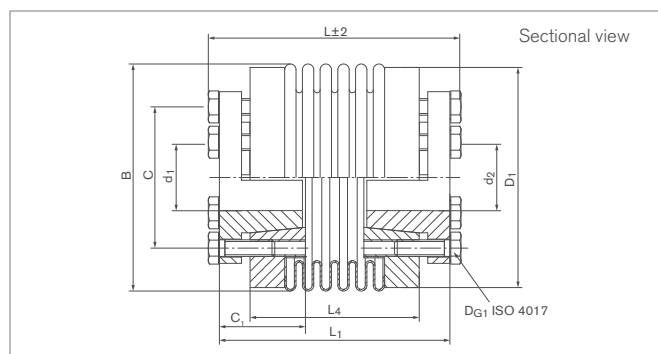


Metal Bellows Couplings

RINGFEDER® GWB AK

Metal bellows coupling with inner conical hub



Size	L	C	d ₁ ;d ₂ min-max	B	D ₁	C ₁	L ₁	L ₄
	mm	mm	mm	mm	mm	mm	mm	mm
30	52/60	31	9 - 20	56	55	20	45/53	30/38
60	63/73	37	12 - 25	66	64	25	55/65	35/46
80	79/91	51	15 - 35	82	80	30	72/83	49/61
150	79/91	51	15 - 35	82	80	30	72/84	49/61
200	80/93	51/56	15 - 42	90	90	30	72/85	50/63
300	93/104	62/75	15 - 50	110	110	33	80/93	56/67
500	102/113	75/80	24 - 55	122	119	38	94/105	61/72
800	170	92/100	30 - 70	157	140	60	150	110
1400	170	92/100	35 - 70	157	140	60	150	110
3000	191	100/125	50 - 80	199	180	60	171	131
5000	199	100/125	60 - 90	250	230	65	179	139

Transmission of the couplings transmissible torque T can not longer be guaranteed for certain with borings < d_{min}. Types with borings < d_{min}, however, can be supplied.

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

Size	T	n _{max}	C _{Tdyn}	C _r	C _a	ΔK _a	ΔK _w	ΔK _r	J	D _{G1}	T _{A1}	G _w
	Nm	1/min	10 ³ Nm/rad	N/mm	N/mm	mm	degree	mm	10 ⁻³ kgm ²	mm	Nm	kg
30	36	11000	35/25	720/220	50/30	0,4/0,5	1,0/1,5	0,1/0,2	0,15	6 x M4	3	0,281
60	72	9100	75/50	1100/330	90/55	0,4/0,5	1,0/1,5	0,1/0,2	0,24	6 x M6	8,5	0,482
80	96	7000	130/75	1200/400	80/55	0,4/0,5	1,0/1,5	0,2	0,65	6 x M6	10	0,846
150	180	7000	150/100	2000/600	150/85	0,4/0,5	1,0/1,5	0,2	0,65	6 x M6	14	0,846
200	240	6700	170/120	2500/450	150/85	0,4/0,5	1,0/1,5	0,2	0,87	6 x M6	14	1,005
300	360	5200	318/500/280	6300/1500	235/280/150	0,4/0,5	1,0/1,5	0,2	2,33	6 x M8	18	1,915
500	600	4600	680/310	8800/1000	100/85	0,5/1,0	1,0/1,5	0,2	5,73	6 x M8	26	2,448
800	800	3700	760	510	190	1,0	1,5	0,2	26,10	6 x M16	50	9,978
1400	1400	3700	1300	710	280	1,0	1,5	0,2	26,10	6 x M16	80	9,202
3000	3000	2800	2800	8060	880	1,0	1,5	0,2	86,83	6 x M16	130	14,57
5000	5000	2800	4800	9190	737	1,0	1,5	0,2	170,30	6 x M16	210	24,3

To continue see next page

Metal Bellows Couplings RINGFEDER® GWB AK

Transmissible torque T [Nm]

Size	Ø9	Ø10	Ø12	Ø14	Ø15	Ø18	Ø20	Ø24	Ø28	Ø32	Ø38	Ø44	Ø48	Ø50	Ø58	Ø60	Ø65	Ø70	Ø75	Ø80	Ø85	Ø90
30	36	36	36	36	36	36	36	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
60	---	---	72	72	72	72	72	72	---	---	---	---	---	---	---	---	---	---	---	---	---	---
80	---	---	---	---	96	96	96	96	96	96	---	---	---	---	---	---	---	---	---	---	---	---
150	---	---	---	---	180	180	180	180	180	180	---	---	---	---	---	---	---	---	---	---	---	---
200	---	---	---	---	240	240	240	240	240	240	240	---	---	---	---	---	---	---	---	---	---	---
300	---	---	---	---	290	350	360	360	360	360	360	360	360	---	---	---	---	---	---	---	---	---
500	---	---	---	---	---	---	---	600	600	600	600	600	600	600	---	---	---	---	---	---	---	---
800	---	---	---	---	---	---	---	---	800	800	800	800	800	800	800	800	800	800	---	---	---	---
1400	---	---	---	---	---	---	---	---	---	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	---	---	---
3000	---	---	---	---	---	---	---	---	---	---	---	---	3000	3000	3000	3000	3000	3000	3000	3000	---	---
5000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5000	5000	5000	5000	5000	5000	5000	5000

Explanation

L = Total length	L₄ = Length of coupling piece (without conical bushing)	ΔK_w = Max. permissible angular misalignment
C = Pitch circle diameter	T = Transmissible torque at given T _A	ΔK_r = Max. permissible radial misalignment
d₁; d_{2min} = Min. bore diameter d ₁ /d ₂	n_{max} = Max. rotation speed	J = Total moment of inertia
d₁; d_{2max} = Max. bore diameter d ₁ /d ₂	C_{tdyn} = Dynamic torsional stiffness	n_{sc1} = Quantity of screws D _{G1}
B = Bellow outer diameter	C_r = Radial spring stiffness	D_{G1} = Thread
D₁ = Outer diameter	C_a = Axial spring stiffness	T_{A1} = Tightened torque of clamping screw D _{G1}
C₁ = Guided length in hub bore	ΔK_a = Max. permissible axial misalignment	G_w = Weight
L₁ = Length of coupling		

Ordering example

Series/Size	Length	Bore diameter d ₁	Bore diameter d ₂	Further details
AK 150	79	30	35	*

