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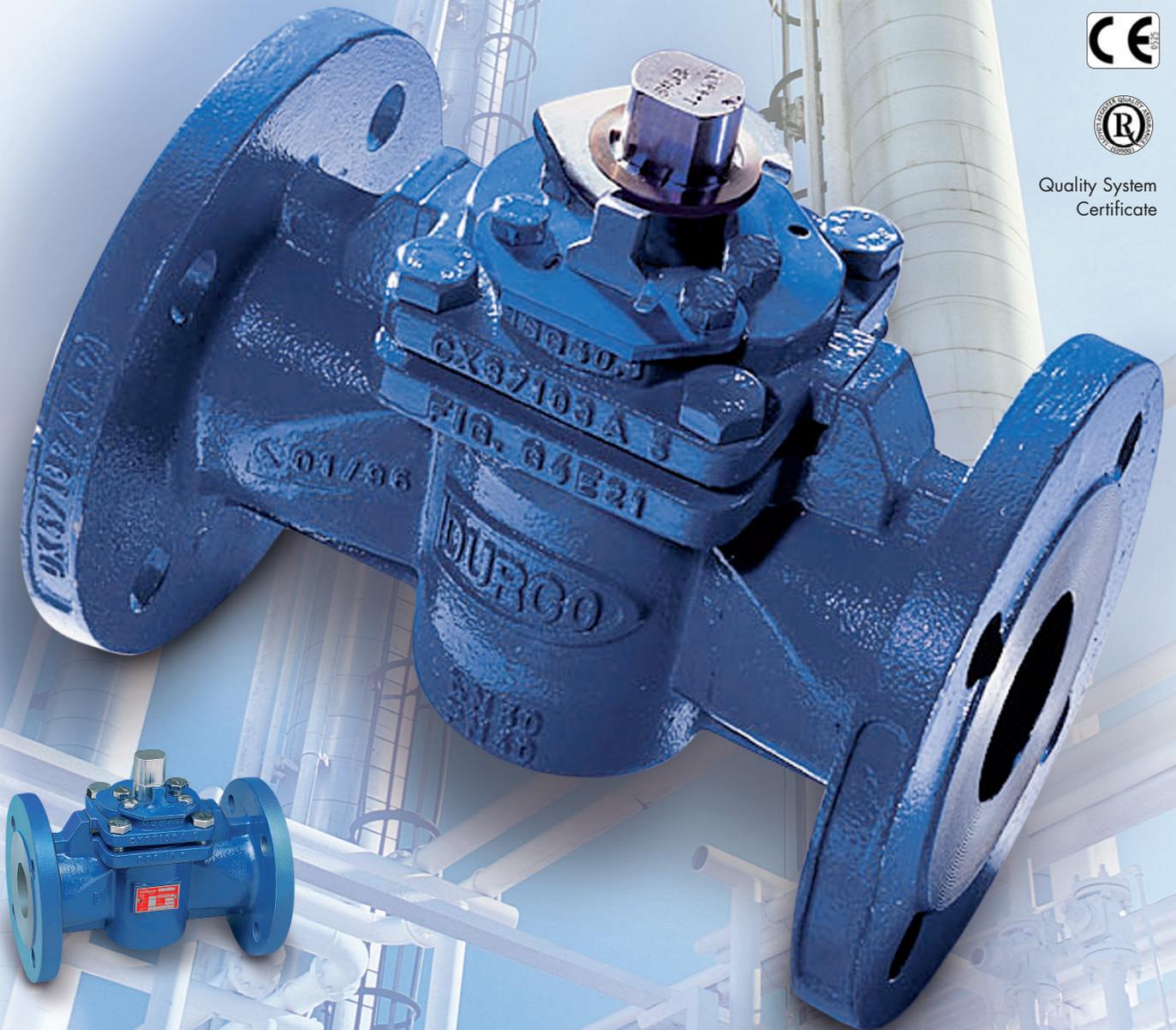
# G4E EUROPA™ SleeveLine®

CHEMICAL SERVICE VALVE

The New Standard For Performance



Quality System  
Certificate



Bulletin V-23c (E)

