

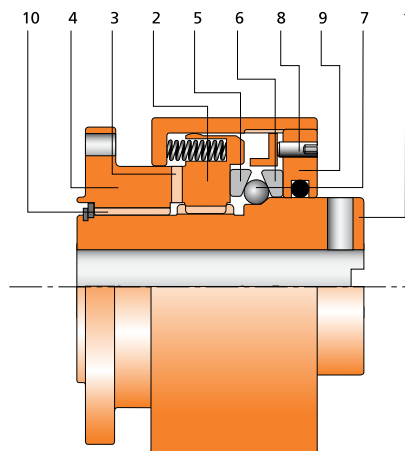
Brunel Torque Limiting Clutches

Type JAB - Manual Reset

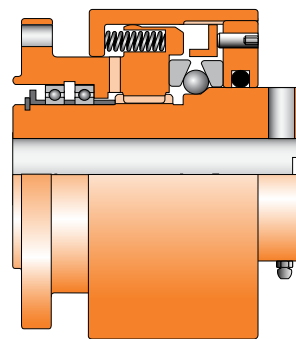
Release Torque: 10 to 4000 lb ft, 14 to 5500Nm

Technical Features

- Complete disengagement on overload
- Simple "one screw" torque adjustment
- Positive drive - no slip
- Rapid easy reset
- Torque setting maintained indefinitely
- Release action can operate a warning device or limit switch
- Robust and compact design
- May also be used as a lever operated clutch



Bush Bearing Type JAB



Ball Bearing Type JAB

For particularly dusty conditions such as cement works we offer neoprene seals. Please specify when ordering.

Important - Use switch plate and limit switch to quickly shut down drive on break-out to avoid damage to bearing. For prolonged periods of running disengaged, ball-bearing mounted units must be used. For higher speed applications consult Brunel Corporation.

Application

The clutch can be installed in any drive system, safeguarding against sudden surges or gradual build-up of torque. Modifications are possible to provide manual lever operation of the clutch while retaining the overload release feature. Single direction release and one position reset can also be provided.

Normal Running

The drive is transmitted from the hub 1 through the splined ring 2 via the tapered jaws 3 to the rotating jaw ring 4. The jaws are held together by spring pressure acting through two angled races (5 and 6) and a crowd of balls 7 located by a step on the hub.

Disengagement

On overload, the tapered jaws are thrust apart, moving the splined ring 2 and lifting the balls 7 over the step on the hub, thus instantly disengaging the drive, leaving rotating jaw ring 4 free to rotate on bearing 10.

Torque Adjustment

The release torque settings are made by adjusting the control ring 9 so altering the spring forces. The adjusting ring is locked in position by a set screw 8.

Re-engagement

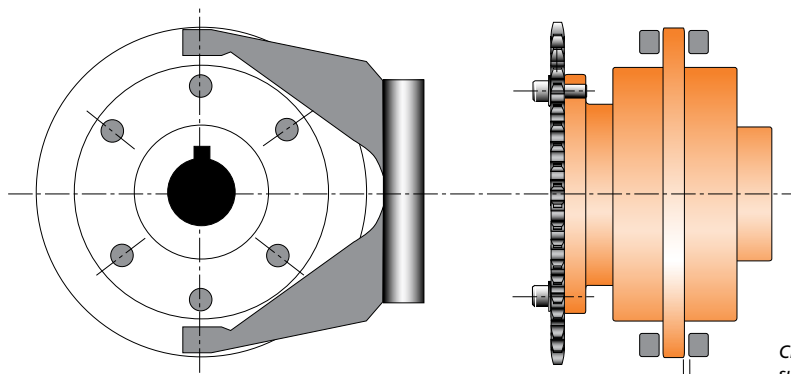
To re-engage, the tapered jaws are aligned using reference marks and the sliding assembly pushed along the hub until the balls snap back into their original position. This requires no further spring compression and is easily accomplished.

For remote resetting the body can be supplied with a flange to suit a resetting mechanism. See diagram below.

Installation

Clutches can be supplied pilot bored or finish bored and keywayed. The hub may be fitted to either shaft and the flange can be connected to a flexible coupling or can carry a sprocket or pulley.

Typical arrangement of Type JAS fitted with shifter ring which can also be optionally used to operate a limit switch.

