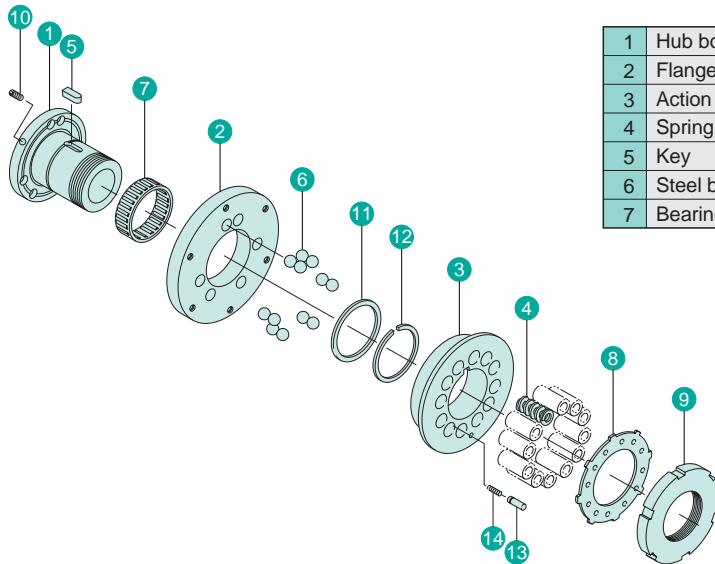


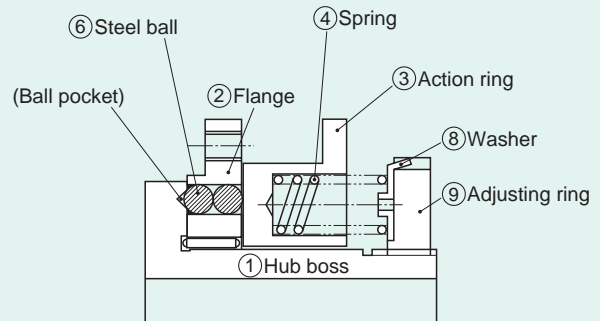
The torque releasers in TX Series are available in four types, B, D, E and R to meet various applications. The basic clutch mechanism is common structure. The structure and principle of type D are explained below:



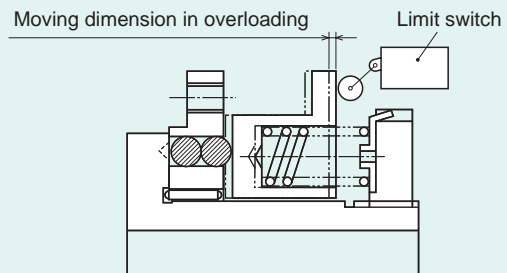
1	Hub boss	8	Washer
2	Flange	9	Adjusting ring
3	Action ring	10	Hexagon socket head setscrew
4	Spring	11	Ring
5	Key	12	WR type stopper ring
6	Steel ball	13	Pin
7	Bearing	14	Spring

- (1) In ordinary operation, the steel ball ⑥ held by the flange ② is pressurized and held in the ball pocket of the hub boss ① with the force of the spring ④, and the torque is transmitted from the hub boss ① to the flange ② through the steel ball ⑥.
- (2) When overloaded, the steel ball ⑥ is pushed out on the slope of the ball pocket of the hub boss ①, and the transmission torque is shut off. At this time, the action ring ③ moves in the axial direction (to the adjusting ring ⑨ side). By making use of this motion, the overload can be detected by limit switch, proximity switch, or the like.
- (3) When resuming operation, after removing the cause of overload, the input side or output side of the torque releaser is rotated. When the steel ball comes to the specified position of the ball pocket (one position in one revolution), it is automatically reset by the force of the spring ④.

