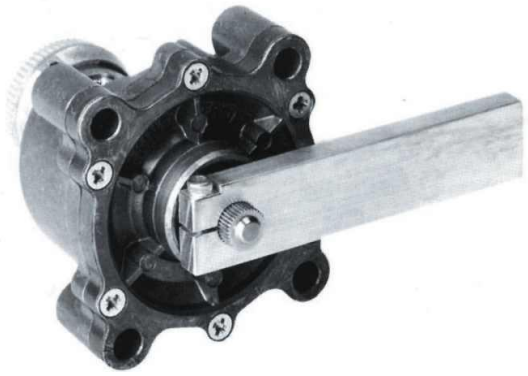
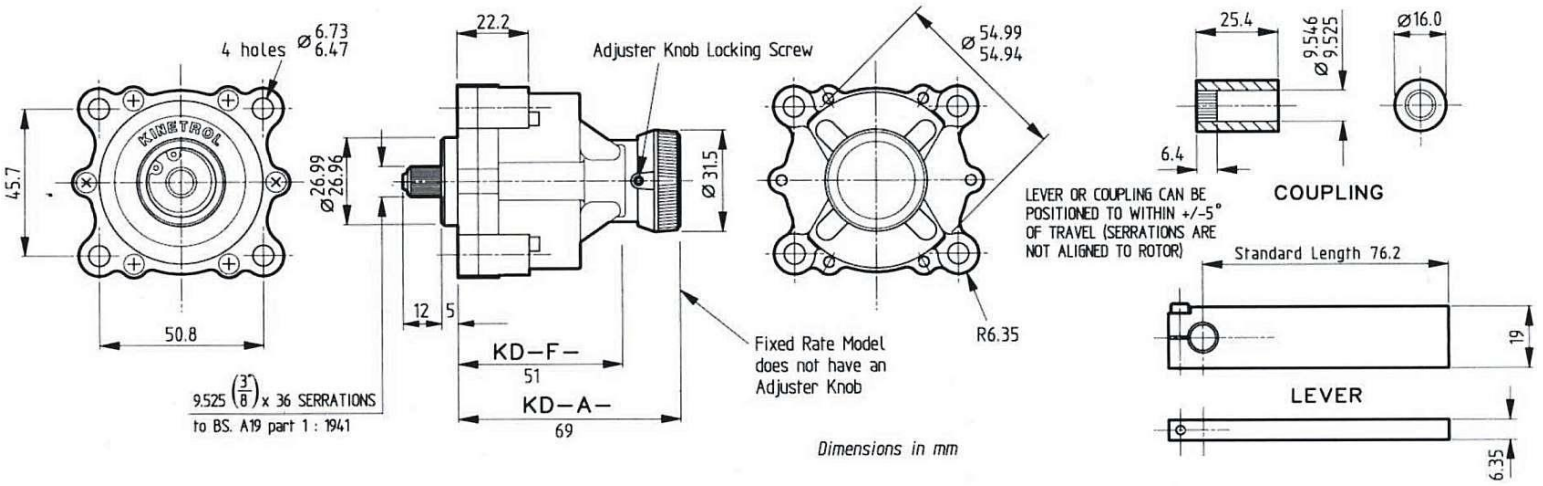
KINETROL LTD.
Model KD Dashpot

SPECIFICATION

Rate	Adjustable Max (KD-A4): 2,600 in-lb/rad/sec 260 Nm/rad/sec
Angle of travel	60°
Max. safe torque	250 lbf.ins
Ambient temperature range	-4° to 131°F
Max. shaft end load	10 lbf / 45 N
Max. shaft side load	40 lbf / 178 N
Ambient temperature range	32° to 140°F / 0º to 60ºC
Frictional torque	.01 in-lbs / 0.001 Nm typical
Shaft material	Stainless steel 431S29
Body material	Zinc alloy Mazak 3
Weight	1.1 lbs/ .48 kg





RATES

KD-A- models have an adjuster which permits any damping rate to be obtained within one of the following ranges. This range must be specified when ordering the dashpot.

