

AUTOFLEX DISC COUPLINGS

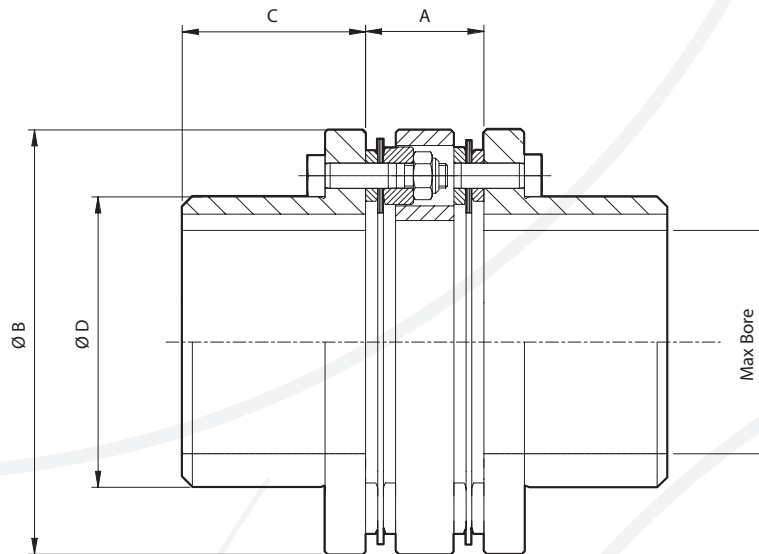
SERIES ES (DOUBLE FLEX - SPACER)

The Autoflex ES coupling has been designed for medium and high duty applications. The coupling has been designed with the minimal number of parts and therefore provides an economical solution for applications requiring a spacer coupling.

The coupling is offered with four, six and eight link discs. The four and six link couplings have been optimized for medium duty application. The eight-link design offers higher torque capacities within a given diameter.

The ES coupling is manufactured to tight tolerances ensuring a high degree of dynamic balance. The coupling has been designed to meet AGMA class 9 as manufactured and can be balanced to meet the AGMA class 10 or API 610 8th Edition requirements.

The coupling consists of five parts, two hubs, two disc packs and one spacer. The ES couplings use scalloped discs, which provides higher flexibility and ensures lower reaction forces on the driving and driven equipment. The six and eight-link coupling also utilizes overload collars which protects it from high transient torque's providing trouble free operation.



**ESS - 6 Link
Short Spacer Coupling**

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	① Inertia (lb.in ²)
		Cont. (lb.in)	Peak (lb.in)	Unbal. (rpm)	Bal. (rpm)		
150 - 6	2.1	1,330	2,390	10,600	24,000	3.7	6
200 - 6	4.9	3,100	5,490	8,900	19,000	7.8	20
256 - 6	9.8	6,200	11,000	8,000	16,000	12.4	46
344 - 6	21	13,300	23,700	6,500	12,000	30.9	172
375 - 6	46	29,200	58,400	5,900	10,000	47.4	407
419 - 6	67	42,500	85,000	5,400	9,100	65.5	712

1) Weight and inertias are calculated using maximum bored standard hubs and minimum DBSE.

2) Maximum Unbalanced Speeds are based on AGMA 9000-C90 Class 9 with min DBSE and max interference bored coupling hubs.

Dimensional Details

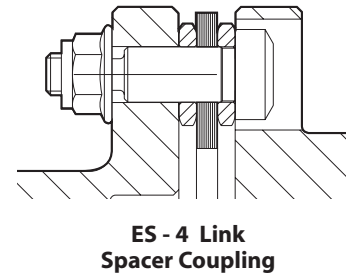
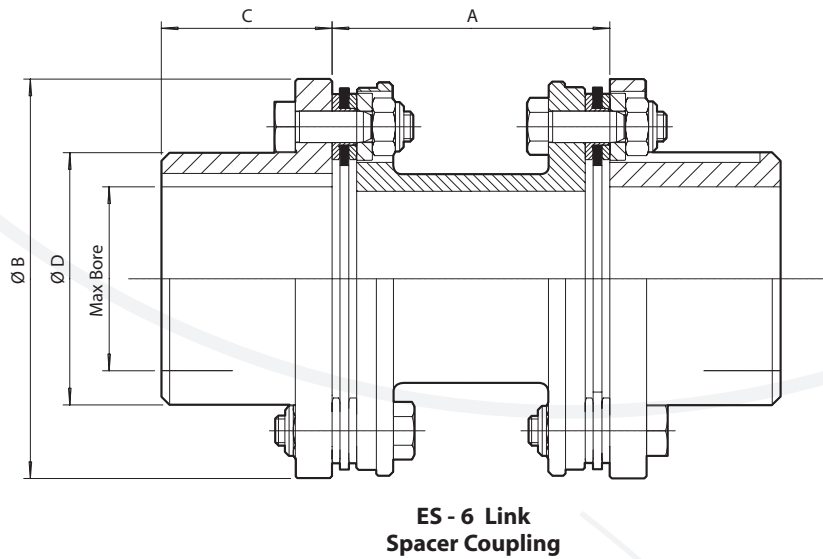
Coupling Size - Links	③ Maximum Bore (in)	A		B (in)	C (in)	D (in)	Misalignment ③	
		Min DBSE (in)	Max DBSE (in)				Axial (in)	Parallel (in)
150 - 6	1 1/2	1.20	1.89	3.50	1.44	2.09	0.030	0.008
200 - 6	2	1.46	2.28	4.33	1.81	2.78	0.038	0.009
256 - 6	2 9/16	1.46	2.28	5.24	2.31	3.58	0.044	0.009
344 - 6	3 7/16	1.83	2.62	6.69	2.93	4.84	0.058	0.013
375 - 6	3 3/4	2.43	3.70	8.07	3.54	5.28	0.070	0.017
419 - 6	4 3/16	2.87	4.29	9.06	3.74	5.91	0.080	0.020

