

AUTOFLEX

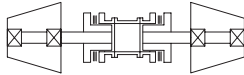
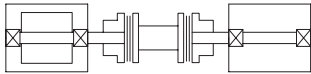
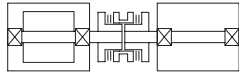
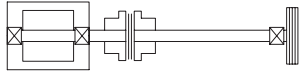
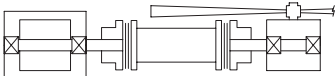
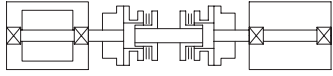
DISC COUPLINGS



SIZE AG 275 - 6
(API 610 8th Edition)

AUTOFLEX DISC COUPLINGS

Contents & Coupling Application Configurations

Coupling Type	Typical Application		Series	Page No
	Introduction - Disc Configuration Coupling Selection Service Factors			2 3 & 4
High Performance Turbo - Compressor Couplings	High Performance Couplings are designed to the highest specifications. These couplings are designed using state of the art finite element analysis. The coupling have been optimized for high speed and high torque duties.		HP - RM HP - RZ HP - MS	5
Spacer Couplings Double Flex (Double Disc Pack)	Spacer couplings utilizing two disc packs will accommodate Angular, Axial and Offset Misalignment. The driving and driven shaft ends are separated allowing for installation and maintenance without moving the connected equipment. These couplings are offered both in API and non-API configurations.		ESS ES AGS AG RX MT	6 7 & 8 9 10 & 11 12 13
Close Coupled Couplings Double Flex (Double Disc Pack)	Close Coupled Couplings utilizing two disc packs will accommodate Angular, Axial and Offset Misalignment. The driving and driven shaft separations tend to be very close (1/8").		CCA CCR	14 & 15 16 & 17
Single Flex Couplings (Single Disc Pack)	Single Flex couplings are capable of accommodating Angular and Axial Misalignments which are commonly found in three bearing applications such as fans, blowers and sprocket drive pulleys. Single Flex couplings cannot accommodate offset misalignments.		SF	18 & 19
Cooling Tower Couplings Double Flex (Double Disc Pack)	Cooling Tower Couplings utilize two disc packs, which will accommodate Angular, Axial and Offset Misalignment. Shaft separations are generally long and thus the coupling is supplied with a carbon fiber composite spacer tube.		CTES CTAG	20 21
Paper Machine Couplings Double Flex (Double Disc Pack)	PMC (Paper Machine Couplings) utilize two disc packs, which will accommodate Angular, Axial and Offset Misalignment. The coupling has been designed for long shaft separations utilizing a solid floating shaft. The PMC coupling is a direct replacement to the older style gear couplings with guard rings, which have been designed to accept a standard AGMA coupling flanges.		PMC	22
	Information for the Selection of Autoflex Couplings.			23

The specifications contained within this brochure are correct at the time of going to print. American Autogard are continually reviewing and updating the specifications on all its product range and therefore reserve the right to change any detail.

AUTOFLEX DISC COUPLINGS

The Autoflex Disc Coupling is designed to provide a highly reliable connection for rotating equipment. The coupling requires no lubrication and thus is maintenance free. Properly installed, the coupling is designed to provide infinite life.

Autoflex Advantages

Disc coupling construction provides optimum power and misalignment capability

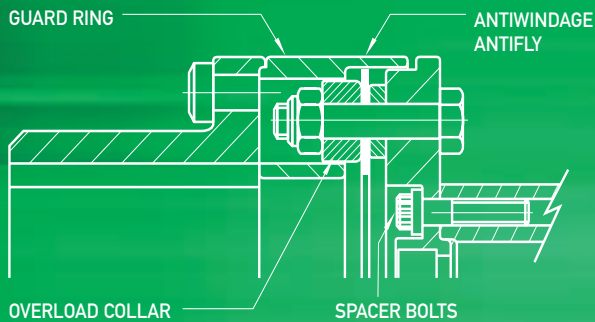
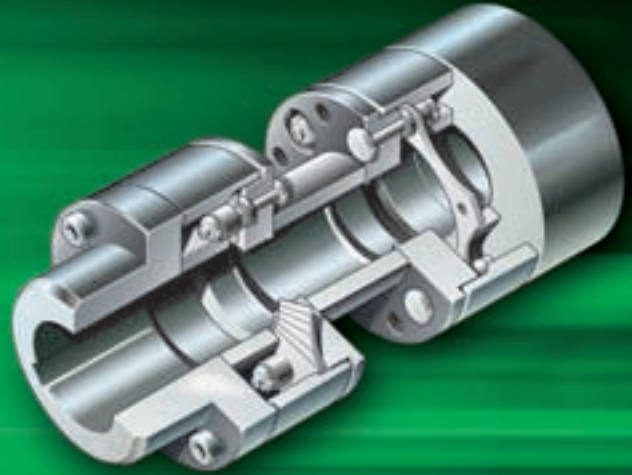
Cartridge transmission unit provides for easy assembly while maintaining an inherent balance to AGMA class 9.

The Autoflex has an optional design to handle non-standard DBSE using Factory assembled Guard Ring Packs which are bolted to a standard spacer tube.

Discs are made from high strength 301 stainless steel.

Hubs have been optimized to provide a larger bore capacity.

All steel parts are phosphate coated.



Reduced windage configuration which also provides an inherent fail-safe feature in the unlikely event of disc failure.

Overload collar also provides an inherent fail-safe feature, protecting the disc in the event of severe transient torque overloads.

Coupling performance is enhanced using high grade washers with an optimized radius profile.

Higher grades of dynamic balance are capable through the elimination of balance tools, gagging is achieved by locking the guard ring to the spacer flange.

The Autoflex disc has been optimized using finite element analysis. This has resulted in a waisted link design which provides more flexibility and thus substantially lower reaction forces on the bearing of the connected equipment. The stresses through the new disc design are uniform and are inherently low due to the reduced weight and inertia of the pack. The discs have been designed to provide for infinite life utilizing a safety factor of 2 times on the Modified Goodman Diagram.



AUTOFLEX DISC COUPLINGS



Coupling Selection

Method







Data required for Coupling Selection.

- Application details (for service factor)
- Power and rpm of the driver
- Shaft details of the driving and driven equipment

- (1) Determine the service factor (SF) from the application and classification lists noted below.
- (2) Calculate the maximum HP/100 rpm rating:

$$\text{HP/100 rpm} = (\text{HP} \times 100 \times \text{SF}) / \text{rpm}$$
 Select the coupling which has a higher max rating.
- (3) Check the Limiting Conditions:
 - a Check the hub bore capacity is suitable
 - b Check the speed capability and specify whether the coupling requires balancing.
 - c Check coupling dimensions such as DBSE, Overall Length and Outside Diameter.

Service Factors - SF

Load Characteristics	Electric Motor, Steam Turbine Gas Turbine	Steam Engine, Water Turbine, 8 Cyl. Recip. Engine	6 Cyl. Recip. Engine	4 Cyl. Recip. Engine
 Constant Torque eg. Centrifugal pumps, compressors & blowers, light duty agitators and fans.	1.0	1.5	2.0	2.5
 Slight Fluctuations eg. Slurry pumps, Screw compressors, Lobe and Vane Blowers.	1.5	2.0	2.5	3.0
 Moderate Fluctuations and/or Slight Shock Loads Double acting pumps, Recip. Comp.	2.0	2.5	3.0	3.5
 Large Fluctuations and/or Moderate Shock Loads 1 or 2 Cylinder Recip.pumps.	2.5	3.0	3.5	4.0
 Shock Loads or Light Torque Reversals Slitters, Rod Mill, Hot Mill	3.0	3.5	4.0	Consult Factory
 Heavy Shock Loads or Large Torque Reversals Feed Rolls, Reversing Mills	Consult Factory	Consult Factory	Consult Factory	Consult Factory

- (1) Use a minimum Service Factor of 1.25 when driving through a gearbox or using a direct on-line electric motor, and 1.5 when selecting a Cooling Tower Coupling.
- (2) Consult Autogard when using a Reciprocating Engine of less than 4 cylinders.
- (3) Service Factors provided are for reference only. Customer experience may dictate the selection of different Service Factors.

Disc Configurations

The standard Flexible Disc Pack is available in four, six and eight link designs to meet various torque, speed and misalignment conditions.

4 Link Disc Pack

Four link disc pack designs offer maximum misalignment and are ideal for low torque applications in which the reaction forces on the bearings must be kept to a minimum.

6 Link Disc Pack

Six link disc pack designs offer the optimum torque carrying capacity and flexibility making it the preferred choice for the standard Autoflex coupling product range.

8 Link Disc Pack

Eight link disc pack designs offer high torque carrying capacity suited for motor or generator drives with high peak torque and lower misalignment requirements.

Example

Driver: Steam Turbine (100 HP at 1800 rpm)
 Driven equipment: Reciprocating Compressor

Turbine Bore: 2.38 in. Compressor Bore: 2.00 in.
 Distance Between Shaft Ends: (DBSE): 5.0 in.

Service Factor for the Steam Turbine & Reciprocating Compressor: SF=2

$$\text{HP/100 rpm} = (100 \text{ HP} \times 100 \times 2) / 1800$$

$$\text{HP/100 rpm} = 11.1$$

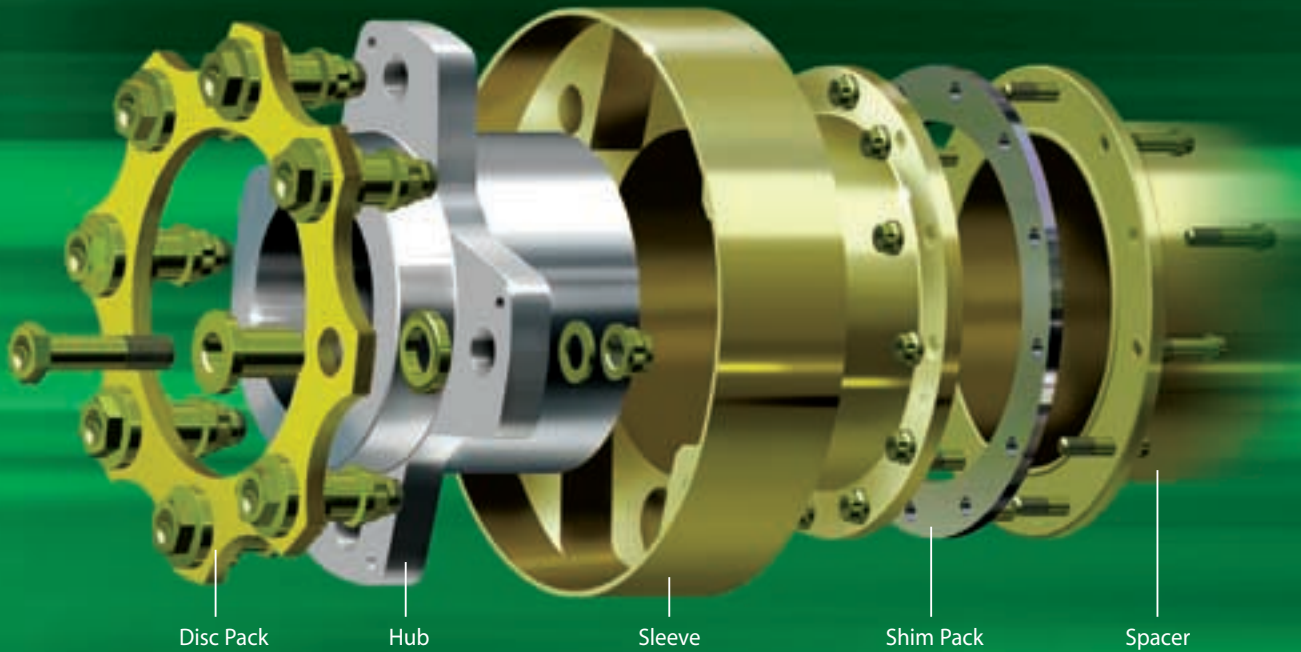
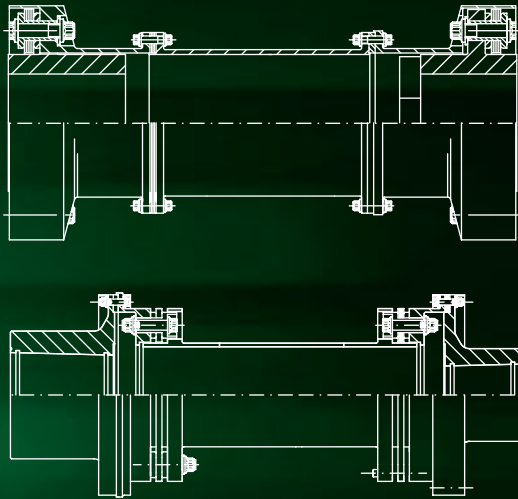
Coupling selection based on the maximum rating - ES269-6
 Coupling Bore Capacity: 2 11/16"
 Maximum speed for the ES269-6 is 7100 rpm Unbalanced
 Minimum Allowable DBSE: 2.87" (Solid Spacer)

