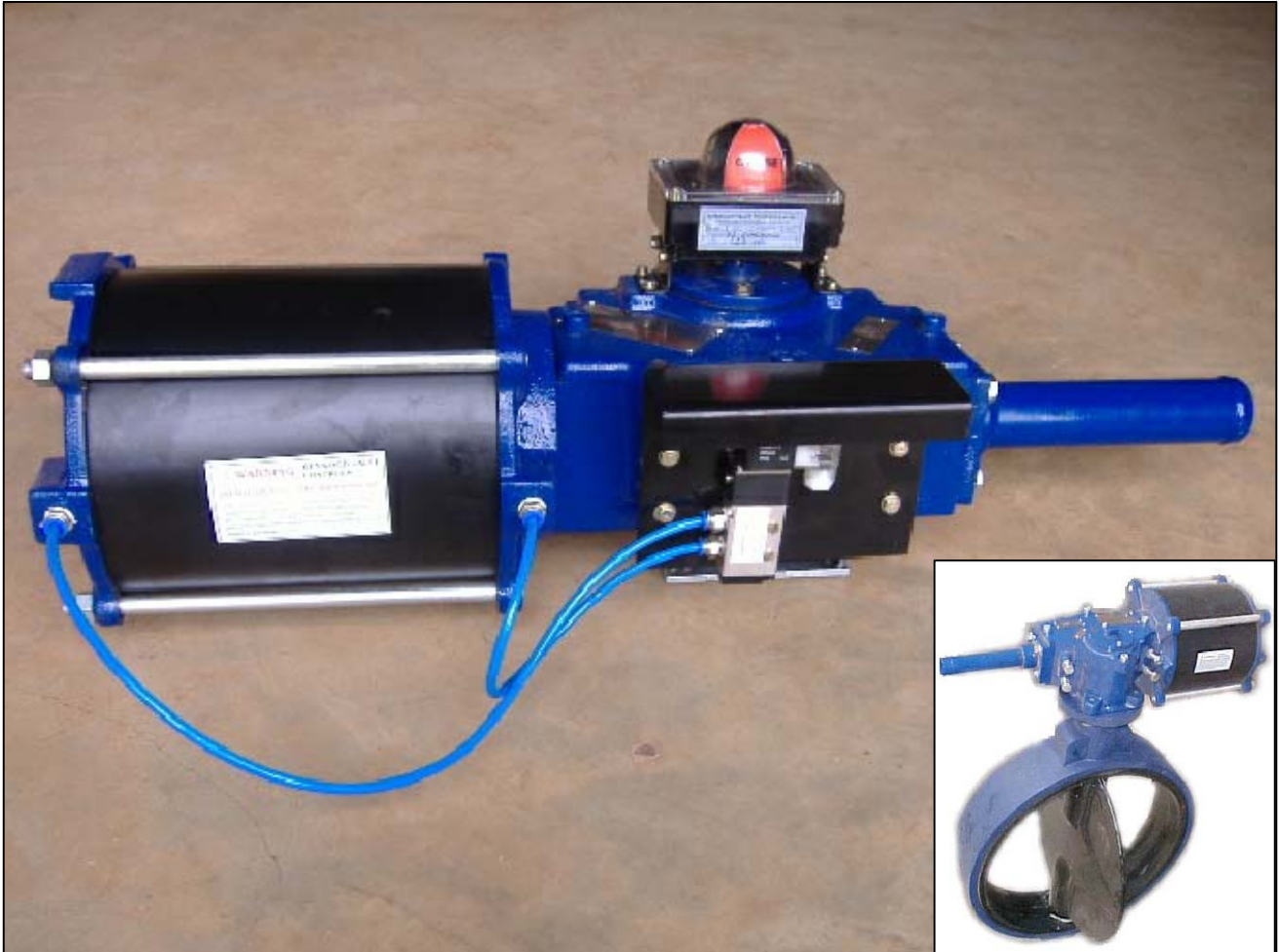# KENWOOD VALVE CONTROLS (INDIA) PVT. LTD.

