

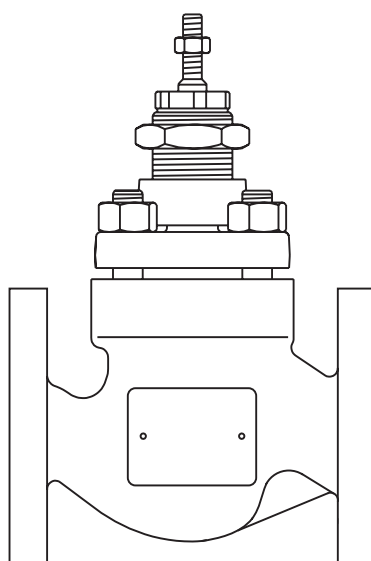


Spira-trol™ Two-port Control Valves ASME Standard K and L Series ½" to 4"

Description

Spira-trol™ is a range of two-port single seat globe valves with cage retained seats conforming to ASME standard. These valves are available in four body materials in sizes ranging from (½" to 4"). When used in conjunction with a pneumatic or electric linear actuator they provide characterized modulating or on/off control.

Important note: Throughout this document, reference has been made to the standard LEA or KEA control valve. With the exception of trim type, the LEA, KEA, LFA, KFA, LLA and KLA control valves are identical.



Sizes and pipe connections

Valve Series	Material	Screwed	SW	Flanged						
		NPT		ASME250	ASME125	ASME125	ASME150	ASME300	KS10	KS20
		Up to 2"		1" and 1½" to 4"		½" to 4" (excluding 1¼")		½" to 4"		
L Series	Cast Iron	•				•			•	
	Carbon Steel					•			•	
	Stainless Steel					•			•	
K series	SG Iron	•		•	•				•	
	Carbon Steel	•	•					•		•
	Stainless Steel	•	•					•		•

Standards

Designed in accordance with EN 60534. This product fully complies with the requirements of the EU Pressure Equipment Directive/UK Pressure Equipment (Safety) Regulations and carries the mark when so required.

Certification

This product is available with certification to EN 10204 3.1. Seat leakage test certificate is available on request.

Note: All certification/inspection requirements must be stated at the time of order placement.

Spira-trol™ valve characteristic - options:

LEA and KEA Equal percentage (E) - Suitable for most modulating process control applications providing good control at all flowrates.

LLA and KFA Fast opening (F) - For on/off applications only.

LFA and KLA Linear (L) - Primarily for liquid flow control where the differential pressures across the valve is constant.

Spira-trol™ valve options:

Stem sealing	PTFE chevron seals (P-N)	Standard
	Graphite packing (H)	High temperature applications
	Bellows / PTFE (B)	Zero emissions and thermal fluids PN25 - up to 572 °F
	Bellows / graphite (C)	Zero emissions, high temperature applications and thermal fluids PN25 - up to 797 °F
	Bellows/graphite secondary seals (D)	Zero emissions and high temperature applications PN16 - up to 572 °F
Seating	Metal-to-metal	431 stainless steel - standard 316L stainless steel
	Soft seating	Up to 338 °F - PTFE for Class VI shut-off for applications like compressed air or water where there is no temperature
		Up to 482 °F - PEEK (K) for Class VI shut-off
		Up to 428 °F PEEK (CandP) for Class VI shut-off
	Hard facing	316L stainless steel with Stellite™ 6 facing - for more arduous applications
Bonnet type	Standard bonnet	
	Extended bonnet for large pipe lagging or hot/cold applications	
Trim	Standard trim	
	Low noise and anti-cavitation trim (see TI-S24-59) Note: Not available with Reverseable PEEK Seat (C)	

Spira-trol™ is a modular valve based on 4 body sizes covering DN15-100 sizes (½" - 1", 1¼" - 2", 2½" - 3" and 4") in order to reduce the number of spare parts. The valves are available with a range of accessories including actuators, positioners, solenoid valves, limit switches.

Please refer to respective data sheets.

Special trims, please refer to TI-S24-59

EN version, please refer to TI-S24-71

Smart positioner, please refer to TI-P343-34 and TI-P343-36

Pneumatic Positioners please refer to TI-P370-14

For electro-pneumatic positioners please refer to TI-P343-43 and TI-P343-45

For large size Spira-trol™, please refer to TI-S24-73

Materials - ½" to 4"

