

Autogard Torque Limiter 320 Series



Any questions? Please contact us.

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Torque Limiter 320 Series

For more than 80 years, Autogard® products have led the industry in overload protection with high-quality products, design innovation and production. Autogard products are manufactured to meet ISO 9001 using the latest machine tools and high-quality materials.

Acting like a mechanical “fuse” to protect the weakest member of the drive train, the most effective location for Autogard Torque Limiters is as close as possible to the component being protected. The 320 Series has been designed to meet the need for a compact and reliable safety clutch. The optimized design provides a robust, backlash-free clutch that will protect equipment from the damaging effects caused by overloading a drive train. The 320 Series is offered in two re-engagement styles. The SR Reset features a timed automatic re-engagement as a standard. An un-timed reset version is also available. The MR Reset is a manual re-engagement and accommodates higher-speed applications, and is capable of running continuously in the disengaged condition.

Disengagement on Overload

In the normal drive condition, torque is transmitted through drive balls ‘A’ that are located in holes in flange ‘B’ and detents in drive plate ‘C’. The drive balls are held in the detents under pressure from springs ‘D’. When the driven machine either jams or an overload occurs which is greater than the torque setting, the balls roll out of their seats.

Re-engagement

Re-engagement occurs in one of two ways depending upon which series is selected.

Figure 1



Letters above correspond to paragraphs on the left and below.

Re-engagement — SR Reset

Re-engagement is automatic once the overload is removed. Ball detents are positioned in a scattered pattern so that the balls must return to their original position before they can reset. Re-engagement will occur within one revolution in either direction. Immediate shutdown is required to prevent wear of the detents.

Re-engagement — MR Reset

Upon overload, the drive balls roll out of their seats and push the pressure plate ‘E’ and control balls ‘G’ into a position such that the drive balls are held away from the drive plate seats preventing re-engagement. The MR Reset remains disengaged and can run freely on a bearing ‘J’. A proximity sensor or limit switch can be used to detect this movement, sending a signal to a warning device or control system to shut down the motor. Re-engagement of the torque limiter is easy. Simply insert a screwdriver (or similar tool) between the pressure plate and the spring plate, and twist slightly. The unit will snap back into engagement, at any position.

320 Series Applications

Conveyor Drives
Vacuum Pumps
Coal Feeder Conveyor
Packaging Equipment
Tool and Die



Features and Benefits:

- Accurate torque limitation prevents costly downtime caused by overloads
- Compact design reduces weight and inertia on the equipment
- Bi-directional operation
- The standard design can accommodate larger torque ranges than many other models currently available
- Offered in a larger number of styles ensuring the right solution is available for all applications
- Backlash-free operation
- Offered in automatic and manual re-engagement
- One revolution synchronous re-engagement offered
- Manual reset after tripping can be easily reset, at any position
- High-speed applications supported with free-running disengagement featured in the MR Reset
- Springs can be inspected and changed without removing the clutch from the drive train
- Coil springs allow one standard design to accommodate the full torque range as opposed to regressive disc springs that can only accommodate a narrow torque band
- Bore options with conventional bore and key or cone clamp sleeve for keyless connection

Selection:

Data required for torque limiter selection:

- Application details for service factors
- Kilowatt (kW) and rpm of the driver
- Shaft details of the driving and driven equipment

(1) Calculate the nominal torque.

$$\text{Torque (Nm)} = \text{Kw} \times 9550 / \text{rpm}$$

Consideration should then be given to start torque or other special circumstances depending on the position chosen in the drive system. Choose a set torque with a suitable margin over nominal. Select the torque limiter which has a higher torque rating.

(2) Check limiting conditions:

- (a) Check running speed
- (b) Check hub bore capacity
- (c) Check the torque limiter dimensions such as the overall length and outside diameter

(3) Select and specify the appropriate drive medium or coupling.

All 320 Series units may be supplied from the factory at a pre-set torque and with the required drive medium assembled to the unit.

Ordering the 320 Series Torque Limiter

When ordering, please provide the following designation:
 Model and Size / Type / Reset / S1 or S3 bore / S2 bore
 Standard bore tolerance = H7 + normal fit key

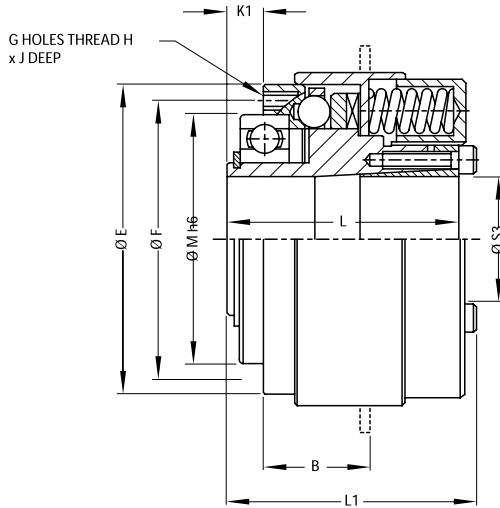
Example: 320-2 / 8 / SR / S235 / S3-38

Refers to a 320 Series, Size 2, Type 8 torque limiter designed for Single Position Reset
 S2 Bore = 35 mm S3 Bore = 38 mm
 Also specify setting torque and/or pulley or sprocket if required.