Ordering Example

Series	Size	Links	DBSE (where applicable)
ES	269	6	5.0

AUTOFLEX HIGH PERFORMANCE DISC COUPLINGS

Autogard has been manufacturing Disc Couplings for over 30 years. The Autogard High Performance Coupling is designed to provide a safe and reliable coupling connection for high speed turbo machinery. The coupling has been designed using the state of the art finite element analysis to ensure optimum performance



Features and benefits

- Reduced moment configurations
- Never requires lubrication
- Coated discs for maximum life
- Compliance with API 671
- Inherent fail-safe design
- Unitized Disc Pack assembly
- Improved balance and reliability
- Reduce windage configurations
- Proven waisted link disc design
- Minimized weights and interias
- Torque measuring can be incorporated

High Performance Duties:

- Compressor Drives
- Generator Sets
- Booster Pumps
- Main Oil Line Pumps
- Test Dynamometers
- Test Rigs
- Boiler Feed Pumps
- Turbine Drives
- Any critical application requiring a safe and reliable coupling manufactured and balanced to the highest specifications

Please refer to Autoflex High Performance Couplings catalog for the selection and full technical & dimensional details.
Autoflex HP Couplings are made under licence from FlexElement™ Texas Inc.

AUTOFLEX DISC COUPLINGS

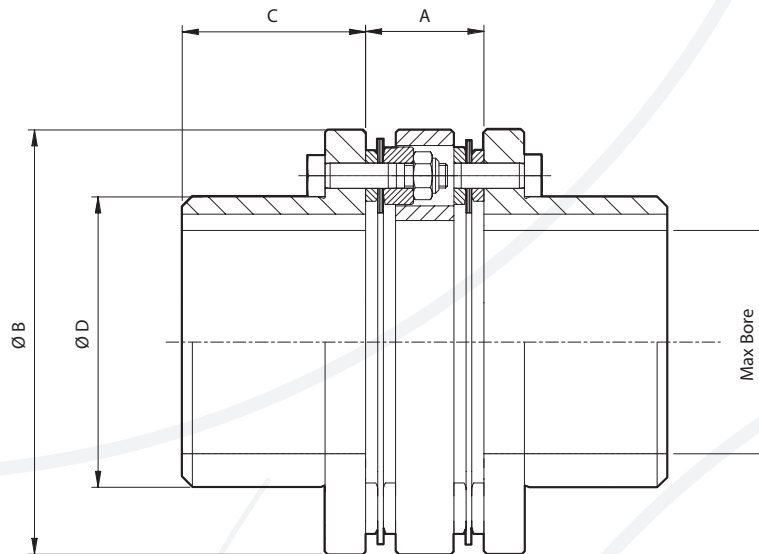
SERIES ES (DOUBLE FLEX - SPACER)

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

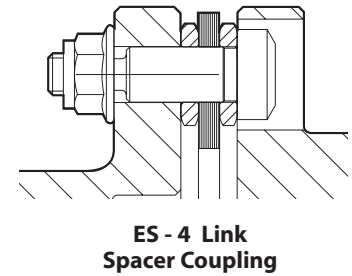
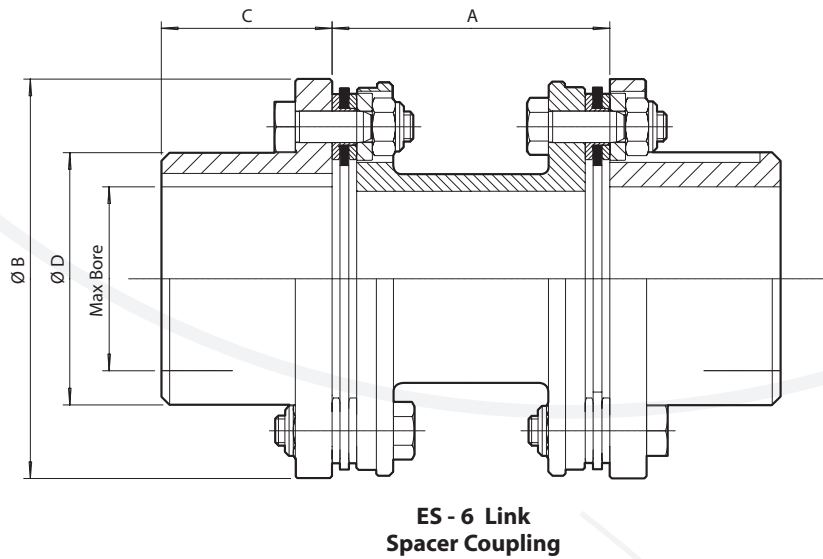
Coupling Size - Links	③ Maximum Bore (in)	A		B (in)	C (in)	D (in)	Misalignment ③	
		Min DBSE (in)	Max DBSE (in)				Axial (in)	Parallel (in)
150 - 6	1 1/2	1.20	1.89	3.50	1.44	2.09	0.030	0.008
200 - 6	2	1.46	2.28	4.33	1.81	2.78	0.038	0.009
256 - 6	2 9/16	1.46	2.28	5.24	2.31	3.58	0.044	0.009
344 - 6	3 7/16	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).

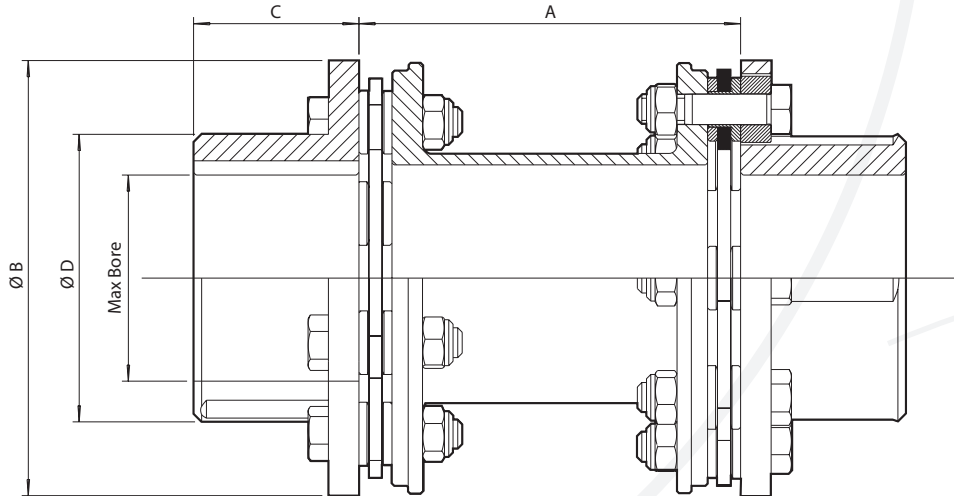
4) Maximum Bore assumes a standard AGMA interference fit with a square keyway. Larger bores are available using rectangular keys.

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

AUTOFLEX DISC COUPLINGS

SERIES AG (DOUBLE FLEX - DROP OUT SPACER)

The Autoflex AG is a drop out spacer style coupling designed to meet API 610 8th Edition for industrial pump couplings. The coupling consists of three parts, two shaft hubs and a factory pre-assembled transmission unit.

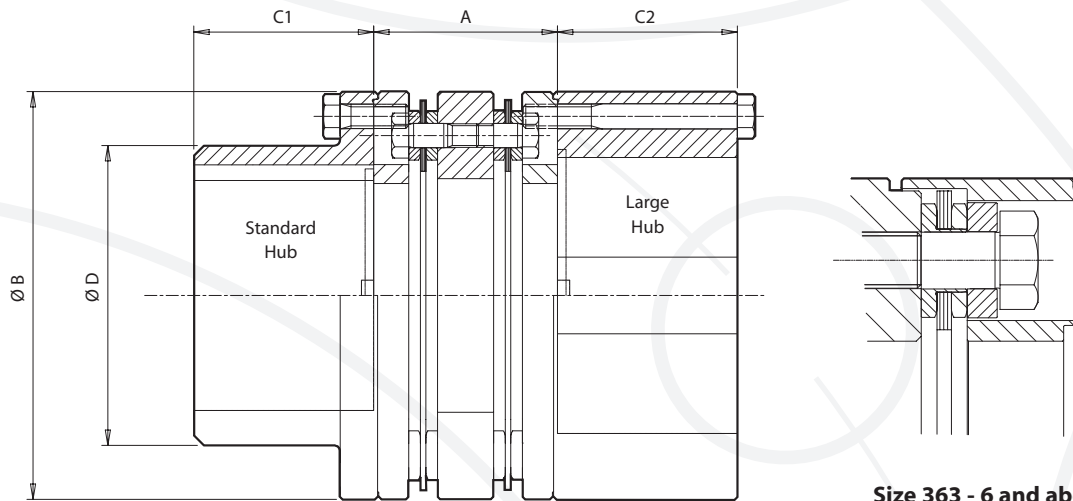
Unlike conventional disc couplings, the anti-fly guard is designed to extend over the top of the disc pack. This features provides several benefits;

- Reduces the Windage produced by the Disc Pack.
- Acts as a coupling guard providing additional safety.
- Increases the retaining strength over conventional couplings.
- Eliminates the need for balancing tools (gag sleeves and bolts) and therefore increases the accuracy of the dynamic balance of the coupling.

The transmission unit is piloted between the shaft providing excellent balance characteristics. The AG has been designed to provide an AGMA class 9 balance as manufactured. The coupling can be balanced up to an AGMA 11 for high speed, sensitive applications. The fact that the coupling does not require lubrication ensures that the balance will not degrade over the life of the driving and driven equipment.

