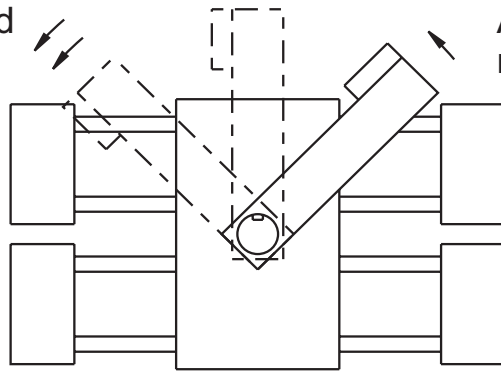


ROTARY ACTUATOR CRASH PREVENTION

PROBLEM: Over center load

At top of stroke, no torque is required

On downward stroke, torque and weight combine; load accelerates out of control, crash at end.



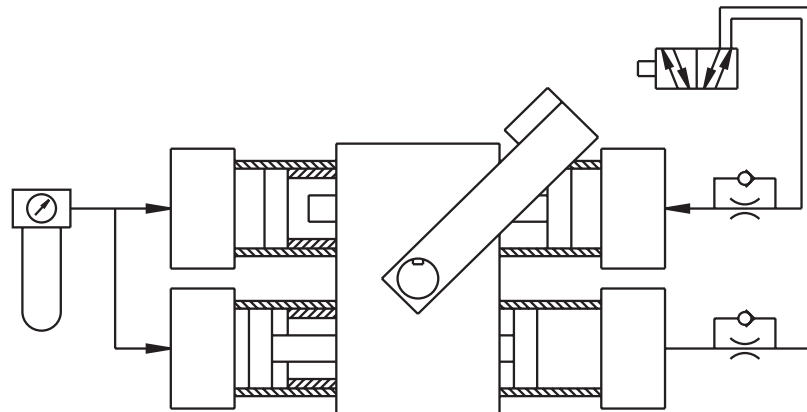
Actuator must be sized to provide maximum torque at beginning of stroke.

Note:

Any massive load presents a similar problem. Cushions may be inadequate, shock absorbers are bulky, expensive, and require special modifications.

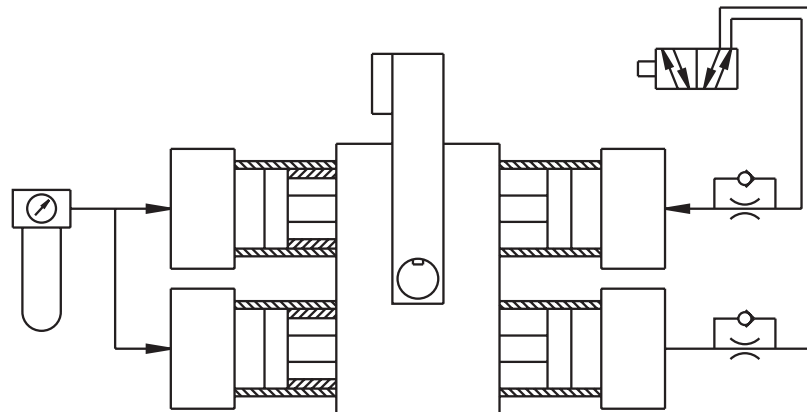
SOLUTION:

Centering cylinders with constant pressure. Adjust to tune system.

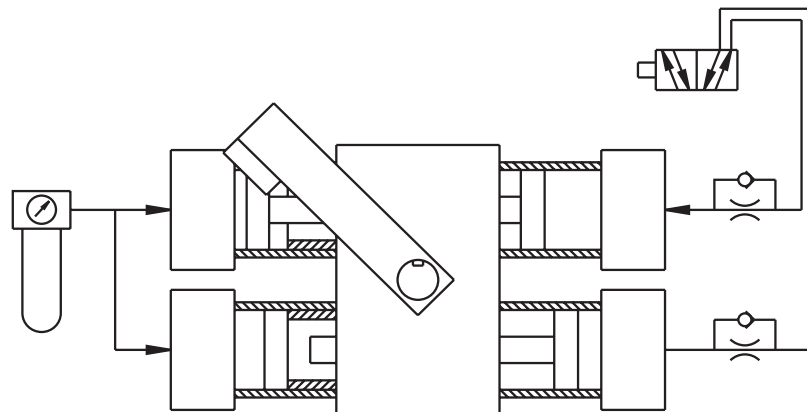


With same pressure to both sides:

1) Lifting: Actuator produces full dual rack torque.



2) Top of stroke: both centering pistons on stop tubes: zero torque.



3) Downward stroke: one piston driving forward, one reverse, so no net torque. Flow controls control descent.

FILE NAME: SK-087.CDR

SPECIFICATION: Order and price as if 3 position rotary actuator, ie A22-90-0-90-S5-1/8-2