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

320 Series SR Standard Hub

Type 1 - Figure 2



Type 2 - Figure 3

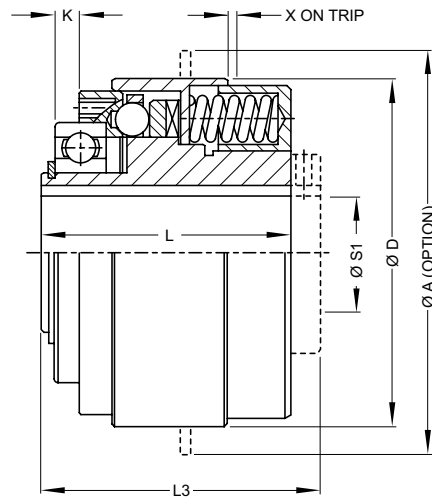


Table 1

Size	Torque ①		Max. Speed	Weight ②	Mass Moment of Inertia MR ² ②	
	Min.	Max.			Hub Side	Flange Side
	Nm	Nm	rpm	Kg	Kg-m ²	Kg-m ²
01	3	50	300	1.00	0.0004	0.0001
0	5	100	300	1.91	0.0009	0.0005
1	10	200	300	2.89	0.0019	0.0010
2	20	400	300	4.47	0.0044	0.0020
3	35	700	300	7.41	0.0094	0.0040
4	75	1,500	300	12.95	0.0257	0.0109

① See page 17, Table 21, for spring and torque ranges with specific springs.

② Weights and inertia values are for unbored units.

Table 2

For use with sprockets, pulleys or gears. Type 1 contains keyless bore clamp bushing. Type 2 accommodates a parallel bore and key.

Size	Bore (S3) Clamped Collar ②		Bore (S1) Keyed Hub ② ③	A	B	D	E	F	G	H	J	K	K1	L	L1	L3	M ①	X
	Min.	Max.																
	mm	mm	mm	mm	mm	mm	mm	mm	mm	holes	mm	mm	mm	mm	mm	mm	mm	mm
01	10	20	20	80	21	68	63.6	56	8	M4	6	5	8	47	50	52	47	1.2
0	15	28	23	100	28	84	78.7	71	8	M5	8	7	11	60	65	68	62	1.6
1	22	35	32	116	33	100	93.6	85	8	M6	10	7	12	71	77	80	75	1.7
2	32	45	40	140	38	120	111	100	8	M6	12.7	8	12	84	90	95	90	2.2
3	35	55	50	160	42	132	127	116	8	M8	12.7	8	16	95	101	105	100	2.4
4	42	65	58	190	49	166	157	144	8	M10	18	8	16	110	118	122	115	2.8

① Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.

② Rectangular keys must be used for maximum bore diameters.

③ The drive medium must be bored to suit dimension M. Clutches may be ordered complete with drive medium (v-belt pulleys, timing pulleys, etc).

Table 3

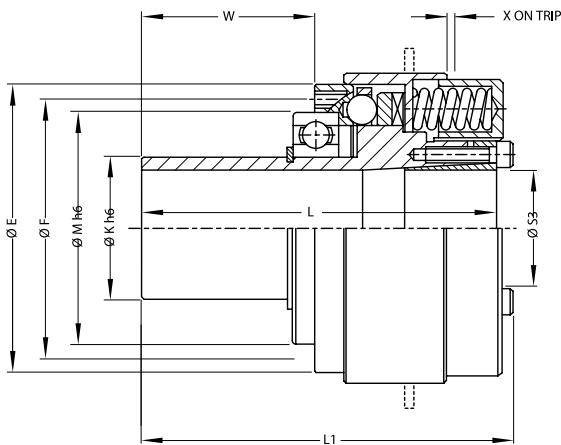
Size	Smallest Sprocket (No. of teeth)					Smallest Pulley Diameter [⊙]
	3/8" Pitch	1/2" Pitch	5/8" Pitch	3/4" Pitch	1" Pitch	mm
01	24	19	16	14	11	60
0	29	23	19	16	13	76
1	34	27	22	19	15	91
2	40	31	25	22	17	106
3	-	35	29	24	19	124
4	-	-	35	29	23	154

⊙ The pulley diameter quoted is to the bottom of the V-pulley groove or the inside diameter for the flange of the timing pulley.



320 Series SR Long Projecting Hub

Type 3 - Figure 4



Type 4 - Figure 5

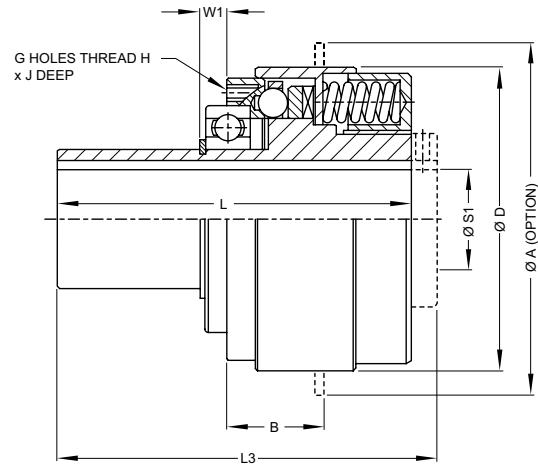


Table 4

Size	Torque ①		Max. Speed	Weight ②	Mass Moment of Inertia MR ² ②	
	Min.	Max.			Hub Side	Flange Side
	Nm	Nm	rpm	Kg	Kg-m ²	Kg-m ²
01	3	50	300	1.16	0.0004	0.0002
0	5	100	300	2.28	0.0010	0.0006
1	10	200	300	3.50	0.0020	0.0012
2	20	400	300	5.64	0.0048	0.0025
3	35	700	300	9.05	0.0103	0.0048
4	75	1,500	300	15.83	0.0277	0.0129