The AGS has been designed for very short DBSE's applications. The AG four and six link couplings are used in medium duty application providing a good combination of Torque carrying and misalignment capacity.

The AG eight-link coupling is used for high power applications.



**AGS - 6 Link
Short Drop Out Spacer Coupling**

**Size 363 - 6 and above
have Shrouded Discs**

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	① Inertia (lb.in ²)	Misalignment ③	
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)			Axial (in)	Parallel (in)
163 - 6	2.1	1,330	2,390	9,800	24,000	5.13	8.8	0.030	0.008
200 - 6	4.9	3,100	5,490	8,300	19,000	10.3	27.7	0.038	0.009
275 - 6	9.8	6,200	11,000	7,600	16,000	15.8	63.7	0.044	0.009
363 - 6	21	13,300	23,700	6,200	12,000	37.0	249	0.058	0.013
450 - 6	46	29,200	58,400	5,300	10,000	75.7	748	0.070	0.017
500 - 6	67	42,500	85,000	4,900	9,100	104	1274	0.080	0.020

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.

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

Dimensional Details

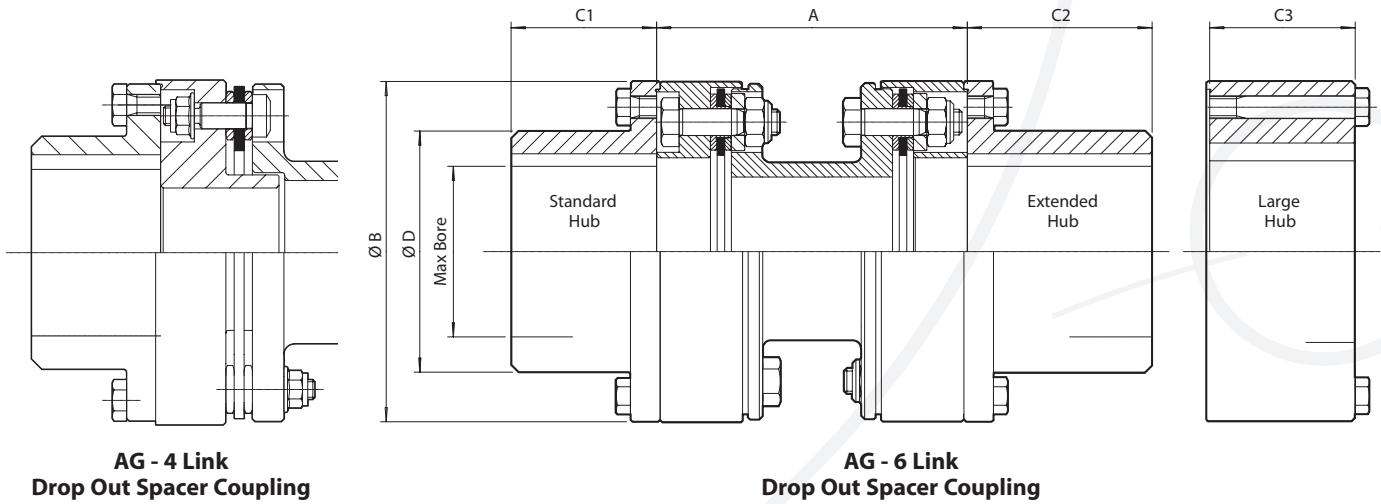
Coupling Size - Links	Maximum Bore ④		A (DBSE)		B (in)	C1 (in)	C2 (in)	D (in)
	Std. Hub (in)	Large Hub (in)	Min (in)	Max (in)				
163 - 6	1 5/8	2 1/2	1.91	3.15	3.50	1.44	1.44	2.27
200 - 6	2	2 7/8	2.36	3.94	4.33	1.81	1.81	2.87
275 - 6	2 3/4	3 3/4	2.36	3.94	5.24	2.31	2.31	3.85
363 - 6	3 5/8	4 3/4	3.57	4.33	6.69	2.93	2.93	5.08
450 - 6	4 1/2	5 5/8	5.04	5.98	8.07	3.54	3.54	6.30
500 - 6	5	-	5.63	6.65	9.06	3.74	-	6.90

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

NOTE: The AGS disc coupling is used on 4 bearing systems such as motor to pump applications where short DBSE's and drop-out features are required.

AUTOFLEX DISC COUPLINGS

SERIES AG (DOUBLE FLEX - DROP OUT SPACER)



AG - 4 Link
Drop Out Spacer Coupling

AG - 6 Link
Drop Out 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)	Misalignment ③	
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)					Axial (in)	Parallel (in)
163 - 4	1.5	974	1,950	8,900	21,000	7.67	0.313	12.7	0.25	0.059	0.024
200 - 4	2.7	1,680	3,360	8,000	19,000	12.4	0.406	27.8	0.40	0.075	0.028
163 - 6	2.1	1,330	2,390	9,100	24,000	7.17	0.258	12	0.13	0.030	0.013
200 - 6	4.9	3,100	5,490	7,800	19,000	14.0	0.367	38	0.39	0.038	0.017
275 - 6	9.8	6,200	11,000	7,100	16,000	21.1	0.752	85	1.38	0.044	0.017
300 - 6	18	11,500	23,000	6,400	14,000	32.2	0.644	164	1.34	0.052	0.019
350 - 6	31	19,500	38,900	5,700	12,000	54.0	1.00	381	3.19	0.062	0.022
450 - 6	46	29,200	58,400	5,200	10,000	80.8	1.30	773	4.93	0.070	0.026
500 - 6	67	42,500	85,000	4,800	9,100	111.7	1.74	1,326	8.64	0.080	0.029
550 - 6	98	62,000	124,000	4,400	8,200	157.0	1.72	2,337	13.52	0.090	0.031
600 - 6	120	77,900	156,000	4,200	7,400	206.9	1.73	3,755	16.62	0.098	0.035
675 - 6	180	115,000	230,000	3,900	6,500	288.5	2.31	6,824	27.36	0.114	0.037

- 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 couplings with standard hubs.
- 3) Maximum Parallel Offset is based on a minimum DBSE (1/2 Deg. Angular misalignment per disc pack, 1 Deg for 4 links).

Dimensional Details

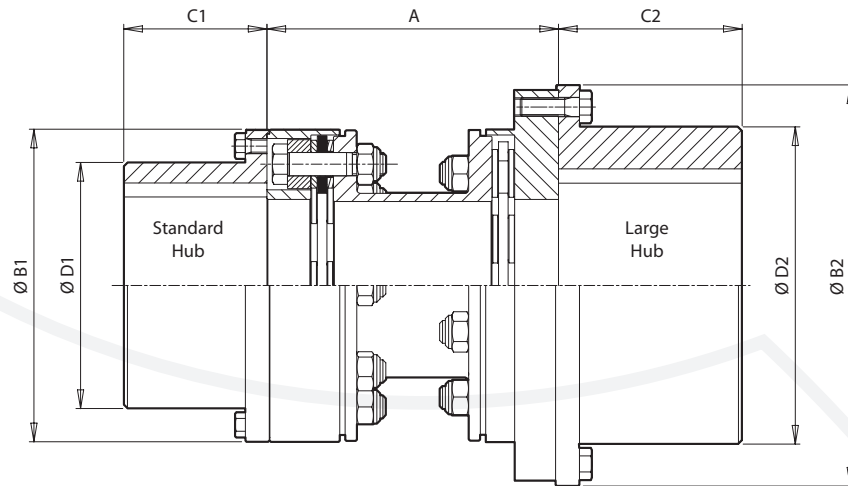
Coupling Size - Links	Maximum Bore ④		A Min DBSE (in)	B (in)	C1 (in)	C2 (in)	C3 (in)	D (in)	Stock DBSE ("A") Dimension (in)					
	Std. & Ext. Hub (in)	Large Hub (in)							3 1/2	4 3/8	5	7	9	
163 - 4	1 5/8	2 3/8	2.76	3.59	1.31	1.69	1.62	2.31						
200 - 4	2	2 3/4	3.35	4.16	1.56	2.06	1.81	2.81						
163 - 6	1 5/8	2 1/2	3.15	3.50	1.44	2.00	1.44	2.27						
200 - 6	2	2 7/8	3.94	4.33	1.81	2.50	1.81	2.87						
275 - 6	2 3/4	3 3/4	3.94	5.24	2.31	3.00	2.31	3.85						
300 - 6	3	4 3/8	4.49	5.98	2.56	3.25	2.56	4.24						
350 - 6	3 1/2	5	5.16	7.09	2.95	3.75	2.95	4.92						
450 - 6	4 1/2	5 5/8	5.98	8.07	3.54	4.38	3.54	6.30						
500 - 6	5	-	6.65	9.06	3.74	5.00	3.74	6.90						
550 - 6	5 1/2	-	7.28	10.12	4.33	5.38	4.33	7.87						
600 - 6	6	-	8.27	11.10	4.72	6.00	4.72	8.49						
675 - 6	6 3/4	-	8.78	12.80	5.12	6.25	5.12	9.47						

- 4) Maximum Bore assumes a standard AGMA interference fit with a square keyway. Larger bores are available using rectangular keys.
- 5) Bolted tube spacers are available upon request.

NOTE: The AG Disc Coupling is used on 4 bearing systems, such as API 610 motor to pump applications and where Drop Out Transmission Units are required.

AUTOFLEX DISC COUPLINGS

SERIES AG (DOUBLE FLEX - DROP OUT SPACER)



**AG - 8 Link
Drop Out 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)	Misalignment ③	
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)					Axial (in)	Parallel (in)
363 - 8	47	29,800	59,700	6,100	12,800	40.81	0.58	264.7	1.98	0.136	0.013
413 - 8	72	45,400	90,700	5,500	11,300	61.89	0.75	524.2	3.39	0.155	0.015
475 - 8	100	65,800	132,000	5,100	10,000	90.54	0.94	978	5.58	0.174	0.017
519 - 8	150	91,800	184,000	4,600	9,000	131.8	1.22	1,781	8.72	0.193	0.019
575 - 8	200	125,000	250,000	4,300	8,200	179.2	1.47	2,965	13.0	0.213	0.021
613 - 8	270	168,000	336,000	4,100	7,500	224.6	1.83	4,370	19.4	0.232	0.022
650 - 8	350	221,000	443,000	3,800	7,200	312.1	2.42	6,731	26.3	0.240	0.026
750 - 8	400	254,000	507,000	3,700	6,400	363.9	2.28	9,837	33.2	0.273	0.025
775 - 8	500	318,000	635,000	3,500	6,000	438.6	2.74	13,390	45.8	0.292	0.028
850 - 8	620	391,000	783,000	3,400	5,600	534.0	3.08	18,690	59.0	0.312	0.029
1000 - 8	1,000	641,000	1,280,000	3,000	4,700	888.0	4.14	44,200	118	0.371	0.033
1200 - 8	1,600	1,030,000	2,060,000	2,700	4,000	1438.0	5.87	97,410	224	0.432	0.040
1400 - 8	2,800	1,770,000	3,540,000	2,400	3,400	2413.0	8.44	229,800	445	0.514	0.048

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 couplings with standard hubs.