* Stainless steel

Further information on
RINGFEDER® GWB AK
 on www.ringfeder.com

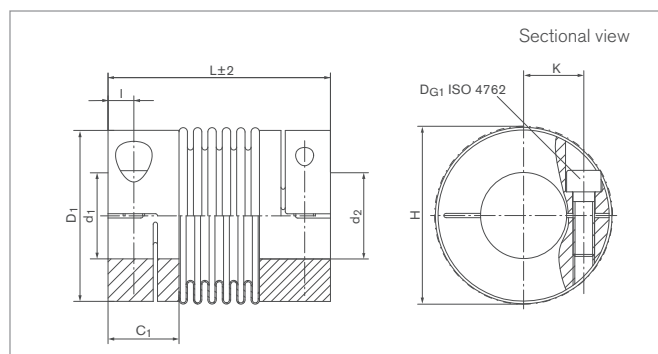
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Metal Bellows Couplings

RINGFEDER® GWB AKD

Metal bellows coupling with clamping hubs



Size	L	d ₁ ;d ₂ min-max	C ₁	D ₁	H	I	K
	mm	mm	mm	mm	mm	mm	mm
18	71	8 - 26	19,2	45	47	6	18
30	73	10 - 30	24,1	55	56	8	20
60	89	12 - 35	28,6	64	67	10	24
80	103	14 - 42	32,4	80	84	12	28
150	103	14 - 42	32,4	80	84	12	28
200	113	22 - 46	36,9	90	93	13	31
300	115	24 - 60	36,9	110	110	13	39
500	122	35 - 64	40,4	119	122	15	43
800	140	40 - 75	45,2	132	139	17	48

Transmission of the couplings transmissible torque T can no longer be guaranteed for certain with borings < d_{min}. Types with borings < d_{min}, however, can be supplied.

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

Size	T	n _{max}	C _r	C _a	C _{Tdyn}	ΔK _a	ΔK _w	ΔK _r	J	D _{G1}	T _{A1}	G _w
	Nm	1/min	N/mm	N/mm	10 ³ Nm/rad	mm	degree	mm	10 ⁻³ kgm ²	mm	Nm	kg
18	22	12700	85	40	6	0,5	1,5	0,2	0,06	1 x M5	6	0,143
30	36	10200	220	30	25	0,5	1,5	0,2	0,1	1 x M6	12	0,263
60	75	8600	330	55	50	0,5	1,5	0,2	0,3	1 x M8	30	0,434
80	95	6800	400	55	75	0,5	1,5	0,2	0,9	1 x M10	60	0,792
150	180	6800	600	85	100	0,5	1,5	0,2	0,9	1 x M10	85	0,792
200	240	6300	450	85	120	0,5	1,5	0,2	1,5	1 x M12	100	1,117
300	360	5900	1500	150	280	0,5	1,5	0,2	3,2	1 x M12	120	1,495
500	600	4900	1000	85	310	1	1,5	0,2	4,9	1 x M14	190	2,038
800	800	5000	6200	100	780	3,5	1,5	0,35	17,5	2 x M16	250	6,06

To continue see next page

Metal Bellows Couplings RINGFEDER® GWB AKD

Transmissible torque T [Nm]

Size	Ø8	Ø9	Ø10	Ø11	Ø12	Ø14	Ø15	Ø16	Ø18	Ø20	Ø25	Ø30	Ø35	Ø40	Ø45	Ø50	Ø55	Ø60	Ø64	Ø70	Ø75
18	18	20	22	22	22	22	22	22	22	22	22	---	---	---	---	---	---	---	---	---	---
30	---	---	36	36	36	36	36	36	36	36	36	36	---	---	---	---	---	---	---	---	---
60	---	---	---	---	75	75	75	75	75	75	75	75	75	---	---	---	---	---	---	---	---
80	---	---	---	---	---	---	95	95	95	95	95	95	95	95	---	---	---	---	---	---	---
150	---	---	---	---	---	---	180	180	180	180	180	180	180	180	---	---	---	---	---	---	---
200	---	---	---	---	---	---	---	---	---	---	240	240	240	240	240	---	---	---	---	---	---
300	---	---	---	---	---	---	---	---	---	---	360	360	360	360	360	360	360	360	---	---	---
500	---	---	---	---	---	---	---	---	---	---	---	---	600	600	600	600	600	600	600	---	---
800	---	---	---	---	---	---	---	---	---	---	---	---	---	800	800	800	800	800	800	800	800

Explanation

L = Total length	K = Distance shaft axis - clamping screw axis	ΔK_r = Max. permissible radial misalignment
d₁; d_{2min} = Min. bore diameter d ₁ /d ₂	T = Transmissible torque at given T _A	J = Total moment of inertia
d₁; d_{2max} = Max. bore diameter d ₁ /d ₂	n_{max} = Max. rotation speed	n_{Sc1} = Quantity of screws D _{G1}
C₁ = Guided length in hub bore	C_r = Radial spring stiffness	D_{G1} = Thread
D₁ = Outer diameter	C_a = Axial spring stiffness	T_{A1} = Tightened torque of clamping screw D _{G1}
H = Clearance diameter	C_{Tdyn} = Dynamic torsional stiffness	Gw = Weight
I = Distance between center screw hole and hub end	ΔK_a = Max. permissible axial misalignment	
	ΔK_w = Max. permissible angular misalignment	

Ordering example

Series/Size	Bore diameter d ₁	Bore diameter d ₂	Further details
AKD 150	30	35	*

* Keyway or stainless steel

Further information on
RINGFEDER® GWB AKD
 on www.ringfeder.com

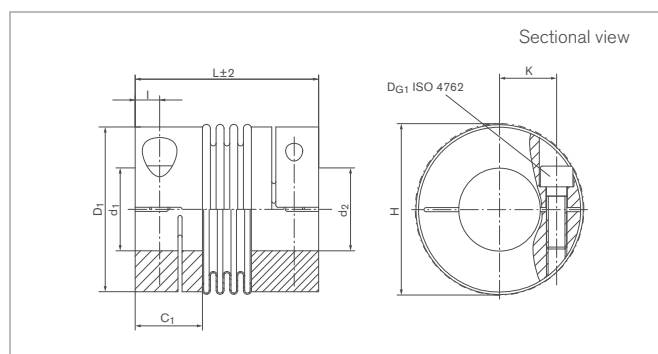
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Metal Bellows Couplings