① See page 17, Table 21, for spring and torque ranges with specific springs.

② Weights and inertia values are for unbored units.

Table 5

For use with sprockets, pulleys or gears. Type 3 contains a keyless bore clamp bushing. Type 4 accommodates a parallel bore and key.

Size	Bore (S3) Clamped Collar		Bore (S1) Keyed Hub ② ③	A	B	D	E	F	G	H	J	K ①	L	L1	L3	M	W	W1	X
	Min.	Max.																	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	holes	mm	mm	mm	mm	mm	mm	mm	mm	mm
01	10	20	20	80	21	68	63.6	56	8	M4	6	30	72	75	77	47	33	6.5	1.2
0	15	28	24	100	22	84	78.7	71	8	M5	8	40	93	97	101	62	43	8.5	1.6
1	22	35	32	116	33	100	93.6	85	8	M6	10	45	115	120	123	75	55	8.8	1.7
2	32	45	40	140	38	120	111	100	8	M6	12.7	55	139	145	150	90	67	10.6	2.2
3	35	55	50	160	42	132	127	116	8	M8	12.7	65	152	158	162	100	73	10.5	2.4
4	42	65	58	190	49	166	157	144	8	M10	18	75	185	193	197	115	91	10.5	2.8

① Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.

② Rectangular keys must be used for maximum bore diameters.

③ The drive medium must be bored to suit dimension K and supported with suitable bearing. Clutches may be ordered complete with drive medium (v-belt pulleys, timing pulleys, etc).

Table 6

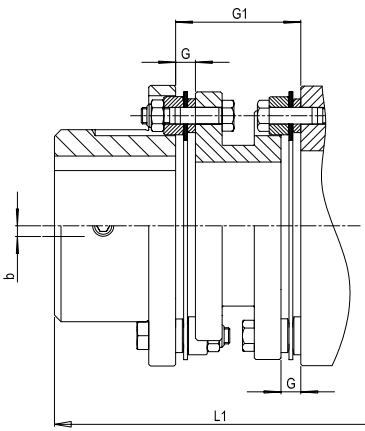
Size	Smallest Sprocket (No. of teeth)					Smallest Pulley Diameter [Ⓞ]
	3/8" Pitch	1/2" Pitch	5/8" Pitch	3/4" Pitch	1" Pitch	mm
01	18	15	12	11	9	45
0	20	16	13	11	9	55
1	24	19	16	13	11	70
2	28	22	18	16	12	85
3	-	26	21	18	14	100
4	-	-	23	20	16	110

Ⓞ The pulley diameter quoted is to the bottom of the V-pulley groove or the inside diameter for the flange of the timing pulley.

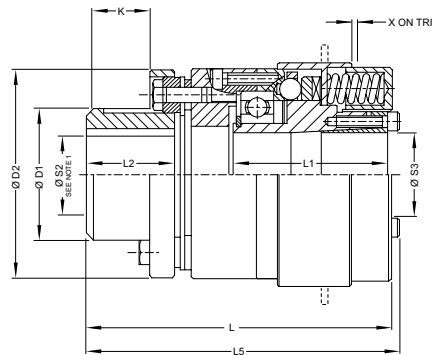


320 Series SR Torsionally Rigid

ES - Figure 6



Type 5, EB - Figure 7



Type 6, EB - Figure 8

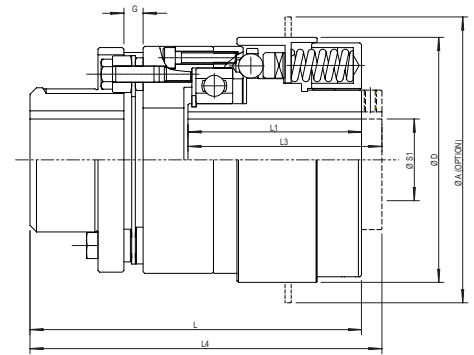


Table 7

Size	Torque ^①		Max. Speed rpm	Weight ^② Kg	Mass Moment of Inertia MR ²		Max. Coupling Misalignments						Combined ^③
	Min.	Max.			Hub Side	Flange Side	EB	ES	EB	ES	EB	ES	
	mm	mm			Kg-m ²	Kg-m ²	Angular °	Angular °	Axial (mm)	Axial (mm)	Parallel (mm)	Parallel (mm)	
01 / 8	3	50	300	2.24	0.0013	0.0011	0.5	1	0.3	0.6	0	0.3	0.7
0 / 8	5	100	300	3.04	0.0017	0.0013	0.5	1	0.3	0.6	0	0.3	0.7
1 / 15	10	200	300	4.75	0.0038	0.0030	0.5	1	0.4	0.8	0	0.4	0.8
2 / 35	20	400	300	8.05	0.0097	0.0073	0.5	1	0.5	1.0	0	0.4	1.0
3 / 70	35	700	300	13.22	0.0213	0.0159	0.5	1	0.6	1.2	0	0.4	1.2
4 / 150	75	1,500	300	25.39	0.0662	0.0514	0.5	1	0.7	1.4	0	0.5	1.5

① See page 17, Table 21, for spring and torque ranges with specific springs.