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

Dimensional Details

Coupling Size - Links	Maximum Bore ④		A Min DBSE (in)	B1 (in)	B2 (in)	C1 Std. Hub (in)	C2 Large Hub (in)	D1 Std. Hub (in)	D2 Large Hub (in)
	Std. Hub (in)	Large Hub (in)							
363 - 8	3 5/8	4 3/4	4.88	6.73	8.62	2.99	3.94	5.20	6.81
413 - 8	4 1/8	5 3/16	5.59	7.68	9.57	3.43	4.38	5.91	7.36
475 - 8	4 3/4	5 3/4	6.26	8.62	10.55	3.94	4.91	6.81	8.31
519 - 8	5 3/16	6 1/2	7.09	9.57	12.20	4.38	6.64	7.36	9.29
575 - 8	5 3/4	7 1/2	7.72	10.55	13.54	4.91	6.30	8.31	10.71
613 - 8	6 1/8	7 3/4	8.35	11.54	14.49	5.20	6.55	8.74	11.18
650 - 8	6 1/2	-	9.69	12.20	-	6.64	-	9.29	-
750 - 8	7 1/2	-	9.37	13.54	-	6.30	-	10.71	-
775 - 8	7 3/4	-	10.31	14.49	-	6.55	-	11.18	-
850 - 8	8 1/2	-	10.79	15.47	-	7.12	-	12.13	-
1000 - 8	10	-	12.48	18.27	-	8.41	-	14.06	-
1200 - 8	12	-	14.76	21.18	-	10.05	-	16.93	-
1400 - 8	14	-	17.64	25.20	-	11.91	-	20.28	-

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

NOTE: The AG Disc Coupling is used on 4 bearing systems, such as API 610 motor to pump applications or where high power and Drop Out Transmission Units are required

AUTOFLEX DISC COUPLINGS SERIES RX & MT

The advanced features of the Autoflex Disc couplings are now available as a "Drop-In" upgrade for your existing Thomas Series 71™ or Metastream T-Series™ Couplings.

The "Drop-In" Advantage

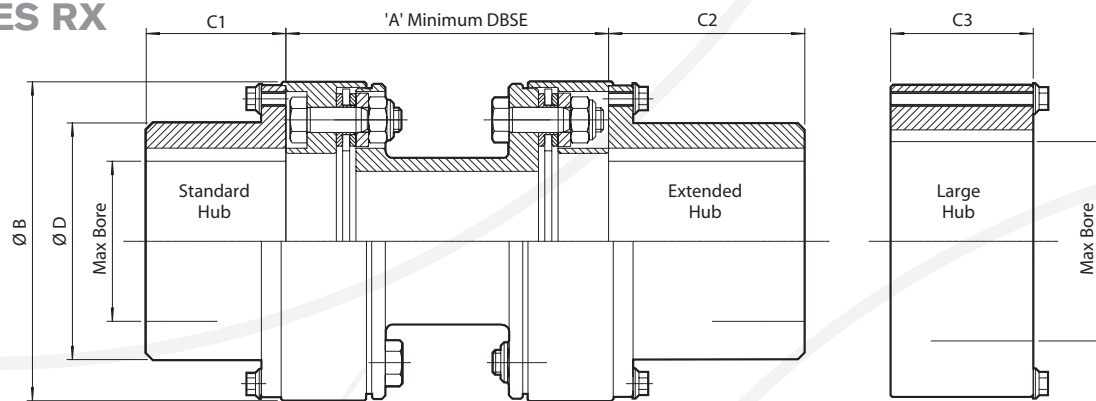
- No need for expensive hub removal or machining as you keep your existing hubs.
- Locates on existing hub pilots for accurate run-out and balance.
- Retains original shaft separation.

The Autoflex Advantage

- Bolted spacer option offers quick turnaround for non standard DBSE's
- Unique locking feature for jig-free dynamic balancing of transmission unit & hubs



SERIES RX



**RX 4 & 6 - Link
"Drop-In" for Thomas™ Series 71**

Technical Details

Coupling Size - Links	Thomas™ Series 71	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	Weight per inch of extra DBSE (lb/in)	① Inertia (lb.in²)	Inertia per inch of extra DBSE (lb.in²/in)	Misalignment ③	
			Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)					Axial (in)	Parallel (in)
150 - 4	150	1.5	974	1,950	8,900	21,000	7.7	0.31	12.7	0.25	0.059	0.020
175 - 4	175	2.7	1,680	3,360	8,000	19,000	12.4	0.41	27.8	0.40	0.075	0.030
225 - 6	225	4.9	3,100	5,490	6,300	17,000	18.5	0.37	58.2	0.39	0.040	0.017
300 - 6	300	18	11,500	23,000	5,500	14,000	33.2	0.64	163	1.34	0.055	0.019
350 - 6	350	31	19,500	38,900	4,900	12,000	53.9	1.00	367	3.19	0.065	0.022
375 - 6	375	31	19,500	38,900	4,700	11,000	65.3	1.00	507	3.19	0.065	0.022

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 couplings with standard hubs.

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

Dimensional Details

Coupling Size - Links	Thomas™ Series 71	Maximum Bore ④		A Min DBSE (in)	B (in)	C1 (in)	C2 (in)	C3 (in)	D (in)
		Std. & Ext. Hub (in)	Large Hub (in)						
150 - 4	150	1 1/2	2 3/8	2.76	3.5	1.31	1.69	1.62	2.31
175 - 4	175	1 7/8	2 3/4	3.35	4.07	1.56	2.06	1.81	2.81
225 - 6	225	2 1/4	3 1/4	3.94	4.82	2.00	2.50	2.06	3.34
300 - 6	300	3	4	4.49	5.85	2.62	3.25	2.75	4.44
350 - 6	350	3 1/2	4 1/2	5.16	6.63	3.12	3.75	3.00	5.25
375 - 6	375	3 3/4	5	5.16	7.50	3.25	4.00	3.25	5.66

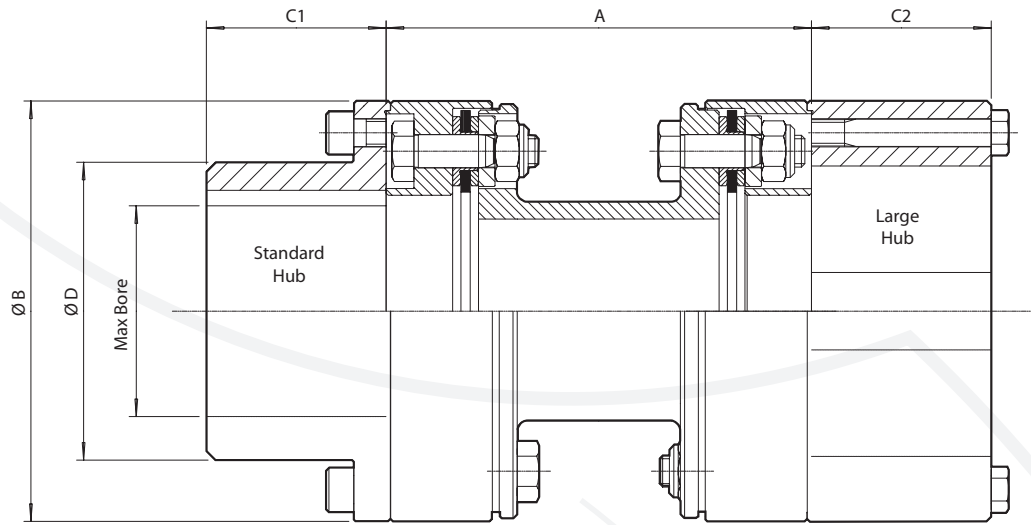
4) Maximum Bore assumes a standard AGMA interference fit with a square keyway. Larger bores are available using rectangular keys.

5) Thomas Series 71 is a registered Trade Mark of Rexnord Industries Inc.

6) Metastream T-Series is a registered Trade Mark of John Crane Inc.

NOTE: When ordering please advise if a Transmission Unit or coupling complete with hubs is required.

AUTOFLEX DISC COUPLINGS SERIES MT



MT - 6 Link
"Drop-In" for Metastream™ "T" Series

Technical Details

Coupling Size - Links	Metastream™ "T" series	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)	Misalignment ③	
			Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)					Axial (in)	Parallel (in)
0013 - 6	TSCS 0013	2.1	1,330	2,390	9,100	24,000	7.57	0.26	12.3	0.13	0.03	0.01
0033 - 6	TSCS 0033	4.9	3,100	5,490	7,800	19,000	14.3	0.37	37.2	0.39	0.04	0.02
0075 - 6	TSCS 0075	10	6,200	11,000	7,100	16,000	20.6	0.75	80.0	1.38	0.04	0.02
0135 - 6	TSCS 0135	18	11,500	23,000	6,400	14,000	32	0.64	164	1.34	0.05	0.02
0230 - 6	TSCS 0230	31	19,500	38,900	5,700	12,000	54	1.00	381	3.19	0.06	0.02
0350 - 6	TSCS 0350	46	29,200	58,400	5,200	10,000	81	1.30	773	4.93	0.07	0.03
0500 - 6	TSCS 0500	67	42,500	85,000	4,800	9,100	112	1.74	1,326	8.64	0.08	0.03
0740 - 6	TSCS 0740	98	62,000	124,000	4,400	8,200	157	1.72	2,337	13.52	0.09	0.03
0930 - 6	TSCS 0930	120	77,900	156,000	4,200	7,400	207	1.73	3,755	16.62	0.10	0.04
1400 - 6	TSCS 1400	180	115,000	230,000	3,900	6,500	289	2.31	6,824	27.36	0.11	0.04

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 couplings with standard hubs.

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

Dimensional Details

Coupling Size - Links	Metastream™ "T" Series	Maximum Bore ④		A Min DBSE (in)	B (in)	C1 (in)	C2 (in)	D (in)
		Std. Hub (in)	Large Hub (in)					
0013 - 6	TSCS 0013	1 3/8	2	3.15	3.50	1.44	1.44	1.96
0033 - 6	TSCS 0033	1 3/4	2 3/4	3.94	4.33	1.81	1.81	2.64
0075 - 6	TSCS 0075	2 1/4	3 3/8	3.94	5.24	2.31	2.31	3.46
0135 - 6	TSCS 0135	3	4 3/8	4.49	5.98	2.56	2.56	4.24
0230 - 6	TSCS 0230	3 1/2	5	5.16	7.09	2.95	2.95	4.92
0350 - 6	TSCS 0350	4 1/2	5 5/8	5.98	8.07	3.54	3.54	6.30
0500 - 6	TSCS 0500	5	-	6.65	9.06	3.74	-	6.90
0740 - 6	TSCS 0740	5 1/2	-	7.28	10.12	4.33	-	7.87
0930 - 6	TSCS 0930	6	-	8.27	11.10	4.72	-	8.49
1400 - 6	TSCS 1400	6 3/4	-	8.78	12.80	5.12	-	9.47

2) Metastream T Series is a registered Trade Mark of John Crane Inc.

3) Socket head cap screws supplied with every Transmission Unit.

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

NOTE: When ordering please advise if a Transmission Unit or coupling complete with hubs is required.

"Drop-in" for Metastream™ TSKS (Metric Version) can be supplied on request – consult Autogard.

