

KENWOOD VALVE CONTROLS

Double Acting Pneumatic Actuators for Quarter Turn Valves and Dampers



General application

Designed for on-off or modulating control of quarter-turn Ball, Butterfly, Plug Valves or Dampers.

Technical data

Torque :500 to 15000 NM

Supply pressure : 60 to 100 psig (4 to 7 bar)

Supply medium : Air or Sweet Gas or Hydraulic oil

Temperature rating :

Standard : -30 to 100°C

Optional : -55 to 135°C

Angle of rotation : 90 ± 5 degrees

Options and accessories

- Declutchable manual override
- Positioner
- Feed back transmitter
- Volume bottle
- Solenoid Valve
- Limit Switches
- I/P converter
- Flow control valve
- Air filter regulator
- Volume booster

Catalogue Number: KVC-FS-003

Date of Issue :2015/01

Kenwood Valve Controls

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Product design and specification may change without notice.

KENWOOD VALVE CONTROLS

Failclose/Failopen Pneumatic Actuators(DAFS) for Quarter Turn Valves and Dampers

Design features and benefits

- Symmetric/canted Scotch Yoke design using precision bearing eliminates dead band in the yoke mechanism, providing the greatest torque output at the beginning and at the end of stroke.
- Torque from 500 to 15000NM to operate Ball, Butterfly, Plug and Damper Valves.
- Scotch yoke mechanism is enclosed in Ductile iron weather proof housing with breather.
- Yoke is supported by larger diameter DU bearing for smooth operation and extended service life.
- Piston rod is supported by two bronze/sintered bronze bearings to take the transverse force and to give long service life of piston seal & piston rod seals.
- Piston rod is high strength steel as a standard which is ground, hard chrome plated and polished to mirror finish. This will provide maximum corrosion resistance and minimum friction loads on dynamic seals.
- Carbon impregnated PTFE piston bearing reduces the friction between the piston and cylinder bore and allows the piston to operate even without lubricant.
- An innovative composite material superior to Stainless Steel for cylinder tube construction as standard provides superior corrosion resistance both internally and externally. Also the weight of these cylinders are lighter by 75 % as compared to steel cylinders. These cylinders gives trouble-free performance in chemical, high moisture and other adverse environments including salt and chlorinated water which results in significant reduction in life cycle costs. Steel/Stainless Steel is also available for high pressure gas and hydraulic pressure source.
- External end travel stops adjustment screws allows precise setting of valve opening/closing to the extent of $\pm 5^\circ$ to take care of loss of motion between valve and actuator.
- Top accessory shaft has NAMUR slot and position indicator. This allows mounting of limit switches and accessories close to the actuator, resulting in a more compact, precise assembly, and eliminates the need for coupling.
- Actuator mounting dimensions are as per ISO 5211 as a standard or as per customer requirement for direct mounting of actuator onto the valve, eliminating the need for any bracket and coupling.