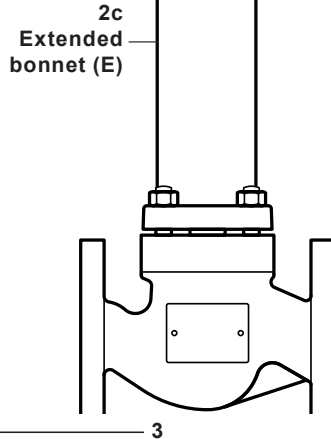
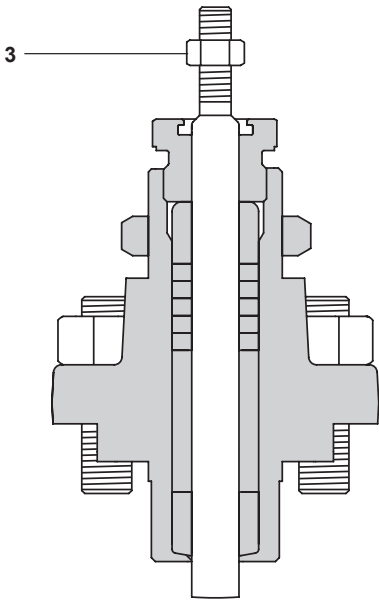
	LEA3 ½" to 4"	KEA7 ½" to 4"	LEA-KEA4 ½" to 2" 2½" - 4"	LEA-KEA6 ½" to 4"
1 Body	A126 ClassB	A395	A216 WCB	A351 CF8M
2 Bonnet	A395	A395	A105N A216 WCB	A351 CF8M
2a Bonnet extension		A216 WCB		A351 CF8M
2b Bellows	Bonnet option B - C - D		Stainless steel 316L	
2c Extended bonnet		A216 WCB		A351 CF8M
3 Stem lock-nut			Stainless steel A2-70	
4 Bonnet gasket			Graphite and Stainless steel	

KEA valve with extended bonnet (E)

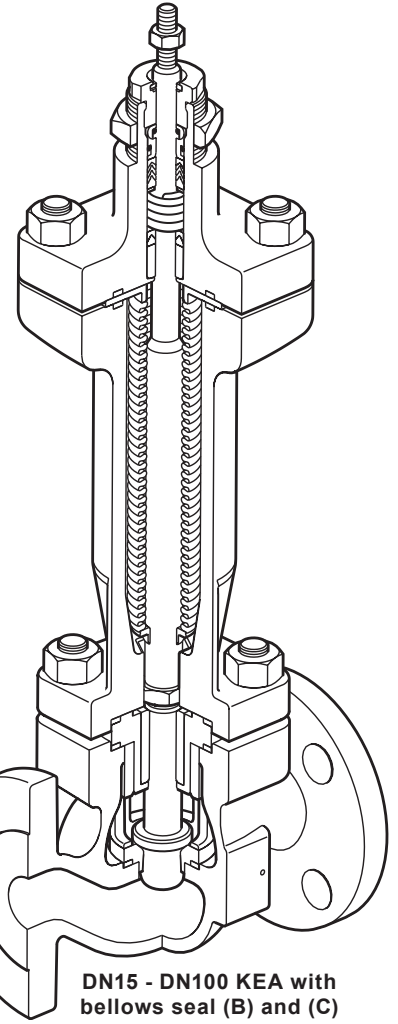
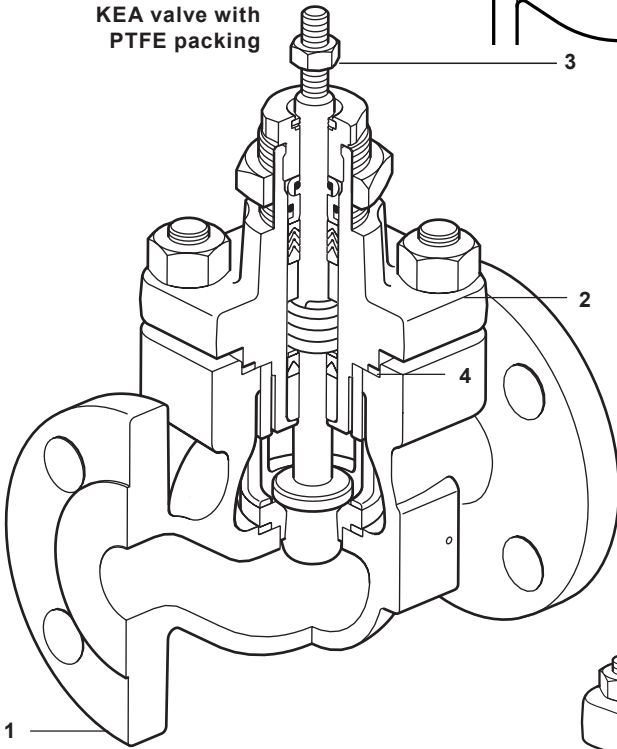
* Graphite packing

High temperature packing	9	Lower and upper stem guide	Stellite 6
	16		
	14	Grafoil packing	Graphite rings
	10, 11, 12, 15, 17 and 19		
	Not used		

