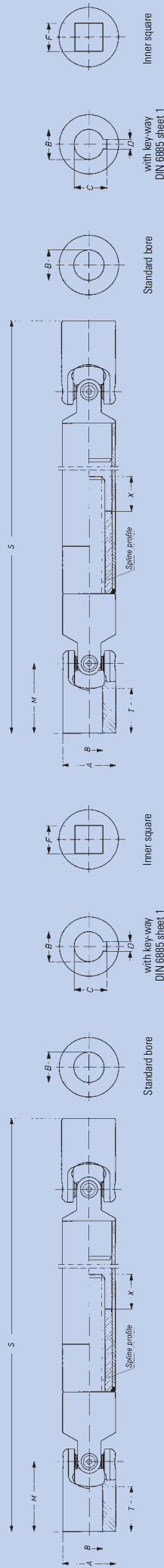


Needle bearing version, with length compensation



Please indicate compressed length, S*, extension and required type of flange when ordering!

Order number	Precision Cardan Shafts, Standard bore					Precision Cardan Shafts, Bore with key-way DIN 6885, Sheet 1								
	0.616.100	0.620.100	0.625.100	0.632.100	0.640.100	0.650.100	0.663.100	0.616.103	0.620.103	0.625.103	0.632.103	0.640.103	0.650.103	0.663.103
Md _{max} Nm	6	15	20	40	80	120	250	6	15	20	40	80	120	250
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Weight by S ₁ kg	0,20	0,33	0,59	1,09	2,13	4,0	8,25	0,20	0,33	0,59	1,09	2,13	4,0	8,25
Weight by S ₂ kg	0,24	0,39	0,68	1,21	2,28	4,44	8,75	0,24	0,39	0,68	1,21	2,28	4,44	8,75
Weight by S ₃ kg	0,26	0,42	0,72	1,35	2,57	4,98	9,70	0,26	0,42	0,72	1,35	2,57	4,98	9,70
A mm	16	20	25	32	40	50	63	16	20	25	32	40	50	63
*B ^{1/2} mm	10	12	16	20	25	32	40	10	12	16	20	25	32	40
*C ^{1/2} mm	—	—	—	—	—	—	—	11,4	13,8	—	—	—	—	—
*D ^{2/3} mm	—	—	—	—	—	—	—	3	4	—	—	—	—	—
*E ^{1/3} mm	—	—	—	—	—	—	—	—	—	—	—	—	—	—
M mm	26	31	37	43	54	66	83	26	31	37	43	54	66	83
S ₁ + X ₁ mm	165 + 15	174 + 20	188 + 25	234 + 30	301 + 40	372 + 50	475 + 70	165 + 15	174 + 20	188 + 25	234 + 30	301 + 40	372 + 50	475 + 70
S ₂ + X ₂ mm	185 + 30	194 + 40	228 + 55	264 + 60	321 + 60	422 + 100	505 + 100	185 + 30	194 + 40	228 + 55	264 + 60	321 + 60	422 + 100	505 + 100
S ₃ + X ₃ mm	210 + 60	224 + 70	248 + 75	294 + 90	371 + 110	472 + 150	565 + 180	210 + 60	224 + 70	248 + 75	294 + 90	371 + 110	472 + 150	565 + 180
T mm	15	18	22	25	32	40	50	15	18	22	25	32	40	50
Spline profile	6x7,5x10,2	6x11x14	6x11x14	6x16x20	6x21x25	6x28x32	6x36x42	6x7,5x10,2	6x7,5x10,2	6x7,5x10,2	6x16x20	6x21x25	6x28x32	6x36x42

These drive shafts are also available with rapid-change coupling.
 * = Customized bores, key-way and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 S₁ = preferred lengths, compressed
 S₂ = preferred lengths, compressed
 X₁ = Maximum extension for S₁
 X₂ = Maximum extension for S₂
 X₃ = Maximum extension for S₃
 For application criteria and calculations refer to technical annex

Precision Cardan Shafts, Standard bore

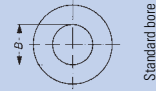
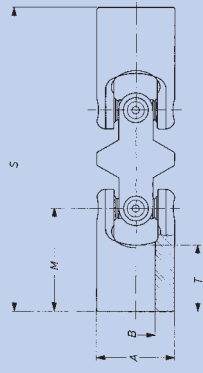
Precision Cardan Shafts, Inner square