RINGFEDER® GWB AKN

Metal bellows coupling with
clamping hubs, short length and higher torsional stiffness



Size	L	d ₁ ;d ₂ min-max	d _{1k} ;d _{2k} min-max	C ₁	D ₁	H	I	K
	mm	mm	mm	mm	mm	mm	mm	mm
18	63	8 - 26	8 - 26	19,2	45	48	6	18
30	65	10 - 30	10 - 30	24,1	55	56	8	20
60	78	12 - 35	12 - 35	28,6	64	67	10	24
80	90	14 - 42	14 - 42	32,4	80	84	12	28
150	90	14 - 42	14 - 42	32,4	80	84	12	28
200	99	22 - 46	22 - 46	36,9	90	93	13	31
300	104	24 - 60	24 - 60	36,9	110	110	13	39
500	111	35 - 64	35 - 64	40,4	119	122	15	43

Transmission of the couplings transmissible torque T can not longer be guaranteed for certain with borings < d_{min}. Types with borings < d_{min}, however, can be supplied.

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

Size	T	n _{max}	C _r	C _a	C _{Tdyn}	ΔK _a	ΔK _w	ΔK _r	J	D _{G1}	T _{A1}	G _w
	Nm	1/min	N/mm	N/mm	10 ³ Nm/rad	mm	degree	mm	10 ⁻³ kgm ²	mm	Nm	kg
18	22	12700	200	50	8	0,5	1,5	0,2	0,05	1 x M5	6	0,133
30	36	10200	720	50	35	0,4	1,0	0,1	0,11	1 x M6	12	0,245
60	75	8600	1100	90	75	0,4	1,0	0,1	0,29	1 x M8	30	0,406
80	95	6800	1200	80	130	0,4	1,0	0,2	0,87	1 x M10	60	0,742
150	180	6800	2000	150	150	0,4	1,0	0,2	0,87	1 x M10	85	0,742
200	240	6300	2500	150	170	0,4	1,0	0,2	1,44	1 x M12	100	1,054
300	360	5900	6300	280	500	0,4	1,0	0,2	3,00	1 x M12	120	1,434
500	600	4900	8800	100	680	0,5	1,0	0,2	4,70	1 x M14	190	1,949

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Metal Bellows Couplings RINGFEDER® GWB AKN

Transmissible torque T [Nm]

Size	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø15	Ø16	Ø18	Ø20	Ø22	Ø25	Ø28	Ø30	Ø35	Ø40	Ø45	Ø50	Ø55	Ø60	Ø64
18	18	20	22	22	22	22	22	22	22	22	22	22	---	---	---	---	---	---	---	---	---
30	---	---	36	36	36	36	36	36	36	36	36	36	36	36	---	---	---	---	---	---	---
60	---	---	---	---	75	75	75	75	75	75	75	75	75	75	75	---	---	---	---	---	---
80	---	---	---	---	---	---	95	95	95	95	95	95	95	95	95	95	---	---	---	---	---
150	---	---	---	---	---	---	180	180	180	180	180	180	180	180	180	180	---	---	---	---	---
200	---	---	---	---	---	---	---	---	---	---	240	240	240	240	240	240	240	---	---	---	---
300	---	---	---	---	---	---	---	---	---	---	---	360	360	360	360	360	360	360	360	360	---
500	---	---	---	---	---	---	---	---	---	---	---	---	---	---	600	600	600	600	600	600	600

Explanation

L = Total length	I = Distance between center screw hole and hub end	ΔK_w = Max. permissible angular misalignment
d₁;d_{2min} = Min. bore diameter d ₁ /d ₂	K = Distance shaft axis - clamping screw axis	ΔK_r = Max. permissible radial misalignment
d₁;d_{2max} = Max. bore diameter d ₁ /d ₂	T = Transmissible torque at given T _A	J = Total moment of inertia
d_{1k};d_{2kmin} = Min. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	n_{max} = Max. rotation speed	n_{Sc1} = Quantity of screws D _{G1}
d_{1k};d_{2kmax} = Max. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	C_r = Radial spring stiffness	D_{G1} = Thread
C₁ = Guided length in hub bore	C_a = Axial spring stiffness	T_{A1} = Tightened torque of clamping screw D _{G1}
D₁ = Outer diameter	C_{Tdyn} = Dynamic torsional stiffness	Gw = Weight
H = Clearance diameter	ΔK_a = Max. permissible axial misalignment	

Ordering example

Series/Size	Bore diameter d ₁	Bore diameter d ₂	Further details
AKN 150	30	35	*

* Keyway or stainless steel

Further information on
RINGFEDER® GWB AKN
 on www.ringfeder.com

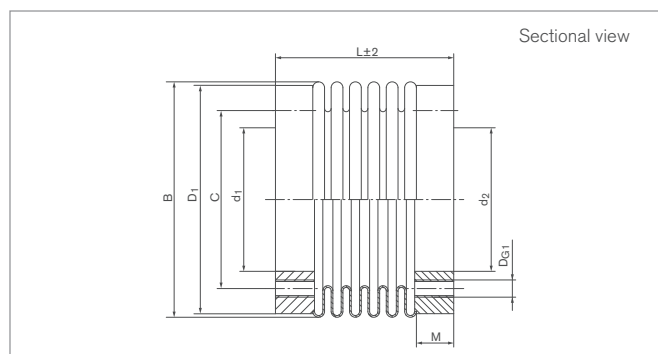
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Metal Bellows Couplings

RINGFEDER® GWB CKN

Metal bellows coupling with flange



Size	L	d ₁	d ₂	B	C	D ₁	M
	mm	mm	mm	mm	mm	mm	mm
18	36	22	22	46	31	46	6
18	44	22	22	46	31	46	6
30	30	28	28	56	37	55	7
30	38	28	28	56	37	55	7
60	41	38	38	66	46	64	10
60	51	38	38	66	46	64	10
80	52	50	50	82	62	80	13
80	62	50	50	82	62	80	13
150	52	50	50	82	62	80	13
150	62	50	50	82	62	80	13
200	51	50	50	90	62	90	13
200	63	50	50	90	62	90	13
300	55	65	65	110	80	109	13
300	66	65	65	110	80	109	13
500	61	70	70	122	94	119	16
500	72	70	70	122	94	119	16
800	130	85	85	157	110	152	18
1400	130	85	85	157	110	152	18
3000	130	100	100	199	140	180	25
5000	143	145	145	250	190	230	25

