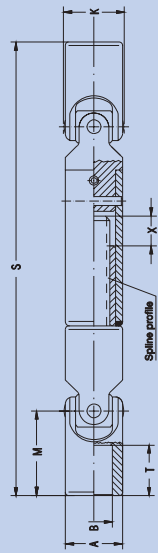
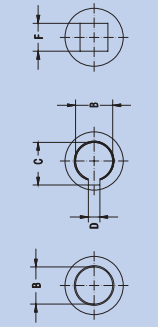


Needle bearing version, with length compensation

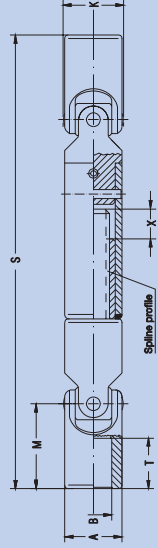


Standard bore

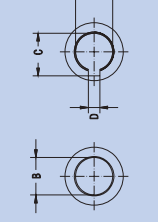


with key-way
DIN 6885 sheet 1

Inner square



Standard bore



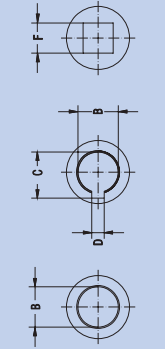
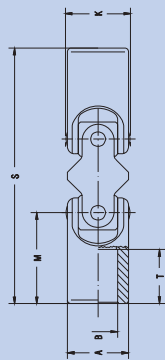
with key-way
DIN 6885 sheet 1

Inner square

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

	Cross Cardan Shafts, Standard bore										Cross Cardan Shafts, Inner square										
	0.716.100	0.720.100	0.725.100	0.732.100	0.740.100	0.750.100	0.763.100	0.770.100	0.775.100	0.780.100	0.785.100	0.790.100	0.795.100	0.800.100	0.805.100	0.810.100	0.815.100	0.820.100	0.825.100	0.830.100	
Order number	8	20	30	60	160	290	450	8	20	30	60	160	290	450	8	20	30	60	160	290	450
Md _{max}	8	20	30	60	160	290	450	8	20	30	60	160	290	450	8	20	30	60	160	290	450
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
Weight by S ₁	0,20	0,33	0,59	1,09	2,13	4,0	8,24	0,20	0,33	0,59	1,09	2,13	4,0	8,24	0,20	0,33	0,59	1,09	2,13	4,0	8,24
Weight by S ₂	0,24	0,39	0,68	1,21	2,28	4,44	8,74	0,24	0,39	0,68	1,21	2,28	4,44	8,74	0,24	0,39	0,68	1,21	2,28	4,44	8,74
Weight by S ₃	0,26	0,42	0,72	1,35	2,57	4,98	9,72	0,26	0,42	0,72	1,35	2,57	4,98	9,72	0,26	0,42	0,72	1,35	2,57	4,98	9,72
A	16	20	25	32	40	50	63	16	20	25	32	40	50	63	16	20	25	32	40	50	63
*B ^{1/2}	10	12	16	20	25	32	40	10	12	16	20	25	32	40	10	12	16	20	25	32	40
*C ^{1/2}	-	-	-	-	-	-	-	11,4	13,8	-	-	-	-	-	-	-	-	-	-	-	-
*D ^{1/2}	-	-	-	-	-	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
*F ^{1/2}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K	17,5	21,5	26,5	33,5	42	52,5	65	17,5	21,5	26,5	33,5	42	52,5	65	17,5	21,5	26,5	33,5	42	52,5	65
M	26	31	37	43	54	66	83	26	31	37	43	54	66	83	26	31	37	43	54	66	83
S ₁ + X ₁	165 + 15	174 + 20	198 + 25	234 + 30	301 + 40	372 + 50	475 + 70	165 + 15	174 + 20	198 + 25	234 + 30	301 + 40	372 + 50	475 + 70	165 + 15	174 + 20	198 + 25	234 + 30	301 + 40	372 + 50	475 + 70
S ₂ + X ₂	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	185 + 30	194 + 40	228 + 55	264 + 60	321 + 60	422 + 100	505 + 100
S ₃ + X ₃	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	210 + 60	224 + 70	248 + 75	294 + 90	371 + 110	472 + 150	565 + 180
T	15	18	22	25	32	40	50	15	18	22	25	32	40	50	15	18	22	25	32	40	50
Spine profile	6x7,5x10,2	6x11x14	6x11x14	6x16x20	6x21x25	6x28x32	6x36x42	6x7,5x10,2	6x11x14	6x11x14	6x16x20	6x21x25	6x28x32	6x36x42	6x7,5x10,2	6x11x14	6x11x14	6x16x20	6x21x25	6x28x32	6x36x42