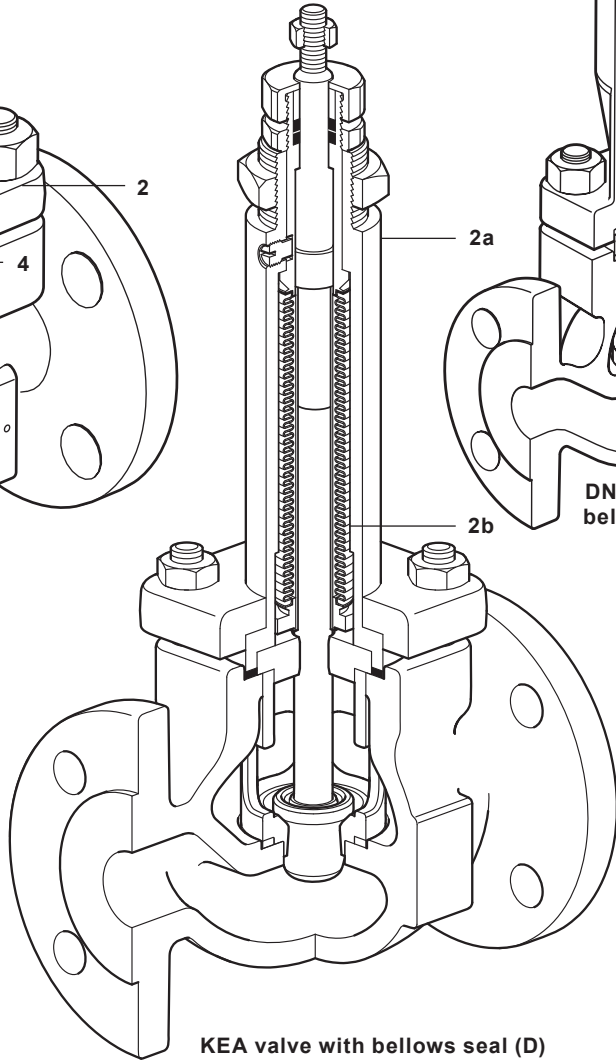
KEA valve with graphite packing



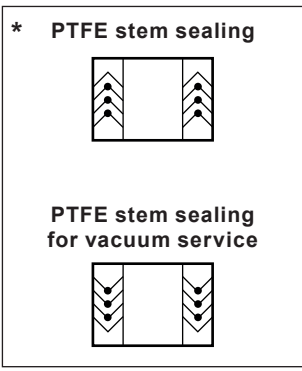
KEA valve with PTFE packing



DN15 - DN100 KEA with bellows seal (B) and (C)



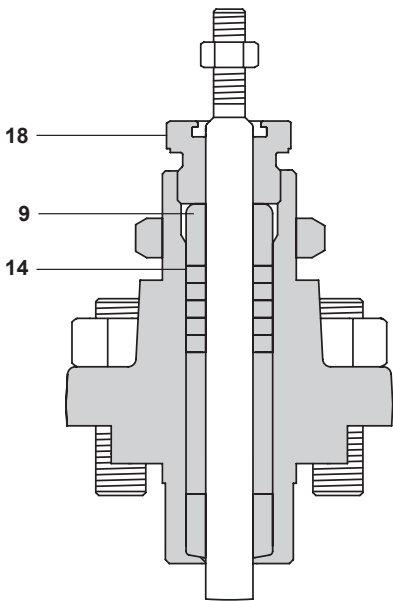
KEA valve with bellows seal (D)



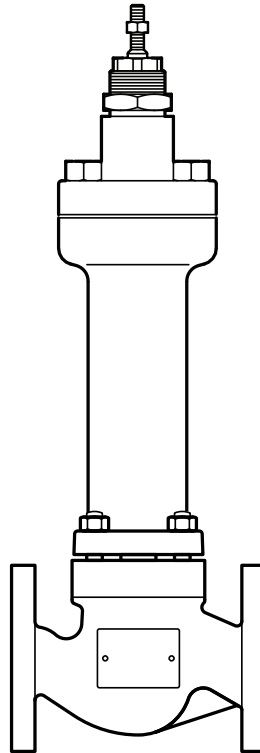
Materials - 1/2" to 4" (continued)