To continue see next page

Metal Bellows Couplings RINGFEDER® GWB CKN

Size	T	n_{max}	C_{Tdyn}	ΔK_a	ΔK_w	ΔK_r	J	D_{G1}	T_{A1}	Gw
	Nm	1/min	10^3 Nm/rad	mm	degree	mm	10^{-3} kgm^2	mm	Nm	kg
18	22	13900	8	0,5	1,5	0,2	0,05	6 x M5	5,9	0,06
18	22	13900	6	0,5	1,5	0,2	0,05	6 x M5	5,9	0,06
30	36	11000	35	0,4	1,0	0,1	0,09	6 x M5	5,9	0,12
30	36	11000	25	0,5	1,5	0,2	0,09	6 x M5	5,9	0,12
60	75	9000	75	0,4	1,0	0,1	0,16	6 x M6	10	0,19
60	75	9000	50	0,5	1,5	0,2	0,16	6 x M6	10	0,19
80	96	7100	130	0,4	1,0	0,2	0,43	6 x M6	10	0,36
80	96	7100	75	0,5	1,5	0,2	0,43	6 x M6	10	0,36
150	180	7100	150	0,4	1,0	0,2	0,43	6 x M6	15	0,36
150	180	7100	100	0,5	1,5	0,2	0,43	6 x M6	15	0,36
200	240	6600	170	0,4	1,0	0,2	0,80	6 x M6	18	0,48
200	240	6600	120	0,5	1,5	0,2	0,80	6 x M6	18	0,48
300	360	5200	500	0,4	1,0	0,2	1,70	6 x M8	25	0,59
300	360	5200	280	0,5	1,5	0,2	1,70	6 x M8	25	0,59
500	600	4600	680	0,5	1,0	0,2	2,30	6 x M8	36	0,88
500	600	4600	310	1,0	1,5	0,2	2,30	6 x M8	36	0,88
800	960	3700	760	1,0	1,5	0,2	11,00	6 x M16	210	3,74
1400	1680	3700	1300	1,0	1,5	0,2	11,00	6 x M16	210	3,73
3000	3000	3700	2800	1,0	1,5	0,2	47,00	6 x M20	365	7,80
5000	5000	3000	4800	1,0	1,5	0,2	119,00	8 x M20	365	11,74

Explanation

L = Total length	n_{max} = Max. rotation speed	n_{Sc1} = Quantity of screws D_{G1}
d_1 = Inner diameter	C_{Tdyn} = Dynamic torsional stiffness	D_{G1} = Thread
d_2 = Inner diameter	C_r = Radial spring stiffness	T_{A1} = Tightened torque of clamping screw D_{G1}
B = Bellow outer diameter	C_a = Axial spring stiffness	Gw = Weight
C = Pitch circle diameter	ΔK_a = Max. permissible axial misalignment	
D_1 = Outer diameter	ΔK_w = Max. permissible angular misalignment	
M = Max. depth of thread	ΔK_r = Max. permissible radial misalignment	
T = Transmissible torque at given T_A	J = Total moment of inertia	

Ordering example

Series/Size	Length	Further details
CKN 150	52	*

* Stainless steel

Further information on
RINGFEDER® GWB CKN
 on www.ringfeder.com

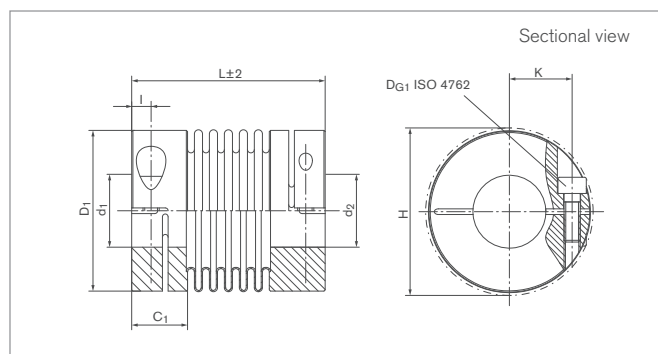
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Metal Bellows Couplings

RINGFEDER® GWB DKN

Miniature metal bellows coupling with clamping hubs



Size	L	d ₁ ;d ₂ min-max	d _{1k} ;d _{2k} min-max	C ₁	D ₁	H	I	K
	mm	mm	mm	mm	mm	mm	mm	mm
4	21	3 - 8	6 - 8	6,5	16	18	2,4	5
4	24	3 - 8	6 - 8	6,5	16	18	2,4	5
4	28	3 - 8	6 - 8	6,5	16	18	2,4	5
9	23	3 - 8	6 - 8	6,5	16	18	2,4	5
9	26	3 - 8	6 - 8	6,5	16	18	2,4	5
9	30	3 - 8	6 - 8	6,5	16	18	2,4	5
15	26	3 - 10	6 - 10	8,3	20	21	3	7
15	30	3 - 10	6 - 10	8,3	20	21	3	7
20	32	3 - 14	6 - 14	10,4	25	27	3,5	9
20	38	3 - 14	6 - 14	10,4	25	27	3,5	9
20	42	3 - 14	6 - 14	10,4	25	27	3,5	9
45	41	5 - 17	6 - 17	12,5	33	34	4,5	12
45	50	5 - 17	6 - 17	12,5	33	34	4,5	12
100	47	5 - 24	6 - 24	13,2	40	42	4,8	16
100	57	5 - 24	6 - 24	13,2	40	42	4,8	16

Transmission of the couplings transmissible torque T can not longer be guaranteed for certain with borings < d_{min}. Types with borings < d_{min}, however, can be supplied.

