

Metal bellows coupling with intermediate pipe I Series WDS

- /// variable length 0,2 up to 6 m // simple installation - splitted hub design
- /// backlashfree, exact torque transfer, without additional intermediate bearing
- /// high speed // low moment of inertia

Technical data:

WDS size	T _N [Nm]	T _{max} [Nm]	torsional stiffness [Nm/arcmin]				moment of inertia [10 ⁻³ kgm ²]				max. speed approx. [min ⁻¹]				mass approx. [kg]			
			1m	2m	3m	4m	1m	2m	3m	4m	1m	2m	3m	4m	1m	2m	3m	4m
15	15	30	0,4	0,2	0,15	-	0,2	0,4	0,6	-	3900	880	370	-	0,9	1,5	2,3	-
50	50	100	1,5	0,8	0,6	0,5	0,9	1,6	2,2	2,9	6000	1300	550	300	1,8	3	4,3	5,5
100	100	200	2,6	1,5	1,5	0,8	1,8	2,9	4,1	5,3	7300	1600	670	360	2,5	4	5,5	7
200	200	400	5,9	3,5	2,5	1,9	5,3	9,1	13	17	8000	2100	900	500	3,8	6	8	10
400	400	800	17	10	7,5	6	12	21	31	40	8000	2700	1100	600	7	11	15	19
800	800	1600	26	16	11	9	32	48	64	80	8000	3400	1400	760	15	20	25	30
1600	1600	3200	61	37	27	21	116	150	190	230	8000	4800	2000	1100	33	40	46	53

maximum temperature range: -40°C up to +300°C

maximum axial shaft displacement: $\Delta A = \pm 1,5 \text{ mm}$

maximum angular shaft displacement: $\alpha = 1^\circ$

maximum lateral shaft displacement: $\Delta R = \tan \alpha \cdot L_x$ with $L_x = L - (2 \cdot L_1)$

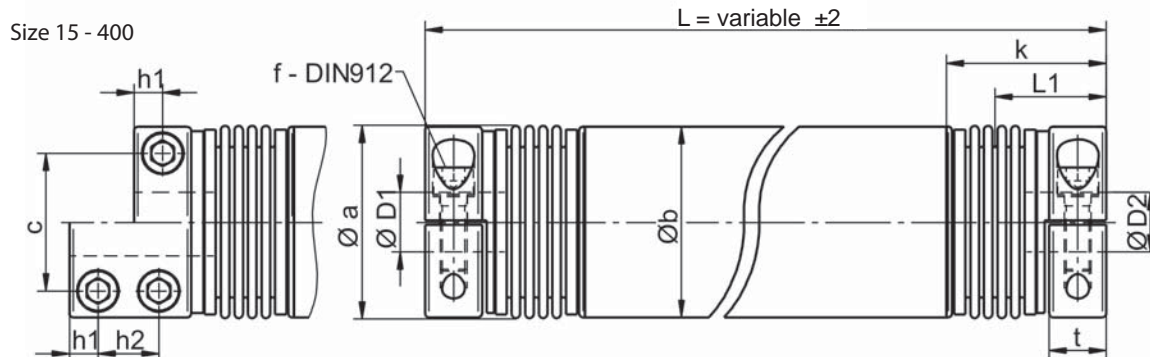
Calculation example:

WDS 200 / L = 1200 mm $\rightarrow \Delta R = \tan \alpha \cdot L_x$

with $L_x = 1200 - (2 \cdot 53) = 1094 \text{ mm}$

$\Delta R = \tan 1^\circ \cdot 1094 \text{ mm} \approx 20 \text{ mm}$

Notice: Length over 4 m and in-house production of intermediate pipe are possible on request.



Size 800 - 1600

Material:

bellows: stainless steel

hubs: Size 15 - 400: high tensile aluminium / size 800-1600: steel - oxidize

intermediate pipe: aluminium - optional: steel, stainless steel, CFK

Dimensions: (mm) length dimensions according to DIN ISO 2768 cH

WDS	Øa	Øb	c	f-tightening torque	h1	h2	L1	k	t	L _{min}	ØD1/2min	ØD1/2max
15	35	35	21	2x M5 - 8Nm	9	-	37	54	18	108	6	15
50	58	50	36	2x M8 - 35Nm	13	-	48	67	26	132	9	25
100	75	60	47	2x M10 - 65Nm	13	-	48	69	26	136	12,5	35
200	89	80	56	2x M12 - 115Nm	14	-	53	77	28	152	19	42
400	109	100	72	2x M14 - 185Nm	15	-	58	84	30	165	24	55
800	123	110	80	4x M12 - 115Nm	13	22	74	101	45	200	24	65
1600	158	160	108	4x M16 - 290Nm	18	30	95	125	64	250	35	85

Ordering example: WDS 400 - D1 = 28^{G7} D2 = 38^{G7} L = 1250