5	Seat retainer	DUPLEX Stainless steel ASME A994 CD4MCuN
	Seat option T	Stainless steel 431
	Seat option S	Stainless steel 316L
6	Valve seat ring	Stainless steel 316L + Stellite™ 6
	Seat option CandP	PEEK
	Seat option G	PTFE + Stainless Steel 316L
	Seat option K	PEEK + Stainless Steel 316L
7	Seat gasket	Graphite and stainless steel
	Seat option T	Stainless steel 431
	Seat option S	Stainless steel 316L
8	Valve plug and stem	Stainless steel 316L + Stellite™ 6
	Seat option C/P/K/G	Stainless steel 316L for Stainless steel valve and Stainless steel 431 for all other materials
9	Lower stem guide	PTFE glass filled
	Bonnet option P - B	Nitronic™ 60
	Bonnet option H - C	Stellite™ 6
10	Lower stem wiper	PTFE
11	Packing guard washer	Stainless steel 316L
12	Spring	Bonnet option P - N - B Stainless steel 316L
13	Packing spacer	Stainless steel 316L
14	Packing set	Bonnet option P - N - B PTFE chevron
	Bonnet option H - C	Graphite rings
15	Outer 'O' ring	Bonnet option P - N - B VITON™
16	Upper stem guide	Bonnet option P - B PTFE glass filled
	Bonnet option N	Nitronic™ 60
	Bonnet option H - C	Stellite™ 6
17	Inner 'O' ring	Bonnet option P - N - B VITON™
18	Gland nut	Stainless steel 316L for stainless steel valve and stainless steel 431 for all others materials
19	Scraper ring	Bonnet option P - N - B PTFE
20	Actuator clamp nut	Stainless steel valve Nickel plated carbon steel
	All others	Zinc plated carbon steel
22	Bonnet extension gasket	Graphite and stainless steel
23	Top plate (used on bonnet extension only)	Stainless steel 316L
24	Lower spindle bearing housing	Stainless steel
25	Lower spindle bearing	Stellite™ 6 for stainless steel valve and stainless steel 431 for all others materials
26	Spindle lock and anti-rotation nut	Stainless steel
27	Nut	Stainless steel A194 Gr8M for Stainless Steel valve and A194 2H for others valves
28	Stud	Stainless steel A193 GrB8M2 for Stainless Steel valve and A193 B7 for others valves

KEA valve with graphite packing



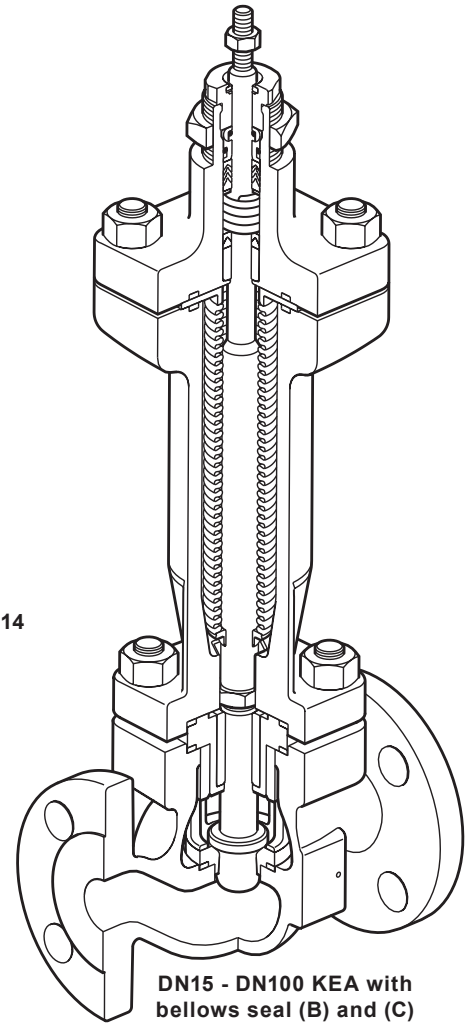
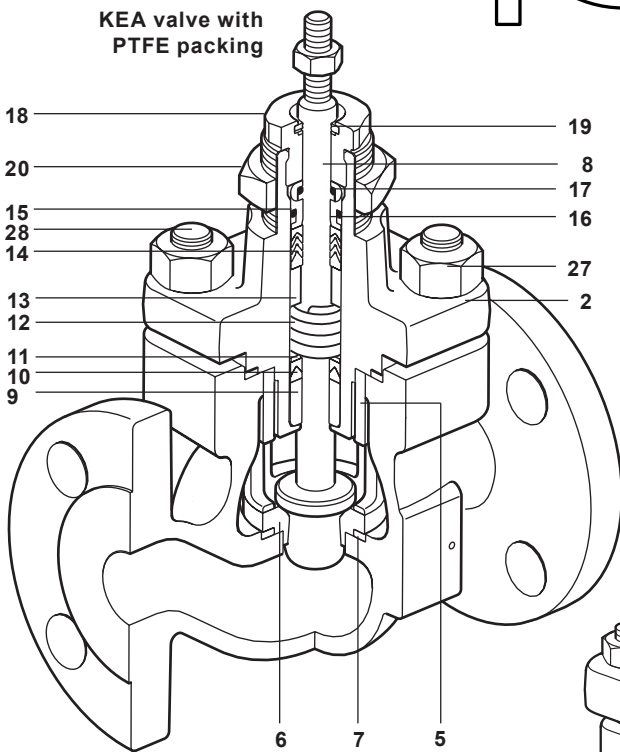
KEA valve with extended bonnet (E)