Double Acting Pneumatic Actuators for Quarter Turn Valves and Dampers

600MM Butterfly Valve fitted with Actuator

General application

Designed for on-off or modulating control of

quarter-turn Ball, Butterfly, Plug Valves or Dampers.

Technical data

Torque :300 to 46000 NM

Supply pressure   : 40 to 100 psig (2.8 to 7 bar)

Supply medium   : Air or Sweet Gas or Hydraulic

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 tranmitter
- Volume bottle
- Solenoid Valve

- Limit Switches
- I/P converter
- Flow control valve
- Air filter regulator
- Volume booster

Catalogue Number: KVC-002
Date of Issue   :2020/05

Product design and specification may change without notice.

KENWOOD VALVE CONTROLS (INDIA) PVT. LTD.

Double Acting Pneumatic Actuators 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 300 to 46000NM 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 ±5° 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   ■ Limit Switches

■ Positioner   ■ I/P converter

■ Feed back tranmitter   ■ Flow control valve

■ Volume bottle   ■ Air filter regulator

■ Solenoid Valve   ■ Volume booster

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KENWOOD VALVE CONTROLS (INDIA) PVT. LTD.

TORQUE CHARACTERISTIC OF PNEUMATIC ACTUATOR
(SCOTCH-YOKE MECHANISM)

DOUBLE-ACTING ACTUATORS
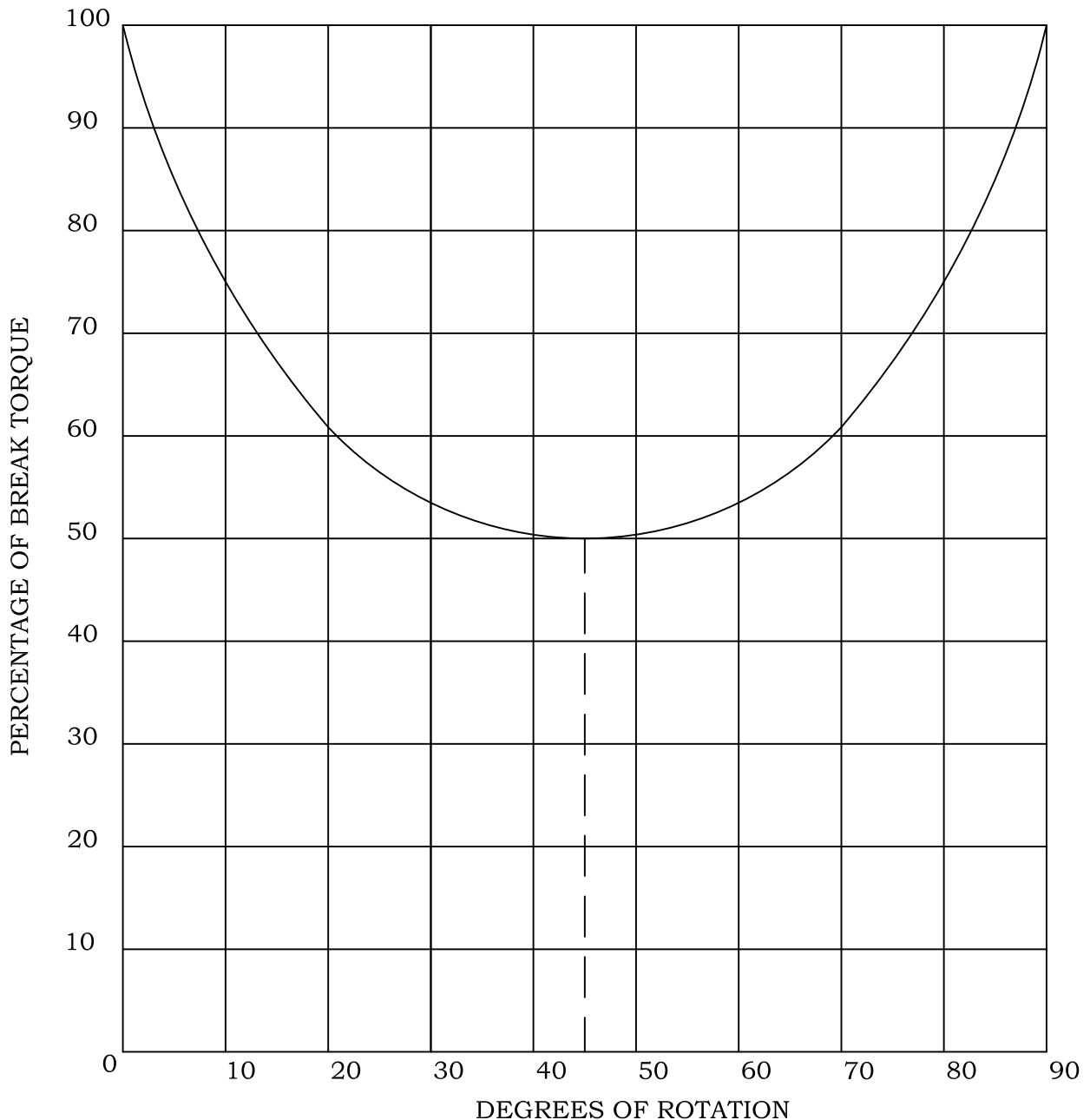
The torque outputs (pressure to open,pressure to close) produced by double-acting actuators are expressed as break and run torques.The break torque is the torque produced at the biginning and the end of the Scotch-yoke rotation. The run torque is the torque produced at the mid-point (45 degrees) of the Scotch-yoke rotation.