② Weights and inertia values are for unbored units.

③ This is the maximum variation in G measured around the periphery. It corresponds to the maximum combined angular, axial and parallel misalignments.

Table 8

Includes the Autoflex EB torsionally rigid metal membrane coupling for angular and axial misalignment. The Autoflex ES double flex spacer coupling can also be supplied to accommodate angular, axial and parallel offset misalignment. Type 5 contains a keyless bore clamp bushing.

Size	Bore (S3) Clamped Collar		Bore (S2) Keyed Hub ^① ^②	Bore (S1) Keyed Hub ^① ^②	A	D	D1	D2	G	G1 ^③	L	L1	L2	L3	L4	L5	X
	Min.	Max.															
	mm	mm	mm	mm													
01 / 8	10	20	30	20	80	68	44	80	7.3	48	99	47	32.5	52	104	102	1.2
0 / 8	15	28	30	23	100	84	44	80	7.3	48	118	61	32.5	68	125	122	1.6
1 / 15	22	35	40	32	116	100	53	89	7.3	48	132	72	36.5	80	140	136	1.7
2 / 35	32	45	50	40	140	120	71	110	9.4	58	162	85	46.0	95	172	166	2.2
3 / 70	35	55	70	50	160	132	91	133	9.4	58	180	95	57.5	105	190	185	2.4
4 / 150	42	65	90	58	190	166	123	170	8.8	64	214	110	73.5	122	226	222	2.8

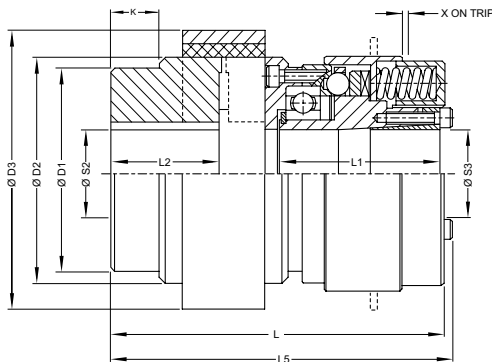
① Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.

② Rectangular keys must be used for maximum bore diameters.

③ G1 is for minimum DBSE, longer spacers are available.

320 Series SR Elastomeric Coupling

Type 7 - Figure 9



Type 8 - Figure 10

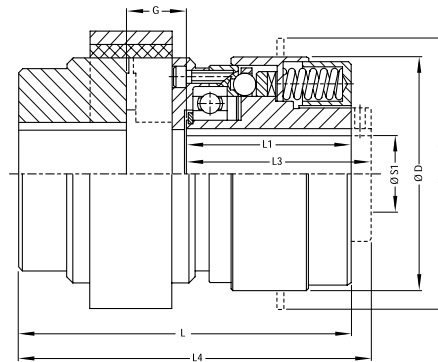


Table 9

Size	Torque [⊙]		Max. Speed rpm	Weight [⊙] Kg	Mass Moment of Inertia MR ² [⊙]		Coupling Misalignment		
	Min.	Max.			Hub Side	Flange Side	Max. Axial	Max. Radial/ Parallel	Max. Angular
	mm	mm			Kg-m ²	Kg-m ²	mm	mm	degrees
01/A1	3	50	300	1.91	0.0012	0.0010	+0.5	0.10	2
0/A2	5	100	300	3.99	0.0048	0.0044	+0.5	0.10	2
1/A3	10	200	300	7.13	0.0172	0.0164	+0.7	0.15	2
2/A3	20	400	300	8.64	0.0196	0.0172	+0.7	0.15	2
3/A4	35	700	300	15.55	0.0678	0.0624	+0.8	0.20	1.3
4/A45	75	1,500	300	24.51	0.1179	0.1031	+1.0	0.20	1.3

⊙ See page 17, Table 21, for spring and torque ranges with specific springs.

⊙ Weights and inertia values are for unbored units.

Table 10

Model includes the Samiflex coupling which accommodates angular, axial and parallel offset misalignments. Type 7 contains a keyless bore clamp bushing.

