

KINETROL LTD. Model T-CRD Dashpot

SPECIFICATION

Rate

Max. shaft side load Ambient temperature range Frictional torque Shaft material Body material Weight

0.1

maximum.

Torque / Speed Curves

with adjuster set at

filling of various viscosities

1000

100

10

TORQUE

lbf.in.

Adjustable See curves below (± 10%) 41 lbf / 183 N 0° to 60°C 0.5 lbf.ins / 0.056 Nm typical High tensile steel 605M36(T) Cast aluminum LM 4M 5.27 lbs/ 2.39 kg



SPEED - Rev./min

10

for





The T-CRD continuous rotation dashpot has an adjustable rate. Specification of a given silicone fluid filling provides maximum rates as shown by the curves opposite.

Adjustment allows the rate to be varied down to 1/10 of the maximum values, for any speed of rotation.

The adjuster knob, although marked for reference, is not normally calibrated.

VISCOSITIES AVAILABLE

0.1

1,000; 12,500; 30,000; 100,000; 500,000 cSt

ORDERING CODES

T-CRD-(Filling Viscosity) Example: T-CRD-30,000 has 30,000 cSt fluid

Kinetrol LTD. Rotary dashpots distributed through:

2

SPEED - Radians / sec.

4 6 8 10

Efdyn, Incorporated 7734 East 11th Street Tulsa, Oklahoma 74112

www.efdyn.com

Logarithmic co-ordinates

100

1000

100

10

8

6

4

2

0.2

Nm

100

Heating limits

Toll Free: 800-950-1172 Phone: 918-838-1170 sales@efdyn.com



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TEMPERATURE EFFECTS

Damping rate is reduced by increases in fluid temperature (and increased by reduction in temperature). The graph below indicates the percentage change in damping rate with temperature, relative to the rate quoted at 20°C.

Dashpots compensated for temperature change, to keep damping rate constant, can be special ordered.

In addition to the effect of ambient temperature, heating of the dashpot above ambient is caused by the power absorbed by the damping action. Power dissipation limits are given for 20°C ambient. At temperatures above 20°C these power limits are de-rated by a factor:

 $(T_L - T_A)/(T_L - 20)$

where T_L= Limit Temperature and T_A= Ambient Temperature



CONVERSION FACTORS

1 rad = 57.3° 1 Nm = 8.85 lbf.ins 1 RPM = 0.1047 rad/s 1 lbf = 4.45 N 1 lbf.ins = 0.113 Nm 9.81N = 1 kgf = 1 kp

GENERAL NOTES

- For calculation purposes the rotation speed of the dashpot is given in RADIANS per second (1 radian = 57.3°). The significance of a radian is that if, for example, a 1 meter radius lever rotates through 1 radian, the end of the lever moves 1 meter, a distance equal to the radius.
- Damping RATE is defined here as TORQUE divided by ROTATION SPEED. Note that a dashpot with a high rate may not
 necessarily be working at a high torque. For example, a dashpot may have a rate of 100 Nm/rad/s; however, it may be rotated
 at 1/10 rad/s so that the damping torque produced is 10 Nm which is not numerically equal to the rate.

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