3) Maximum Parallel Offset is based on a minimum DBSE (1/2 Deg. Angular misalignment per disc pack).

4) Maximum Bore assumes a standard AGMA interference fit with a square keyway. Larger bores are available using rectangular keys.

NOTE: The ESS Disc Coupling is used on 4 bearing systems, such as motor to pump / gearbox when short DBSEs are required.

AUTOFLEX DISC COUPLINGS SERIES ES (DOUBLE FLEX - SPACER)



Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	Weight per inch of extra DBSE (lb/in)	① Inertia (lb.in ²)	Inertia per inch of extra DBSE (lb.in ² /in)
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)				
156 - 4	1.5	974	1,950	10,500	21,000	3.80	0.31	5.7	0.25
188 - 4	2.7	1,680	3,360	9,200	19,000	6.72	0.41	14	0.40
150 - 6	2.1	1,330	2,390	10,200	24,000	4.37	0.26	6.7	0.13
200 - 6	4.9	3,100	5,490	8,500	19,000	9.30	0.37	22	0.39
256 - 6	9.8	6,200	11,000	7,700	16,000	14.6	0.75	52	1.38
269 - 6	18	11,500	23,000	7,100	14,000	21.1	0.64	94	1.34
319 - 6	31	19,500	38,900	6,300	12,000	34.3	1.00	216	3.19
375 - 6	46	29,200	58,400	5,700	10,000	52.6	1.30	431	4.93
419 - 6	67	42,500	85,000	5,300	9,100	73.0	1.74	761	8.64
475 - 6	98	62,000	124,000	5,000	8,200	97.9	1.72	1,286	13.52
525 - 6	120	77,900	156,000	4,700	7,400	129.3	1.73	2,074	16.62
613 - 6	180	11,5000	230,000	4,300	6,500	187.1	2.31	3,991	27.36

1) Weight and inertias are calculated using maximum bored standard hubs and minimum DBSE.

2) Maximum Unbalanced Speeds are based on AGMA 9000-C90 Class 9 with min DBSE and max interference bored coupling hubs.

Dimensional Details

Coupling Size - Links	④ Maximum Bore (in)	A Min DBSE (in)	B (in)	C (in)	D (in)	Misalignment ③	
						Axial (in)	Parallel (in)
156 - 4	1 9/16	1.77	3.50	1.31	2.23	0.059	0.028
188 - 4	1 7/8	2.20	4.07	1.56	2.64	0.075	0.033
150 - 6	1 1/2	1.89	3.50	1.44	2.09	0.030	0.013
200 - 6	2	2.28	4.33	1.81	2.78	0.038	0.017
256 - 6	2 9/16	2.28	5.24	2.26	3.58	0.044	0.017
269 - 6	2 11/16	2.87	5.98	2.56	3.78	0.052	0.019
319 - 6	3 3/16	3.19	7.09	2.95	4.49	0.062	0.022
375 - 6	3 3/4	3.70	8.07	3.54	5.28	0.070	0.026
419 - 6	4 3/16	4.29	9.06	3.74	5.91	0.080	0.029
475 - 6	4 3/4	4.65	10.12	4.33	6.65	0.090	0.031
525 - 6	5 1/4	5.04	11.10	4.72	7.40	0.098	0.035
613 - 6	6 1/8	5.63	12.80	5.12	8.58	0.114	0.037

3) Maximum Parallel Offset is based on a minimum DBSE (1/2 Deg. Angular misalignment per disc pack, 1 Deg for 4 link).