Experience In Motion

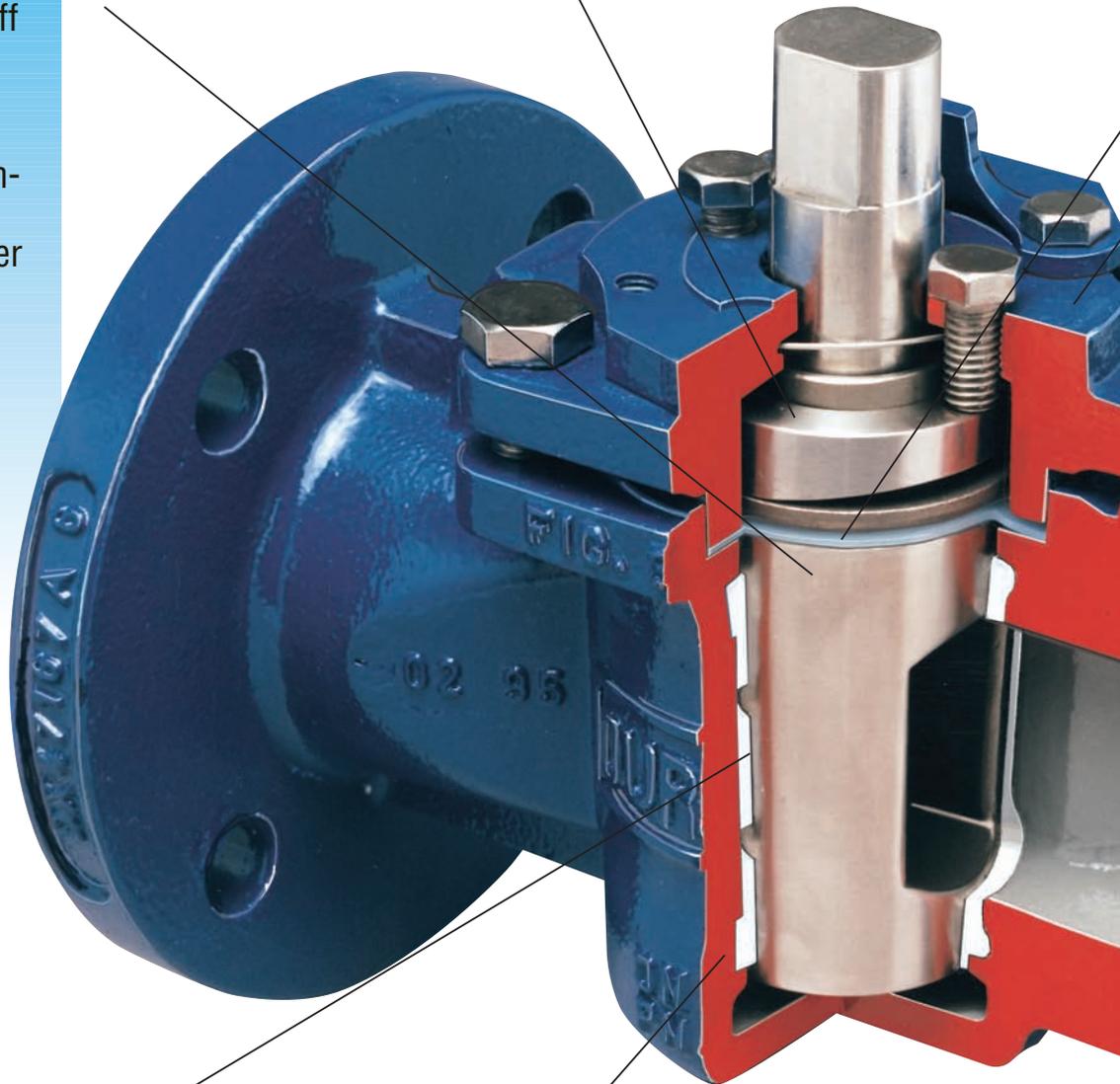
# Durco G4E Europa Valves Provide Bubble Tight Shutoff and ISO Mounting

## Euro Sleeveline

valves offer tighter shutoff than other rotary design valves and emissions containment equal to or better than specially designed severe service valves. They are a best choice for difficult chemical applications and for isolation of pumps, tanks, reactors and other critical equipment.

*Unique tapered plug design assures reduced turning torque and in-line seal adjustment for wear.  $\pm 5$  mm (3/16 in) adjustment; plug cannot bottom out.*

*Rocker arm adjustment ensures positive sealing with the valve in-line.*



*Large seal area of the PTFE sleeve (as much as 10X greater than valves of other design) delivers positive shutoff and extended service life. Sealing is bi-directional.*

*Available sizes: DN 15 (1/2 in), 20 (3/4 in), 25 (1 in), 32 (1-1/4 in), 40 (1-1/2 in), 50 (2 in), 65 (2-1/2 in), 80 (3 in), 100 (4 in), 125 (5 in) and 150 (6 in).*

*Raised ribs, grooves and recesses positively lock sleeve in body.*

*Pressure class: PN 10-40*

*The G4E valve has been designed according to the criteria of TRB801 No. 45 (AD-A4, DIN 3840 (calculation) and TRB 801 No. 45.*

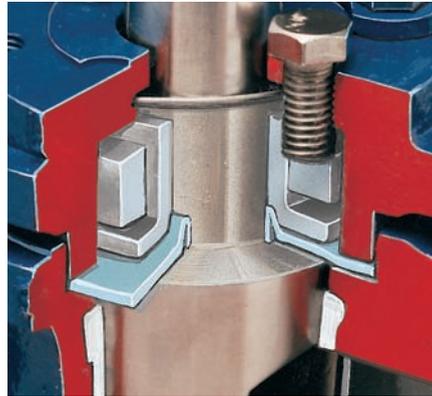
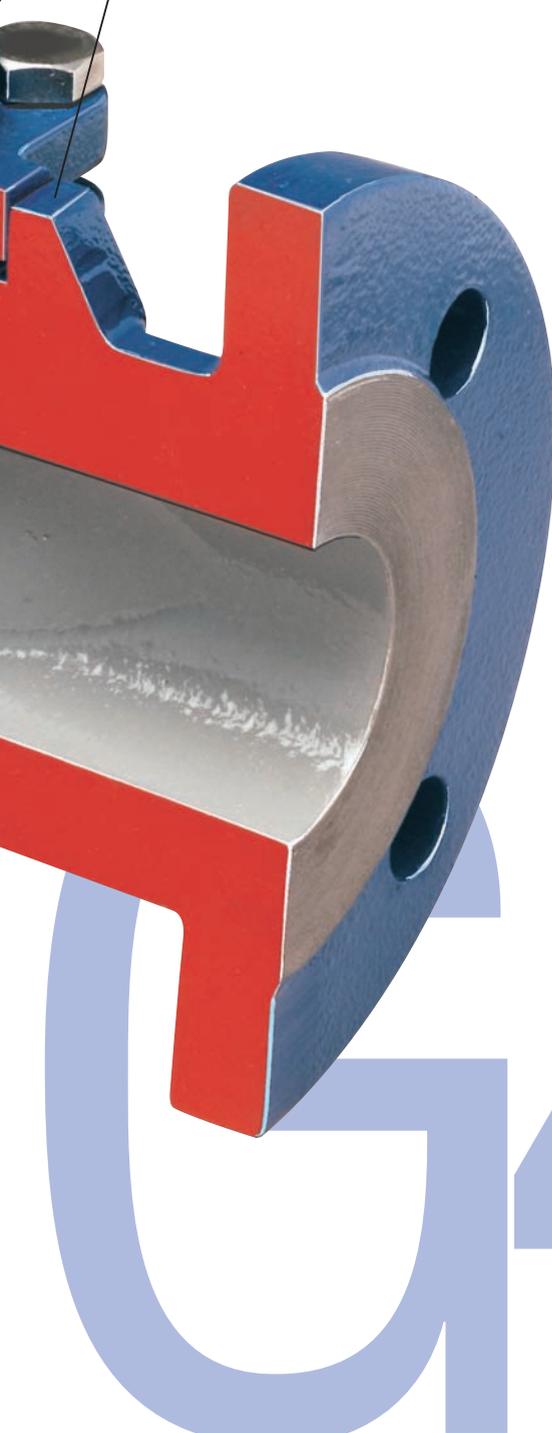
*Face-to-face flange dimensions conform to EN 558-1, row 1 (ISO 5752, DIN 32021F1).*