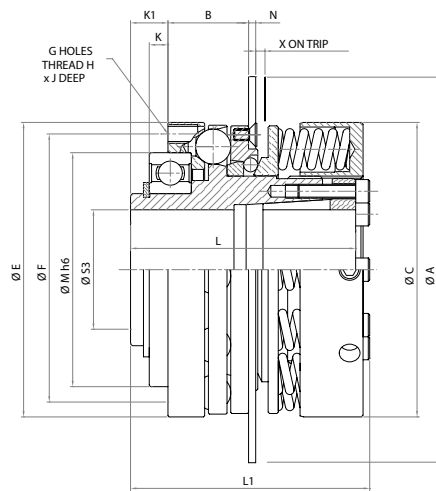
Size	Bore (S3) Clamped Collar		Bore (S2) Coupling Hub [⊙] [⊙]		Bore (S1) Keyed Hub [⊙] [⊙]	A	D	D1	D2	D3	G	L	L1	L2	L3	L4	L5	X
	Min.	Max.	Min.	Max.	Max.													
	mm	mm	mm	mm	mm													
01/A1	10	20	15	38	20	80	68	65	65	83	15	97	47	35	52	102	100	1.2
0/A2	15	28	18	42	24	100	84	80	86	111	21	127	61	46	68	134	133	1.6
1/A3	22	35	20	42	32	116	100	85	116	144	29	156	72	56	80	164	162	1.7
2/A3	32	45	20	42	40	140	120	85	116	144	31	171	85	56	95	181	176	2.2
3/A4	35	55	25	70	50	160	132	110	150	182	36	194	95	63	105	204	200	2.4
4/A45	42	65	26	75	58	190	166	125	170	202	34	214	110	70	122	226	222	2.8

⊙ Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.

⊙ Rectangular keys must be used for maximum bore diameters.

320 Series MR Standard Hub

Type 1 - Figure 11



Type 2 - Figure 12

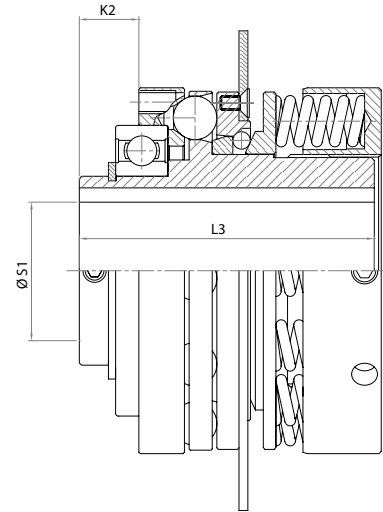


Table 11

Size	Torque ①		Max. Speed ②	Weight ③	Mass Moment of Inertia MR ² ③
	Min. Nm	Max. Nm			
01	6	60	8,000	1.0	0.0005
0	10	130	7,000	1.9	0.0010
1	20	220	6,000	2.9	0.0030
2	40	500	5,000	4.5	0.0060
3	80	800	3,600	7.4	0.0130
4	160	1,800	3,000	13	0.0400

- ① See page 17, Table 22, for spring and torque ranges with specific springs.
- ② Higher speeds may be allowed under certain conditions. Consult Rexnord.
- ③ Weights and inertia values are for unbored units.

Table 12

For use with sprockets, pulleys or gears. Type 1 contains a keyless bore clamp and bushing. Type 2 accomodates a parallel bore and key.

Size	Bore (S3) Clamped Collar ②		Bore (S1) Keyed Hub ② ③	A	B	C	E	F	G	H	J	K	K1	K2	L	L1	L3	M ①	N	X
	Min.	Max.		Max.	mm	mm	mm	mm	mm	holes	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
01	10	20	20	100	16	64	64	56	8	M4	5.5	5	8	15	47	50	54	47	1.5	2.2 - 2.7
0	15	29	24	115	21	79	79	71	8	M5	7.3	7	11	19	61	66	69	62	1.5	2.5 - 3.3
1	22	35	32	130	26	94	94	85	8	M6	10	7	12	19	71	77	78	75	2	3.0 - 4.0
2	32	45	42	150	34	114	111	100	8	M6	10	9	12	23	88	94	98	90	3	3.6 - 4.7
3	35	55	50	165	34	126	126	116	8	M8	13	8	16	26	96	102	106	100	3	4.0 - 5.3
4	42	65	61	200	42	159	159	144	8	M10	18	8	16	26	112	120	123	115	3	4.9 - 6.5
5	60	90	95	280	60	230	230	205	6	M16	22	14	25	42	153	165	170	180	4	6.9 - 8.9

- ① Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.
- ② Rectangular keys must be used for maximum bore diameters.
- ③ The drive medium must be bored to suit dimension M. Clutches may be ordered complete with drive medium (v-belt pulleys, timing pulleys, etc).

Table 13

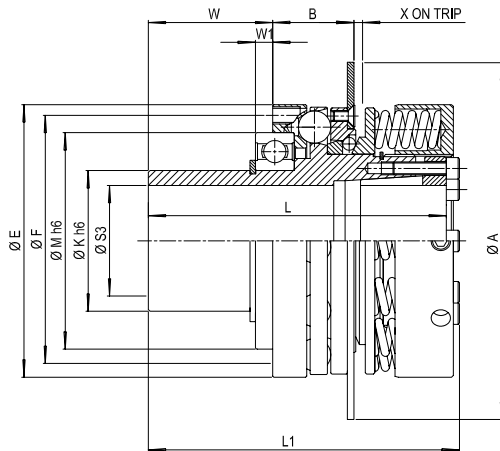
Size	Smallest Sprocket (No. of teeth)					Smallest Pulley Diameter [Ⓞ]
	3/8" Pitch	1/2" Pitch	5/8" Pitch	3/4" Pitch	1" Pitch	mm
01	24	19	16	14	11	60
0	29	23	19	16	13	76
1	34	27	22	19	15	91
2	40	31	25	22	17	106
3	-	35	29	24	19	124
4	-	-	35	29	23	154
5	-	-	50	50	42	221

[Ⓞ] The pulley diameter quoted is to the bottom of the V-pulley groove or the inside diameter for the flange of the timing pulley.