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

To continue see next page

Metal Bellows Couplings RINGFEDER® GWB DKN

Size	T	n_{max}	C_{Tdyn}	C_r	C_a	ΔK_a	ΔK_w	ΔK_r	J	D_{G1}	T_{A1}	Gw
	Nm	1/min	10^3 Nm/rad	N/mm	N/mm	mm	degree	mm	10^{-3} kgm^2	mm	Nm	kg
4	0,5	15000	0,25	128	18	0,2	1,2	0,10	0,00026	1 x M2	0,3	0,005
4	0,5	15000	0,19	54	13	0,3	2,0	0,15	0,00026	1 x M2	0,3	0,006
4	0,5	15000	0,15	26	11	0,4	2,0	0,20	0,00026	1 x M2	0,3	0,007
9	1,1	15000	0,50	187	36	0,2	1,2	0,10	0,00026	1 x M2	0,3	0,006
9	1,1	15000	0,38	82	27	0,3	2,0	0,15	0,00029	1 x M2	0,3	0,007
9	1,1	15000	0,30	42	22	0,4	2,0	0,20	0,00032	1 x M2	0,3	0,008
15	1,75	15000	0,75	139	23	0,25	1,2	0,10	0,0011	1 x M2,5	0,8	0,012
15	1,75	15000	0,70	81	12	0,4	2,0	0,15	0,0012	1 x M2,5	0,8	0,014
20	2,4	15000	1,50	147	18	0,3	1,2	0,10	0,0025	1 x M3	1,5	0,020
20	2,4	15000	1,30	96	14	0,4	2,0	0,20	0,0027	1 x M3	1,5	0,022
20	2,4	15000	1,00	46	9	0,5	2,0	0,25	0,0028	1 x M3	1,5	0,024
45	5,5	15000	6,50	444	47	0,3	1,2	0,10	0,0098	1 x M4	3	0,058
45	5,5	15000	4,00	108	29	0,5	2,0	0,20	0,0103	1 x M4	3	0,062
100	12	15000	8,10	361	46	0,4	1,2	0,15	0,0231	1 x M4	3	0,060
100	12	15000	6,70	193	34	0,5	2,0	0,25	0,0250	1 x M4	3	0,070

Transmissible torque T [Nm]

Size	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20	Ø21	Ø22	Ø24
4	0,5	0,5	0,5	0,5	0,5	0,5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	0,5	0,5	0,5	0,5	0,5	0,5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	1,5	1,75	1,75	1,75	1,75	1,75	1,75	1,75	---	---	---	---	---	---	---	---	---	---	---	---	---
20	1,7	2,3	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	---	---	---	---	---	---	---	---	---	---
45	---	---	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	---	---	---	---	---	---
100	---	---	7	8	9	10,5	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12

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Metal Bellows Couplings RINGFEDER® GWB DKN

Explanation

L	= Total length	I	= Distance between center screw hole and hub end	ΔK_a	= Max. permissible axial misalignment
d₁; d_{2min}	= Min. bore diameter d ₁ /d ₂	K	= Distance shaft axis - clamping screw axis	ΔK_w	= Max. permissible angular misalignment
d₁; d_{2max}	= Max. bore diameter d ₁ /d ₂	T	= Transmissible torque at given T _A	ΔK_r	= Max. permissible radial misalignment
d_{1k}; d_{2kmin}	= Min. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	n_{max}	= Max. rotation speed	J	= Total moment of inertia
d_{1k}; d_{2kmax}	= Max. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	C_{Tdyn}	= Dynamic torsional stiffness	n_{Sc1}	= Quantity of screws D _{G1}
C₁	= Guided length in hub bore	C_r	= Radial spring stiffness	D_{G1}	= Thread
D₁	= Outer diameter	C_a	= Axial spring stiffness	T_{A1}	= Tightened torque of clamping screw D _{G1}
H	= Clearance diameter			Gw	= Weight

Ordering example

Series/Size	Length	Bore diameter d ₁	Bore diameter d ₂	Further details
DKN 20	42	6	10	*

* Keyway or stainless steel

Further information on
RINGFEDER® GWB DKN
 on www.ringfeder.com

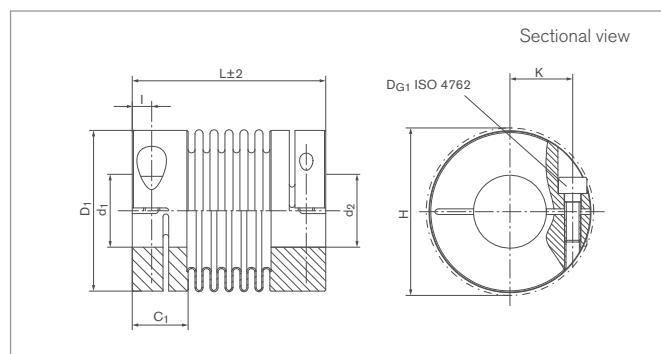
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Metal Bellows Couplings

RINGFEDER® GWB EKN

Miniature metal bellows coupling with radial set screws



Size	L	d ₁ ;d ₂ min-max	d _{1k} ;d _{2k} min-max	C ₁	D ₁	I
	mm	mm	mm	mm	mm	mm
4	20	3 - 9	6 - 8	6	16	2
4	23	3 - 9	6 - 8	6	16	2
4	26	3 - 9	6 - 8	6	16	2
9	21	3 - 9	6 - 8	6	16	2
9	25	3 - 9	6 - 8	6	16	2
9	28	3 - 9	6 - 8	6	16	2
15	25	3 - 12	6 - 10	10	20	3
15	30	3 - 12	6 - 10	10	20	3
20	26	3 - 16	6 - 14	11	25	2
20	32	3 - 16	6 - 14	11	25	2
20	36	3 - 16	6 - 14	11	25	2
45	39	6 - 22	6 - 16	16	33	4
45	48	6 - 22	6 - 16	16	33	4
100	44	6 - 28	6 - 25	20	40	4
100	54	6 - 28	6 - 25	20	40	4

Transmission of the couplings transmissible torque T can not longer be guaranteed for certain with borings < d_{min}. Types with borings < d_{min}, however, can be supplied.