# In-Line And Thru-Line Seal Adjustability

Reverse lip design of the PFA diaphragm provides static and self-adjusting dynamic stem seal design. Backup stainless steel diaphragm is optional.

DIN/ISO 5211 mounting pad facilitates actuation.

Rugged, heavy-duty body may be specified in corrosion resistant stainless steels, nickel base and light reactive alloys.



### Static Seal

PFA diaphragm wedges against stem with an interference fit to seal against leakage to atmosphere or air leakage into valve on vacuum service.

### Dynamic Seal

Reverse lip diaphragm provides self-energizing dynamic stem seal where pressure activates the reverse lip to seal against the stem.

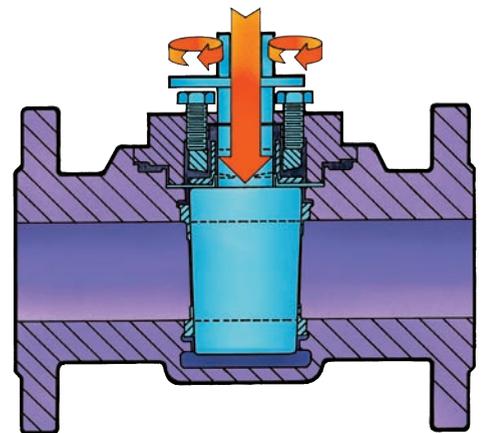
### Line sealing

The interference fit of the tapered plug with the PTFE sleeve serves as the sealing surface. The sleeve totally surrounds plug ports and seals the circumference of the plug, top and bottom. There are no cavities to fill up with product, and the seal area is larger than in ball valves. Sealing is both upstream and downstream.

- Seal is totally independent of line pressure.
- There is no metal to metal contact.
- Valve remains free-turning throughout its life and never requires lubrication.
- Seal is adjustable.
- Wiping action between sleeve and plug provides for good slurry handling.

### Positive stem seal

A PFA diaphragm with reverse lip design provides both static and self-adjusting dynamic stem sealing. This serves as a secondary atmospheric seal to the primary plug/sleeve seal. The stem seal is not normally exposed to full line pressure.



### Positive in-line plug adjustment

The unique design of the tapered plug allows a bubble tight, adjustable seal. The plug can be pushed deeper into the sleeve by two adjuster fasteners. The rocker arm gives one plane contact and resultant force down the centerline of the plug. Uniform adjustment of the two fasteners is not necessary.

# G4EB Marathon™ Valves Deliver High Cycle, Positive Stem Sealing Durability

## Unique stem-sealing design

The Marathon valve can be used with confidence in chemical processing applications where tight shutoff and emissions containment are priority requirements. As a bonus, its very design assures long life, high cycle performance.

## Viton O-rings

A pair of Viton® O-rings prevents stem leakage while containing line pressure. They also protect the thrust collar against attack from atmospheric corrosion. PTFE back-up rings firmly lock the Viton O-rings in the stem grooves.

Optional Kalrez® O-rings are available for special services.



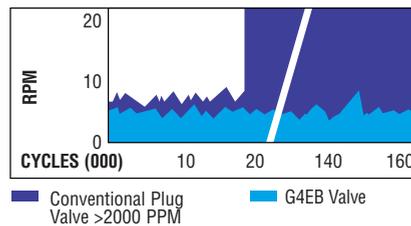
## New welded diaphragm

The integral thrust collar/alloy diaphragm is welded together for another line of defense against leakage to the atmosphere. The underside of the metal bellows-like diaphragm acts as an expansion joint by allowing the PFA diaphragm to adjust to plug movement and pressure changes.

The Hastelloy® C diaphragm provides an impermeable barrier to chlorine as well as many other services.

## G4EB Marathon Valve

Viton O-Rings & Welded Metal Diaphragm  
Stem Seals  
Sleeve & Diaphragm cut in four places



## Passing the test

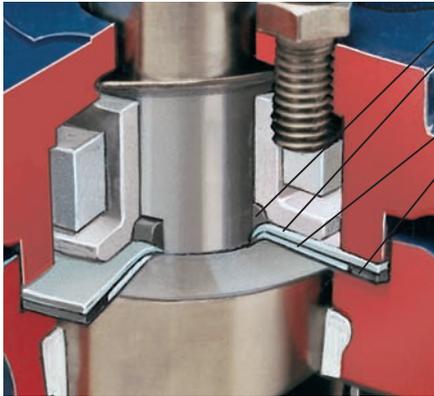
In a remarkable test, lab technicians defeated the PTFE sleeve and PFA diaphragm, the G4EB's primary and secondary seals, by cutting both of them in four places. After 160,000 cycles, the G4EB emitted less than 10 parts per million of helium and showed no visible signs of stem wear.

## The conclusion

G4EB Marathon valve fugitive emission containment is often equal to more expensive valves designed specifically as severe or toxic service valves.

©Viton and Kalrez are registered trademarks of the DuPont Company.  
©Hastelloy is a registered trademark of Haynes International.

# G4EZ Fire Sealed Valves



Packing (Grafoil®)  
Diaphragm  
(Stainless Steel  
or Monel®)  
Diaphragm (PFA)  
Gasket (Grafoil)

Durco Sleeveless valves have been fire tested in accordance with the procedures set forth in API 607 Third Edition. They surpassed the external sealing requirements of Section 4, Paragraph 4.2, "Performance Requirements."