320 Series MR Long Projecting Hub

Type 3 - Figure 13



Type 4 - Figure 14

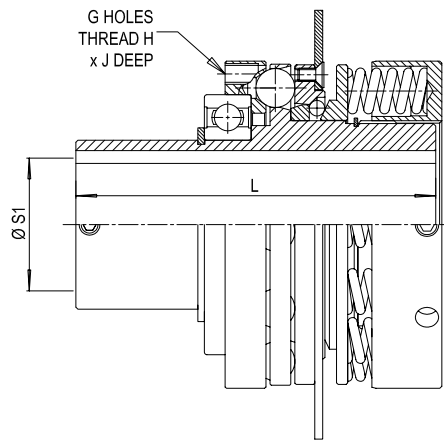


Table 14

Size	Torque ①		Max. Speed ②	Weight ③	Mass Moment of Inertia MR ² ③
	Min.	Max.			
	Nm	Nm	rpm	Kg	Kg-m ²
01	6	60	8,000	1.2	0.0006
0	10	130	7,000	2.3	0.0020
1	20	220	6,000	3.5	0.0030
2	40	500	5,000	5.6	0.0100
3	80	800	3,600	9.1	0.0200
4	160	1,800	3,000	16	0.0400

- ① See page 17, Table 22, for spring and torque ranges with specific springs.
- ② Higher speeds may be allowed under certain conditions. Consult Rexnord.
- ③ Weights and inertia values are for unbored units.

Table 15

For use with sprockets, pulleys or gears. Type 3 contains a keyless bore clamp bushing. Type 4 accommodates a parallel bore and key.

Size	Bore (S3) Clamped Collar		Bore (S1) Keyed Hub ① ②	A	B	C	E	F	G	H	J	K	L	L1	M ③	N	W	W1	X
	Min.	Max.																	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	holes	mm	mm	mm	mm	mm	mm	mm	mm	mm
01	10	20	20	100	16	64	64	56	8	M4	5.5	30	72	75	47	1.5	33	6.4	2.2 - 2.7
0	15	28	24	115	21	79	79	71	8	M5	7.3	35	94	99	62	1.5	44	8.7	2.5 - 3.3
1	22	35	32	130	26	94	94	85	8	M6	10	45	114	119	75	2	55	8.7	3.0 - 4.0
2	32	45	42	150	34	114	111	100	8	M6	10	55	144	150	90	3	68	11.2	3.6 - 4.7
3	35	55	50	165	34	126	126	116	8	M8	13	65	153	159	100	3	73	10.5	4.0 - 5.3
4	42	65	61	200	42	159	159	144	8	M10	18	75	187	195	115	3	91	10.5	4.9 - 6.5

- ① Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.
- ② Rectangular keys must be used for maximum bore diameters.
- ③ The drive medium must be bored to suit dimension M. Clutches may be ordered complete with drive medium (v-belt pulleys, timing pulleys, etc).

Table 16

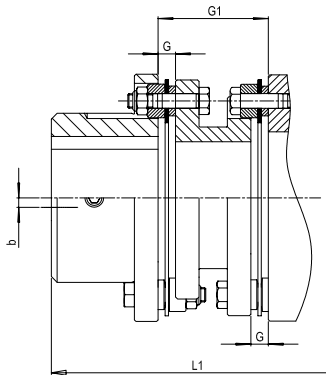
Size	Smallest Sprocket (No. of teeth)					Smallest Pulley Diameter [Ⓞ]
	3/8" Pitch	1/2" Pitch	5/8" Pitch	3/4" Pitch	1" Pitch	mm
01	18	15	12	11	9	45
0	20	16	13	11	9	55
1	24	19	16	13	11	70
2	28	22	18	16	12	85
3	-	26	21	18	14	100
4	-	-	23	20	16	110

[Ⓞ] The pulley diameter quoted is to the bottom of the V-pulley groove or the inside diameter for the flange of the timing pulley.