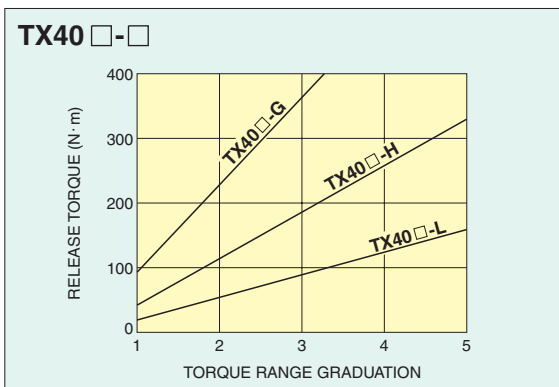
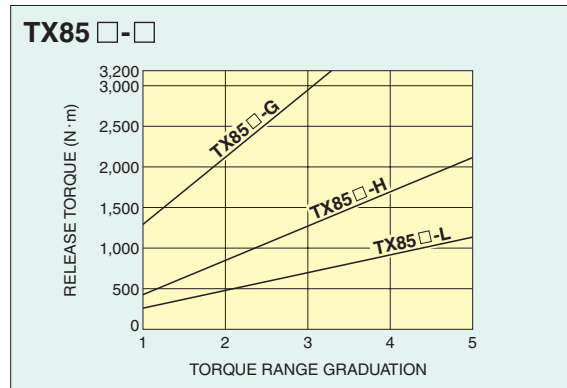
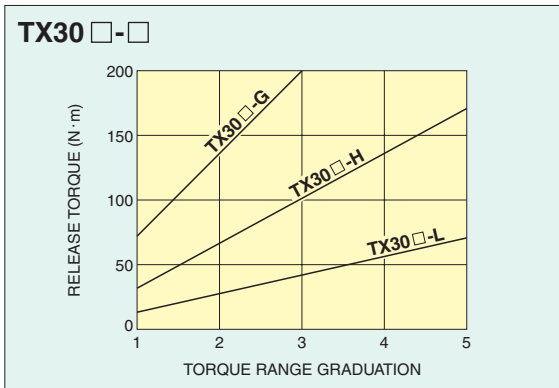
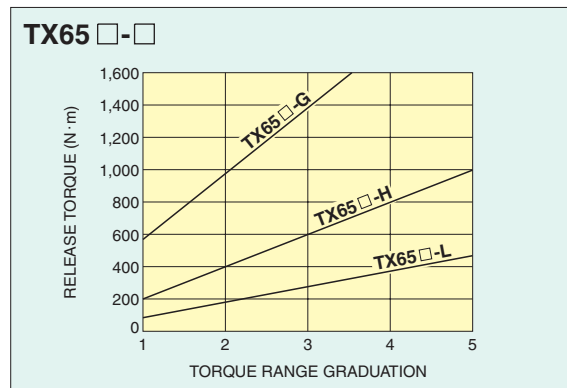
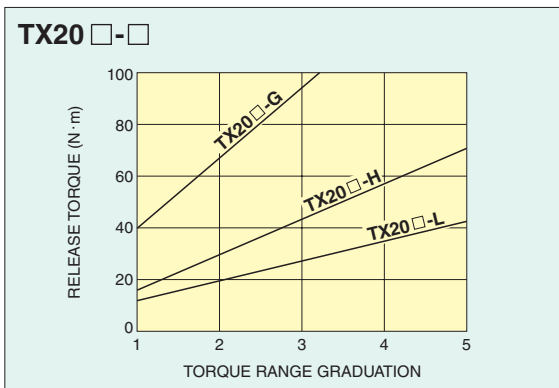
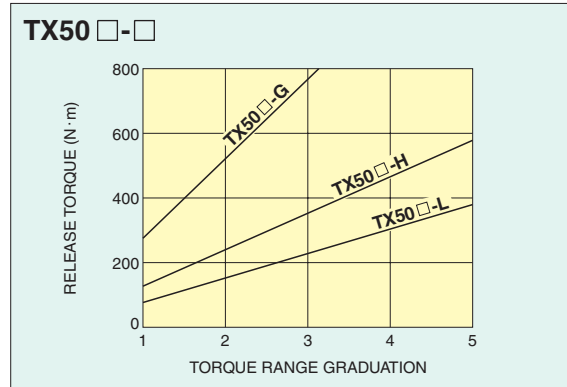
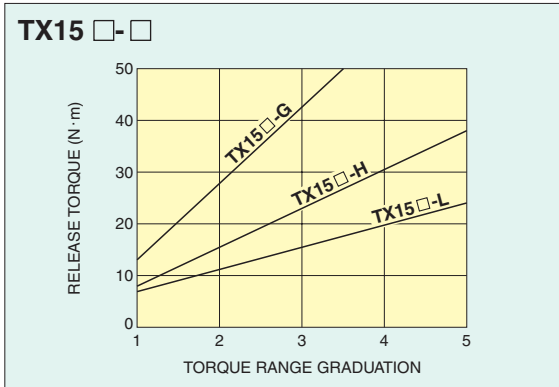
In ordinary operation (when setting)



When overloaded (when releasing)



*Dimensions and specifications might be changed for improvement without notice.



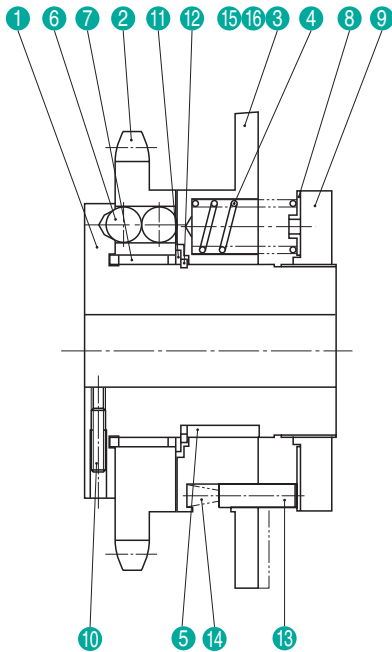
Torque can be varied proportionally according to number of springs.
Number of springs can be used for minimum is three.

*Dimensions and specifications might be changed for improvement without notice.