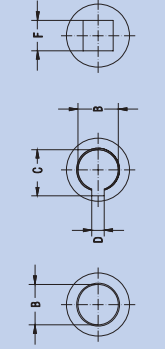
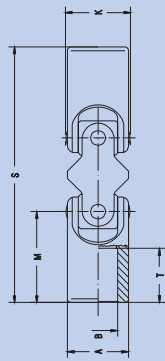
These drive shafts are also available with rapid-change coupling.
 * = Customized bores, key-ways and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 S₁ = preferred lengths, compressed
 S₂ = preferred lengths, extended
 X₁ = Maximum extension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



Standard bore

with key-way
DIN 6885 sheet 1

Inner square



Standard bore

with key-way
DIN 6885 sheet 1

Inner square

Cross Joints, double, Standard bore

	0.713.300	0.716.300	0.720.300	0.725.300	0.732.300	0.740.300	0.750.300	0.763.300	0.713.303	0.716.303
Order number	0.713.300	0.716.300	0.720.300	0.725.300	0.732.300	0.740.300	0.750.300	0.763.300	0.713.303	0.716.303
Md _{max} Nm	6	8	20	30	60	160	290	450	6	8
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45
Weight kg	0,04	0,08	0,14	0,24	0,50	0,95	1,71	3,51	0,04	0,08
A mm	13	16	20	25	32	40	50	63	13	16
*B ^{1/2} mm	8	10	12	16	20	25	32	40	8	10
*C ^{0,2} mm	-	-	-	-	-	-	-	-	9	11,4
*D ^{2/3} mm	-	-	-	-	-	-	-	-	2	3
*F ^{1/3} mm	-	-	-	-	-	-	-	-	-	-
K mm	14	17,5	21,5	26,5	33,5	42	52,5	65	14	17,5
M mm	21	26	31	37	43	54	66	83	21	26
S mm	60	74	88	104	124	156	188	238	60	74
T mm	12	15	18	22	25	32	40	50	12	15

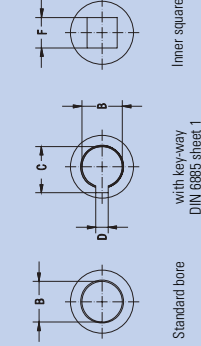
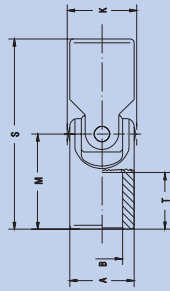
* = Customized bores, key-ways and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex

Bore with key-way DIN 6885, Sheet 1

Cross Joints, double, Inner square

	0.720.303	0.725.303	0.732.303	0.740.303	0.750.303	0.763.303	0.713.304	0.716.304	0.720.304	0.725.304	0.732.304	0.740.304	0.750.304	0.763.304
Order number	0.720.303	0.725.303	0.732.303	0.740.303	0.750.303	0.763.303	0.713.304	0.716.304	0.720.304	0.725.304	0.732.304	0.740.304	0.750.304	0.763.304
Md _{max} Nm	20	30	60	160	290	450	6	8	20	30	60	160	290	450
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Weight kg	0,14	0,24	0,50	0,95	1,71	3,51	0,04	0,08	0,14	0,24	0,50	0,95	1,71	3,51
A mm	20	25	32	40	50	63	13	16	20	25	32	40	50	63
*B ^{1/2} mm	12	16	20	25	32	40	-	-	-	-	-	-	-	-
*C ^{0,2} mm	13,8	18,3	22,8	28,3	35,3	43,3	-	-	-	-	-	-	-	-
*D ^{2/3} mm	4	5	6	8	10	12	-	-	-	-	-	-	-	-
*F ^{1/3} mm	-	-	-	-	-	-	6	8	10	12	16	20	25	32
K mm	21,5	26,5	33,5	42	52,5	65	14	17,5	21,5	26,5	33,5	42	52,5	65
M mm	31	37	43	54	66	83	21	26	31	37	43	54	66	83
S mm	88	104	124	156	188	238	60	74	88	104	124	156	188	238
T mm	18	22	25	32	40	50	12	15	18	22	25	32	40	50