**Durco firesealed valves have been successfully used on refinery applications such as:**

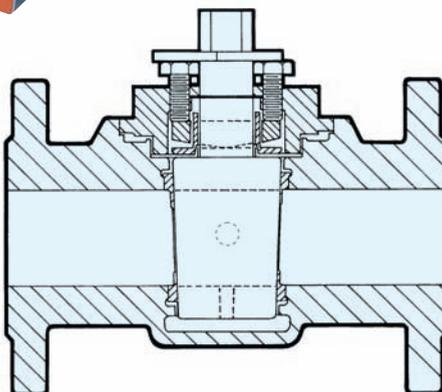
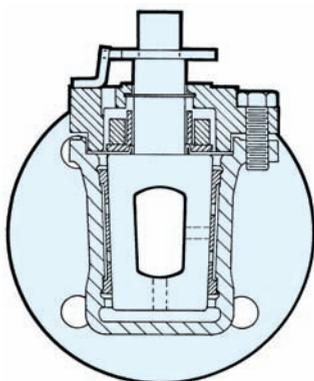
- Isomerization
- Gas plant
- Blending
- Sulfur plant
- Light ends
- Crude desalting

G4Z fire sealed valves have been temperature cycled to 204° C (400°F)\*. They have provided performance superior to any other soft-seated valves available for temperature cycling applications.

## Chlorine Valves

The Durco G4E Chlorine valve is built in accordance with the recommendations of the U.S. Chlorine Institute. This valve is manufactured with a cast carbon steel body and a vented Monel plug for dry chlorine service. It is cleaned, dried and packaged for delivery.

Vented plug design is also recommended for other cold liquids such as anhydrous HCL.



\* 232° C (450°F) with optional Duriron II sleeve.

## Fire Sealed Sleeveless

valves – both G4EZ and G4EBZ models – incorporate special Grafoil® packing rings at the stem and Grafoil® gaskets at the top cap that reduce atmospheric leakage to a negligible amount should fire destroy the PTFE sleeve and diaphragm. A metal diaphragm keeps the Grafoil® packing in place if the top seal is destroyed.

®Grafoil is registered trademark of Union Carbide Corporation.

## Control Valves That Are Cost Effective

**S**pecially trimmed control valves reduce noise, cavitation and flashing while improving flow and pressure performance. Unique, self-cleaning design prevents particulate build-up and clogging.

Durco V-port alloy control valves are available in 25 mm (1 in) through 150 mm (6 in) sizes with full open  $K_V$  values of 3 through 400. They are available in a wide range of materials to satisfy your flow control needs.

Standard port G4E control valves are available in 15 mm (1/2 in) through 150 mm (6 in) sizes.



*G4E is readily actuated with Automax's SuperNova™ rack and pinion actuator and Apex 5000™ positioner with Pharos® visual position indicator.*

### **Automax® automation equipment**

Automax Inc., a wholly owned subsidiary of Flowserve Corporation, is a specialist in complete automation systems. Automax markets a broad line of rack and pinion, heavy-duty and electric actuators. In addition, Automax offers engineered special control circuits, solenoid valves, limit switches, positioners and actuator mounting kits.

# Technical Data for Durco G4E Valves

## Testing assures Durco dependability

Durco G4E valves are a revolutionary design. They incorporate all the best design and construction improvements that have been made in soft-seated valves since Flowserve Corporation introduced the original non-lubricated plug valve in 1950.

G4E valves have been extensively tested to ensure, insofar as possible, a completely reliable process valve.

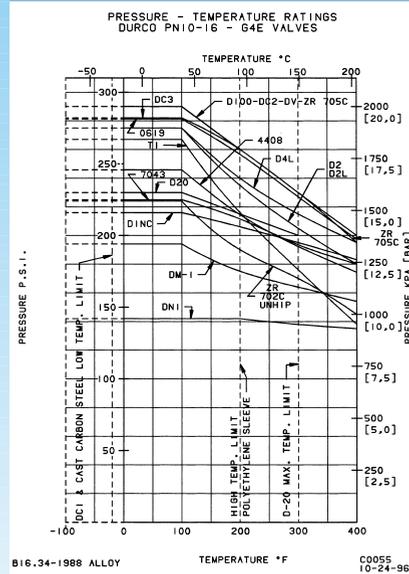
The unique reverse lip stem seal has been tested from -46°C (-50°F) to 204°C (400°F) maximum, and with pressures up to 4960 kPa (720 psig). For higher temperatures contact your Flowserve Sales Office.

High temperature throttling tests at 204°C (400°F) with pressure drops of 1205 kPa (175 psig) have proven the superiority of the G4E valves over other soft-seated valves. Ask your Flowserve Sales Representative for specific test results.

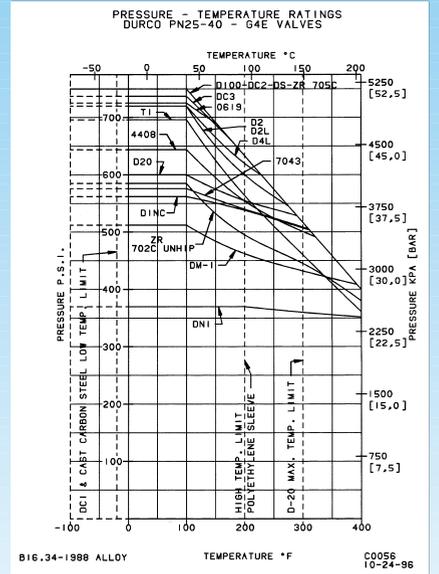
The valves have been temperature cycled to 204°C (400°F), and have provided performance superior to any other soft-seated valve available for cyclical temperature situations.

We believe the G4E valve is the best soft-seated valve on the market today, and will outlast and outperform all competitive valves.