TX□B Type



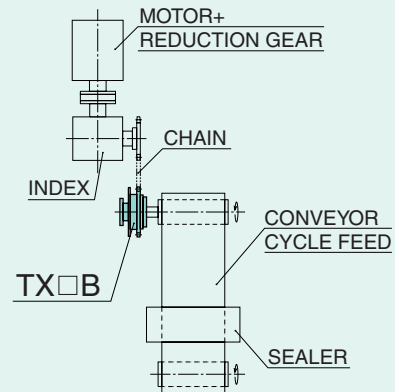
TX30B



● ADOPTION EXAMPLES



BOXING MACHINE

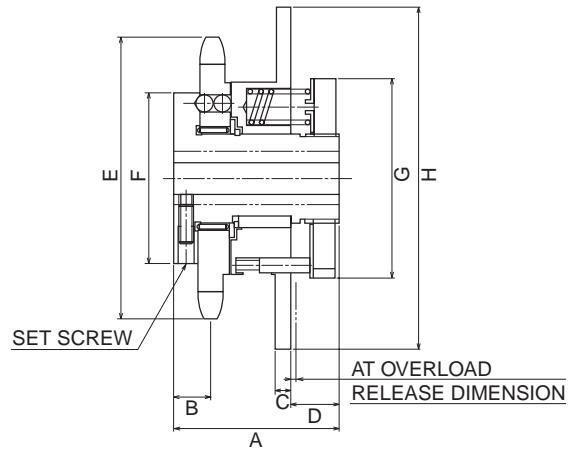
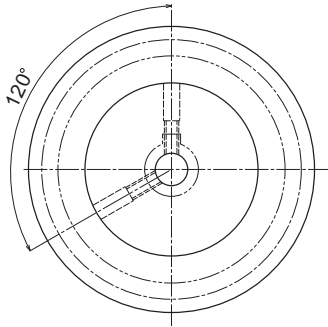


● NAMES OF PARTS

1	Hub boss
2	Sprocket
3	Action ring
4	Spring
5	Key
6	Steel ball
7	Bearing
8	Washer
9	Adjusting ring
10	Hexagon socket head setscrew
11	Ring
12	WR type stopper ring
13	Pin
14	Spring
15	Model name plate
16	Name plate

*Dimensions and specifications might be changed for improvement without notice.

TX□B Type



● DIMENSION LIST

MODEL TYPE	A	B	C	D	φE	φF	φG	φH
TX15B-L · H · G	47	10.6	4	13.7	80	48	56	96
TX20B-L · H · G	53	11.6	4	15.1	92	62	68	108
TX30B-L · H · G	65	12.35	6	20.0	115	77	84	124
TX40B-L · H · G	75	15.85	6	20.3	138	96	108	148

● SPECIFICATION

MODEL TYPE	TORQUE RANGE N · m	SPRING COLOR × NO	MAX SPEED min ⁻¹	INERTIA MOMENT kg · m ²	WEIGHT kg	MAX HOLE DIA φmm	STANDARD HOLE DIA φmm	PREPARED HOLE DIA φmm	SET SCREW	RELEASE DIMENSION mm	SPROCKET	SPROCKET PCD
TX15B-L	7 ~ 24	WHITE × 10	900	0.625 × 10 ⁻³	1.0	15	15H7 × 5Js9	9	2-M4	1.5	#40 × 18T	73.14
TX15B-H	8 ~ 38	R E DX 5										
TX15B-G	13 ~ 50	R E DX 10										
TX20B-L	12 ~ 43	WHITE × 12	750	1.2 × 10 ⁻³	1.5	20	20H7 × 6Js9	12	2-M4	1.9	#40 × 21T	85.21
TX20B-H	16 ~ 70	R E DX 6										
TX20B-G	40 ~ 100	R E DX 12										
TX30B-L	14 ~ 72	WHITE × 12	600	3.4 × 10 ⁻³	3.0	30	30H7 × 8Js9	19	2-M4	2.6	#50 × 21T	106.51
TX30B-H	33 ~ 170	R E DX 6										
TX30B-G	72 ~ 200	R E DX 12										
TX40B-L	20 ~ 160	WHITE × 12	450	9.0 × 10 ⁻³	5.0	40	40H7 × 12Js9	24	2-M5	2.9	#60 × 21T	127.82
TX40B-H	43 ~ 330	R E DX 6										
TX40B-G	97 ~ 400	R E DX 12										

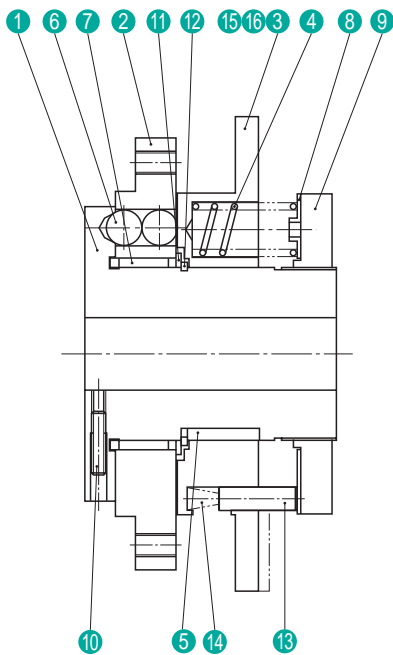
• Torque can be varied proportionally according to number of springs.
Number of springs can be used for minimum is three.