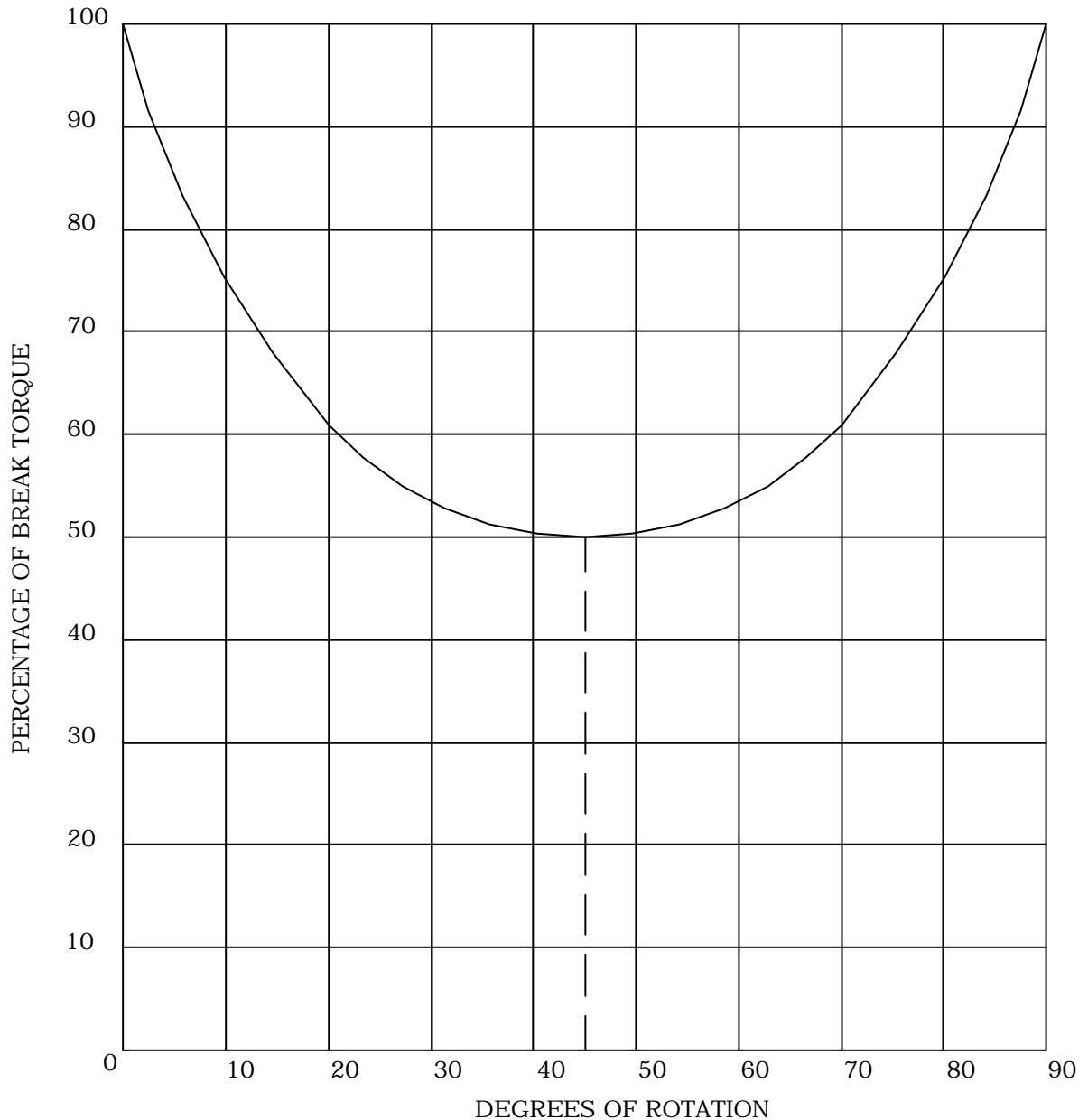
Options and accessories

- Declutchable manual override
- Positioner
- Feed back transmitter
- Volume bottle
- Solenoid Valve
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TORQUE CHARACTERISTIC OF PNEUMATIC ACTUATOR (SCOTCH-YOKE MECHANISM)

FAILCLOSE/FAILOPEN(DAFS) ACTUATORS



The torque outputs (pressure to open, pressure to close) produced by the actuator are expressed as break and run torques. The break torque is the torque produced at the beginning and the end of the Scotch-yoke rotation. The run torque is the torque produced at the mid-point (45 degrees) of the Scotch-yoke rotation.