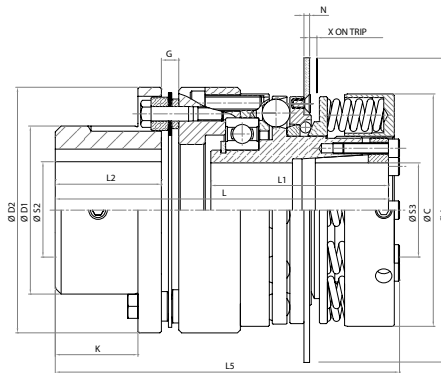


320 Series MR Torsionally Rigid

ES - Figure 15



Type 5, EB - Figure 16



Type 6, EB - Figure 17

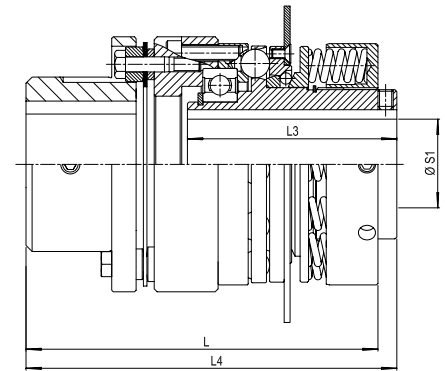


Table 17

Size	Torque ①		Max. Speed ②	Weight ③	Mass Moment of Inertia MR ² ④	Max. Coupling Misalignments						
	Min.	Max.				EB	ES	EB	ES	EB	ES	
	Nm	Nm	rpm	Kg	Kg-m ²	Angular °	Angular °	Axial (mm)	Axial (mm)	Parallel (mm)	Parallel (mm)	Combined ④
01 / 8	6	60	8,000	2.2	0.0020	0.5	1	0.3	0.6	0	0.3	0.7
0 / 8	10	130	7,000	3.0	0.0030	0.5	1	0.3	0.6	0	0.3	0.7
1 / 15	20	220	6,000	4.8	0.0070	0.5	1	0.4	0.8	0	0.4	0.8
2 / 35	40	500	5,000	8.0	0.0200	0.5	1	0.5	1.0	0	0.4	1.0
3 / 70	80	800	3,600	13	0.0400	0.5	1	0.6	1.2	0	0.4	1.2
4 / 150	160	1,800	3,000	25	0.1200	0.5	1	0.7	1.4	0	0.5	1.5

① See page 17, Table 22, for spring and torque ranges with specific springs.

② Higher speeds may be allowed under certain conditions. Consult Rexnord.

③ Weights and inertia values are for unbored units.

④ This is the maximum variation in G measured around the periphery. It corresponds to the maximum combined angular, axial and parallel misalignments.

Table 18

Includes the Autoflex EB torsionally rigid metal membrane coupling for angular and axial misalignment. The Autoflex ES double flex spacer coupling can also be supplied to accommodate angular, axial and parallel offset misalignment. Type 5 contains a keyless bore clamp bushing. Type 6 accommodates a parallel bore and key.

Size	Bore (S3) Clamped Collar		Bore (S2) Keyed Hub ① ②	Bore (S1) Keyed Hub ① ②	A	C	D1	D2	G	G1 ③	K	L	L1	L2	L3	L4	L5	N	X
	Min.	Max.																	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
01 / 8	10	20	30	20	100	64	44	80	7.3	48	23	99	47	32.5	57	109	103	1.5	2.2 - 2.7
0 / 8	15	28	30	24	115	79	44	80	7.3	48	23	118	61	32.5	71	128	123	1.5	2.5 - 3.3
1 / 15	22	35	40	32	130	94	53	89	7.3	48	27	131	71	36.5	84	144	137	2	3.0 - 4.0
2 / 35	32	45	50	42	150	114	71	110	9.4	58	33	165	88	46.0	105	182	171	3	3.6 - 4.7
3 / 70	35	55	66	50	165	126	91	133	9.4	58	45	181	96	57.5	112	197	187	3	4.0 - 5.3
4 / 150	42	65	90	61	200	159	123	170	8.8	64	59	216	112	73.5	130	234	224	3	4.9 - 6.5

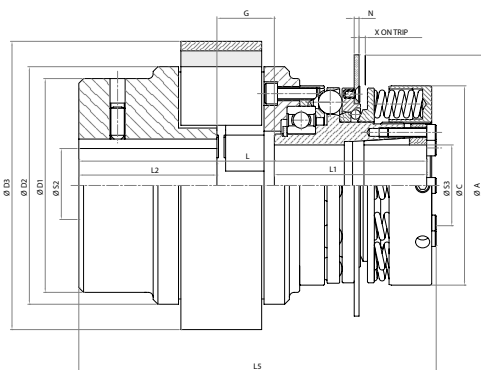
① Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.

② Rectangular keys must be used for maximum bore diameters.

③ G1 is for minimum DBSE, longer spacers are available.

320 Series MR Elastomeric Coupling

Type 7 - Figure 18



Type 8 - Figure 19

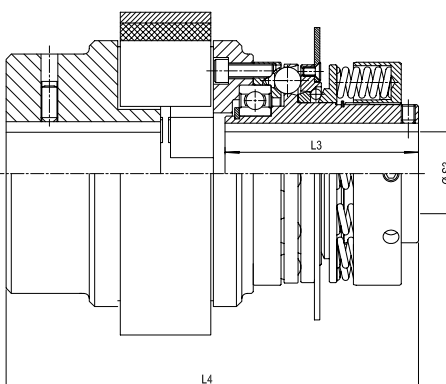


Table 19

Size	Torque ①		Max. Speed ②	Max. Speed ②	Weight ③	Mass Moment of Inertia MR ² ③	Coupling Misalignment		
	Min.	Max.	Unbalanced	Balanced			Max. Axial	Max. Radial/Parallel	Max. Angular
	mm	mm	rpm	rpm			mm	mm	degrees
01/A1	6	60	7,250	8,000	1.9	0.0020	+0.5	0.30	2
0/A2	10	130	5,440	6,500	4.0	0.0090	+0.5	0.50	2
1/A3	20	220	4,200	4,800	7.1	0.0340	+0.5	0.50	2
2/A3	40	500	4,200	4,800	8.6	0.0370	+0.5	0.50	2
3/A4	80	800	3,275	3,600	16	0.1300	+0.7	0.70	1.3
4/A45	160	1,800	2,800	3,000	25	0.2200	+0.7	0.70	1.3

① See page 17, Table 21, for spring and torque ranges with specific springs.
 ② Higher speeds may be allowed under certain conditions. Consult Rexnord.
 ③ Weights and inertia values are for unbored units.