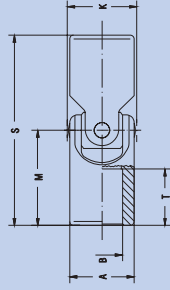
* = Customized bores, key-ways and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex



Standard bore

with key-way
DIN 6885 sheet 1

Inner square



Standard bore

with key-way
DIN 6885 sheet 1

Inner square

Cross Joints, single, Standard bore

Order number	0.713.400	0.716.400	0.720.400	0.725.400	0.732.400	0.740.400	0.750.400	0.763.400	0.713.403	0.716.403
Md _{max} Nm	6	8	20	30	60	160	290	450	6	8
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45
Weight kg	0,03	0,05	0,10	0,16	0,31	0,61	1,15	2,38	0,03	0,05
A mm	13	16	20	25	32	40	50	63	13	16
*B ^{1/2} mm	8	10	12	16	20	25	32	40	8	10
*C ^{0,2} mm	-	-	-	-	-	-	-	-	9	11,4
*D ^{2/3} mm	-	-	-	-	-	-	-	-	2	3
*F ^{1/3} mm	-	-	-	-	-	-	-	-	-	-
K mm	14	17,5	21,5	26,5	33,5	42	52,5	65	14	17,5
M mm	21	26	31	37	43	54	66	83	21	26
S mm	42	52	62	74	86	108	132	166	42	52
T mm	12	15	18	22	25	32	40	50	12	15

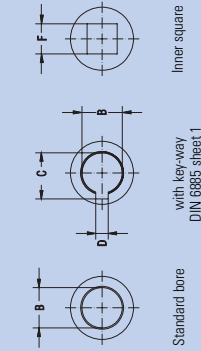
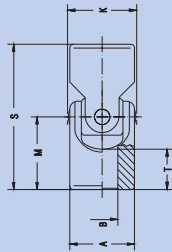
* = Customized bores, key-ways and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex

Bore with key-way DIN 6885, Sheet 1

Cross Joints, single, Inner square

Order number	0.720.403	0.725.403	0.732.403	0.740.403	0.750.403	0.763.403	0.713.404	0.716.404	0.720.404	0.725.404	0.732.404	0.740.404	0.750.404	0.763.404
Md _{max} Nm	20	30	60	160	290	450	6	8	20	30	60	160	290	450
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Weight kg	0,10	0,16	0,31	0,61	1,15	2,38	0,03	0,05	0,10	0,16	0,31	0,61	1,15	2,38
A mm	20	25	32	40	50	63	13	16	20	25	32	40	50	63
*B ^{1/2} mm	12	16	20	25	32	40	-	-	-	-	-	-	-	-
*C ^{0,2} mm	13,8	18,3	22,8	28,3	35,3	43,3	-	-	-	-	-	-	-	-
*D ^{2/3} mm	4	5	6	8	10	12	-	-	-	-	-	-	-	-
*F ^{1/3} mm	-	-	-	-	-	-	6	8	10	12	16	20	25	32
K mm	21,5	26,5	33,5	42	52,5	65	14	17,5	21,5	26,5	33,5	42	52,5	65
M mm	31	37	43	54	66	83	21	26	31	37	43	54	66	83
S mm	62	74	86	108	132	166	42	52	62	74	86	108	132	166
T mm	18	22	25	32	40	50	12	15	18	22	25	32	40	50

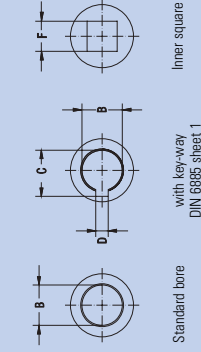
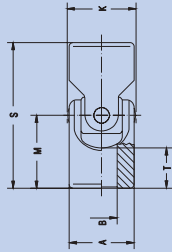
* = Customized bores, key-ways and inner square dimensions possible
 Md_{max} = Max. permissible torque
 β = Max. angle of deflection per joint
 For application criteria and calculations refer to technical annex