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

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Metal Bellows Couplings RINGFEDER® GWB EKN

Size	T	n _{max}	C _{Tdyn}	C _r	C _a	ΔK _a	ΔK _w	ΔK _r	J	D _{G1}	T _{A1}	G _w
	Nm	1/min	10 ³ Nm/rad	N/mm	N/mm	mm	degree	mm	10 ⁻³ kgm ²	mm	Nm	kg
4	0,5	15000	0,25	128	18	0,2	1,2	0,1	0,0002	1 x M3	0,5	0,005
4	0,5	15000	0,19	54	13	0,3	2,0	0,15	0,0002	1 x M3	0,5	0,006
4	0,5	15000	0,15	26	11	0,4	2,0	0,2	0,0002	1 x M3	0,5	0,007
9	1,1	15000	0,50	187	36	0,2	1,2	0,1	0,0002	1 x M3	0,5	0,006
9	1,1	15000	0,38	82	27	0,3	2,0	0,15	0,0002	1 x M3	0,5	0,007
9	1,1	15000	0,30	42	22	0,4	2,0	0,2	0,0003	1 x M3	0,5	0,008
15	1,75	15000	0,75	139	12	0,25	1,2	0,1	0,0008	2 x M4	1,5	0,012
15	1,75	15000	0,70	81	23	0,4	2,0	0,15	0,0008	2 x M4	1,5	0,014
20	2,4	15000	1,50	147	18	0,3	1,2	0,1	0,0014	2 x M3	1,5	0,016
20	2,4	15000	1,30	96	14	0,4	2,0	0,2	0,0016	2 x M3	1,5	0,018
20	2,4	15000	1,00	46	9	0,5	2,0	0,25	0,0017	2 x M3	1,5	0,020
45	5,5	15000	6,50	444	47	0,3	1,2	0,1	0,0068	2 x M6	3	0,048
45	5,5	15000	4,00	108	29	0,5	2,0	0,2	0,0073	2 x M6	3	0,052
100	12	15000	8,10	361	46	0,4	1,2	0,15	0,0200	2 x M6	3	0,048
100	12	15000	6,70	193	34	0,5	2,0	0,25	0,0220	2 x M6	3	0,058

Transmissible torque T [Nm]

Size	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø20	Ø22	Ø24	Ø26	Ø28
4	0,5	0,5	0,5	0,5	0,5	0,5	0,5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	0,9	0,7	1,1	1,1	1,1	1,1	1,1	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	1,75	1,75	1,75	1,75	1,75	1,75	1,75	1,75	1,75	1,75	---	---	---	---	---	---	---	---	---	---	---
20	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	---	---	---	---	---	---	---
45	---	---	---	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	---	---	---
100	---	---	---	7,3	8,5	9,7	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12

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Metal Bellows Couplings RINGFEDER® GWB EKN

Explanation

L	= Total length	l	= Distance between center screw hole and hub end	ΔK_r	= Max. permissible radial misalignment
d₁;d_{2min}	= Min. bore diameter d ₁ /d ₂	T	= Transmissible torque at given T _A	J	= Total moment of inertia
d₁;d_{2max}	= Max. bore diameter d ₁ /d ₂	n_{max}	= Max. rotation speed	n_{Sc1}	= Quantity of screws D _{G1}
d_{1k};d_{2kmin}	= Min. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	C_{Tdyn}	= Dynamic torsional stiffness	D_{G1}	= Thread
d_{1k};d_{2kmax}	= Max. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	C_r	= Radial spring stiffness	T_{A1}	= Tightened torque of clamping screw D _{G1}
C₁	= Guided length in hub bore	C_a	= Axial spring stiffness	Gw	= Weight
D₁	= Outer diameter	ΔK_a	= Max. permissible axial misalignment		
		ΔK_w	= Max. permissible angular misalignment		

Ordering example

Series/Size	Length	Bore diameter d ₁	Bore diameter d ₂	Further details
EKN 20	26	6	10	*

* Keyway

Further information on
RINGFEDER® GWB EKN
 on www.ringfeder.com

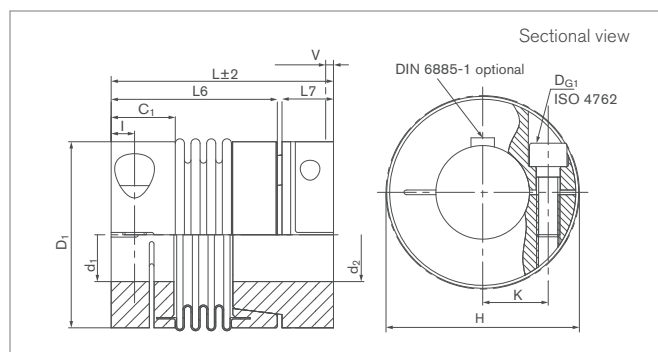
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Metal Bellows Couplings

RINGFEDER® GWB PKA

Metal bellows coupling with axial pluggable clamping hub



Size	L	d ₁ ;d ₂ min-max	d _{1k} ;d _{2k} min-max	C ₁	D ₁	H	I	K	L ₆	L ₇	V
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
0,4	26	3 - 8	--- ---	6,5	16	17	2,4	5	20	5,5	0,4
0,4	28	3 - 8	--- ---	6,5	16	17	2,4	5	22	5,5	0,4
0,4	32	3 - 8	--- ---	6,5	16	17	2,4	5	26	5,5	0,4
0,9	27	3 - 8	--- ---	6,5	16	17	2,4	5	20	5,5	0,4
0,9	30	3 - 8	--- ---	6,5	16	17	2,4	5	22	5,5	0,4
0,9	34	3 - 8	--- ---	6,5	16	17	2,4	5	26	5,5	0,4
1,5	32	3 - 10	6 - 10	8,3	20	21,5	3	7	23	8	0,5
1,5	36	3 - 10	6 - 10	8,3	20	21,5	3	7	27	8	0,5
2	37	3 - 14	6 - 14	10,4	25	27	3,5	9	28	8	0,5
2	43	3 - 14	6 - 14	10,4	25	27	3,5	9	34	8	0,5
2	47	3 - 14	6 - 14	10,4	25	27	3,5	9	38	8	0,5
4,5	49	5 - 17	6 - 17	12,5	33	34,5	4,5	11,5	36	11,5	0,7
4,5	57	5 - 17	6 - 17	12,5	33	34,5	4,5	11,5	44	11,5	0,7
10	55	5 - 24	6 - 24	13,2	40	41,5	4,8	15,5	42	11	1,0
10	66	5 - 24	6 - 24	13,2	40	41,5	4,8	15,5	53	11	1,0
18	59	10 - 26	10 - 26	16,2	45	47	5,5	17,5	39	17,5	0,5 - 1,0
18	67	10 - 26	10 - 26	16,2	45	47	5,5	17,5	47	17,5	0,5 - 1,0
30	70	10 - 30	10 - 30	20,6	55	56,5	7,5	20	48	19	0,5 - 1,0
30	78	10 - 30	10 - 30	20,6	55	56,5	7,5	20	56	19	0,5 - 1,0
60	85	14 - 34	14 - 34	23,1	64	66,5	9	22,5	62,5	20	0,5 - 1,5
60	96	14 - 34	14 - 34	23,1	64	66,5	9	22,5	73,5	20	0,5 - 1,5
150	95	17 - 42	17 - 42	26,8	80	83	10	28	71	22	0,5 - 1,5
150	107	17 - 42	17 - 42	26,8	80	83	10	28	83	22	0,5 - 1,5
300	112	24 - 60	24 - 60	32	110	110	12,5	39	72	37,5	0,5 - 1,5
300	123	24 - 60	24 - 60	32	110	110	12,5	39	84	37,5	0,5 - 1,5
500	134	35 - 64	35 - 64	40,4	119	119	15	43	91	40,5	0,5 - 2,0
500	145	35 - 64	35 - 64	40,4	119	119	15	43	102	40,5	0,5 - 2,0