Table 20

Model includes the Samiflex coupling which accommodates angular, axial and parallel offset misalignments. Type 7 contains a keyless bore clamp bushing. Type 8 accommodates a parallel bore and key.

Size	Bore (S3) Clamped Collar		Bore (S2) Coupling Hub ① ②		Bore (S1) Keyed Hub ① ②	A	C	D1	D2	D3	G	L	L1	L2	L3	L4	L5	N	X
	Min.	Max.	Min.	Max.	Max.	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
01/A1	10	20	15	29	20	100	64	65	65	83	15	97	47	35	57	107	101	1.5	2.2 - 2.7
0/A2	15	28	18	35	24	115	79	80	86	111	21	127	61	45	71	137	132	1.5	2.5 - 3.3
1/A3	22	35	20	41	32	130	94	85	116	144	28	155	71	56	84	168	161	2.0	3.0 - 4.0
2/A3	32	45	20	41	42	150	114	85	116	144	30	174	88	56	105	191	180	3.0	3.6 - 4.7
3/A4	35	55	25	56	50	165	126	110	150	182	36	195	96	63	112	211	201	3.0	4.0 - 5.3
4/A45	42	65	26	65	61	200	159	125	170	202	34	216	112	70	130	234	224	3.0	4.9 - 6.5

① Bores are furnished for clearance fit unless otherwise specified by customer. Consult Rexnord.
 ② Rectangular keys must be used for maximum bore diameters.

Torque Setting

The full torque capabilities of the 320 Series will depend on the number of springs fitted. A full complement of springs gives the catalog maximum values. See Table 21 below.

Table 21: Spring Selection 320 Series — SR

Size No. of Springs	01		0		1		2		3		4	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm
2	3	12	10	17	10	30	20	70	35	100	75	250
4	5	25	10	35	20	60	40	140	70	225	150	500
8	10	50	20	70	40	120	80	260	140	450	300	1,000
12	-	-	30	100	60	200	120	400	200	700	450	1,500

Table 22: Spring Selection 320 Series — MR

Size No. of Springs	01		0		1		2		3		4	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm
2	6	12	10	20	20	40	40	80	80	160	160	320
4	12	30	20	40	40	80	80	160	160	330	320	640
8	25	60	40	80	80	150	160	330	320	530	640	1,200
12	-	-	60	130	120	220	240	500	480	800	960	1,800

Drive Shutdown on Disengagement — 320 Series SR

The 320 Series SR torque limiter is designed to run at speeds up to 300 rpm, but the service life is determined by the number of rotations after disengagement. No wear occurs while the torque limiter is engaged. The life of the unit when running tripped depends on the torque setting, the running speed, and the time it takes to stop the drive after an overload occurs. Situations where a drive is allowed to coast to a stop or where the drive runs continuously with the torque limiter disengaging, are to be avoided. Longer life may also be achieved at lower torque settings.

Drive Shutdown on Disengagement — 320 Series MR

The 320 Series MR is designed to run continuously in the disengaged condition.

Protective Finish

The standard phosphate and oil finish provides a high level of corrosion resistance. Units can be supplied with a suitable alternative finish for special machinery requirements, or for adverse environmental conditions. Please consult Rexnord to discuss any special requirements.

Maintenance and General Safety Information

Maintenance

The 320 Series uses sealed-for-life deep groove ball bearings. Other working surfaces are lightly greased on assembly. Under reasonably clean conditions the unit will operate with a minimum of maintenance and re-lubrication. It is recommended that the torque setting is checked and reset as part of routine maintenance or after any sustained period of disengaged running. The frequency of maintenance is dependent on many operating factors, but in adverse conditions, please consult Rexnord.

General Safety

Autogard Torque Limiters are reliable units, built to high standards of workmanship. Similar to all mechanical devices, each application must be considered on its own merits with reference to safety (i.e. lifting equipment, explosive conditions, etc). As rotating components, adequate guarding must be provided, in accordance with local codes. The intended use of torque limiters is for the protection of industrial machinery and should not be regarded as human safety devices. Rexnord staff is always available to discuss particular applications.



320 Series Industries

Lumber — Wood Products

Energy

Printing and Packaging

Paper Converting

Chemical

Pharmaceuticals



Other Autogard Products



Autogard Torque Limiter 200 Series



Autogard Torque Limiter 400 Series



Autogard Torque Limiter 600 Series



Autogard Torque Limiter 820 Series



Autogard WT Series

Any questions? Please contact us.

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