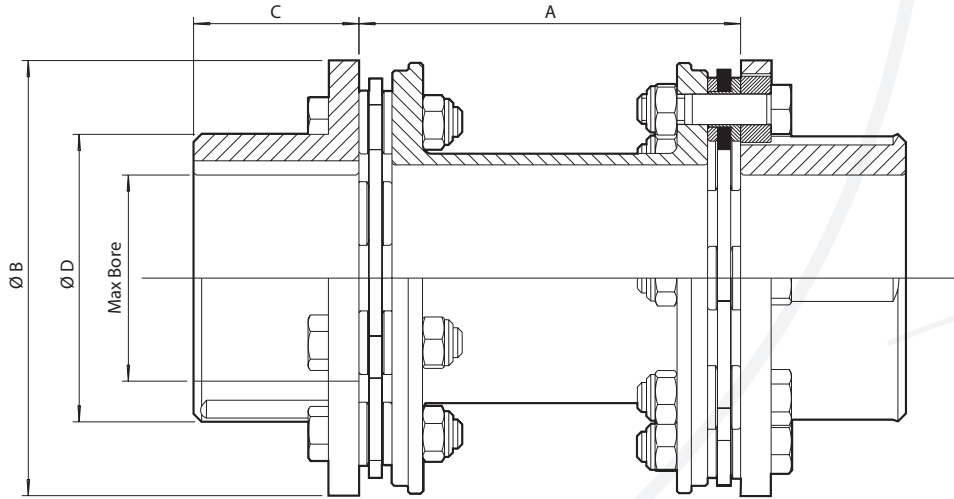
4) Maximum Bore assumes a standard AGMA interference fit with a square keyway. Larger bores are available using rectangular keys.

5) Most sizes stocked with 5" and 7" DBSEs.

6) Bolted tube spacers are available upon request.

Note: The ES Disc Coupling is used on 4 bearing systems, such as motor to pump / gearbox where economical non API spacer couplings are required.

AUTOFLEX DISC COUPLINGS SERIES ES (DOUBLE FLEX - SPACER)



**ES - 8 Link
Spacer Coupling**

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	Weight per inch of extra DBSE (lb/in)	① Inertia (lb.in ²)	Inertia per inch of extra DBSE (lb.in ² /in)
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)				
313 - 8	47	29,800	59,700	6,400	12,800	31.47	0.584	186	1.98
350 - 8	72	45,400	90,700	5,800	11,300	48.51	0.750	369	3.39
400 - 8	100	65,800	132,000	5,400	10,000	69.05	0.94	669	5.58
450 - 8	150	91,800	184,000	5,000	9,000	95.73	1.22	1,140	8.72
488 - 8	200	125,000	250,000	4,700	8,200	127.18	1.47	1,860	13.0
538 - 8	270	168,000	336,000	4,400	7,500	166.14	1.83	2,910	19.4
550 - 8	350	221,000	443,000	4,100	7,200	217.23	2.42	4,230	26.3
638 - 8	400	254,000	507,000	3,900	6,400	266.47	2.28	6,350	33.2
675 - 8	500	318,000	635,000	3,700	6,000	330.03	2.74	9,010	45.8
725 - 8	620	391,000	783,000	3,600	5,600	409.92	3.08	12,670	59.0
850 - 8	1000	641,000	1,280,000	3,200	4,700	669.72	4.14	28,900	118
1000 - 8	1600	1,030,000	2,060,000	2,900	4,000	1030.79	5.87	60,600	224
1175 - 8	2800	1,770,000	3,540,000	2,500	3,400	1796.70	8.44	148,000	445

1) Weight and inertias are calculated using maximum bored standard hubs and minimum DBSE.

2) Maximum Unbalanced Speeds are based on AGMA 9000-C90 Class 9 with min DBSE and max interference bored coupling hubs.

Dimensional Details

Coupling Size - Links	③ Maximum Bore (in)	A Min DBSE (in)	B (in)	C (in)	D (in)	Misalignment ③	
						Axial (in)	Parallel (in)
313 - 8	3 1/8	3.07	6.73	4.45	4.45	0.136	0.013
350 - 8	3 1/2	3.50	7.68	5.04	5.04	0.155	0.015
400 - 8	4	3.94	8.62	5.71	5.71	0.174	0.017
450 - 8	4 1/2	4.41	9.57	6.34	6.34	0.193	0.019
488 - 8	4 7/8	4.76	10.55	6.97	6.97	0.213	0.021
538 - 8	5 3/8	5.12	11.54	7.64	7.64	0.232	0.022
550 - 8	5 1/2	5.75	12.20	7.91	7.91	0.240	0.026
638 - 8	6 3/8	5.75	13.54	9.06	9.06	0.273	0.025
675 - 8	6 3/4	6.34	14.49	9.57	9.57	0.292	0.028
725 - 8	7 1/4	6.65	15.47	10.35	10.35	0.312	0.029
850 - 8	8 1/2	7.60	18.27	12.28	12.28	0.371	0.033
1000 - 8	10	8.90	21.18	14.21	14.21	0.432	0.040
1175 - 8	11 3/4	10.63	25.20	16.81	16.81	0.514	0.048

3) Maximum Parallel Offset is based on a minimum DBSE (1/3 Deg. Angular misalignment per disc pack).

4) Maximum Bore assumes a standard AGMA interference fit with a square keyway. Larger bores are available using rectangular keys.

NOTE: The ES Disc Coupling is used on 4 bearing systems, such as motor to pump / gearbox where economical non API spacer couplings are required