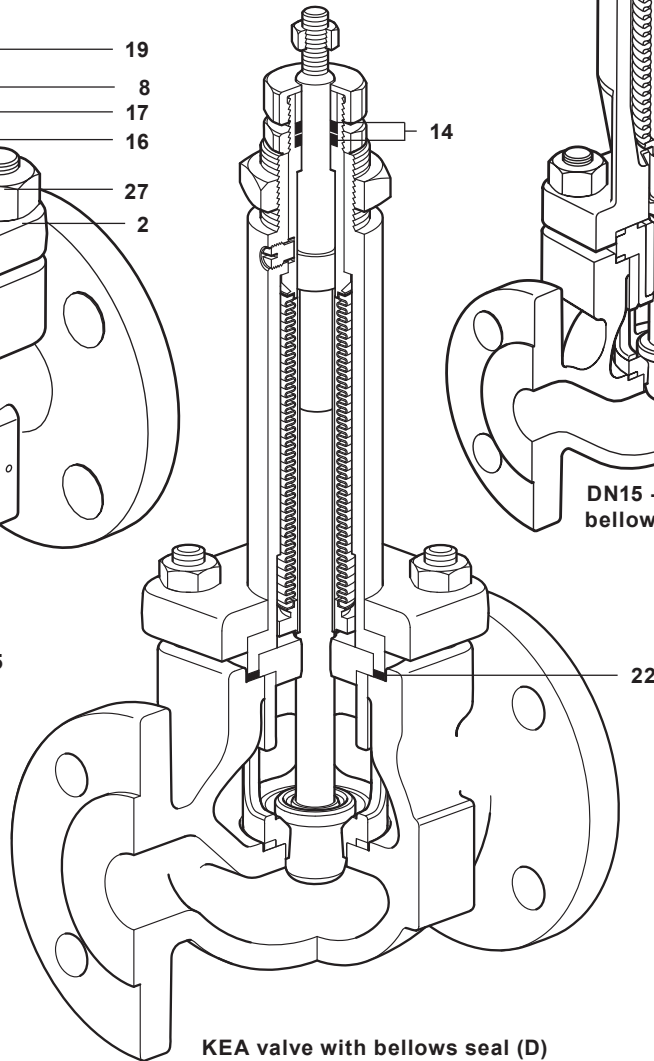
* Graphite packing

High temperature packing	9	Lower and upper stem guide	Stellite 6
	16		
	14	Grafoil packing	Graphite rings
	10, 11, 12, 15, 17 and 19 Not used		

KEA valve with PTFE packing

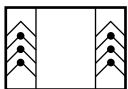


DN15 - DN100 KEA with bellows seal (B) and (C)



KEA valve with bellows seal (D)

* PTFE stem sealing



PTFE stem sealing for vacuum service



C_V (US) values
C_V (US) = C_V (UK) x 1.2009

Valve size		½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	
Standard trim	High capacity Equal %	5.7	8.3	12.7	20.2	36.0	53.0	104.0	133.0		
	Full port	Equal %	4.6	7.3	12.0	18.0	29.0	42.0	73.0	116.0	185.0
		Linear	4.6	7.3	12.0	18.0	29.0	42.0	73.0	116.0	185.0
		Fast opening	5.7	8.3	12.7	21.0	36.0	58.0	104.0	135.0	208.0
	Reduced trim 1	Equal %	2.9	4.6	7.3	12.0	18.0	29.0	42.0	73.0	116.0
		Linear	2.9	4.6	7.3	12.0	18.0	29.0	42.0	73.0	116.0
	Reduced trim 2	Equal %	1.8	2.9	4.6	7.3	12.0	18.0	29.0	42.0	73.0
		Linear	1.8	2.9	4.6	7.3	12.0	18.0	29.0	42.0	73.0
	Reduced trim 3	Equal %	1.2	1.8	2.9	4.6	7.3	12.0	18.0	29.0	42.0
		Linear	1.2	1.8	2.9	4.6	7.3	12.0	18.0	29.0	42.0
	Reduced trim 4	Equal %		1.2	1.8		4.6	7.3		18.0	
		Linear		1.2	1.8		4.6	7.3		18.0	
	Reduced trim 5	Equal %			1.2			4.6			
		Linear			1.2			4.6			
	Microflute (not available with C Seat option)		0.58	0.58	0.6						
			0.23	0.23	0.23						
			0.12	0.12	0.12						
			0.081	0.081	0.081						
		0.012	0.012	0.012							

