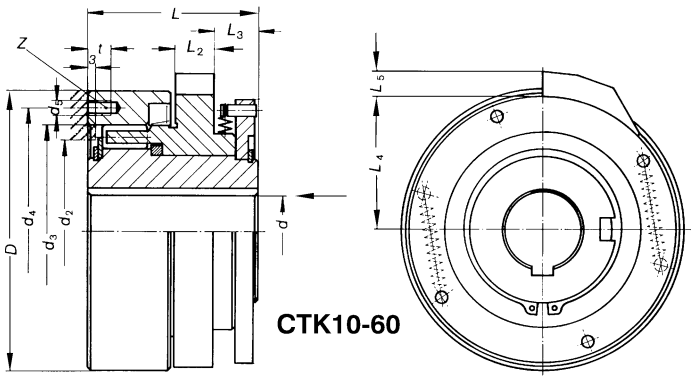
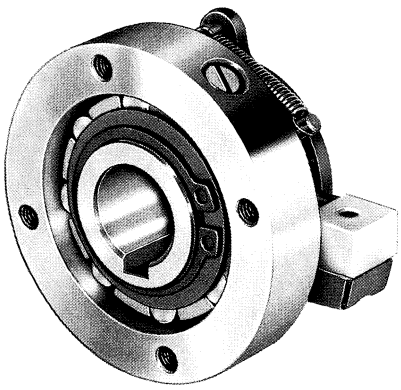
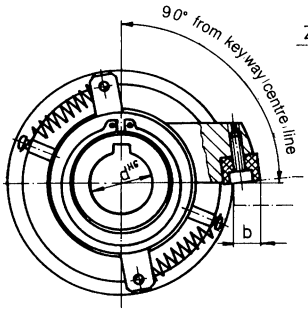
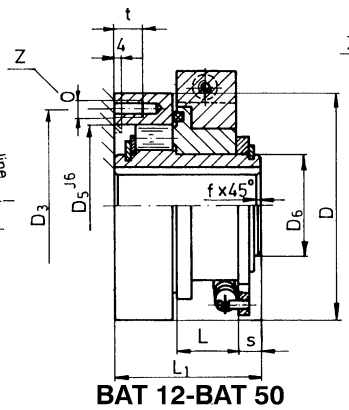
Single Revolution Clutches

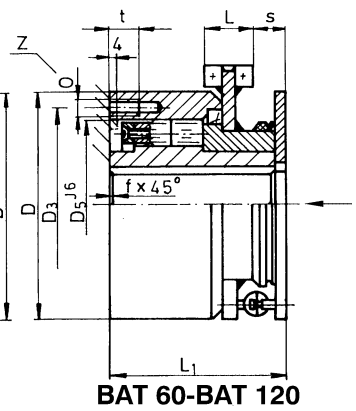
These clutches have rollers contained in a cage which is connected to the operating cam. The cam is sprung loaded to push the rollers up the ramp to provide drive, but if the cam is stopped by a trip pawl it fires the rollers out of engagement, thereby disengaging the drive. Clutches can provide a single revolution, multiple revolutions or a fraction of a revolution from a constantly rotating input. Extremely accurate positional control is provided with no accumulative error. Two types of clutch are offered - the BAT series for maximum torque capacity, and CTK series for higher speed applications and replacement on existing machinery.











Dimensions - BAT Series

Clutch Size	Bore d_{H6} mm	Rated Torque(1) Nm	Max. Operating Speed rpm	Dimensions mm														Approx. Weight Kg
				D	D_3	D_{5J6}	D_6	D_7	L	L_1	z	o	t	s	b	f	
BAT 12	12	19	750	56	45	37	22	-	12	32	3	M5	7	7	5.0	0.5	0.6
BAT 20	20	60	650	72	61	50	32	-	16	40	4	M5	8	8	7.0	0.8	1.1
BAT 25	25	53	620	72	61	50	37	-	16	40	4	M5	8	8	7.0	1.0	1.1
BAT 30	30	240	560	108	95	75	50	-	26	60	6	M5	10	10	10.0	1.0	4.0
BAT 40	40	370	410	126	108	90	60	-	32	70	6	M8	12	11	10.0	1.5	6.0
BAT 50	50	700	400	152	132	110	75	-	38	80	8	M8	12	11	13.0	1.5	10.0
BAT 60	60	2750	210	195	175	155	-	195	25	120	12	M10	15	22	12.0	2.0	31.0
BAT 70	70	2750	210	195	175	155	-	195	25	120	12	M10	15	22	12.0	2.5	30.0
BAT 80	80	7000	200	250	225	200	-	250	45	140	12	M12	15	22	25.0	2.5	72.0
BAT 90	90	7000	200	250	225	200	-	250	45	140	12	M12	15	22	25.0	3.0	70.0
BAT 100	100	11500	170	315	285	255	-	315	55	160	12	M16	20	16	33.0	3.0	124.0
BAT 120	120	11500	170	315	285	255	-	315	55	160	12	M16	20	16	33.0	4.0	120.0

Dimensions - CTK Series

Clutch Size	Bore d_{H7} mm	Rated Torque(1) Nm	Inertia kgm²	Max. Operating Speed rpm	Dimensions mm											Approx. Weight
					D_{h6}	d_2Min	d_{3H7}	d_4	Z	d_5	t	L	L_2	L_3	L_4	L_5	Kg
CTK 10	10	14	0.00025	900	55	28	35	45	4	M4	7	43	12	12	26	7	0.8
CTK 15	15	21	0.0005	800	62	36.5	42	52	5	M5	7.5	43	12	11	31.5	7	1.2
CTK 20	20	60	0.0012	700	75	42	52	64	6	M5	9	62	13	15	36	7	1.8
CTK 30	30	160	0.011	450	120	72	85	102	6	M6	11	80	17	18	58	10	5.8
CTK 40	40	420	0.042	350	155	100	120	136	8	M8	13	108	26	24	74	14	13.2
CTK 50	50	650	0.089	300	185	120	140	162	8	M10	15	113	26	30	90	14	19.6
CTK 60	60	1150	0.193	260	218	150	170	195	10	M10	17	128	30	32	105	16	31.0

(1) Torque not to be exceeded.
Note: Torque due to accelerating masses usually determines clutch selection.

When ordering, please specify direction of rotation seen from arrow "A".
"R" - Clockwise rotation.
"L" - Counterclockwise rotation.

The units have no bearings and outer driving race (Item 1) must be supported to maintain concentricity with shaft within 0.01mm.

Single revolution freewheel clutches are supplied unlubricated. Lubrication is required prior to operation. We recommend use of Variotrac 68 oil or CAM 916 grease for positive operation.

Keyways: to DIN 6885/1.

Torque is transmitted from the inner race to the shaft via a feather key. We recommend shaft tolerance h6 or j6.
For BAT clutches the driving race is centred on D5, and for CTK series on d3 with locating spigot to h6 tolerance.

For correct operation it is essential that the trip pawl is rigidly located, and moves in the direction of clutch rotation in disengage motion.
A backstop clutch should always be used with a single revolution clutch to prevent recoil engagement, and a forward lock clutch may be required on reciprocating drives.

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