## G4E Pressure-Temperature Ratings Class 150 PN 10-16\*



## G4E Pressure-Temperature Ratings Class 300 PN25-40\*



7043 = 0.7043/GGG 40.3, Ref. ASTM A-395; DINI = Ductile Cast Iron Nickel Plated; 0619 = 1.0619/GSC-25, Ref. ASTM A-216, WCB; DSNI = Cast Steel Nickel Plated; D2 = ASTM A351/A744 Gr. CF8 (304 S.S.); D2L = ASTM A351/A744 Gr. CF3 (304L S.S.); 4408 = 1.4408/G-X6 CrNiMo 18.10, Ref. ASTM A744, CF8M; D4L = ASTM A351/A744 Gr. CF3M (316 L S.S.); DV = Durcomet 5; CD = ASTM A351/A744 Gr. CD4M Cu (Durcomet 100); D20 = ASTM A351/A744 Gr. CN-7M (Durimet 20); CK3M = ASTM A351/A744 Gr. CK-3MCuN (254 SMO); DIN = ASTM A494 Gr. CY-40 (Inconel 600); DM = ASTM A494 Gr. M35-2 (Monel 400); DMM = ASTM A494 Gr. M35-1 (Monel 400); DNI = ASTM A494 Gr. CZ-100 (Nickel 200); DC2 = ASTM A494 Gr. N-7M (Chlorimet 2); DC3 = ASTM A494 Gr. CW-6M (Chlorimet 3); Ti = ASTM B367 Gr. C-3 (Titanium); Zr = ASTM B752 Gr. 702C (Zirconium); Zr5 = ASTM B752 Gr. 705C (Zirconium).

## Pressure-temperature ratings

The pressure-temperature ratings of all the materials above are based on mechanical property requirements cited in the latest DIN, ASTM or ANSI specifications.

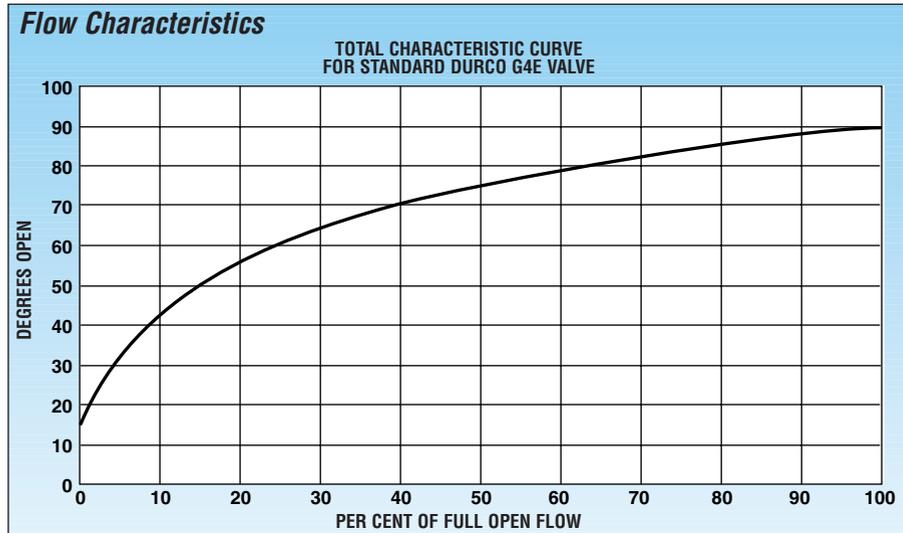
Valves may require adjustment to remain drop tight at the lower end of temperature range when operating below -17°C (0°F) or in extreme temperature cycles.

*Special Note:* Flowserve pursues an aggressive and continuous product development program. As a result, Flowserve reserves the right to alter specifications without notice.

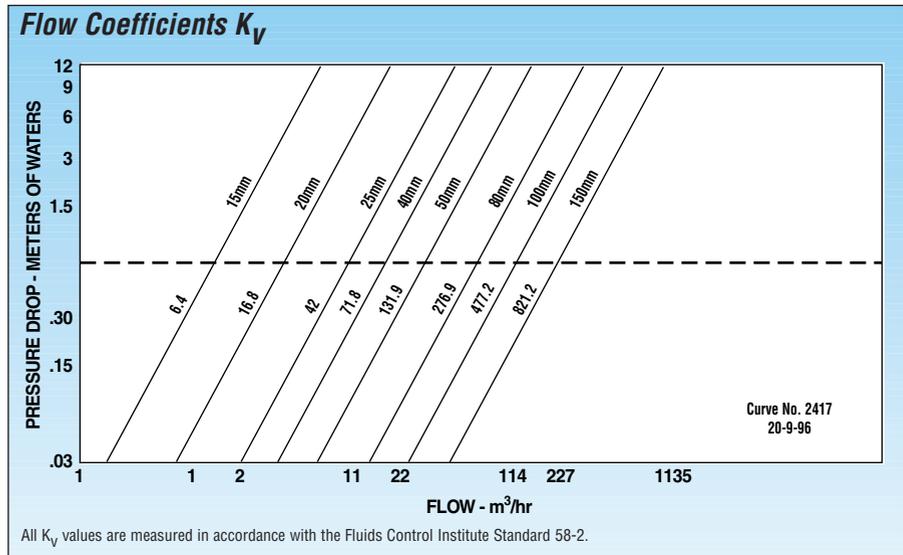
# Technical Data for Durco G4E Valves

## Manual valve turning torque\*

The turning torque of a PTFE sleeved plug valve is determined by two primary factors: setting of the plug to hold line pressure; and operating conditions (temperature, corrosion deposits, frequency of operation, etc.). All G4E valves 150 mm and smaller are air tested at ambient temperature. The gas closure test is in agreement with ANSI B16.34, 1988 for both the Class 150 and Class 300 valves. The average turning torques for new valves are shown in the table below.