Note: For low noise and anti-cavitation C_V please see TI-S24-59

Spira-trol Series Valve

Nominal Size	DN	½" - 2"	2½" - 4"	½" - 2"	2½" - 4"	½" - 2"	2½" - 4"	½" - 2"	2½" - 4"
Travel	mm	20	30	20	30	20	30	20	30
Nominal Pressure		Class 125		Class 250		Class 150	Class 300	Class 150	Class 300
Body Material		LEA3		KEA7		LEA4	KEA4	LEA6	KEA6

For Full Temperature/pressure operating curves, please refer to IM-S24-42

Maximum Operating Pressure	Flanged	ASME125	200 psi g	200 psi g				
		ASME250		500 psi g				
		ASME150			285 psi g		275 psi g	
		ASME300				740 psi g		720 psi g
		KS10	189 psi g	189 psi g	203 psi g		203 psi g	
		KS20				493 psi g		493 psi g
	Threaded	NPT	200 psi g	500 psi g		740 psi g		720 psi g
SW					740 psi g		720 psi g	

Operating temperature range	Std. Bonnet	-20 to +450 °F	-20 to +450 °F	-20 to +482 °F	-20 to +482 °F
	Ext. Bonnet	-20 to +450 °F	-20 to +450 °F	-20 to +800 °F	-20 to +800 °F
	Bellows	-20 to +450 °F	-20 to +450 °F	-20 to +800 °F	-20 to +800 °F

Maximum Operating temperature	Seat	PEEK	C	428 °F			
		PEEK	P	428 °F			
		PEEK insert	K	482 °F			
		PTFE insert	G	338 °F			
		431S29	T	800 °F			
		316L	S				
	316L/ Stellite™ 6	W					
	Stem seal	P and N and B		482 °F			
		H and C		572 °F	800 °F		
Bellows D		572 °F					

Maximum operating temperature	Flanged	ASME125	450 °F	450 °F			
		ASME250		450 °F			
		ASME150			800 °F		800 °F
		ASME300				800 °F	800 °F
		KS10	428 °F	450 °F	572 °F		572 °F
		KS20				752 °F	752 °F
	Threaded	NPT	450 °F	450 °F		800 °F	800 °F
	SW				800 °F		800 °F

Spira-trol Series Valve

Body Material			LEA3	KEA7	LEA4	KEA4	LEA6	KEA6
Maximum Saturated Steam Service	Body	Flanged	ASME125	364 °F @ 147 psi g	364 °F @ 147 psi g			
			ASME250		415 °F @ 279 psi g			
			ASME150			389 °F @ 203 psi g		386 °F @ 196 psi g
			ASME300				490 °F @ 607 psi g	468 °F @ 490 psi g
			KS10	364 °F @ 147 psi g	379 °F @ 180 psi g	383 °F @ 189 psi g		383 °F @ 189 psi g
			KS20				457 °F @ 437 psi g	457 °F @ 437 psi g
	Threaded	NPT	364 °F @ 147 psi g	415 °F @ 279 psi g		490 °F @ 607 psi g	468 °F @ 490 psi g	
		SW				490 °F @ 607 psi g	468 °F @ 490 psi g	
	Seat	C/K/P	414 °F @ 276 psi g					
	Bellows	BandC	389 °F @ 203 psi g				386 °F @ 196 psi g	
D		385 °F @ 193 psi g				386 °F @ 196 psi g		
Leakage Class	In accordance to IEC 60534-4	PEEK	Class VI					
		PTFE	Class VI					
		Metal	Class IV (Class V on request)					
		Stellite™	Class IV (Class V on request)					
		Balanced	Class IV					
Characteristic			Equal %	Linear			Fast Acting	
Rangeability			50 : 1	30 : 1			10 : 1	

Differential pressure Class IV metal seat standard trim

Actuator type		DN15 - 25 (1/2" - 1")																								
		0.012-0.081				0.12-0.23				0.58				1.2				1.8				2.9				
		N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D
Valve DN	Cv																									
Stem sealing	Actuator trust																									
	Actuator trust																									
PN9120E	0.2-1.0	51.1																								
PN9120E	0.4-1.2	51.1			16.0	51.1			16.0	51.1											16.0	26.5				0.6
PN9125E	0.4-2.0	51.1			16.0	51.1			16.0	51.1											16.0	26.5				0.6
PN9126E	1.0-2.0	51.1	51.1		16.0	51.1	51.1		16.0	51.1	51.1										16.0	51.1	51.1			16.0
PN9123E	2.0-4.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0									16.0	51.1	51.1	25.0		16.0
PN9220E	0.2-1.0	51.1	51.1		16.0	51.1	51.1		16.0	51.1	51.1										16.0	51.1	25.7			16.0
PN9220E	0.4-1.2	51.1	51.1		16.0	51.1	51.1		16.0	51.1	51.1										16.0	51.1	51.1			16.0
PN9226E	1.0-2.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0
PN9223E	2.0-4.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0