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Metal Bellows Couplings RINGFEDER® GWB PKA

Size	T	n _{max}	C _{Tdyn}	C _r	C _a	ΔK _a	ΔK _w	ΔK _r	J	D _{G1}	T _{A1}	G _w
	Nm	1/min	10 ³ Nm/rad	N/mm	N/mm	mm	degree	mm	10 ⁻³ kgm ²	mm	Nm	kg
0,4	0,5	15000	0,25	128	18	0,2	1,2	0,1	0,0003	1 x M2	0,3	0,008
0,4	0,5	15000	0,19	54	13	0,3	2	0,15	0,0003	1 x M2	0,3	0,009
0,4	0,5	15000	0,15	26	11	0,4	2	0,2	0,0003	1 x M2	0,3	0,01
0,9	1,1	15000	0,5	187	36	0,2	1,2	0,1	0,0004	1 x M2	0,6	0,009
0,9	1,1	15000	0,38	82	27	0,3	2	0,15	0,0004	1 x M2	0,6	0,01
0,9	1,1	15000	0,3	42	22	0,4	2	0,2	0,0004	1 x M2	0,6	0,011
1,5	1,75	15000	0,75	139	23	0,25	1,2	0,1	0,001	1 x M2,5	0,8	0,015
1,5	1,75	15000	0,7	81	12	0,4	2	0,15	0,0011	1 x M2,5	0,8	0,017
2	2,4	15000	1,5	147	18	0,3	1,2	0,1	0,0028	1 x M3	1,5	0,028
2	2,4	15000	1,3	96	14	0,4	2	0,2	0,003	1 x M3	1,5	0,03
2	2,4	15000	1	46	9	0,5	2	0,25	0,0031	1 x M3	1,5	0,032
4,5	5,5	15000	6,5	444	47	0,3	1,2	0,1	0,0112	1 x M4	3	0,067
4,5	5,5	15000	4	108	29	0,5	2	0,2	0,0117	1 x M4	3	0,071
10	12	15000	8,1	361	46	0,4	1,2	0,15	0,0255	1 x M4	3	0,097
10	12	15000	6,7	193	34	0,5	2	0,25	0,0274	1 x M4	3	0,107
18	22	12700	8	200	50	0,4	1,2	0,15	0,0482	1 x M5	6	0,156
18	22	12700	6	85	40	0,5	1,5	0,2	0,0582	1 x M5	6	0,166
30	36	10200	35	720	50	0,4	1	0,1	0,1334	1 x M6	12	0,282
30	36	10200	25	220	30	0,5	1,5	0,2	0,1439	1 x M6	12	0,3
60	75	8600	75	1100	90	0,4	1	0,1	0,3228	1 x M8	30	0,482
60	75	8600	50	330	55	0,5	1,5	0,2	0,3328	1 x M8	30	0,51
150	180	6800	150	2000	150	0,4	1	0,2	0,8289	1 x M10	85	0,803
150	180	6800	100	600	85	0,5	1,5	0,2	0,8589	1 x M10	85	0,853
300	360	5900	500	6300	280	0,4	1	0,2	3,299	1 x M12	120	1,71
300	360	5900	280	1500	150	0,5	1,5	0,2	3,454	1 x M12	120	1,77
500	600	4900	680	8800	100	0,5	1	0,2	5,585	1 x M14	190	2,39
500	600	4900	310	1000	85	1	1,5	0,2	5,855	1 x M14	190	2,49

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Metal Bellows Couplings RINGFEDER® GWB PKA

Transmissible torque T [Nm]

Size	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20	Ø21	Ø22	Ø24	Ø25	Ø28	Ø30	Ø35	Ø40	Ø45	Ø50	Ø55	Ø60	Ø64		
0,4	0,5	0,5	0,5	0,5	0,5	0,5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
0,9	0,5	0,5	0,5	0,5	0,5	0,5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
1,5	1,5	1,75	1,75	1,75	1,75	1,75	1,75	1,75	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
2	1,7	2,3	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
4,5	---	---	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
10	---	---	7	8	9	10,5	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	---	---	---	---	---	---	---	---	---	---	---	
18	---	---	---	---	---	18	20	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	---	---	---	---	---	---	---	---	---	---	
30	---	---	---	---	---	---	---	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	---	---	---	---	---	---	
60	---	---	---	---	---	---	---	---	---	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	---	---	---	---	---	---	
150	---	---	---	---	---	---	---	---	---	---	---	---	180	180	180	180	180	180	180	180	180	180	180	180	180	180	---	---	---	---	---	---	
300	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	360	360	360	360	360	360	360	360	---	---	---
500	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	600	600	600	600	600	600	600	600	600

Explanation

L = Total length	K = Distance shaft axis - clamping screw axis	ΔK_a = Max. permissible axial misalignment
d₁;d_{2min} = Min. bore diameter d ₁ /d ₂	L₆ = Length of basic part	ΔK_w = Max. permissible angular misalignment
d₁;d_{2max} = Max. bore diameter d ₁ /d ₂	L₇ = Body length until bellow beginning or plug connection	ΔK_r = Max. permissible radial misalignment
d_{1k};d_{2kmin} = Min. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	V = Preload distance	J = Total moment of inertia
d_{1k};d_{2kmax} = Max. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	T = Transmissible torque at given T _A	n_{Sc1} = Quantity of screws D _{G1}
C₁ = Guided length in hub bore	n_{max} = Max. rotation speed	D_{G1} = Thread
D₁ = Outer diameter	C_{Tdyn} = Dynamic torsional stiffness	T_{A1} = Tightened torque of clamping screw D _{G1}
H = Clearance diameter	C_r = Radial spring stiffness	G_w = Weight
I = Distance between center screw hole and hub end	C_a = Axial spring stiffness	