- **A1**: 0.8 to 10 in-lb/rad/sec / 2.5 to 25 Nm/rad/s
- **A2**: 10 to 100 in-lb/rad/sec / 6 to 60 Nm/rad/s
- **A3**: 100 to 1,000 in-lb/rad/sec / 12 to 120 Nm/rad/s
- **A4**: 260 to 2,600 in-lb/rad/sec / 30 to 300 Nm/rad/s

With adjuster set to maximum the rate may exceed stated maximum and with adjuster set to minimum the rate may be less than stated minimum.

OPTIONS

The following features may be specified for any model:

Differential Rate (FC or FAC)
Gives resistance in one direction only and less than 1/10 resistance in the other. Specify free clockwise or free counterclockwise when viewed from shaft end.

Double Damping (DD)
Gives equal resistance in either direction.

Couplings
Steel couplings available.

ORDERING CODES

KD-A1, 2, 3 or 4 – DD
KD-A1, 2, 3 or 4 – FC or FAC

Kinetrol LTD. Rotary dashpots distributed through:

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

www.efdyn.com

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

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TEMPERATURE EFFECTS

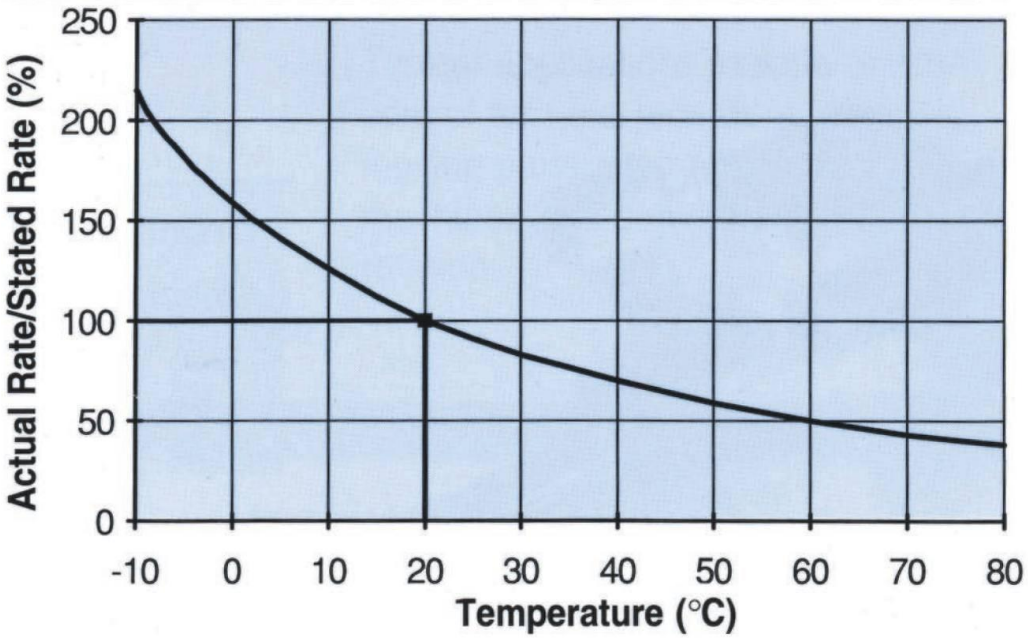
Damping rate is reduced by increases in fluid temperature (and increased by reduction in temperature). The graph below indicates the percentage change in damping rate with temperature, relative to the rate quoted at 20ºC.

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 20ºC ambient. At temperatures above 20ºC 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 = 57.3º	1 RPM = 0.1047 rad/s	1 in-lb = 0.113 Nm
1 Nm = 8.85 lbf.ins	1 lbf = 4.45 N	9.81N = 1 kgf = 1 kp

GENERAL NOTES

1. For calculation purposes the rotation speed of the dashpot is given in RADIANS per second (1 radian = 57.3º). 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.

2. 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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