Actuator type		DN15 - 25 (1/2" - 1")																								
		4.6				5.7-7.3				8.3				12				12.7								
		N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D
Valve DN	Cv																									
Stem sealing	Actuator trust																									
	Actuator trust																									
PN9120E	0.2-1.0																									
PN9120E	0.4-1.2	5.1																								
PN9125E	0.4-2.0	5.1																								
PN9126E	1.0-2.0	51.1	29.5		16.0	27.8	12.9		16.0	20.5	8.7										15.4	15.4	5.8			8.0
PN9123E	2.0-4.0	51.1	51.1	8.3	16.0	51.1	51.1	0.9	16.0	51.1	46.4										16.0	45.9	36.4			16.0
PN9220E	0.2-1.0	31.3	4.8		16.0	13.8			7.4	9.5											4.4	6.5				0.8
PN9220E	0.4-1.2	51.1	51.1		16.0	47.7	32.7		16.0	36.2	24.4										16.0	28.1	18.6			16.0
PN9226E	1.0-2.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	25.0	16.0
PN9223E	2.0-4.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	25.0	16.0

Differential pressure Class IV metal seat standard trim (continued)

Actuator type		DN32 - 50 (1 1/4" - 2")																															
		4.6						7.3						12						18													
		Cv		N-P		H		B		C		D		N-P		H		B		C		D		N-P		H		B		C		D	
		Valve DN	Stem sealing	Actuator type	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D				
PN9120E	0.4-1.2	384	7.9																														
	0.4-2.0	384	7.9																														
PN9126E	1.0-2.0	960	51.1	31.5			16.0	30.3	15.4				16.0	17.4	7.8																	10.1	
PN9123E	2.0-4.0	1920	51.1	51.1	11.0		16.0	51.1	51.1	3.4			16.0	47.9	38.4	0.2															16.0		
PN9220E	0.2-1.0	680	33.2	7.6			16.0	16.3	1.4				9.9	8.5																	2.7		
PN9220E	0.4-1.2	1360	51.1	51.1			16.0	50.2	35.2				16.0	30.1	20.6																16.0		
PN9226E	1.0-2.0	3400	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	16.0	
PN9223E	2.0-4.0	6800	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	16.0	

Actuator type		DN32 - 50 (1 1/4" - 2")																															
		20.2-21						29						36-42						53-58													
		Cv		N-P		H		B		C		D		N-P		H		B		C		D		N-P		H		B		C		D	
		Valve DN	Stem sealing	Actuator type	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C
PN9120E	0.4-1.2	384																															
	0.4-2.0	384																															
PN9126E	1.0-2.0	960	9.5	3.4			6.9	3.6	0.3				2.2	2.3																			
PN9123E	2.0-4.0	1920	29.1	23.0			16.0	14.2	10.9				12.7	10.8	8.1																		6.2
PN9220E	0.2-1.0	680	3.8				1.2	0.5																									
PN9220E	0.4-1.2	1360	17.7	11.6			15.0	8.0	4.7				6.6	5.8	3.2																		2.7
PN9226E	1.0-2.0	3400	51.1	51.1	25.0	22.6	16.0	30.5	27.2	13.9	10.6	10.6	16.0	23.8	21.2	10.6	8.0	16.0	16.3	14.4	6.9	5.0	15.5										
PN9223E	2.0-4.0	6800	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	16.0	

Differential pressure Class IV metal seat standard trim (continued)

Actuator type	Valve DN	DN65 - 100 (2½" - 4")																																				
		Cv	18						29						42						73 - 104						116 - 133 - 135						185 - 208					
			Stem sealing	P	H	B	C	D	P	H	B	C	D	P	H	B	C	D	P	H	B	C	D	P	H	B	C	D	P	H	B	C	D					
																																		Actuator type				
PN9230E	0.2-1.0	680	2.8																																			
PN9230E	0.4-1.2	1360	16.6	6.3			5.4	0.9				3.2																										
PN9236E	1.0-2.0	3400	51.1	47.8	15.4	5.0	23.4	18.9	4.9	0.4	0.4	16.0	12.8	2.8			8.2	6.4	0.7				4.7	3.5														
PN9233E	2.0-4.0	6800	51.1	51.1	25.0	16.0	51.1	48.9	25.0	25.0	16.0	37.4	34.2	24.2	21.0	16.0	20.2	18.4	12.8	11.0	11.0	11.0	12.4	11.2	7.6	6.5	6.5	7.3	6.6	4.3	3.6	3.6						
PN9330E	0.2-1.0	1340	16.2	5.9			5.2	0.7				3.0					0.9																					
PN9330E	0.4-1.2	2680	43.5	33.2	0.8		17.0	12.5				11.5	8.3				5.6	3.8					3.1	1.9														
PN9336E	1.0-2.0	6700	51.1	51.1	25.0	16.0	51.1	48.0	25.0	25.0	16.0	36.7	33.5	23.5	20.3	16.0	19.8	18.0	12.4	10.6	10.6	10.6	12.2	11.0	7.4	6.3	6.3	7.1	6.4	4.2	3.5	3.5						
PN9337E	2.5-3.5	16750	51.1	51.1	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	25.0	16.0	34.9	33.8	25.0	25.0	16.0	21.3	20.6	18.4	17.6	16.0						