KENWOOD VALVE CONTROLS (INDIA) PVT. LTD.

DOUBLE ACTING PNEUMATIC ACTUATOR
OUTPUT TORQUE (NM) FOR SYMMETRIC SCOTCH-YOKE
DESIGN

MODEL	POSITION	@40PSIG (2.8Kg/sq.cms)	@60PSIG (4.2Kg/sq.cms)	@80PSIG (5.5Kg/sq.cms)	@100PSIG (7Kg/sq.cms)
Z06	Starting/Ending	451	677	902	1128
	Run(minimum)	225	339	451	564
A08D	Starting/Ending	1229	1838	2445	3049
	Run(minimum)	612	919	1225	1528
A10D	Starting/Ending	1914	2859	3818	4765
	Run(minimum)	955	1438	1916	2389
A12D	Starting/Ending	2746	4118	5488	6859
	Run(minimum)	1377	2065	2749	3435
B08D	Starting/Ending	1694	2535	3372	4215
	Run(minimum)	845	1269	1690	2109
B10D	Starting/Ending	2635	3949	5267	6579
	Run(minimum)	1317	1975	2633	3292
B12D	Starting/Ending	3792	5694	7585	9477
	Run(minimum)	1902	2850	3794	4738
B14D	Starting/Ending	5158	7738	10322	12898
	Run(minimum)	2585	3869	5159	6448
C10D	Starting/Ending	4715	7068	9424	11779
	Run(minimum)	2358	3537	4715	5890
C12D	Starting/Ending	6785	10175	13570	16960
	Run(minimum)	3395	5092	6786	8482
C14D	Starting/Ending	9233	13852	18465	23085
	Run(minimum)	4620	6925	9235	11545
2C10D	Starting/Ending	9422	14135	18845	23555
	Run(minimum)	4715	7070	9425	11780
2C12D	Starting/Ending	13575	20355	27135	33925
	Run(minimum)	6785	10175	13570	16960
2C14D	Starting/Ending	18475	27705	36935	46165
	Run(minimum)	9235	13850	18465	23080

KENWOOD VALVE CONTROLS (INDIA) PVT. LTD.