AUTOFLEX DISC COUPLINGS

SERIES CCA - CLOSE COUPLED AXIAL SPLIT

The Autoflex CCA is offered in both a six and eight link disc design. The six link is suitable for light to medium duty applications and is often used when replacing the Thomas DBZ™.

The CCA eight-link coupling has been designed for heavy-duty applications and is often offered when replacing out gear or grid style couplings.

The Autoflex CCA is comprised of two coupling hubs, two guard rings, two disc packs and one axial split spacer. The axial split spacer is piloted to the guard ring to provide a good balance characteristic.

The coupling can be installed with hubs reversed as shown offering the maximum flexibility in DBSE selection. The coupling has been designed to allow the user to replace disc packs without moving the driving or the driven equipment. Simply remove the axial split spacer and remove the disc pack from between the hub faces.

The CCA has been designed to meet AGMA 8-balance classification. Dynamic Balancing is offered which will increase the balance to an AGMA class 9.

Refer to the Autoflex CCR for higher speed requirements.

SERIES CCA - 6 LINK (MEDIUM DUTY)

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	① Inertia (lb/in ²)	Misalignment ③	
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)			Axial (in)	Parallel (in)
125 - 6	2.1	1,330	2390	6,300	10,800	4.36	6.55	0.030	0.026
169 - 6	4.9	3,100	5490	5,300	9,000	8.71	21.4	0.038	0.033
206 - 6	9.8	6,200	11,000	4,800	7,800	13.1	45.9	0.044	0.037
225 - 6	18	11,500	23,000	4,100	7,000	24.6	113	0.052	0.047
269 - 6	31	19,500	38,900	3,600	6,200	28.1	155	0.062	0.054
331 - 6	46	29,200	58,400	3,300	5,500	38.9	250	0.070	0.061
369 - 6	67	42,500	85,000	3,000	5,100	56.4	484	0.080	0.071
419 - 6	98	62,000	124,000	2,700	4,700	83.8	893	0.090	0.078
463 - 6	120	77,900	156,000	2,600	4,300	116	1,565	0.098	0.085
544 - 6	180	115,000	230,000	2,400	3,900	151	2,439	0.114	0.093

1) Weights and Inertias are calculated using maximum bored hubs.

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

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

Dimensional Details

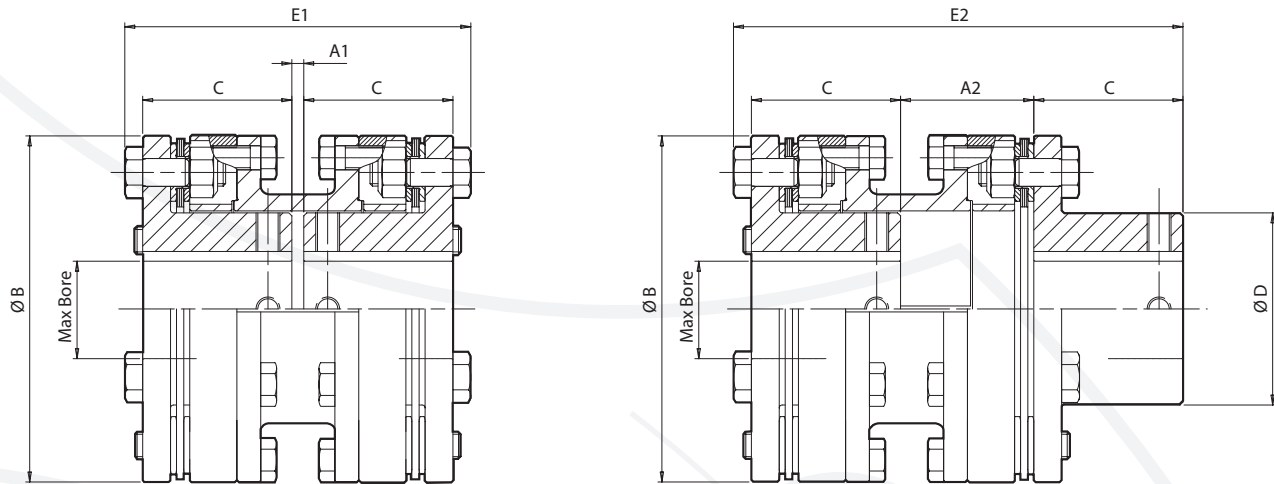
Coupling Size - Links	④ Maximum Bore (in)	A1 Min DBSE (in)	A2 Rev Hub (in)	B (in)	C (in)	D (in)	E1 (in)	E2 (in)
125 - 6	1 1/4	0.12	-	3.35	1.46	1.76	3.03	-
169 - 6	1 11/16	0.12	-	4.25	1.81	2.36	3.74	-
206 - 6	2 1/16	0.12	-	5.04	2.05	2.95	4.21	-
225 - 6	2 1/4	0.20	2.32	5.83	2.60	3.11	6.02	7.83
269 - 6	2 11/16	0.24	2.64	6.85	2.95	3.80	6.85	8.90
331 - 6	3 5/16	0.24	2.95	7.87	3.35	4.66	7.72	10.04
369 - 6	3 11/16	0.28	3.50	8.78	3.94	5.19	9.09	11.85
419 - 6	4 3/16	0.31	3.86	9.84	4.33	5.88	10.00	13.03
463 - 6	4 5/8	0.35	4.21	10.75	4.72	6.55	10.91	14.21
544 - 6	5 7/16	0.39	4.57	12.36	5.12	7.62	11.81	15.39

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

5) Thomas DBZ™ is a registered Trade Mark of Rexnord Industries Inc.

AUTOFLEX DISC COUPLINGS

SERIES CCA - CLOSE COUPLED AXIAL SPLIT



CCA 6 & 8 - Link Couplings

CCA - 8 LINK (HEAVY DUTY)

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ^②		① Weight (lbs)	① Inertia (lb.in ²)	Misalignment ^③	
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)			Axial (in)	Parallel (in)
425 - 8	200	125,000	250,000	2,700	4,500	128	1,827	0.213	0.055
463 - 8	270	168,000	336,000	2,500	4,200	166	2,812	0.232	0.059
488 - 8	350	221,000	443,000	2,400	4,100	193	3,520	0.240	0.063
550 - 8	400	254,000	507,000	2,300	3,700	255	5,936	0.273	0.066
588 - 8	500	318,000	635,000	2,100	3,600	317	8,444	0.292	0.072
625 - 8	620	391,000	783,000	2,000	3,400	381	11,500	0.312	0.076
750 - 8	1,000	641,000	1,280,000	1,800	2,900	634	27,500	0.371	0.087
875 - 8	1,600	1,030,000	2,060,000	1,600	2,600	1,010	59,000	0.432	0.102
1050 - 8	2,800	1,770,000	3,540,000	1,400	2,300	1,730	144,000	0.514	0.122

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.

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

Dimensional Details

Coupling Size - Links	④ Maximum Bore (in)	A1 Min DBSE (in)	A2 Rev Hub (in)	B (in)	C (in)	D (in)	E1 (in)	E2 (in)
425 - 8	4 1/4	0.43	4.17	10.16	4.53	6.11	9.49	13.74
463 - 8	4 5/8	0.47	4.53	11.06	4.92	6.69	10.31	14.92
488 - 8	4 7/8	0.47	4.69	11.50	5.20	6.87	10.87	15.63
550 - 8	5 1/2	0.51	5.00	12.99	5.47	7.84	11.46	16.54
588 - 8	5 7/8	0.55	5.43	13.90	5.94	8.39	12.44	17.99
625 - 8	6 1/4	0.59	5.75	14.84	6.30	8.98	13.19	19.02
750 - 8	7 1/2	0.63	6.57	17.68	7.24	10.74	15.12	21.89
875 - 8	8 3/4	0.67	7.64	20.55	8.54	12.51	17.76	25.71
1050 - 8	10 1/2	0.75	9.06	24.49	10.20	14.94	21.14	30.63

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

AUTOFLEX DISC COUPLINGS

SERIES CCR - CLOSE COUPLED RADIAL SPLIT

The Autoflex CCR is offered in both a six and eight link disc design. The six-link design is suitable for medium duty high-speed applications. The CCR eight-link coupling has been designed for heavy-duty high-speed applications and is often offered when replacing out high performance gear couplings. This allows for easy conversion between lubricated couplings to a non-lubricated, zero maintenance disc style coupling.

The Autoflex CCR is comprised of two coupling hubs, two guard rings and two disc packs. The radial split guard rings are piloted ensuring the highest level of balance.

The CCR has been designed to meet AGMA class 9 as manufactured and can be balanced to meet the AGMA class 11 or API 610 8th edition requirements.

The coupling can be installed with hubs reversed, offering the maximum flexibility in DBSE selection. The coupling has been designed with scalloped discs making one of the most flexible couplings available today. In addition, the coupling comes with overload collars, which protects the coupling from high peak loads.

Refer to the Autoflex CCA for lower speed requirements.

CCR - 6 LINK (MEDIUM DUTY)

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		Weight (lbs)	Inertia (lb.in ²)	Misalignment ③	
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)			Axial (in)	Parallel (in)
113 - 6	2.1	1,330	2,390	9,500	18,000	5.91	13.7	0.030	0.016
163 - 6	4.9	3,100	5,490	8,300	15,000	10.4	33.6	0.038	0.017
225 - 6	9.8	6,200	11,000	7,400	13,000	17.2	74.4	0.044	0.020
231 - 6	18	11,500	23,000	6,900	11,000	23.3	139	0.052	0.021
281 - 6	31	19,500	38,900	6,200	9,600	37.1	290	0.062	0.025
325 - 6	46	29,200	58,400	5,600	8,300	56.1	580	0.070	0.029
363 - 6	67	42,500	85,000	5,200	7,300	79.6	1,040	0.080	0.032
413 - 6	98	61,200	124,000	4,900	6,800	104	1,690	0.090	0.036
450 - 6	120	77,900	156,000	4,500	6,000	145	2,900	0.098	0.041
544 - 6	180	115,000	230,000	4,100	5,400	214	5,300	0.114	0.051

1) Weights and Inertias are calculated using maximum bored hubs.