V-Port	
Size (mm)	Available $K_V$ ( $C_V$ )
15	—
20	—
25	3,5 (4), 6,9 (8), 26 (30)
32	3,5 (4), 6,9 (8), 26 (30)
40	26 (30)
50	46,5 (54)
65	105 (122)
80	105 (122)
100	162 (188)
125	162 (188)
150	318 (370)

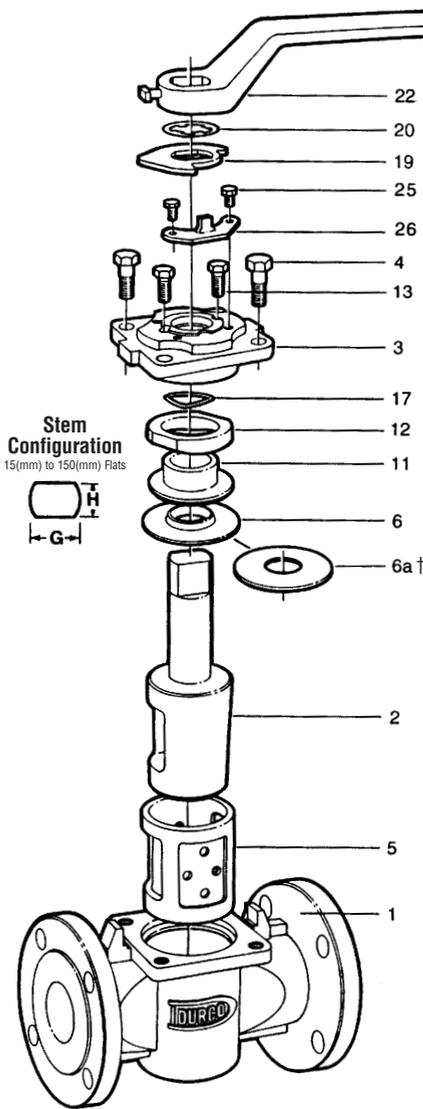


Valve Standards Applicable To G4E21	
Specification	Title
ISO 5752 (1982) Table 6-Long	Face to Face Dimensions
DIN 2501 (1971) DIN3230 PART 3	Flange Dia., Flange Drilling, Raised Face Dia., Etc.
DIN 2543 (1977) DIN 2545 (1977)	Flange Thickness, Raised Face Height, Etc.
ANSI B16.34 (1988) DIN 3840 (1982)	Valve Body Wall Thickness
DIN/ISO 5211.1 DIN/ISO 5211.2 (1993)	Actuator Mounting Flange

Turning Torque / Sizing Torque – Nm (Ft-Lbs)					
Valve Size		Turning Torque		Sizing Torque (max)*	
		Nm	(Ft-Lbs)	Nm	(Ft-Lbs)
15 mm	(1/2 in)	11	(8)	34	(25)
20 mm	(3/4 in)	11	(8)	34	(25)
25 mm	(1 in)	18	(13)	38	(28)
32 mm	(1 1/4 in)	18	(13)	38	(28)
40 mm	(1 1/2 in)	25	(18)	56	(41)
50 mm	(2 in)	34	(25)	95	(70)
65 mm	(2 1/2 in)	48	(35)	133	(98)
80 mm	(3 in)	48	(35)	133	(98)
100 mm	(4 in)	102	(75)	271	(200)
125 mm	(5 in)	102	(75)	271	(200)
150 mm	(6 in)	272	(200)	678	(500)

\*For actuator sizing torques contact your nearest Flowserve office or distributor.

# G4E Valves



† Backup stainless steel diaphragm is optional.

## Parts and Materials List

Item No.	Description	Material of Construction	No. Req.
1	Body	*	1
2	Plug	*	1
3	Top Cap	1.4408/CF8M or Ductile Cast Iron	1
4	Top Cap Fastener	1.4301 (B8-M S.S.)	4
5	Sleeve	PTFE***	1
6	Diaphragm	PFA	1
6a	Diaphragm	1.4301 S.S.	1
11	G4E Thrust Collar	Durcomet 100**	1
12	Adjuster	Durcomet 100**	1
13	Adjuster Fastener	1.4301 (B8-M S.S.)	2
17	Grounding Spring	301 S.S.	1
19	Stop Collar	Cadmium Plated Carbon Steel	1
20	Stop Collar Retainer	302 S.S.	1
22	Wrench	Ductile Iron	1
25	Stop Fastener	1.4301 (B8-M S.S.)	2
26	Stop	304 S.S.	1

\* Body (Item No. 1) and Plug (Item No. 2) available in the following cast materials: 0.7043, 1.0619, 1.4408, Durcomet 100, Durimet 20, Chlorimet 2 and 3, Nickel, Monel, Inconel, Titanium and Zirconium.

\*\* Durcomet 100 is a high alloy stainless steel, CD-4M Cu.

\*\*\* Other materials available on request.

## Materials Selection Chart A

7043 = 0.7043/GGG 40.3, Ref. ASTM A-395
DINI = Ductile Cast Iron Nickel Plated (Plug Only)
0619 = 1.0619/GSC-25, Ref. ASTM A-216, WCB
DSNI = Cast Steel Nickel Plated (Plug Only 75 mm (3 in) & larger)
D2 = ASTM A351/A744 Gr. CF8 (304 S.S.)
D2L = ASTM A351/A744 Gr. CF3 (304L S.S.)
4408 = 1.4408/G-X6 CrNiMo 18.10, Ref. ASTM A744, CF8M
D4L = ASTM A351/A744 Gr. CF3M (316L S.S.)
DV = Durcomet 5 (Durco's High Silicon Stainless Steel)
CD = ASTM A351/A744 Gr. CD4M Cu (Durcomet 100)
D20 = ASTM A351/A744 Gr. CN-7M (Durimet 20)
CK3M = ASTM A351/A744 Gr. CK-3MCuN (254 SMO) <sup>1</sup>
DIN = ASTM A494 Gr. CY-40 (Inconel 600) <sup>2</sup>
DM = ASTM A494 Gr. M35-2 (Monel 400) <sup>2</sup>
DMM = ASTM A494 Gr. M35-1 (Monel 400) <sup>2</sup>
DNI = ASTM A494 Gr. CZ-100 (Nickel 200)
DC2 = ASTM A494 Gr. N-7M (Chlorimet 2)
DC3 = ASTM A494 Gr. CW-6M (Chlorimet 3)
Ti = ASTM B367 Gr. C-3 (Titanium)
Zr = ASTM B752 Gr. 702C (Zirconium)
Zr5 = ASTM B752 Gr. 705C (Zirconium)