*Dimensions and specifications might be changed for improvement without notice.

TX□D Type



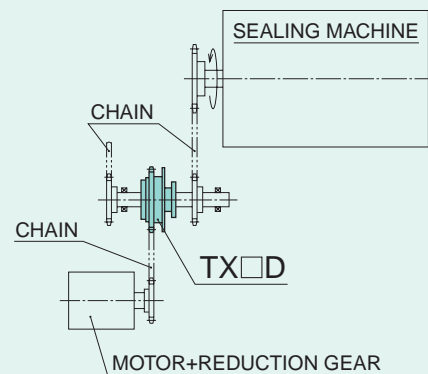
TX30D



● ADOPTION EXAMPLES



FOUR-WAY SEALING MACHINE

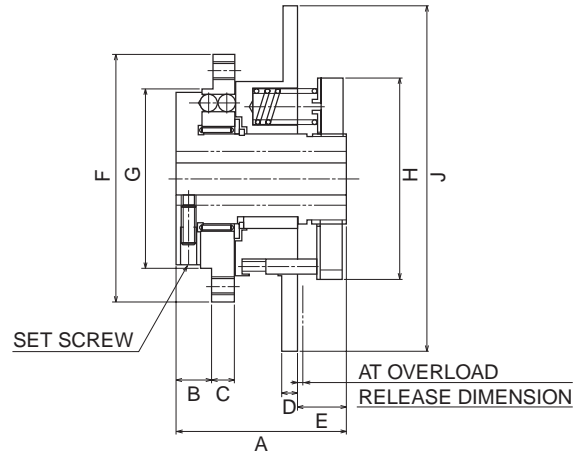
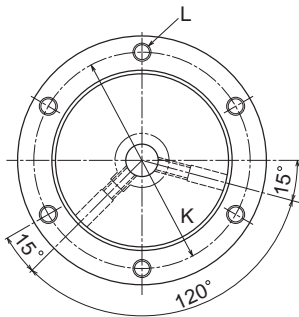


● NAMES OF PARTS

1	Hub boss
2	Flange
3	Action ring
4	Spring
5	Key
6	Steel ball
7	Bearing
8	Washer
9	Adjusting ring
10	Hexagon socket head setscrew
11	Ring
12	WR type stopper ring
13	Pin
14	Spring
15	Model name plate
16	Name plate

*Dimensions and specifications might be changed for improvement without notice.

TX□D Type



● DIMENSION LIST

MODEL TYPE	A	B	C	D	E	φF	φG	φH	φJ	INSTALLATION BOLT	
										K PCD	L BOLT SIZE
TX15D-L · H · G	47	10	6.0	4	13.7	69	50 ⁺⁰ _{-0.025}	56	96	60	6-M5
TX20D-L · H · G	53	11	8.3	4	15.1	88	65 ⁺⁰ _{-0.030}	68	108	75	6-M6
TX30D-L · H · G	65	13	10.5	6	20.0	113	85 ⁺⁰ _{-0.035}	84	124	100	6-M6
TX40D-L · H · G	75	15	13.2	6	20.3	134	105 ⁺⁰ _{-0.035}	108	148	120	6-M8
TX50D-L · H · G	90	20	15.8	8	24.8	168	130 ⁺⁰ _{-0.040}	134	174	150	6-M10

● SPECIFICATION

MODEL TYPE	TORQUE RANGE N·m	SPRING COLOR × NO	MAX SPEED min ⁻¹	INERTIA MOMENT kg·m ²	WEIGHT kg	MAX HOLE DIA φmm	STANDARD HOLE DIA φmm	PREPARED HOLE DIA φmm	SET SCREW	RELEASE DIMENSION mm
TX15D-L	7 ~ 24	WHITE × 10	900	0.58 × 10 ⁻³	1.0	15	15H7 × 5Js9	9	2-M4	1.5
TX15D-H	8 ~ 38	R E DX 5								
TX15D-G	13 ~ 50	R E DX 10								
TX20D-L	12 ~ 43	WHITE × 12	750	1.3 × 10 ⁻³	1.5	20	20H7 × 6Js9	12	2-M4	1.9
TX20D-H	16 ~ 70	R E DX 6								
TX20D-G	40 ~ 100	R E DX 12								
TX30D-L	14 ~ 72	WHITE × 12	600	3.7 × 10 ⁻³	3.0	30	30H7 × 8Js9	19	2-M4	2.6
TX30D-H	33 ~ 170	R E DX 6								
TX30D-G	72 ~ 200	R E DX 12								
TX40D-L	20 ~ 160	WHITE × 12	450	9.6 × 10 ⁻³	5.0	40	40H7 × 12Js9	24	2-M5	2.9
TX40D-H	43 ~ 330	R E DX 6								
TX40D-G	97 ~ 400	R E DX 12								
TX50D-L	79 ~ 390	WHITE × 12	400	26.4 × 10 ⁻³	10.0	50	50H7 × 14Js9	34	2-M8	3.8
TX50D-H	130 ~ 580	R E DX 6								
TX50D-G	280 ~ 800	R E DX 12								