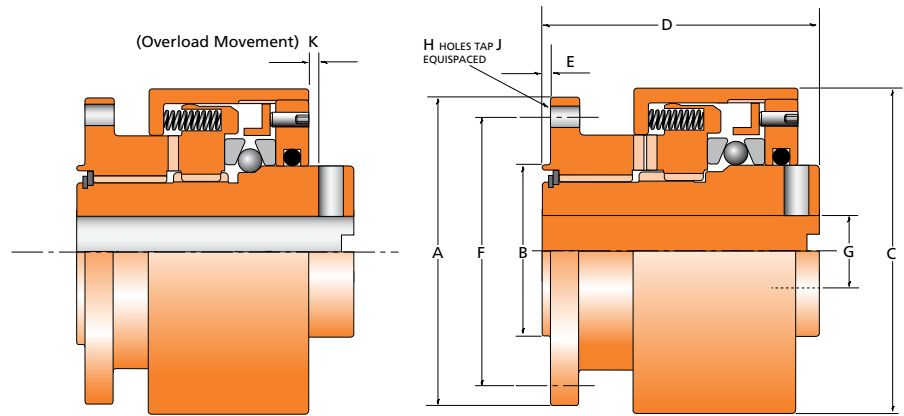


Clearance must be sufficient to allow for clutch disengagement

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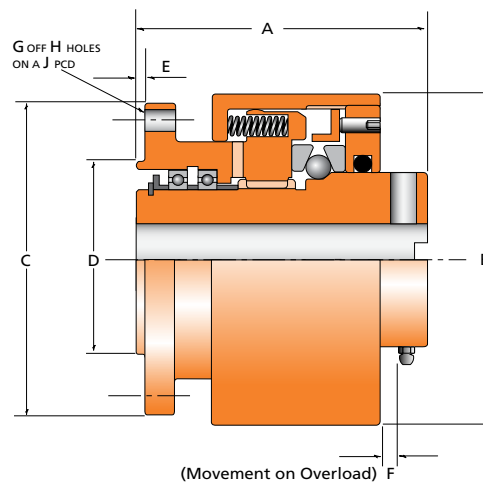


- ① Lower release torques can be achieved. Consult Brunel Corporation.
- ② Dimensions G and axial movement on overload also apply to Types JAR, JAF, JAS and JAP.
- ③ Tolerance on spigot diameter B is f7 to BS 4500:1969.
- ④ Applicable to all variants except JAP Type.

Model	Release Torque		④ Maximum Speed rpm	Dimensions in mm and inches											Weight kg lb
	Min ① Nm lb ft	Max Nm lb ft		A	③ B	C	D	E	F	G max	② G min	H	J	K	
JAB2	14	140	1500	90	55	93.5	85	3	75	25.4	12.7	6		6.35	2.95
	10	100		3.54	2.163/2.164	3.68	3.35	0.118	2.95	1.00	0.50		1/4-20	0.25	6.5
JAB5	70	700	1500	120	80	123.8	90	3	100	40	19.05	6		6.35	5.59
	50	500		4.72	3.147/3.138	4.875	3.54	0.118	3.94	1.57	0.75		3/8-16	0.25	12.3
JAB7	475	1356	1500	180	110	177.8	150	3	150	57	31.75	6		6.35	17
	350	1000		7.09	4.328/4.329	7.00	5.91	0.118	5.91	2.24	1.25		1/2-13	0.25	37
JAB8	610	2712	1500	235	150	228.6	150	3	195	77	38.1	6		6.35	30
	450	2000		9.25	5.902/5.904	9	5.91	0.118	7.68	3.03	1.50		5/8-11	0.25	66
JAB9	815	5500	1000	305	200	305	205	3	270	102	50.8	6		8.13	84
	600	4000		12	7.870/7.872	12	8.07	0.118	10.63	4.00	2.00		3/4-10	0.32	185

Type JAB

Type JAB with ball bearing mounting



Model	④ Max Bore Max Speed rpm		Dimensions in mm and inches									
			A	B	C	D	E	F	G	H	J	
JAB2	25	4500	85	94	90	54.97/54.94	3	6.35	6		75	
	1.00		3.35	3.70	3.54	2.163/2.164	.118	.25		1/4-20	2.95	
JAB5	40	3600	90	124	120	79.97/79.94	3	6.35	6		100	
	1.57		3.54	4.88	4.72	3.147/3.148	.118	.25		3/8-16	3.94	
JAB7	57	2400	150	178	180	109.96/109.93	3	6.35	6		150	
	2.25		5.90	7.00	7.09	4.328/4.339	.118	.25		1/2-13	5.91	
JAB8	79	1800	150	229	235	149.96/149.92	3	6.35	6		195	
	3.03		5.90	9.02	9.25	5.902/5.904	.118	.25		5/8-11	7.68	

Consult factory for special application