Order number	Precision Cardan Shafts, Standard bore					Precision Cardan Shafts, Inner square								
	0.616.100	0.620.100	0.625.100	0.632.100	0.640.100	0.650.100	0.663.100	0.616.104	0.620.104	0.625.104	0.632.104	0.640.104	0.650.104	0.663.104
Md _{max} Nm	6	15	20	40	80	120	250	6	15	20	40	80	120	250
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Weight by S ₁ kg	0,20	0,33	0,59	1,09	2,13	4,0	8,25	0,20	0,33	0,59	1,09	2,13	4,0	8,25
Weight by S ₂ kg	0,24	0,39	0,68	1,21	2,28	4,44	8,75	0,24	0,39	0,68	1,21	2,28	4,44	8,75
Weight by S ₃ kg	0,26	0,42	0,72	1,35	2,57	4,98	9,70	0,26	0,42	0,72	1,35	2,57	4,98	9,70
A mm	16	20	25	32	40	50	63	16	20	25	32	40	50	63
*B ^{1/2} mm	10	12	16	20	25	32	40	10	12	16	20	25	32	40
*C ^{1/2} mm	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*D ^{2/3} mm	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*E ^{1/3} mm	—	—	—	—	—	—	—	—	—	—	—	—	—	—
M mm	26	31	37	43	54	66	83	26	31	37	43	54	66	83
S ₁ + X ₁ mm	165 + 15	174 + 20	188 + 25	234 + 30	301 + 40	372 + 50	475 + 70	165 + 15	174 + 20	188 + 25	234 + 30	301 + 40	372 + 50	475 + 70
S ₂ + X ₂ mm	185 + 30	194 + 40	228 + 55	264 + 60	321 + 60	422 + 100	505 + 100	185 + 30	194 + 40	228 + 55	264 + 60	321 + 60	422 + 100	505 + 100
S ₃ + X ₃ mm	210 + 60	224 + 70	248 + 75	294 + 90	371 + 110	472 + 150	565 + 180	210 + 60	224 + 70	248 + 75	294 + 90	371 + 110	472 + 150	565 + 180
T mm	15	18	22	25	32	40	50	15	18	22	25	32	40	50
Spline profile	6x7,5x10,2	6x11x14	6x11x14	6x16x20	6x21x25	6x28x32	6x36x42	6x7,5x10,2	6x7,5x10,2	6x11x14	6x16x20	6x21x25	6x28x32	6x36x42

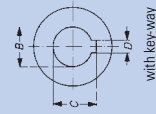
Precision Cardan Joints

Series 0.600

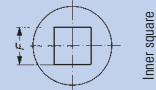
also



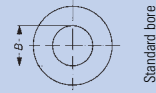
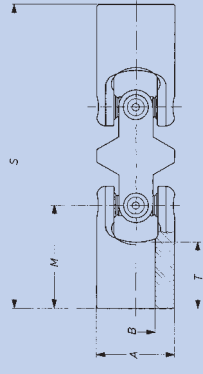
Standard bore



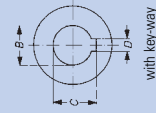
with key-way
DIN 6885 sheet 1



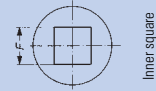
Inner square



Standard bore



with key-way
DIN 6885 sheet 1



Inner square

Precision Cardan Shafts, Standard bore

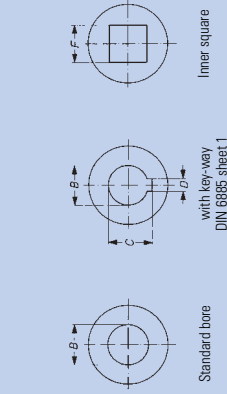
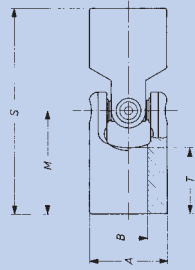
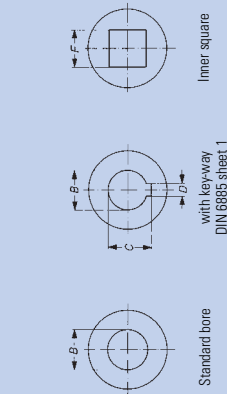
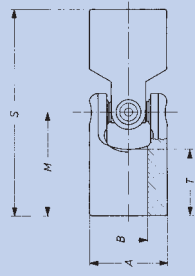
Order number	0.616.300		0.620.300		0.625.300		0.632.300		0.640.300		0.650.300		0.663.300	
	6	15	20	40	45	20	40	45	80	45	120	250	250	250
Md _{max} Nm														
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Weight kg	0,08	0,14	0,24	0,50	0,50	1,71	3,06	3,06	0,08	0,14	0,24	0,50	0,50	0,14
A mm	16	20	25	32	40	50	63	63	16	20	25	32	40	16
*B ¹⁷ mm	10	12	16	20	20	25	32	40	10	10	12	12	12	10
*C ^{18,2} mm	–	–	–	–	–	–	–	–	11,4	13,8	–	–	–	–
*D ¹⁸ mm	–	–	–	–	–	–	–	–	3	4	–	–	–	–
*E ¹⁹ mm	–	–	–	–	–	–	–	–	–	–	–	–	–	–
M mm	26	31	37	43	54	66	83	83	26	26	31	31	31	26
S mm	74	88	104	124	150	188	238	238	74	74	88	88	88	74
T mm	15	18	22	25	32	40	50	50	15	15	18	18	18	15