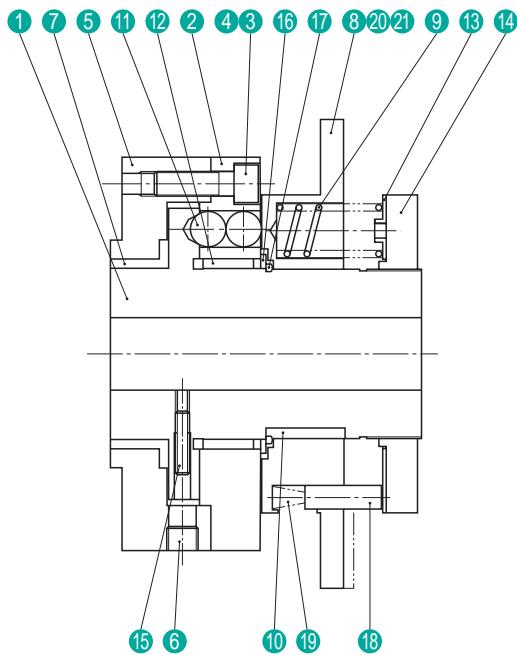
• Torque can be varied proportionally according to number of springs.
Number of springs can be used for minimum is three.

*Dimensions and specifications might be changed for improvement without notice.

TX□E Type



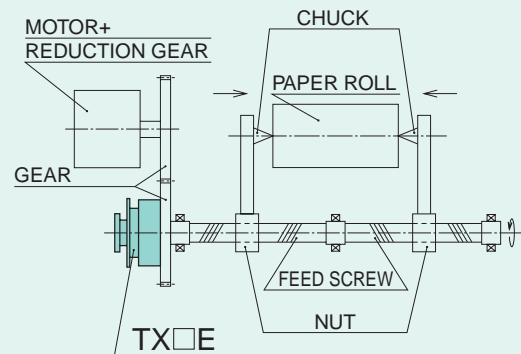
TX30E



● ADOPTION EXAMPLES



PAPER MAKING MACHINE UNWINDER

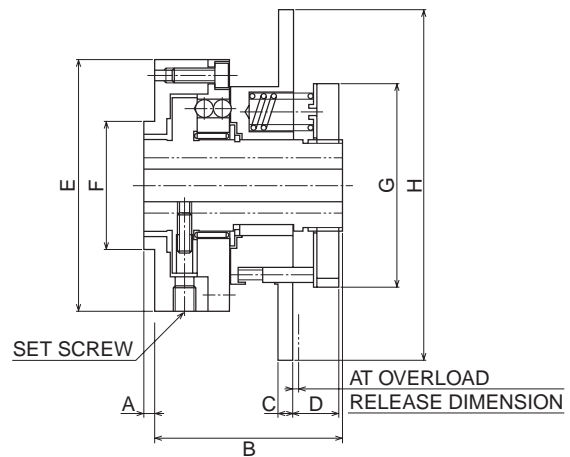
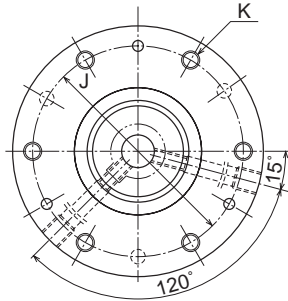


● NAMES OF PARTS

1	Hub boss
2	Housing
3	Hexagon socket head bolt
4	Spring pin
5	Flange
6	Hexagon socket head plug
7	Metal
8	Action ring
9	Spring
10	Key
11	Steel ball
12	Bearing
13	Washer
14	Adjusting ring
15	Hexagon socket head setscrew
16	Ring
17	WR type stopper ring
18	Pin
19	Spring
20	Model name plate
21	Name plate

*Dimensions and specifications might be changed for improvement without notice.

