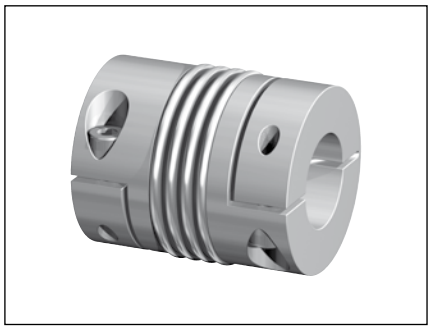
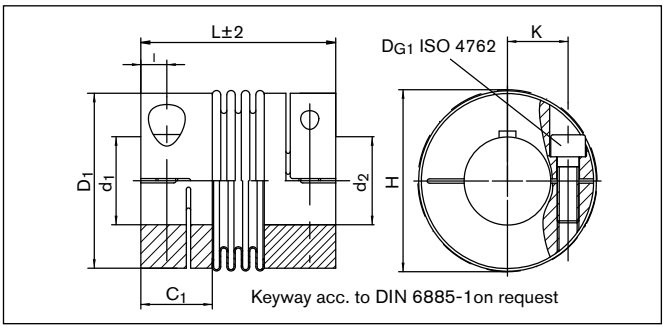
5080 ECOLOC

Backlash-free Metal Bellows Coupling





Sectional view

Dimensions

L	=	Total length of coupling	**d_1, d_{2max}**	=	Bore diameter	**l**	=	Distance between clamping screw hole and hub end
D_1	=	Outer diameter	**C_1**	=	Guided length shaft bore d_1	**D_{G1}**	=	Thread
H	=	Clearance diameter	**K**	=	Distance shaft axis - clamping screw axis			
d_1, d_{2min}	=	Min. bore diameter						

Metric dimensions

Size	L±2	D_1	H	d_1/d_2 min-max	C_1	K	l	D_{G1}
	mm	mm	mm	mm	mm	mm	mm	mm
0,9	23	16	18	3 - 8	7	5	2	M2
1,5	26	20	21	3 - 10	9	7	3	M2,5
2	32	25	27	3 - 12	11	9	4	M3
4,5	41	33	34	6 - 16	13	12	5	M4
10	47	40	42	6 - 19	14	16	5	M4
18	63	45	48	10 - 25	20	18	6	M5
30	65	55	56	10 - 25	25	20	8	M6
60	78	64	67	14 - 32	29	24	10	M8
150	90	80	84	20 - 40	33	28	12	M10
200	99	90	93	25 - 44	38	31	13	M12
300	104	110	110	32 - 50	38	39	13	M12
500	111	119	122	40 - 60	41	43	15	M14

Moment of inertia and weight (mass) are calculated with reference to the largest bore size.

Bore range (mm)

Size	10	11	12	13	14	15	16	17	18	19	20	22	23	24	25	26	27	28	30	31	32	34	35	38	40	42	44	45	48	50	55	60	65	70
18	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																		
30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•															
60					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•												
150								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
300														•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
500																					•	•	•	•	•	•	•	•	•	•	•	•	•	•

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Technical Data

T = Transmissible torque at given T_A
T_{A1} = Tightened torque of clamping screw (D_{G1})
C_{Tdyn} = Dynamic torsional stiffness
C_r = Radial spring stiffness
C_a = Axial spring stiffness
n_{max} = Max. rotational speed
ΔKa = Max. permissible axial misalignment
ΔKw = Max. permissible angularly misalignment
ΔKr = Max. permissible radial misalignment
Gw = Weight
J = Total moment of inertia

Technical data

Size	T	T_{A1}	C_{Tdyn}	C_r	C_a	n_{max}	ΔKa	ΔKw	ΔKr	Gw	J
	Nm	Nm	10^3 Nm/rad	N/mm	N/mm	1/min	± mm	Degree	mm	kg	10^{-3} Kgm²
0,9	0,9	0,3	0,5	187	36	15000	0,2	1,2	0,1	0,009	0,0003
1,5	1,5	0,8	0,75	139	12	15000	0,25	1,2	0,1	0,022	0,0011
2	2	1	1,5	147	9	15000	0,3	1,2	0,1	0,036	0,0025
4,5	4,5	3	6,5	444	47	15000	0,3	1,2	0,1	0,074	0,01
10	10	3	8,1	361	34	15000	0,4	1,2	0,15	0,12	0,023
18	18	6	8	200	50	12700	0,5	1,5	0,2	0,16	0,05
30	30	12	35	720	50	10200	0,4	1	0,1	0,26	0,12
60	60	30	75	1100	90	8600	0,4	1	0,1	0,44	0,29
150	150	85	150	2000	150	6800	0,4	1	0,2	0,98	0,87
200	200	100	170	2500	150	6300	0,4	1	0,2	1,16	1,44
300	300	120	500	6300	280	5900	0,4	1	0,2	1,35	3
500	500	190	680	8800	100	4900	0,5	1	0,2	1,71	4,7

Ordering example: 5080 ECOLOC

Type, Size	Bore diameter d_1	Bore diameter d_2	Further details
5080 ECOLOC 60	20	20	*

* Keyway

Characteristics

- Metal bellows made of stainless steel, hubs made of aluminum
- The shaft tolerance should be within the fit tolerance „g6“ or „h7“
- The contact surfaces have to be free from oil and grease
- Optional designs with keyways DIN 6885-1

Subject to technical changes.