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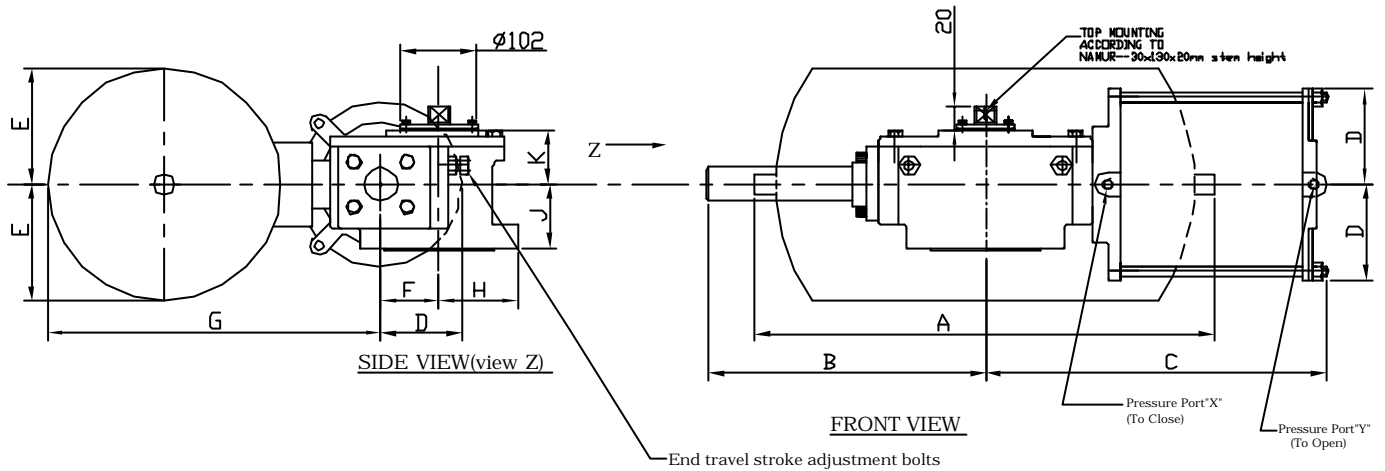
FAILCLOSE/FAILOPEN PNEUMATIC ACTUATOR (DAFS) OUTPUT TORQUE (NM) FOR SYMMETRIC SCOTCH-YOKE DESIGN

MODEL	POSITION	AIR PRESSURE IN KG/SQ. CMS							
		@4	@4.5	@5	@5.5	@6	@6.5	@7	
Z06FS10	Starting/Ending	499	564	628	692	757	821	886	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1
A08FS10	Starting/Ending	1001	1132	1262	1393	1480	1611	1741	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1
A08FS25	Starting/Ending	1350	1524	1698	1828	2003	2177	2351	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1
A10FS25	Starting/Ending	1836	2108	2312	2584	2788	2992	3264	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1
A10FS80	Starting/Ending	2380	2652	2992	3264	3536	3876	4148	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1
A12FS25	Starting/Ending	2350	2644	2938	3232	3526	3819	4113	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1
A12FS50	Starting/Ending	2938	3330	3721	4015	4407	4799	5190	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1
A12FS80	Starting/Ending	3232	3624	4015	4505	4897	5299	5680	
	Run(minimum)	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1	Note-1

Note-1. Run torque can be got from the graph in page No.3 of this catalogue.

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DOUBLE ACTING PNEUMATIC ACTUATOR WITH FAILOPEN/FAILCLOSE SYSTEMS



MODEL	A	B	C	D	E	F	G	H	J	K	"X" & "Y" BSP(F)	MOUNTING ISO 5211	STEM ACCEPTANCE(Max)		
													DIA	SQUARE	DEPTH
Z06FS10	400	273	345	106	110	50	390	78	60	58	1/4"	F10	30	22	28
A08FS10	400	360	435	106	110	76	434	83	86	100	1/4"	F14	70	-----	140
A08FS25	580	360	435	106	136	76	488	83	86	100	1/4"	F14	70	-----	140
A10FS25	580	360	465	134	136	76	512	83	86	100	3/8"	F16	70	-----	140
A10FS80	985	360	465	134	178	76	595	83	86	100	3/8"	F16	70	-----	140
A12FS25	580	360	465	134	136	76	512	83	86	100	3/8"	F16	70	-----	140
A12FS50	773	360	465	162	162	76	589	83	86	100	3/8"	F16	70	-----	140
A12FS80	985	360	465	162	178	76	621	83	86	100	3/8"	F16	70	-----	140

Notes:

1. ALL DIMENSIONS IN MM
2. MOUNTING (VALVE SIZE) DIMENSIONS WILL BE AS PER ISO 5211
3. TOP WORK WILL BE AS PER NAMUR STANDARD FOR MOUNTING LIMITSWITCH/POSITIONER BOX

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