TX□E Type



● DIMENSION LIST

MODEL TYPE	A	B	C	D	φE	φF	φG	φH	INSTALLATION BOLT	
									J PCD	K BOLT SIZE
TX15E-L · H · G	3	52	4	13.7	69	35 ⁺⁰ _{-0.025}	56	96	58	6-M5×15L
TX20E-L · H · G	3	62	4	15.1	85	45 ⁺⁰ _{-0.025}	68	108	72	6-M6×20L
TX30E-L · H · G	3	77	6	20.0	104	60 ⁺⁰ _{-0.030}	84	124	90	6-M6×23L
TX40E-L · H · G	3	87	6	20.3	126	75 ⁺⁰ _{-0.030}	108	148	110	6-M8×25L
TX50E-L · H · G	3	107	8	24.8	155	90 ⁺⁰ _{0.035}	134	174	135	6-M10×32L
TX65E-L · H · G	3	137	8	29.9	198	120 ⁺⁰ _{0.035}	172	212	175	6-M12×40L
TX85E-L · H · G	3	167	10	36.5	254	150 ⁺⁰ _{0.040}	218	258	225	6-M16×32L

● SPECIFICATION

MODEL TYPE	TORQUE RANGE N·m	SPRING COLOR × NO	MAX SPEED min ⁻¹	INERTIA MOMENT kg·m ²	WEIGHT kg	MAX HOLE DIA φ mm	STANDARD HOLE DIA φ mm	PREPARED HOLE DIA φ mm	SET SCREW	RELEASE DIMENSION mm
TX15E-L	7 ~ 24	WHITE×10	900	0.78×10 ⁻³	1.0	15	15H7×5Js9	9	2-M4	1.5
TX15E-H	8 ~ 38	R E DX 5								
TX15E-G	13 ~ 50	R E DX 10								
TX20E-L	12 ~ 43	WHITE×12	750	1.9×10 ⁻³	2.0	20	20H7×6Js9	12	2-M4	1.9
TX20E-H	16 ~ 70	R E DX 6								
TX20E-G	40 ~ 100	R E DX 12								
TX30E-L	14 ~ 72	WHITE×12	600	5.1×10 ⁻³	4.0	30	30H7×8Js9	19	2-M4	2.6
TX30E-H	33 ~ 170	R E DX 6								
TX30E-G	72 ~ 200	R E DX 12								
TX40E-L	20 ~ 160	WHITE×12	450	1.3×10 ⁻³	6.5	40	40H7×12Js9	24	2-M5	2.9
TX40E-H	43 ~ 330	R E DX 6								
TX40E-G	97 ~ 400	R E DX 12								
TX50E-L	79 ~ 390	WHITE×12	400	36.6×10 ⁻³	12.0	50	50H7×14Js9	34	2-M8	3.8
TX50E-H	130 ~ 580	R E DX 6								
TX50E-G	280 ~ 800	R E DX 12								
TX65E-L	80 ~ 480	WHITE×12	300	125.5×10 ⁻³	25.0	65	65H7×18Js9	38	2-M10	5.0
TX65E-H	200 ~ 1,000	R E DX 6								
TX65E-G	570 ~ 1,600	R E DX 12								
TX85E-L	270 ~ 1,100	YELLOW×12	200	398.8×10 ⁻³	44.0	85	85H7×22Js9	48	2-M12	6.0
TX85E-H	450 ~ 2,100	R E DX 6								
TX85E-G	1,300 ~ 3,200	R E DX 12								

• Torque can be varied proportionally according to number of springs.
Number of springs can be used for minimum is three.

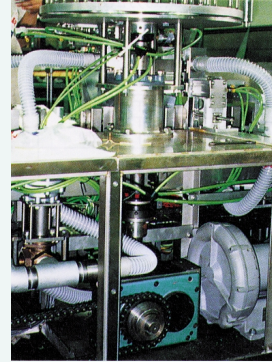
*Dimensions and specifications might be changed for improvement without notice.