1. Registered trademark of Avesta AB

2. Registered trademark of the International Nickel Company, Inc.

# How To Specify G4E Sleeveless Valves

## EXAMPLE

Size	Model	Style	Options	Material
1	PUXA	F1PW	X	SS8T

25mm

Standard European PN 10 plug valve  
Raised face flanged, standard plug, PFA  
diaphragm, wrench operator

No options

Stainless body and plug, 1.4301 fasteners,  
PTFE sleeve

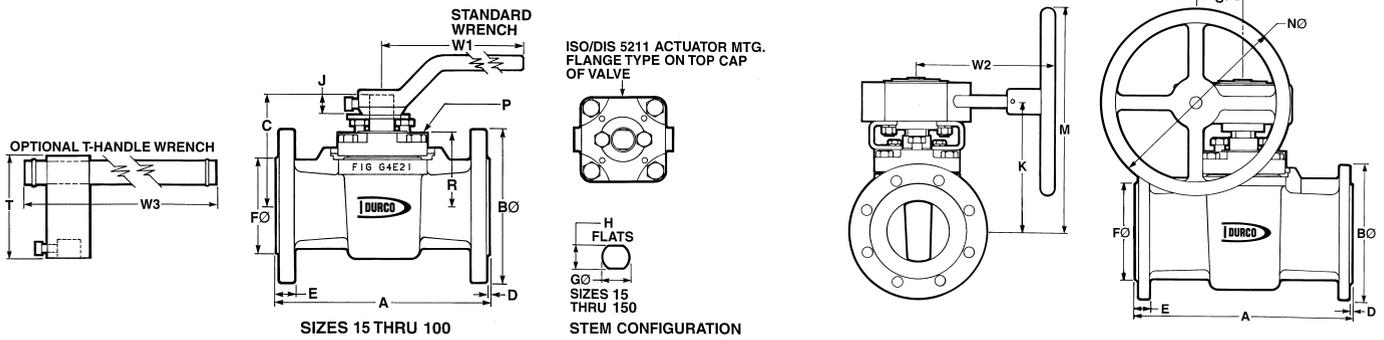
## SELECTION, INSTALLATION, OPERATION AND MAINTENANCE

Although Flowserve can, and often does, provide general guidelines, it is obviously not possible to provide application specific data and warnings for all conceivable applications. The purchaser/end user must therefore assume the ultimate responsibility for the proper selection, installation, operation and maintenance of the products. Read the appropriate IOM before installing, operating and repairing any valve. The purchaser/end user should train its employees and/or contractors in the safe use of the Flowserve products in connection with the purchaser's manufacturing process.

## How To Specify:

	Size	Model	Style	Option	Material
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
<b>SIZE</b>					
	<b>Selection</b>	<b>Code</b>			
	15mm	.5			
	20mm	.75			
	25mm	1			
	30mm	.12			
	40mm	1.5			
	50mm	2			
	65mm	2.5			
	80mm	3			
	100mm	4			
	125mm	5			
	150mm	6			
<b>MODEL</b>					
1 Type Valve	Plug	P			
2 Model	European G4E	U			
3 Jacket	None	X			
4 Class	PIN 10-40	A			
	PIN 10-16	B			
	PIN 25-40	C			
<b>STYLE</b>					
1 End	Flanged/Raised Face F				
	Flanged/Flat Face	L			
	Special	S			
2 Plug	Standard port	1			
	V-port	4			
	V-port	8			
	V-port	30			
	V-port	54			
	V-port	122			
	V-port	188			
	V-port	370			
	Soundtrim	9			
	Vented	V			
	Special	S			
3 Seal	PFA diaphragm	P			
	Fireseal	Z			
	Marathon	M			
	Marthon/Fireseal	B			
	Special	S			
4 Operator	Bare	B			
	Wrench	W			
	Gear	G			
	Chain	C			
	Special	S			
<b>OPTIONS</b>					
	None	X	Oxygen clean	O	
	Block & bleed	B	Phosgene clean	P	
	Chlorine clean	C	Special/Multiple	S	
	Dow chlorine	D			
<b>MATERIALS</b>					
1 Body	0.7043	D	Chlorimet 3	3	
	1.0619	C	Monel M		
	1.4408	S	Inconel	I	
	Durcomet 100	E	Titanium	T	
	Durimet 20	A	Zirconium	Z	
	Chlorimet 2	2			
2 Plug	0.7043	D	Chlorimet 3	3	
	1.0619	C	Monel M		
	1.4408	S	Inconel	I	
	Durcomet 100	E	Titanium	T	
	Durimet 20	A	Zirconium	Z	
	Chlorimet 2	2			
3 Fasteners	1.4301	8			
4 Seat	PTFE	T	TFEG (Glass)	G	
	TM	M	TFEC (Calcium)	C	
	UHMWPE	P			