Ordering example

Series/Size	Length	Bore diameter d ₁	Bore diameter d ₂	Position	Further details
PKA 2	43	12	12	D	*

C = Single position

D = Multi position

* Keyway

Further information on
RINGFEDER® GWB PKA
on www.ringfeder.com

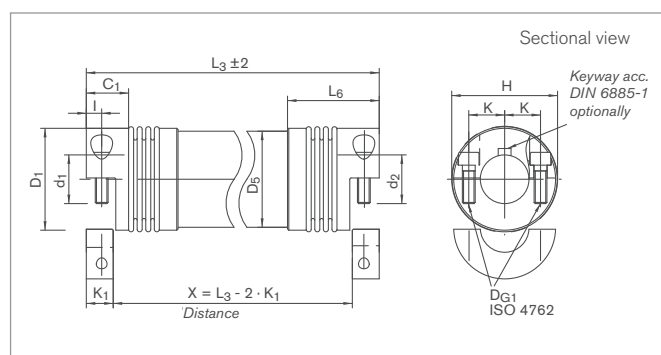
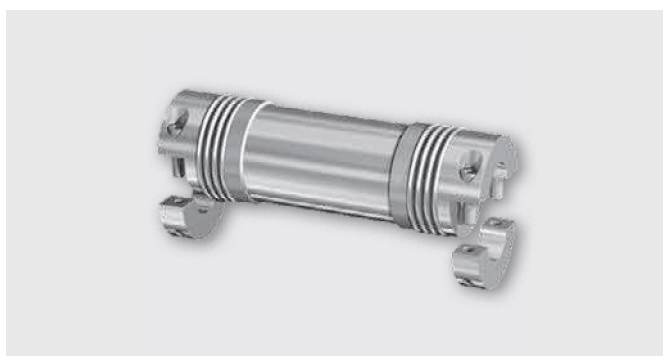
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Metal Bellows Couplings

RINGFEDER® GWB Z5106

**Metal bellows coupling with clamping
in split hub design**



Size	d ₁ ;d ₂ min-max	d _{1k} ;d _{2k} min-max	C ₁	D ₁	D ₅	H	I
	mm	mm	mm	mm	mm	mm	mm
18	8 - 25	8 - 22	20	45	40	47,5	6
30	10 - 25	10 - 22	24,5	55	50	56	8
60	12 - 35	12 - 29	29	64	60	66,5	10
150	14 - 40	14 - 36	33	80	80	83	12
200	22 - 44	22 - 38	37,5	90	90	92	13
300	24 - 55	24 - 52	37,5	110	100	110	13
500	35 - 62	35 - 54	41	119	114	122	15

Transmission of the couplings transmissible torque T can not longer be guaranteed for certain with borings < dmin. Types with borings < dmin, however, can be supplied.

Size	K	K ₁	L _{3min}	L _{3max}	L ₆	T	C _m	ΔK _w	D _{G1}	T _{A1}
	mm	mm	mm	mm	mm	Nm	Nm/rad	degree	mm	Nm
18	17,5	11	134	3000	53	22	3244	1	1 x M5	6
30	20	15	133	3000	52	36	6632	1	1 x M6	12
60	23,5	19	165	3000	64	75	11814	1	1 x M8	30
150	28	21	205	3000	72	180	49929	1	1 x M10	85
200	31	24	218	3000	80	240	75797	1	1 x M12	100
300	39	24	227	3000	83	360	91158	1	1 x M12	120
500	43	27,5	251	3000	90	600	203202	1	1 x M14	190

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Transmissible torque T [Nm]

Size	Ø8	Ø9	Ø10	Ø11	Ø12	Ø14	Ø15	Ø18	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø35	Ø40	Ø45	Ø50	Ø55	Ø60	Ø64
18	13,6	15,3	17	18,7	20,4	22	22	22	22	22	22	22	---	---	---	---	---	---	---	---	---
30	---	---	28	30	33	36	36	36	36	36	36	36	36	36	---	---	---	---	---	---	---
60	---	---	---	---	62	73	75	75	75	75	75	75	75	75	75	---	---	---	---	---	---
150	---	---	---	---	---	167	180	180	180	180	180	180	180	180	180	180	---	---	---	---	---
200	---	---	---	---	---	---	---	---	---	240	240	240	240	240	240	240	240	---	---	---	---
300	---	---	---	---	---	---	---	---	---	---	342	360	360	360	360	360	360	360	360	360	---
500	---	---	---	---	---	---	---	---	---	---	---	---	---	---	600	600	600	600	600	600	600

Explanation

d₁;d_{2min} = Min. bore diameter d ₁ /d ₂	l = Distance between center screw hole and hub end	C_m = Torsional stiffness of extension tube per meter
d₁;d_{2max} = Max. bore diameter d ₁ /d ₂	K = Distance shaft axis - clamping screw axis	ΔK_w = Max. permissible angular misalignment
d_{1k};d_{2kmin} = Min. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	K₁ = Clamping length	n_{Sc1} = Quantity of screws D _{G1}
d_{1k};d_{2kmax} = Max. bore diameter d ₁ /d ₂ with keyway acc. to DIN 6885-1	L_{3min} = Min. length of line shaft	D_{G1} = Thread
C₁ = Guided length in hub bore	L_{3max} = Max. length of line shaft	T_{A1} = Tightened torque of clamping screw D _{G1}
D₁ = Outer diameter	L₆ = Length of basic part	
D₅ = Tube diameter	T = Transmissible torque at given T _A	
H = Clearance diameter		

Ordering example

Series/Size	Bore diameter d ₁	Bore diameter d ₂	Length of Line Shaft L ₃	Further details
GWB Z5106-18	8	10	1000	*

* Keyway or stainless steel

Further information on
RINGFEDER® GWB Z5106
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