TX□R Type

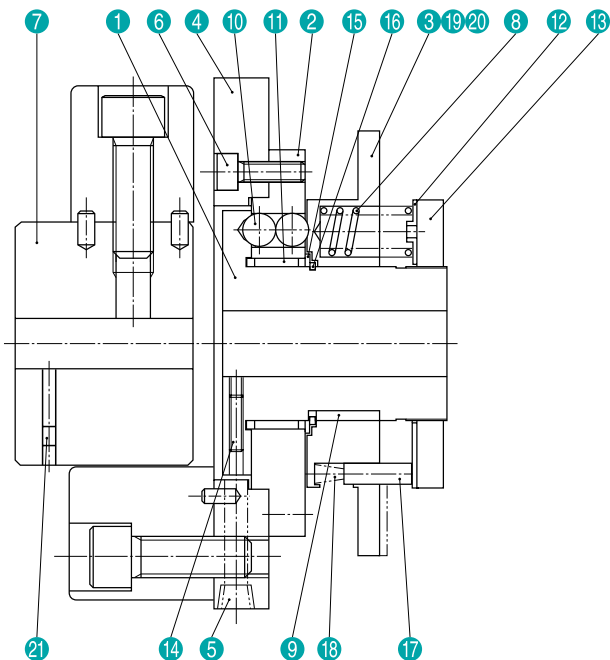


TX30R

● APPLICATION EXAMPLE



FILLER

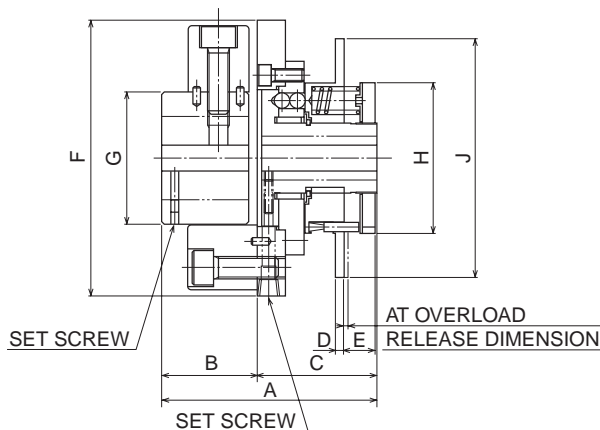
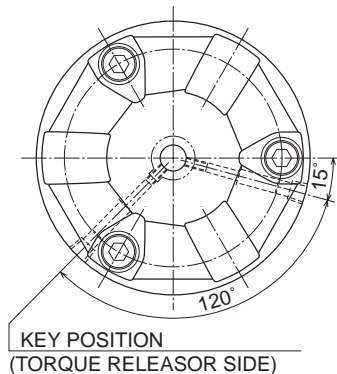


● NAMES OF PARTS

1	Hub boss
2	Flange
3	Action ring
4	Plate
5	Hexagon socket head plug
6	Hexagon socket head bolt
7	Coupling
8	Spring
9	Key
10	Steel ball
11	Bearing
12	Washer
13	Adjusting ring
14	Hexagon socket head setscrew
15	Ring
16	WR type snap ring
17	Pin
18	Spring
19	Model name plate
20	Name Plate
21	Hexagon socket head setscrew

*Dimensions and specifications are subject to change without prior notice.

TX□R Type



● DIMENSION LIST

MODEL TYPE	A	B	C	D	E	φF	φG	φH	φJ
TX15R-L · H · G	88	38	50	4	13.7	100	45	56	96
TX20R-L · H · G	99	44	55	4	15.1	125	60	68	108
TX30R-L · H · G	126	58	68	6	20.0	155	70	84	124
TX40R-L · H · G	148	64	84	6	20.3	175	85	108	148
TX50R-L · H · G	175	76	99	8	24.8	205	100	134	174
TX65R-L · H · G	215	92	123	8	29.9	260	125	172	212
TX85R-L · H · G	248	108	140	10	36.5	340	160	218	258

● SPECIFICATION

MODEL TYPE	TORQUE RANGE N·m	SPRING COLOR × NO	MAX SPEED min ⁻¹	INERTIA MOMENT kg·m ²	WEIGHT kg	TORQUE RELEASOR				COUPLING			
						MAX HOLE DIA φmm	STANDARD HOLE DIA φmm	PREPARED HOLE DIA φmm	SET SCREW	MAX HOLE DIA φmm	PREPARED HOLE DIA φmm	SET SCREW	RELEASE DIMENSION mm
TX15R-L	7 ~ 24	WHITE×10	900	1.6×10 ⁻³	2.3	15	15H7×5Js9	9	2-M4	30	12	2-M4	1.5
TX15R-H	8 ~ 38	R E DX 5											
TX15R-G	13 ~ 50	R E DX 10											
TX20R-L	12 ~ 43	WHITE×12	750	4.0×10 ⁻³	3.8	20	20H7×6Js9	12	2-M4	38	12	2-M4	1.9
TX20R-H	16 ~ 70	R E DX 6											
TX20R-G	40 ~ 100	R E DX 12											
TX30R-L	14 ~ 72	WHITE×12	600	11.4×10 ⁻³	7.2	30	30H7×8Js9	19	2-M4	48	15	2-M4	2.6
TX30R-H	33 ~ 170	R E DX 6											
TX30R-G	72 ~ 200	R E DX 12											
TX40R-L	20 ~ 160	WHITE×12	450	24.7×10 ⁻³	11.4	40	40H7×12Js9	24	2-M5	55	15	2-M5	2.9
TX40R-H	43 ~ 330	R E DX 6											
TX40R-G	97 ~ 400	R E DX 12											
TX50R-L	79 ~ 390	WHITE×12	400	70.4×10 ⁻³	22.0	50	50H7×14Js9	34	2-M8	65	20	2-M8	3.8
TX50R-H	130 ~ 580	R E DX 6											
TX50R-G	280 ~ 800	R E DX 12											
TX65R-L	80 ~ 480	WHITE×12	300	207.1×10 ⁻³	46.8	65	65H7×18Js9	38	2-M10	85	30	2-M10	5.0
TX65R-H	200 ~ 1,000	R E DX 6											
TX65R-G	570 ~ 1,600	R E DX 12											
TX85R-L	270 ~ 1,100	YELLOW×12	200	662.6×10 ⁻³	77.8	85	85H7×22Js9	48	2-M12	115	40	2-M12	6.0
TX85R-H	450 ~ 2,100	R E DX 6											
TX85R-G	1,300 ~ 3,200	R E DX 12											

• Torque can be varied proportionally according to number of springs.
Number of springs can be used for minimum is three.