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

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

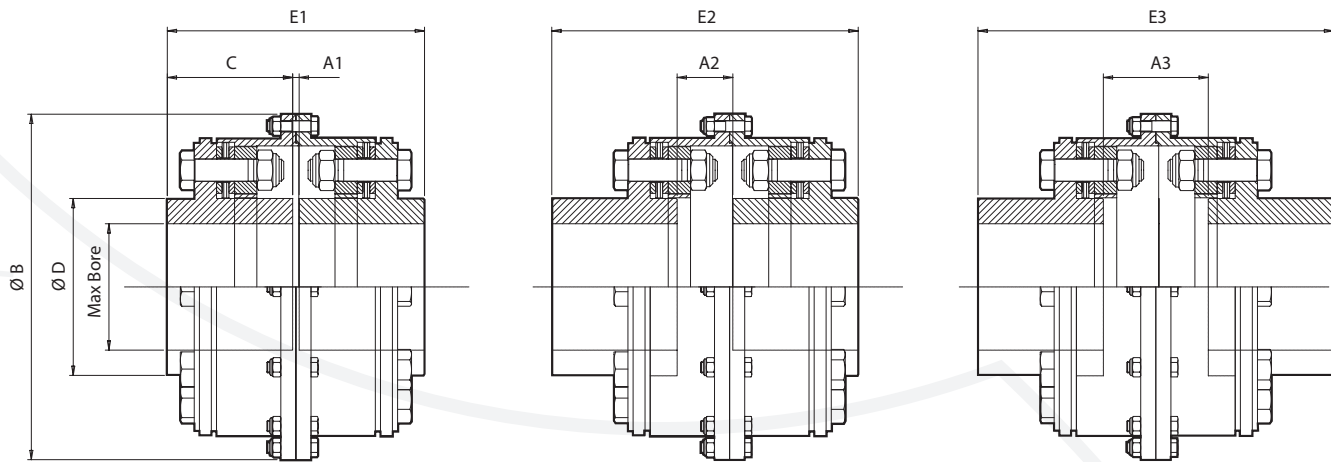
Dimensional Details

Coupling Size - Links	Maximum Bore (in)	DBSE			B (in)	C (in)	D (in)	E1 (in)	E2 (in)	E3 (in)
		A1 Min (in)	A2 1 Hub Rev (in)	A3 2 Hubs Rev (in)						
113 - 6	1 1/8	0.12	1.12	2.12	4.65	1.38	1.59	2.87	3.88	4.88
163 - 6	1 5/8	0.12	1.19	2.27	5.51	1.57	2.32	3.27	4.34	5.42
225 - 6	2 1/4	0.12	0.99	1.87	6.42	2.17	3.31	4.45	5.32	6.20
231 - 6	2 5/16	0.12	0.97	1.82	7.48	2.36	3.27	4.84	5.69	6.54
281 - 6	2 13/16	0.12	1.12	2.13	8.58	2.76	3.94	5.63	6.64	7.64
325 - 6	3 1/4	0.12	1.30	2.48	10.00	3.15	4.61	6.42	7.60	8.78
363 - 6	3 5/8	0.12	1.45	2.79	11.26	3.54	5.16	7.20	8.54	9.88
413 - 6	4 1/8	0.12	1.65	3.18	12.20	3.94	5.83	7.99	9.52	11.05
450 - 6	4 1/2	0.12	1.93	3.75	13.78	4.33	6.50	8.78	10.60	12.41
544 - 6	5 7/16	0.12	2.47	4.82	15.43	5.12	7.60	10.35	12.71	15.06

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

AUTOFLEX DISC COUPLINGS

SERIES CCR - CLOSE COUPLED RADIAL SPLIT



CCR 6 & 8 - Link Couplings

CCR - 8 LINK (HEAVY DUTY)

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	① Inertia (lb.in ²)	Misalignment ③	
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)			Axial (in)	Parallel (in)
269 - 8	47	29,800	59,700	6,200	9,700	37.1	268	0.136	0.017
313 - 8	72	45,400	90,700	5,700	8,600	55.0	511	0.155	0.020
350 - 8	100	65,800	132,000	5,200	7,800	77.1	876	0.174	0.022
394 - 8	150	91,800	184,000	4,900	7,100	105	1,470	0.193	0.024
431 - 8	200	125,000	250,000	4,500	6,400	143	2,430	0.213	0.027
475 - 8	270	168,000	336,000	4,300	5,900	187	3,780	0.232	0.029
488 - 8	350	221,000	443,000	4,000	5,600	236	5,340	0.240	0.028
550 - 8	400	254,000	507,000	3,900	5,100	292	7,970	0.273	0.037
588 - 8	500	318,000	635,000	3,700	4,800	364	11,400	0.292	0.039
625 - 8	620	391,000	783,000	3,500	4,500	441	15,800	0.312	0.043
750 - 8	1,000	641,000	1,280,000	3,100	3,800	708	35,100	0.371	0.051
875 - 8	1,600	1,030,000	2,060,000	2,800	3,300	1,120	74,600	0.432	0.061
1050 - 8	2,800	1,770,000	3,540,000	2,500	2,800	1,850	173,000	0.514	0.069

1) Weights and Inertias are calculated using maximum bored hubs.

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

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

Dimensional Details

Coupling Size - Links	④ Maximum Bore (in)	DBSE			B (in)	C (in)	D (in)	E1 (in)	E2 (in)	E3 (in)
		A1 Min (in)	A2 1 Hub Rev (in)	A3 2 Hubs Rev (in)						
269 - 8	2 11/16	0.16	1.22	2.28	8.54	2.76	3.86	5.67	6.73	7.80
313 - 8	3 1/8	0.16	1.34	2.52	9.65	3.15	4.45	6.46	7.64	8.82
350 - 8	3 1/2	0.20	1.54	2.87	10.59	3.54	5.00	7.28	8.62	9.96
394 - 8	3 15/16	0.20	1.61	3.03	11.69	3.94	5.55	8.07	9.49	10.91
431 - 8	4 5/16	0.24	1.81	3.39	12.99	4.33	6.14	8.90	10.47	12.05
475 - 8	4 3/4	0.24	1.97	3.70	13.98	4.72	6.73	9.69	11.42	13.15
488 - 8	4 7/8	0.24	1.85	3.46	14.80	4.92	6.89	10.08	11.69	13.31
550 - 8	5 1/2	0.28	2.64	5.00	16.14	5.71	7.91	11.69	14.06	16.42
588 - 8	5 7/8	0.31	2.76	5.20	17.40	6.10	8.46	12.52	14.96	17.40
625 - 8	6 1/4	0.31	3.07	5.83	18.39	6.50	9.02	13.31	16.06	18.82
750 - 8	7 1/2	0.39	3.62	6.85	21.65	7.68	10.79	15.75	18.98	22.20
875 - 8	8 3/4	0.47	4.25	8.03	25.28	9.06	12.56	18.58	22.36	26.14
1050 - 8	10 1/2	0.55	4.72	8.90	29.29	10.63	15.00	21.81	25.98	30.16

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

AUTOFLEX DISC COUPLINGS

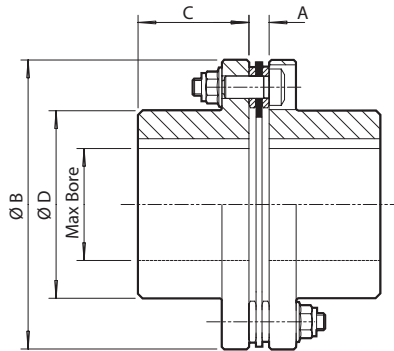
SERIES SF (SINGLE FLEX)

The Autoflex SF coupling has been designed for medium and high duty applications. The coupling has been specifically designed for three bearing systems, which only require angular and axial misalignment capacity.

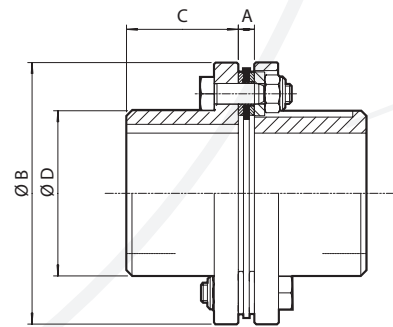
The coupling is offered with four, six and eight link discs. The four and six link couplings have been optimized for medium duty application. The eight-link design offers higher torque capacities within a given diameter.

The coupling consists of three parts, two hubs and a disc pack. The SF couplings use scalloped discs, which provide higher flexibility and ensures lower reaction forces on the driving and driven equipment.

The six and eight-link coupling also utilize overload collars to protect the coupling from high transient torque's.



SF - 4 Link Coupling



SF - 6 Link Coupling

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	① Inertia (lb.in ²)	Max. Axial Misalignment (in)
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)			
156 - 4	1.5	974	1,950	11,700	21,000	2.35	2.76	0.030
188 - 4	2.7	1,680	3,360	10,400	19,000	4.04	6.70	0.037
150 - 6	2.1	1,330	2,390	11,600	12,800	2.47	3.78	0.015
200 - 6	4.9	3,100	5,490	9,600	11,300	5.67	13.1	0.019
256 - 6	9.8	6,200	11,000	8,500	10,000	9.41	32.0	0.022
269 - 6	18	11,500	23,000	7,900	9,000	13.2	56.5	0.026
319 - 6	31	19,500	38,900	7,000	7,500	21.6	129	0.031
375 - 6	46	29,200	58,400	6,400	7,200	33.2	259	0.035
419 - 6	67	42,500	85,000	5,900	6,400	45.4	452	0.040
475 - 6	98	62,000	124,000	5,500	6,000	64.5	787	0.045
525 - 6	120	77,900	156,000	5,100	5,600	86.0	1,283	0.049
613 - 6	180	115,000	230,000	4,700	4,700	123	2,453	0.057

1) Weights and Inertias are calculated using maximum bored hubs.

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

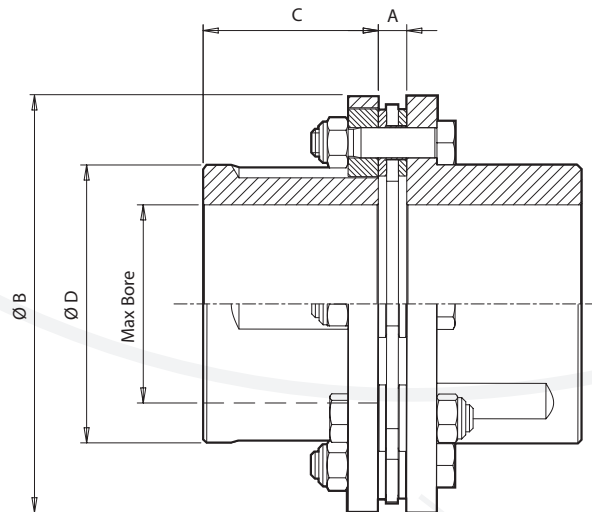
Dimensional Details

Coupling Size - Links	Maximum ③ Bore (in)	A DBSE (in)	B (in)	C (in)	D (in)
156 - 4	1 9/16	0.25	3.50	1.31	2.23
188 - 4	1 7/8	0.32	4.07	1.56	2.64
150 - 6	1 1/2	0.29	3.50	1.44	2.09
200 - 6	2	0.37	4.33	1.81	2.78
256 - 6	2 9/16	0.37	5.24	2.26	3.58
269 - 6	2 11/16	0.37	5.98	2.56	3.78
319 - 6	3 3/16	0.38	7.09	2.95	4.49
375 - 6	3 3/4	0.44	8.07	3.54	5.28
419 - 6	4 3/16	0.59	9.06	3.74	5.91
475 - 6	4 3/4	0.62	10.12	4.33	6.65
525 - 6	5 1/4	0.65	11.10	4.72	7.40
613 - 6	6 1/8	0.76	12.80	5.12	8.58

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

NOTE: The SF Coupling is used on 3 bearing systems, and only accepts angular and axial misalignment. Do not use where offset misalignment is needed.