Precision Cardan Shafts, Bore with key-way DIN 6885, Sheet 1

Order number	0.625.303		0.632.303		0.640.303		0.650.303		0.663.303		0.616.304		0.620.304		0.625.304		0.632.304		0.640.304		0.650.304	
	20	40	45	45	45	45	45	45	45	45	6	15	20	20	20	20	20	20	20	20	20	20
Md _{max} Nm																						
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Weight kg	0,24	0,50	0,95	1,71	3,06	3,06	3,06	3,06	3,06	3,06	0,08	0,14	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24	0,24
A mm	25	32	40	50	63	63	63	63	63	63	16	20	25	25	25	25	25	25	25	25	25	25
*B ¹⁷ mm	16	20	25	32	40	40	40	40	40	40	10	10	12	12	12	12	12	12	12	12	12	12
*C ^{18,2} mm	18,3	22,8	28,3	35,3	43,3	43,3	43,3	43,3	43,3	43,3	–	–	–	–	–	–	–	–	–	–	–	–
*D ¹⁸ mm	5	6	8	10	10	10	10	10	10	10	–	–	–	–	–	–	–	–	–	–	–	–
*E ¹⁹ mm	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
M mm	37	43	54	66	83	83	83	83	83	83	26	31	37	43	43	43	43	43	43	43	43	43
S mm	104	124	156	188	238	238	238	238	238	238	74	88	104	124	124	124	124	124	124	124	124	124
T mm	22	25	32	40	40	40	40	40	40	40	15	18	22	22	22	22	22	22	22	22	22	22

* = Customized bores, key-way and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex

single, DIN 808, Needle bearing version



Precision Cardan Shafts, Standard bore

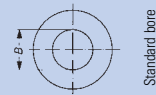
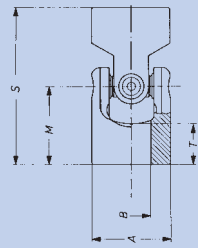
Order number	0.616.400			0.625.400			0.632.400			0.640.400			0.650.400			0.663.400		
	6	15	45	20	45	120	40	45	80	45	120	250	45	45	45	250	45	45
Md _{max}	Nm																	
Angle of deflection β	°																	
Weight	kg																	
A	mm																	
*B ^{1/2}	mm																	
*C ^{1/2}	mm																	
*D ^{3/8}	mm																	
*F ^{1/8}	mm																	
M	mm																	
S	mm																	
T	mm																	

Precision Cardan Shafts, Precision Cardan Shafts, Inner square

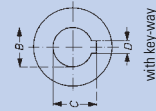
Order number	0.616.403			0.640.403			0.650.403			0.663.403			0.625.404			0.632.404			0.640.404			0.650.404			0.663.404		
	6	15	45	20	45	120	40	45	80	45	120	250	45	45	45	250	45	45	80	45	45	45	250	45	45	45	250
Md _{max}	Nm																										
Angle of deflection β	°																										
Weight	kg																										
A	mm																										
*B ^{1/2}	mm																										
*C ^{1/2}	mm																										
*D ^{3/8}	mm																										
*F ^{1/8}	mm																										
M	mm																										
S	mm																										
T	mm																										

* = Customized bores, key-way and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex

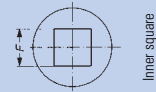
single, Short Version, DIN 808, Needle bearing version



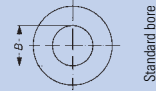
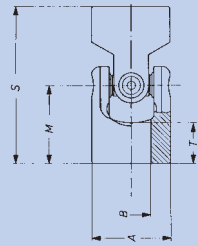
Standard bore



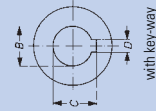
with key-way
DIN 6885 sheet 1



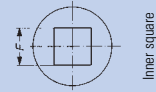
Inner square



Standard bore



with key-way
DIN 6885 sheet 1



Inner square

Precision Cardan Shafts, Standard bore

Order number	Precision Cardan Shafts, Standard bore									
	0.616.410	0.620.410	0.625.410	0.632.410	0.640.410	0.650.410	0.663.410	0.616.413	0.620.413	0.625.413
Md_{max} Nm	6	15	20	40	80	120	250	6	15	20
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45
Weight kg	0,03	0,07	0,10	0,22	0,42	0,80	1,88	0,03	0,07	0,10
A mm	16	20	25	32	40	50	63	16	20	25
*B ^{1/2} mm	8	10	12	16	20	25	32	8	10	12
*C ^{1/2} mm	–	–	–	–	–	–	–	9	11,4	–
*D ^{3/8} mm	–	–	–	–	–	–	–	2	3	–
*F ^{1/8} mm	–	–	–	–	–	–	–	–	–	–
M mm	20	24	28	34	41	52,5	65	20	24	28
S mm	40	48	56	68	82	105	130	40	48	56
T mm	11	13	15	18**	20**	27**	36	11	13	15