# G4E Valve Dimensions



SIZES 15 THRU 100

STEM CONFIGURATION

Metric Units																					
Valve Size	Drilling PN 10-40			Drilling PN 10-16			Drilling PN 25-40			A	B			C	D	E			F		
	No.	Size	B.C.	No.	Size	B.C.	No.	Size	B.C.		PN 10-40	PN 10-16	PN 25-40			PN 10-40	PN 10-16	PN 25-40	PN 10-40	PN 10-16	PN 25-40
15	4	14	65						130	95			81	2	16			45			
20	4	14	75						150	105			81	2	18			58			
25	4	14	85						160	115			94	2	18			68			
32	4	18	100						180	140			94	2	18			78			
40	4	18	110						200	150			106	3	18			88			
50	4	18	125						230	165			121	3	20			102			
65				4	18	145	8	18	145	290		185	185	152	3		18	22		122	122
80	8	18	160						310	200			152	3	24			138			
100				8	18	180	8	22	190	350		220	235	194	3		20	24		158	162
125				8	18	210	8	26	220	400		250	270	194	3		22	26		188	188
150				8	22	240	8	26	250	480		285	300	247	3		22	28		212	218
Valve Size	GØ		H	J	K	M	N	P ISO Pad	R	S	T	W1 Std. Wrench	W2 Std. Gear	W3 Opt. T-Handle	Area of Port Sq. Cm.	Weights - Kgs					
																PN 10-40	PN 10-16	PN 25-40			
15	13.61/13.49		11.10/10.97	18				F05	48		130	152		350	1.59	3.2					
20	13.61/13.49		11.10/10.97	18				F05	48		130	152		350	1.59	3.9					
25	19.99/19.86		16.66/16.54	22				F05	58		140	178		510	5.1	6.0					
32	19.99/19.86		16.66/16.54	22				F05	58		140	178		510	5.1	7.0					
40	19.99/19.86		16.66/16.54	24				F05	67		140	229		510	7.8	9.3					
50	27.31/27.18		22.23/22.10	25				F07	79		145	305		610	13.0	11.6					
65	27.31/27.18		22.23/22.10	30				F07	106		145	457		610	30.0		16.0	18.0			
80	27.31/27.18		22.23/22.10	30				F07	106		145	457		610	30.0	21.2					
100	42.85/42.60		36.09/35.97	40	213		305	F10	133	76	150	762	224	710	48.0		30.4	35.3			
125	42.85/42.60		36.09/35.97	40	213		305	F10	133	76			224		48.0		45.0	55.0			
150	47.63/47.37		36.09/35.97	41	263		305	F12	183	76			224		104.0		66.9	73.7			

English Units																					
Valve Size	Drilling PN 10-40			Drilling PN 10-16			Drilling PN 25-40			A	B			C	D	E			F		
	No.	Size	B.C.	No.	Size	B.C.	No.	Size	B.C.		PN 10-40	PN 10-16	PN 25-40			PN 10-40	PN 10-16	PN 25-40	PN 10-40	PN 10-16	PN 25-40
1/2	4	9/16	29/16						5 1/8	3 3/4			3 3/16	1/16	5/8			1 3/4			
3/4	4	9/16	2 15/16						5 15/16	4 1/8			3 3/16	1/16	1 1/16			2 1/4			
1	4	9/16	3 3/8						6 5/16	4 1/2			3 11/16	1/16	1 1/16			2 11/16			
1 1/4	4	1 1/16	3 15/16						7 1/16	5 1/2			3 11/16	1/16	1 1/16			3 1/16			
1 1/2	4	1 1/16	4 5/16						7 7/8	5 15/16			4 3/16	1/8	1 1/16			3 7/16			
2	4	1 1/16	4 15/16						9 1/16	6 1/2			4 3/4	1/8	3/4			4			
2 1/2				4	1 1/16	5 11/16	8	1 1/16	5 11/16	11 7/16		7 1/4	7 1/4	6	1/8		1 1/16	7/8		4 7/8	4 13/16
3	8	1 1/16	6 5/16						12 3/16	7 7/8			6	1/8	15/16			5 7/16			
4				8	1 1/16	7 1/16	8	7/8	7 1/2	13 3/4		8 11/16	9 1/4	7 5/8	1/8		3/4	15/16		6 1/4	6 3/8
5				8	1 1/16	8 1/4	8	1	8 11/16	15 3/4		9 7/8	10 5/8	7 5/8	1/8		7/8	1		7 3/8	7 3/8
6				8	7/8	9 7/16	8	1	9 7/8	18 7/8		11 1/4	11 13/16	9 3/4	1/8		7/8	1 1/8		8 3/8	8 5/8
Valve Size	GØ		H	J	K	M	N	P ISO Pad	R	S	T	W1 Std. Wrench	W2 Std. Gear	W3 Opt. T-Handle	Area of Port Sq. In.	Weights - Lbs.					
																PN 10-40	PN 10-16	PN 25-40			
1/2	17/32		7/16	23/32				F05	1 7/8		5 1/8	6		13 3/4	1/4	7					
3/4	17/32		7/16	23/32				F05	1 7/8		5 1/8	6		13 3/4	1/4	9					
1	25/32		2 1/32	7/8				F05	2 5/16		5 1/2	7		20	13/16	13					
1 1/4	25/32		2 1/32	7/8				F05	2 5/16		5 1/2	7		20	13/16	16					
1 1/2	25/32		2 1/32	1				F05	2 5/8		5 1/2	9		20	1 1/4	21					
2	1 5/64		7/8	1 3/16				F07	3 1/8		5 11/16	12		24	2	26					
2 1/2	1 5/64		7/8	1 3/16				F07	4 3/16		5 11/16	18		24	4 5/8		35	40			
3	1 5/64		7/8	1 3/16				F07	4 3/16		5 11/16	18		24	4 5/8	47					
4	1 11/16		1 27/64	1 9/16	8 3/8	9	12	F10	5 1/4	3	5 7/8	30	8 13/16	28	7 3/8		67	78			
5	1 11/16		1 27/64	1 9/16	8 3/8		12	F10	5 1/4	3			8 13/16		7 3/8		99	121			
6	1 7/8		1 27/64	1 5/8	10 3/8		12	F12	7 3/16	3			8 13/16		16 1/8		148	163			

All dimensions are approximate and for illustration purposes only. For exact dimensions request certified dimensional prints.



***Flowserve has the answer to your corrosion resistant, quarter-turn valving needs.***

*Clockwise from top right.*

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