Standard bore

with key-way
DIN 6885 sheet 1

Inner square



Standard bore

with key-way
DIN 6885 sheet 1

Inner square

Cross Joints, single, Short version, Standard bore

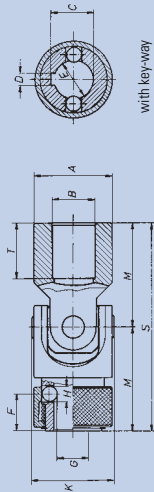
	0.716.410	0.716.411	0.720.410	0.725.410	0.732.410	0.740.410	0.750.410	0.763.410	0.720.413	0.716.413	0.720.413
Order number											
Md _{max} Nm	8	8	20	30	60	160	290	450	8	8	20
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45
Weight kg	0,02	0,03	0,07	0,10	0,22	0,42	0,80	2,12	0,03	0,03	0,07
A mm	16	16	20	25	32	40	50	63	16	16	20
*B ^{1/2} mm	6	8	10	12	16	20	25	32	8	8	10
*C ^{4/2} mm	-	-	-	-	-	-	-	-	-	-	-
*D ^{3/2} mm	-	-	-	-	-	-	-	-	9	9	11,4
*F ^{1/2} mm	-	-	-	-	-	-	-	-	2	2	3
K mm	17,5	17,5	21,5	26,5	33,5	42	52,5	65	17,5	17,5	21,5
M mm	17	20	24	28	34	41	52,5	65	20	20	24
S mm	34	40	48	56	68	82	105	130	40	40	48
T mm	9	11	13	15	19	21**	29**	36	11	11	13

* = Customized bores, keyways 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

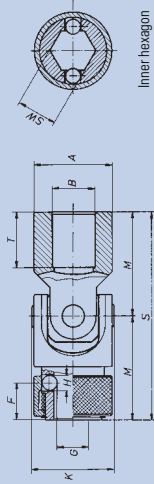
Short vers., Bore with key-way DIN 6885, Sheet 1

	0.725.413	0.732.413	0.740.413	0.750.413	0.763.413	0.716.414	0.720.414	0.725.414	0.732.414	0.740.414	0.750.414	0.763.414
Order number												
Md _{max} Nm	30	60	160	290	450	8	20	30	60	160	290	450
Angle of deflection β °	45	45	45	45	45	45	45	45	45	45	45	45
Weight kg	0,10	0,22	0,42	0,80	2,12	0,03	0,07	0,10	0,22	0,42	0,80	2,12
A mm	25	32	40	50	63	16	20	25	32	40	50	63
*B ^{1/2} mm	12	16	20	25	32	-	-	-	-	-	-	-
*C ^{4/2} mm	13,8	18,3	22,8	28,3	35,3	-	-	-	-	-	-	-
*D ^{3/2} mm	4	5	6	8	10	-	-	-	-	-	-	-
*F ^{1/2} mm	-	-	-	-	-	6	8	10	14	19	24	30
K mm	26,5	33,5	42	52,5	65	17,5	21,5	26,5	33,5	42	52,5	65
M mm	28	34	41	52,5	65	20	24	28	34	41	52,5	65
S mm	56	68	82	105	130	40	48	56	68	82	105	130
T mm	15	19	21**	29**	36	11	13	15	19	21**	29**	36

* = Customized bores, keyways 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



with key-way
DIN 6885 sheet 1



Inner hexagon

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

Order number	0.716.423	0.720.423	0.725.423	0.732.423	0.740.423	0.750.423	0.763.423
Md _{max} Nm	8	20	30	60	160	290	450
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	2,08
A mm	16	20	25	32	40	50	63
*B ^{1/2} mm	8	10	14	16	20	25	30
*C ^{1/2} mm	9	11	15,3	17,3	21,7	26,7	31,7
*D ^{1/8} mm	2	3	5	5	6	8	8
*E ^{1/2} mm	8	10	14	16	20	25	30
F 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
K mm	17,5	21,5	26,5	33,5	42	52,5	65
M mm	26	31	37	43	54	66	83
S mm	52	62	74	86	108	132	166
*SW ^{1/2} 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.

Cross Joints, with rapid-change coupling, Inner hexagon

0.716.426	0.720.426	0.725.426	0.732.426	0.740.426	0.750.426	0.763.426
8	20	30	60	160	290	450
45	45	45	45	45	45	45
0,05	0,10	0,16	0,31	0,61	1,15	2,08
16	20	25	32	40	50	63
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
9,5	11,5	13,5	14	19	20,5	25
6,3	8	13	10,5	14,8	18	23
3,5	4	4	6,35	8	10	10
17,5	21,5	26,5	33,5	42	52,5	65
26	31	37	43	54	66	83
52	62	74	86	108	132	166
7,2	9,06	14,04	11,15	16	20	25
15	18	22	25	32	40	50

* = Customised bores, key-ways and inner hexagon dimensions possible

Md_{max} = Max. permissible torque

β = Max. angle of deflection per joint

For application criteria and calculations refer to technical annex