	77,60 - 80,00	043.004.077,60
	79,60 - 82,00	043.004.079,60

Type	Clamping range D_{f7} from - to mm	Article-no. 0169.
MBM 54	81,60 - 84,00	054.002.081,60
	83,60 - 86,00	054.002.083,60
	85,60 - 88,00	054.002.085,60
	87,60 - 90,00	054.002.087,60
	89,60 - 92,00	054.002.089,60
	91,60 - 94,00	054.002.091,60
	93,60 - 96,00	054.002.093,60
	95,60 - 98,00	054.002.095,60
	97,60 - 100,00	054.002.097,60
	99,60 - 102,00	054.002.099,60
	101,60 - 104,00	054.006.101,60
	103,60 - 106,00	054.006.103,60
	105,60 - 108,00	054.006.105,60
	107,60 - 110,00	054.006.107,60
	109,60 - 112,00	054.006.109,60
	111,60 - 114,00	054.007.111,60
	113,60 - 116,00	054.007.113,60
	115,60 - 118,00	054.007.115,60
	117,60 - 120,00	054.007.117,60
119,60 - 122,00	054.007.119,60	
MBM 54	121,60 - 124,00	054.008.121,60
	123,60 - 126,00	054.008.123,60
	125,60 - 128,00	054.008.125,60
	127,60 - 130,00	054.008.127,60
	129,60 - 132,00	054.008.129,60

Example for ordering for clamping diameter 29 mm

Information by ordering	Item	Type	Article-no.
	Centre mandrel body	MDS 18	2110.018.006
	Collet with clamping nut	MBM 18	0169.018.003.028,70



Freewheels

Backstops

Automatic protection against reverse running of conveyor belts, elevators, pumps and fans.



Catalogue 88

Overrunning Clutches

Automatic engaging and disengaging of drives.



Catalogue 80

Indexing Freewheels

For gradual feed of materials.



Catalogue 80

Housing Freewheels

Automatic engaging and disengaging for multi-motor drives for installations with continuous operation.



Catalogue 80.1

Freewheel Elements

Cage Freewheels, Sprag Sets and Freewheel Chains.



Catalogue 89

Brakes

Industrial Disc Brakes

Manually actuated – manually released.



Catalogue 46

Industrial Disc Brakes

Spring actuated – pneumatically, hydraulically or manually released.



Catalogue 46

Industrial Disc Brakes

Spring actuated – electromagnetically released.



Catalogue 46

Industrial Disc Brakes

Pneumatically actuated – spring released.



Catalogue 46

Industrial Disc Brakes

Hydraulically actuated – spring released.



Catalogue 46

Torque and Force Limiters

Torque Limiters with Screw Face

Reliable overload protection for tough operating conditions.



Catalogue 45

Torque Limiters with Rollers

With double or single Rollers. Through ratcheting or disengaging, also for 360° synchronous running.



Catalogue 45

Torque Limiters with Balls

Reliable overload protection with maximum response accuracy. Also backlash free.



Catalogue 45

Torque Limiters with Friction Linings

RIMOSTAT Torque Limiter for constant torque. Belleville Spring Torque Limiter for simple release.



Catalogue 45

Force Limiters

Reliable axial overload protection in piston rods.



Catalogue 49

Couplings and Clamping Clutches

Flexible Couplings

Large, allowed radial and angular misalignments. Minimum resiliency.



Catalogue 44

Flange-Couplings

Rigid, easily removable shaft coupling with no clearance cone clamping elements.



E04.020

Clamping Clutches

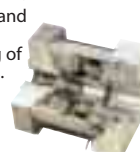
For the automatic coupling of rolls. Fast, safe and free from slipping connection.



Catalogue 45

Safety Clamping Units pneumatically released

For secure and precise positioning of piston rods.



E01.023

Safety Clamping Units hydraulically released

For secure and precise positioning of piston rods.



Catalogue 32

Shaft-Hub-Connections

Two-part Shrink Discs

External clamping connection. Advantages: Simple, secure mounting even without torque wrench.



Catalogue 31.1

Three-part Shrink Discs

External clamping connection for the fastening of hollow shafts on solid shafts



Catalogue 31

Cone Clamping Elements

For shaft-hub connections. High torques with small dimensions.



Catalogue 31

Star and Clamping Discs

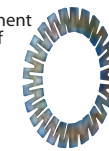
Ideal for shaft-hub-connection for frequent release.



E03.023

Star Spring Washers

Axial spring element for preloading of ball bearings.



Catalogue 20

Precision Clamping Fixtures

Standard Parts for Clamping Fixtures

The RINGSPANN-System for the manufacture of your own precision clamping fixtures.



Catalogue 14

Standard Clamping Fixtures

Standard program in high precision, ready manufactured chucks and mandrels.



Special Clamping Fixtures

Custom made solutions for specific clamping problems.



Collet Mandrels

Universal, cost effective standard series. Fast collet change to other clamping diameters.



Catalogue 15

Hydraulic Expanding Clamping Tools

Mandrels and chucks with high concentricity. Clamping several workpieces in one process possible.



Catalogue 16