*Dimensions and specifications might be changed for improvement without notice.

■ **Applicable Sprockets**

The table shows the size of sprocket for roller chain that can be mounted on the torque releasor (TX□D, TX□E, TY□A, TY□D types).

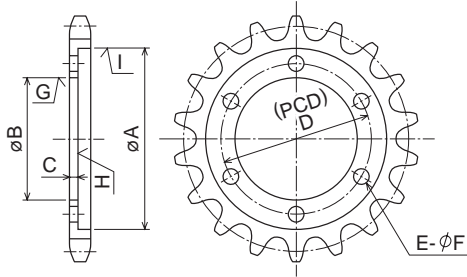
■ **TX□D, TX□E Types**

Torque releasor type		Nom.No.								
		#35	#41	#40	#50	#60	#80	#100	#120	#140
TX15	D	27-46T	21-35T	21-35T						
	E	27-46T	21-35T	21-35T						
TX20	D		26-45T	26-45T	21-36T					
	E		25-45T	25-45T	21-36T					
TX30	D			32-55T	26-45T	23-37T				
	E			30-55T	25-45T	21-37T				
TX40	D				30-54T	26-45T	20-33T			
	E				29-54T	25-45T	20-33T			
TX50	D					32-55T	25-41T	21-32T		
	E					29-55T	23-41T	19-32T		
TX65	E					28-51T	23-41T	20-34T	18-29T	
TX85	E					35-66T	29-53T	25-44T	22-37T	

■ **TY□A, TY□D Types**

Torque releasor type		Nom.No.						
		#40	#50	#60	#80	#100	#120	#140
TY30	A	30-55T	25-45T	21-37T				
	D	32-55T	30-45T	23-37T				
TY40	A		30-54T	25-45T	20-33T			
	D		30-54T	26-45T	20-33T			
TY50	A			29-55T	23-41T	19-33T		
	D			32-55T	25-41T	21-33T		
TY65	A				28-51T	23-41T	20-34T	18-29T
TY85	A				36-66T	29-53T	25-44T	22-37T

■ **Sprocket processing dimensions**



Torque releasor type		Nom.No.								
		A	B	C	D	E-F	G	H	I	
TX15	D	70	50H7 ^{+0.025} ₋₀	3	60	6-5.5	▽▽▽	▽▽	▽	
	E	70	35H7 ^{+0.025} ₋₀	3	58	6-5.5	▽▽▽	▽▽	▽	
TX20	D	89	65H7 ^{+0.030} ₋₀	3	75	6-6.6	▽▽▽	▽▽	▽	
	E	86	45H7 ^{+0.025} ₋₀	3	72	6-6.6	▽▽▽	▽▽	▽	
TX30	D	114	85H7 ^{+0.035} ₋₀	5	100	6-6.6	▽▽▽	▽▽	▽	
	E	105	60H7 ^{+0.030} ₋₀	5	90	6-6.6	▽▽▽	▽▽	▽	
TX40	D	135	105H7 ^{+0.035} ₋₀	5	120	6-9	▽▽▽	▽▽	▽	
	E	127	75H7 ^{+0.030} ₋₀	5	110	6-9	▽▽▽	▽▽	▽	
TX50	D	169	130H7 ^{+0.040} ₋₀	8	150	6-11	▽▽▽	▽▽	▽	
	E	156	90H7 ^{+0.035} ₋₀	8	135	6-11	▽▽▽	▽▽	▽	
TX65	E	199	120H7 ^{+0.035} ₋₀	8	175	6-14	▽▽▽	▽▽	▽	
TX85	E	255	150H7 ^{+0.040} ₋₀	8	225	6-18	▽▽▽	▽▽	▽	

Torque releasor type		Nom.No.								
		A	B	C	D	E-F	G	H	I	
TY30	A	105H7 ^{+0.035} ₋₀	75 or less	5	90	6-6.6	~	▽▽	▽▽▽	
	D	114	85H7 ^{+0.035} ₋₀	5	100	6-6.6	▽▽▽	▽▽	▽	
TY40	A	130H7 ^{+0.040} ₋₀	95 or less	5	115	6-9	~	▽▽	▽▽▽	
	D	135	105H7 ^{+0.035} ₋₀	5	120	6-9	▽▽▽	▽▽	▽	
TY50	A	155H7 ^{+0.040} ₋₀	115 or less	8	135	6-11	~	▽▽	▽▽▽	
	D	169	130H7 ^{+0.040} ₋₀	8	150	6-11	▽▽▽	▽▽	▽	
TY65	A	198H7 ^{+0.046} ₋₀	150 or less	8	175	6-14	~	▽▽	▽▽▽	
TY85	A	258H7 ^{+0.052} ₋₀	200 or less	8	230	6-18	~	▽▽	▽▽▽	

*Dimensions and specifications might be changed for improvement without notice.