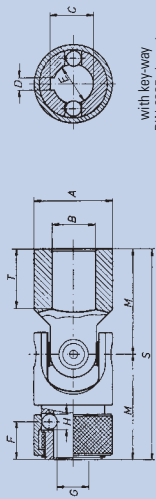
* = Customized bores, key-way and inner square dimensions possible
 ** = Bore depth smaller than DIN 808
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex

Bore with key-way DIN 6885, Sheet 1

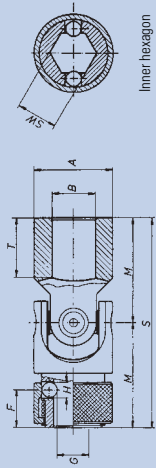
Order number	Precision Cardan Shafts, Inner square									
	0.625.413	0.632.413	0.640.413	0.650.413	0.663.413	0.616.414	0.620.414	0.625.414	0.632.414	0.640.414
Md_{max} Nm	20	40	80	120	250	6	15	20	40	80
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45
Weight kg	0,10	0,22	0,42	0,80	1,88	0,03	0,07	0,10	0,22	0,42
A mm	25	32	40	50	63	16	20	25	32	40
*B ^{1/2} mm	12	16	20	25	32	–	–	–	–	–
*C ^{1/2} mm	13,8	18,3	22,8	28,3	35,3	–	–	–	–	–
*D ^{3/8} mm	4	5	6	8	10	–	–	–	–	–
*F ^{1/8} mm	–	–	–	–	–	6	8	10	14	19
M mm	28	34	41	52,5	65	20	24	28	34	41
S mm	56	68	82	105	130	40	48	56	68	82
T mm	15	18**	20**	27**	36	11	13	15	18**	20**

* = Customized bores, key-way and inner square dimensions possible
 ** = Bore depth smaller than DIN 808
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex

single, with rapid-change coupling, DIN 808, Needle bearing version



with key-way
DIN 6885 sheet 1



Inner hexagon

Precision Cardan Joints, with rapid-change coupling, Bore with key-way DIN 6885, Sheet 1

Order number	0.616.423	0.620.423	0.625.423	0.632.423	0.640.423	0.650.423	0.663.423
Md _{max} Nm	6	15	20	40	80	120	250
Angle of deflection β °	45	45	45	45	45	45	45
Weight kg	0,05	0,10	0,16	0,31	0,61	1,15	1,90
A mm	16	20	25	32	40	50	63
*B ¹⁷ mm	8	10	14	16	20	25	30
*C ^{17,2} mm	9	11	15,3	17,3	21,7	26,7	31,7
*D ¹⁸ mm	2	3	5	5	6	8	8
*E ¹⁷ mm	8	10	14	16	20	25	30
F ¹⁹ mm	9,5	11,5	13,5	14	19	20,5	25
G mm	7	8,7	13	14,8	18	23	28
H mm	3,5	4	4	6,35	8	10	10
M mm	26	31	37	43	54	66	83
S mm	52	62	74	86	108	132	166
*SW mm	—	—	—	—	—	—	—
T mm	15	18	22	25	32	40	50



TIP

There are application examples in which frequent removal of the universal joint shaft or the joint from the drive or the output shaft is required.

In this case the use of a rapid-change coupling allows to change the shaft within very short time. This is done manually without any tools.

Torque transmission is ensured via a hexagonal profile or a feather key. Two steel balls which grip into a circular groove at the shaft connection provide axial locking of the shaft.

Precision Cardan Joints, with rapid-change coupling, Inner hexagon

0.616.426	0.620.426	0.625.426	0.632.426	0.640.426	0.650.426	0.663.426
6	15	20	40	80	120	250
45	45	45	45	45	45	45
0,05	0,10	0,16	0,31	0,61	1,15	1,90
16	20	25	32	40	50	63
8	10	14	16	20	25	30
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
9,5	11,5	13,5	14	19	20,5	25
6,3	8	13	14,8	18	23	28
3,5	4	4	6,35	8	10	10
26	31	37	43	54	66	83
52	62	74	86	108	132	166
7,2	9,06	14,04	16	20	25	30
15	18	22	25	32	40	50

* = Customized bores, key-way and inner hexagon dimensions possible
Md_{max} = Max. permissible torque
& = Max. angle of deflection per joint
For application criteria and calculations refer to technical annex