AUTOFLEX DISC COUPLINGS SERIES SF (SINGLE FLEX)



SF - 8 Link Couplings

Technical Details

Coupling Size - Links	Rating HP/100 rpm	Torque Rating		Maximum Speed ②		① Weight (lbs)	① Inertia (lb.in ²)	Max. Axial Misalignment (in)
		Cont. (in.lbs)	Peak (in.lbs)	Unbal. (rpm)	Bal. (rpm)			
313 - 8	47	29,800	59,700	7,200	12,800	20.0	111	0.068
350 - 8	72	45,400	90,700	6,400	11,300	31.5	222	0.077
400 - 8	100	65,800	132,000	5,900	10,000	44.8	403	0.087
450 - 8	150	91,800	184,000	5,500	9,000	61.7	687	0.097
488 - 8	200	125,000	250,000	5,200	8,200	81.4	1,100	0.106
538 - 8	270	168,000	336,000	4,900	7,500	106	1,730	0.116
550 - 8	350	221,000	443,000	4,600	7,200	135	2,460	0.120
638 - 8	400	254,000	507,000	4,300	6,400	175	3,860	0.136
675 - 8	500	318,000	635,000	4,100	6,000	214	5,430	0.146
725 - 8	620	391,000	783,000	3,900	5,600	271	7,760	0.156
850 - 8	1,000	641,000	1,280,000	3,500	4,700	454	18,000	0.186
1000 - 8	1,600	1,030,000	2,060,000	3,200	4,000	686	37,250	0.216
1175 - 8	2,800	1,770,000	3,540,000	2,800	3,400	1,200	90,900	0.257

1) Weights and Inertias are calculated using maximum bored hubs.

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	① Maximum Bore (in)	A DBSE (in)	B (in)	C (in)	D (in)
313 - 8	3 1/8	0.51	6.73	2.56	4.45
350 - 8	3 1/2	0.57	7.68	3.15	5.04
400 - 8	4	0.64	8.62	3.54	5.71
450 - 8	4 1/2	0.70	9.57	3.94	6.34
488 - 8	4 7/8	0.76	10.55	4.13	6.97
538 - 8	5 3/8	0.83	11.54	4.53	7.64
550 - 8	5 1/2	0.82	12.20	5.12	7.91
638 - 8	6 3/8	0.93	13.54	5.71	9.06
675 - 8	6 3/4	0.99	14.49	6.10	9.57
725 - 8	7 1/4	1.06	15.47	6.89	10.35
850 - 8	8 1/2	1.19	18.27	8.46	12.28
1000 - 8	10	1.33	21.18	9.25	14.21
1175 - 8	11 3/4	1.53	25.20	11.81	16.81

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

NOTE: The SF Coupling is used on 3 bearing systems, and only accepts angular and axial misalignment. Do not use where offset misalignment is needed.

AUTOFLEX DISC COUPLINGS

SERIES CT - COOLING TOWER COUPLINGS

The Autoflex CT has been designed specifically for cooling tower drives with very long shaft separations. The drive shaft is made from a corrosion resistant, lightweight composite fiber material. Composite fiber has been proven to provide the optimum combination of stiffness in a lightweight package.

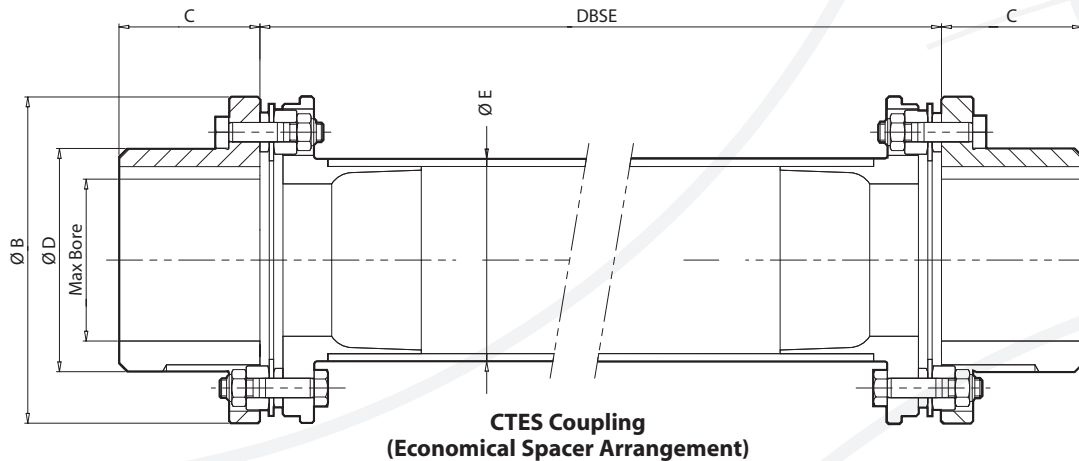
The CT coupling can also be supplied with optional bolted on cartridges. The major advantage of the bolted cartridge design is, the easy of repair and replacement and the rationalization of spares.

Two cartridge packs can spare a number of couplings.

The coupling can be supplied in two styles,

CTES – Economic Spacer arrangement.

CTAG – Drop out spacer arrangement.



Technical Details

Coupling Size - Tube Dia.	Rating HP/100 rpm	Torque Rating ①		Weight at 36" DBSE (lbs)	Weight per in. of extra DBSE (lb/in)	② Inertia (lbs.in ²)	Inertia per in. of extra DBSE (lbs.in ² /in)	Misalignment	
		Cont. (in.lbs)	Peak (in.lbs)					Axial (in)	Offset per DBSE Lgth (in/in)
250 - 3	9.8	6,200	11,000	17	0.07	58	0.17	0.040	0.009
250 - 6	9.8	6,200	11,000	26	0.14	140	1.29	0.040	
263 - 3	18	11,500	23,000	24	0.07	101	0.17	0.050	
263 - 6	18	11,500	23,000	33	0.14	186	1.29	0.050	
313 - 4	31	19,500	38,900	38	0.09	232	0.39	0.060	
313 - 8	31	19,500	38,900	59	0.18	518	3.00	0.060	
363 - 4	35	22,100	43,800	56	0.09	446	0.39	0.070	
363 - 8	46	29,200	58,400	77	0.18	752	3.00	0.070	

1) Torque values listed are for a service factor of 1.0. Typical service factor for cooling tower applications is 1.50.

2) Weight and inertias are calculated using maximum bored standard hubs and 36 in. DBSE.

Dimensional Details

Coupling Size - Tube Dia.	③ Max. Bore (in)	Maximum DBSE ④		B (in)	C (in)	D (in)	E (in)
		at 1500 rpm (in)	at 1800 rpm (in)				
250 - 3	2 1/2	127	116	5.24	2.26	3.58	3.25
250 - 6	2 1/2	175	160	5.24	2.26	3.58	6.25
263 - 3	2 5/8	127	116	5.98	2.56	3.78	3.25
263 - 6	2 5/8	175	160	5.98	2.56	3.78	6.25
313 - 4	3 1/8	147	134	7.09	2.95	4.49	4.25
313 - 8	3 1/8	208	190	7.09	2.95	4.49	8.25
363 - 4	3 5/8	147	134	8.07	3.54	5.28	4.25
363 - 8	3 5/8	208	190	8.07	3.54	5.28	8.25

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

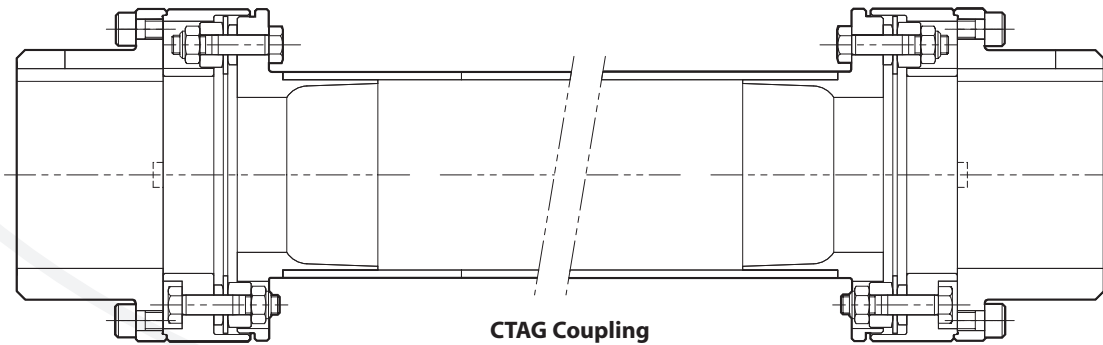
4) Longer DBSE's are available - consult Autogard Engineering.

NOTE: Other sizes available - consult Autogard Engineering.

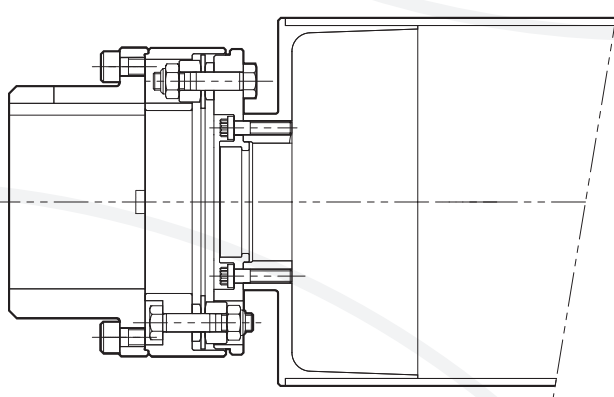
See opposite page for Oversize Tube Designs.

AUTOFLEX DISC COUPLINGS

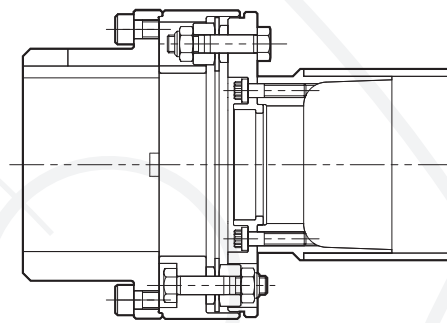
SERIES CT - COOLING TOWER COUPLING



CTAG Coupling
(Drop out Spacer arrangement)



Oversized Tube Design - for longer DBSEs



Optional Bolted Cartridge Assembly

Technical Details

Coupling Size - Tube Dia.	Rating HP/100 rpm	Torque Rating ①		Weight at 36" DBSE (lbs)	Weight per in. of extra (lbs/in)	② Inertia (lb.in ²)	Inertia per in. of extra DBSE (lbs.in ² /in)	Misalignment	
		Cont. (in.lbs)	Peak (in.lbs)					Axial (in)	Offset per DBSE (in/in)
275 - 3	9.8	6,200	11,000	24	0.07	91	0.17	0.040	0.009
275 - 6	9.8	6,200	11,000	33	0.14	173	1.29	0.040	
300 - 3	18	11,500	23,000	35	0.07	170	0.17	0.050	
300 - 6	18	11,500	23,000	44	0.14	255	1.29	0.050	
350 - 4	31	19,500	38,900	57	0.09	395	0.39	0.060	
350 - 8	31	19,500	38,900	79	0.18	681	3.00	0.060	
450 - 4	35	22,100	43,800	84	0.09	788	0.39	0.070	
450 - 8	46	29,200	58,400	105	0.18	1094	3.00	0.070	

1) Torque values listed are for a service factor of 1.0. Typical service factor for cooling tower applications is 1.50.

2) Weight and inertias are calculated using maximum bored standard hubs and 36 in. DBSE.