DOUBLE ACTING PNEUMATIC ACTUATOR

SIDE VIEW

FRONT VIEW
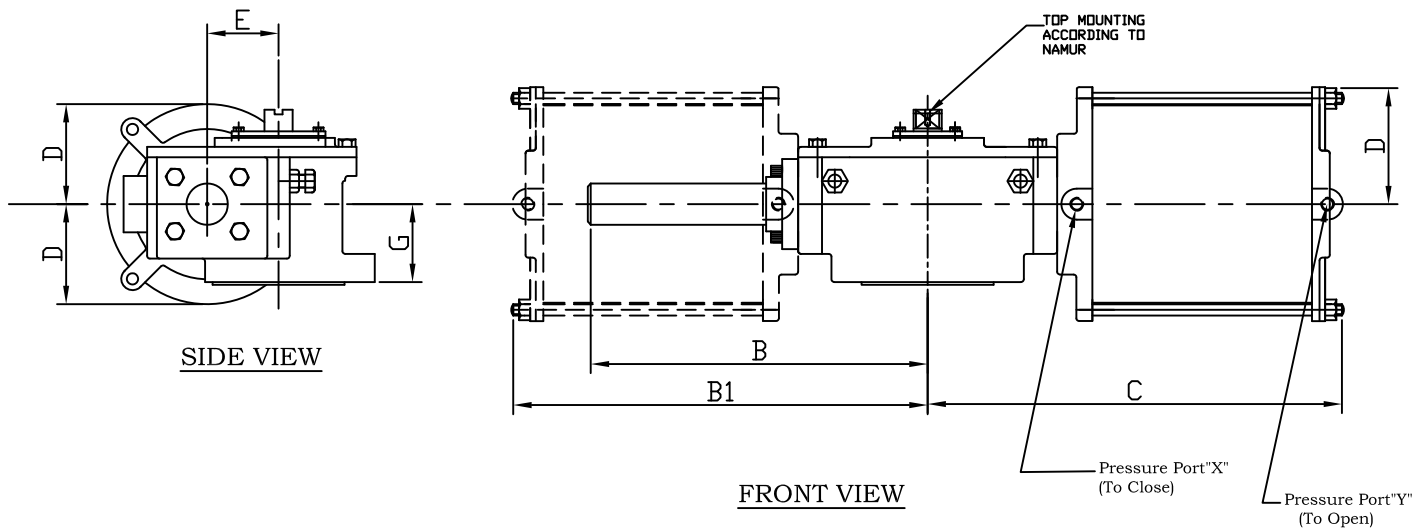
MODEL	B	B1	C	D	E	G	"X" & "Y"	MOUNTING ISO 5211	MAXIMUM STEM ACCEPTANCE		
									DIA	SQUARE	DEPTH
	780		885								
Z06	273	-	345	85	50	60	$\frac{1}{4}$"BSP(F)	F10	30	22	28
A08	360	-	435	106	76	83	$\frac{1}{4}$"BSP(F)	F14/F16	72	55	140
A10	360	-	450	134	76	83	$\frac{3}{8}$"BSP(F)	F14/F16	72	55	140
A12	360	-	450	162	76	83	$\frac{3}{8}$"BSP(F)	F14/F16	72	55	140
B08	480	-	585	106	105	87	$\frac{1}{4}$"BSP(F)	F16/F25	72	55	140
B10	480	-	595	134	105	87	$\frac{3}{8}$"BSP(F)	F16/F25	72	55	140
B12	480	-	710	188	105	87	$\frac{3}{8}$"BSP(F)	F16/F25	72	55	140
B14	480	-	710	188	105	87	$\frac{1}{2}$"BSP(F)	F16/F25	98	75	140
C10	780	-	855	134	188	113	$\frac{3}{8}$"BSP(F)	F25/F30	98	75	200
C12	780	-	910	188	188	113	$\frac{3}{8}$"BSP(F)	F25/F30	98	75	200
C14	780	-	910	188	188	113	$\frac{1}{2}$"BSP(F)	F25/F30	160	-	200
2C10	-	850	855	134	188	113	$\frac{3}{8}$"BSP(F)	F25/F30/F35	160	-	200
2C12	-	900	910	188	188	113	$\frac{3}{8}$"BSP(F)	F25/F30/F35	160	-	200
2C14	-	900	910	188	188	113	$\frac{1}{2}$"BSP(F)	F30/F35/F40	180	-	200

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
4. DRIVE HOLE CAN BE EITHER SQURE, DOUBLE D OR KEY WAY AS PER CUSTOMER REQUIREMENT

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