Dimensional Details

Coupling Size - Tube Dia.	③ Max. Bore (in)	Maximum DBSE ④		B (in)	C (in)	D (in)	E (in)
		at 1500 rpm (in)	at 1800 rpm (in)				
250 - 3	2 1/2	127	116	5.24	2.26	3.85	3.25
250 - 6	2 1/2	175	160	5.24	2.26	3.85	6.25
263 - 3	2 5/8	127	116	5.98	2.56	4.24	3.25
263 - 6	2 5/8	175	160	5.98	2.56	4.24	6.25
313 - 4	3 1/8	147	134	7.09	2.95	4.92	4.25
313 - 8	3 1/8	208	190	7.09	2.95	4.92	8.25
363 - 4	3 5/8	147	134	8.07	3.54	6.30	4.25
363 - 8	3 5/8	208	190	8.07	3.54	6.30	8.25

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

4) Longer DBSE's are available - consult Autogard Engineering.

NOTE: Other sizes available - consult Autogard Engineering.

AUTOFLEX DISC COUPLINGS

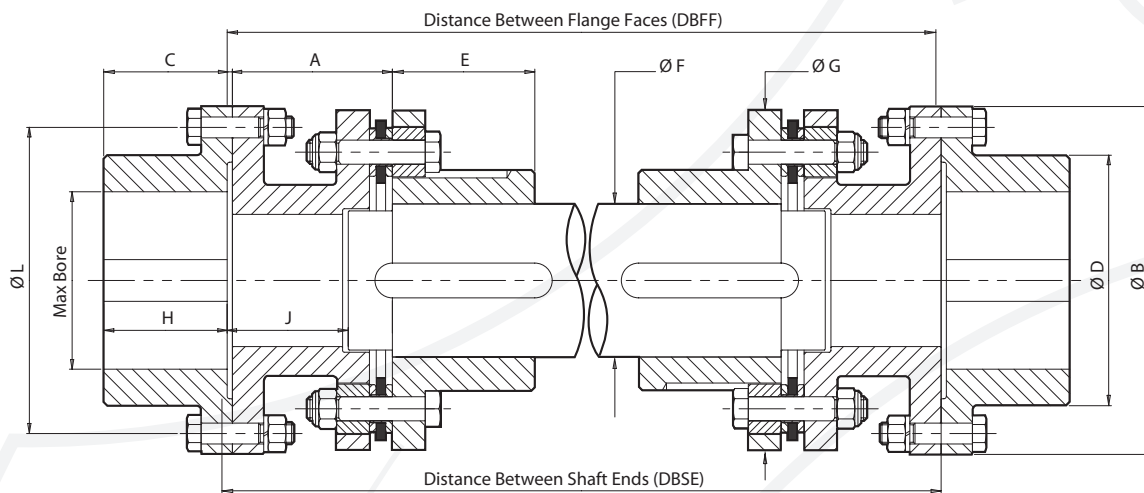
SERIES PMC - PAPER MACHINE COUPLING

The Autoflex PMC coupling has been designed as a non-lubricated, maintenance free drop-in replacement for a standard AGMA floating shaft gear coupling. The PMC flange has been designed to bolt up to the rigid hubs using standard AGMA accessories.

Overload collars provide protection against transient torques.
Scalloped Disc's offer higher flexibility and thus lower reaction forces on the equipment
Superior performance in arduous environments.

Replacing the gear coupling with the PMC offers the following benefits,
Non lubricated, maintenance free coupling
Zero Backlash design
Superior balance characteristics which will not change over the life of the equipment.

The PMC is designed to fit on a floating shaft. In many situations, the customer can modify their existing floating shafts to accommodate the PMC coupling eliminating the cost of the shaft.



**8 - Link
Paper Machine Coupling**

Technical Details

Coupling Size - Links	AGMA Gear Coupling Size	Rating HP/100 rpm	Torque Rating		Misalignment	
			Cont. (in.lbs)	Peak (in.lbs)	Axial (in)	Max. Angular per Disc Pack
1900-8	3-1/2	270	168,000	336,000	0.232	0.3°
2500-8	4	350	221,000	443,000	0.239	0.3°
2870-8	4-1/2	400	254,000	507,000	0.273	0.3°
4420-8	5	620	391,000	783,000	0.311	0.3°
7240-8	5-1/2	1,000	641,000	128,000	0.371	0.3°

Dimensional Details

Coupling Size - Links	Max. Bore ① ② AGMA Rigid (in)	A Min DBSE (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	J (in)	L (in)
1900-8	5 7/8	5.44	11.00	4.13	7.75	4.53	5.50	11.54	4.03	3.99	9.50
2500-8	6 3/4	5.75	12.50	4.63	9.00	5.12	5.50	12.21	4.44	4.35	11.00
2870-8	7 5/8	5.82	13.63	5.25	10.13	5.71	6.50	13.54	5.06	4.23	12.00
4420-8	8 3/4	6.82	15.31	5.88	11.31	6.89	7.25	15.47	5.69	4.97	13.50
7240-8	9 3/4	7.07	16.75	7.16	11.50	8.47	8.75	18.27	6.91	4.97	14.50

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

2) Maximum bore may vary depending on the rigid hub used - Maximum bore shown are based on using Falk™ rigid hubs

Falk is the registered Trade Mark of Falk Corporation

NOTES: When ordering specify application torque (continuous and peak) and maximum speed. If coupling is required complete with hubs specify distance between shaft ends (DBSE) and bore/keyway details. If coupling is required without hubs specify distance between flange faces (DBFF).

AUTOFLEX DISC COUPLINGS

Information for the Selection of Autoflex Couplings

Customer Name & Address

 Zip Code
 Contact Name
 Phone / Fax No.
 E-mail Address

The Driver equipment
 (Electric motor, turbine, etc.)

 The Driven equipment
 (Pump, Conveyor, etc.)

Duty Speed
 rpm

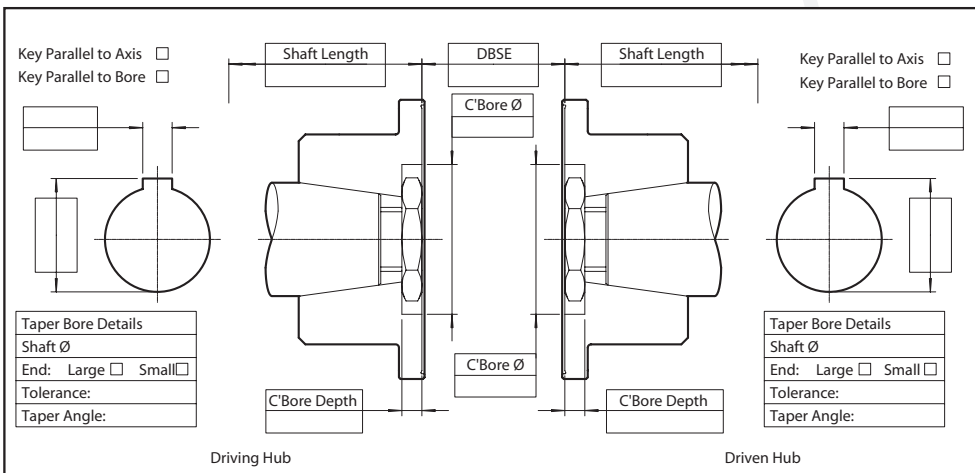
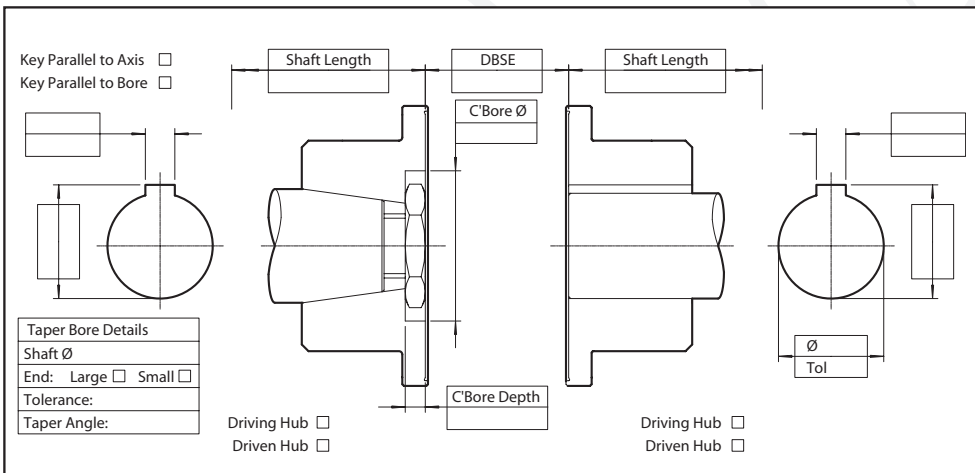
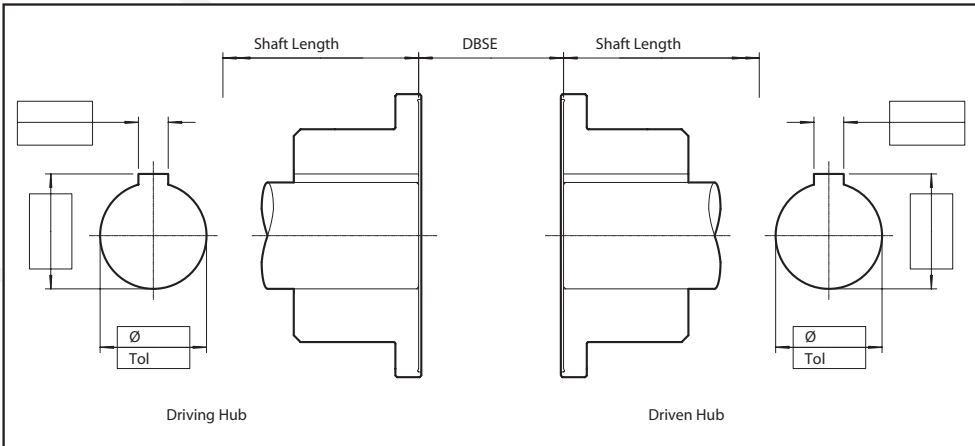
Driver Power
 HP

DBSE
 in.

Driver Bore Size
 in.
 Give full details on appropriate sketch

Driven Bore Size
 in.
 Give full details on appropriate sketch

Ambient Temperature
 Degs. F



Options (Check if required)

Balanced (Indicate Grade)
 Spark Resistance
 Puller Holes
 Insulated
 Axial Adjustment
 Limited End Float
 Trim Balance Holes
 Profiled Hubs
 Specifications API 610
 API 671
 None

OTHER AUTOFLEX PRODUCTS



SamiFlex Elastic Couplings



Autogard Series 200 Torque Limiters



Autogard Series 300 Torque Limiters



Autogard Series 400 Torque Limiters



Autogard Series 600 Torque Limiters



Autogard Series 800 Torque Limiters



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Autogard Kupplungen

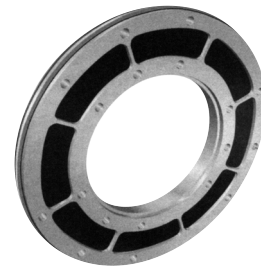
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Fax +39 02 92 1700 472



Autogard Power Monitors



Monitorq - Torque Sensors