Differential pressure CLASS IV metal seat - (TandS) - Flow Under - standard trim - Electric Actuated

Valve DN		DN15 - 25 (½" - 1")																															
		0.012 - 0.081 - 0.12 - 0.23						0.58-1.2						1.8						2.9						4.6							
		N-P		H		B		C		D		N-P		H		B		C		D		N-P		H		B		C		D			
Actuator type	Cv	Stem sealing		Actuator trust		2000		1000		2000		2300		4500		8000		14000		2000		1000		2000		2300		4500		8000		14000	
		AE13	2000	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0
AE151	1000	51.1	51.1	51.1	51.1	16.0	16.0	51.1	51.1	51.1	51.1	16.0	16.0	51.1	51.1	51.1	51.1	16.0	16.0	51.1	51.1	51.1	51.1	16.0	16.0	51.1	51.1	33.1	33.1	16.0	16.0		
AE152	2000	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	15.4	15.4	16.0	16.0		
AE162	2300	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	15.4	15.4	16.0	16.0		
AE153/63	4500	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0		
AE154/64	8000	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0		
AE155/65	14000	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0		

Valve DN		DN15 - 25 (½" - 1")																															
		5.7-7.3						8.3						12						12.7													
		N-P		H		B		C		D		N-P		H		B		C		D		N-P		H		B		C		D			
Actuator type	Cv	Stem sealing		Actuator trust		2000		1000		2000		2300		4500		8000		14000		2000		1000		2000		2300		4500		8000		14000	
		AE13	2000	51.1	51.1	4.9	4.9	16.0	16.0	51.1	51.1	49.5	49.5	2.4	2.4	16.0	16.0	48.5	48.5	38.9	38.9	0.7	0.7	16.0	16.0	38.3	38.3	30.5	30.5	16.0	16.0		
AE151	1000	29.8	14.8	16.0	16.0	22.0	10.2	16.0	16.0	10.2	10.2	16.0	16.0	16.0	16.0	16.6	16.6	7.1	7.1	12.5	12.5	12.4	4.7	12.4	4.7	9.1	9.1	16.0	16.0				
AE152	2000	51.1	51.1	4.9	4.9	16.0	16.0	51.1	51.1	49.5	49.5	2.4	2.4	16.0	16.0	48.5	48.5	38.9	38.9	0.7	0.7	16.0	16.0	38.3	38.3	30.5	30.5	16.0	16.0				
AE162	2300	51.1	51.1	19.8	4.9	16.0	16.0	51.1	51.1	51.1	51.1	14.2	2.4	16.0	16.0	51.1	48.5	10.3	0.7	16.0	16.0	46.0	38.3	7.3	7.3	16.0	16.0	16.0	16.0				
AE153/63	4500	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0		
AE154/64	8000	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0		
AE155/65	14000	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0	51.1	51.1	25.0	25.0	16.0	16.0		

Differential pressure CLASS IV metal seat - (TandS) - Flow Under - standard trim - Electric Actuated (continued)

Actuator type	Valve DN	DN32 - 50 (1/4" - 2")																															
		4.6						7.3						12						18						20.2 - 21							
		Orifice size		N		P		H		B		C		N		P		H		B		C		N		P		H		B		C	
AEL3	2000	51.1	51.1	17.8	16.0	51.1	51.1	51.1	7.4	7.4	16.0	50.5	40.9	2.7	16.0	40.9	33.0	1.4	16.0	30.7	24.6	0.1	16.0	30.7	24.6	0.1	16.0	30.7	24.6	0.1	16.0		
AEL51	1000	51.1	34.9	16.0	16.0	32.3	17.3	16.0	18.6	9.1	14.5	14.6	6.7	14.5	14.6	6.7	11.2	10.3	4.2	11.2	10.3	4.2	11.2	10.3	4.2	11.2	10.3	4.2	7.7	16.0			
AEL52	2000	51.1	51.1	17.8	16.0	51.1	51.1	51.1	7.4	7.4	16.0	50.5	40.9	2.7	16.0	40.9	33.0	1.4	16.0	30.7	24.6	0.1	16.0	30.7	24.6	0.1	16.0	30.7	24.6	0.1	16.0		
AEL62	2300	51.1	51.1	25.0	17.8	16.0	51.1	51.1	22.3	7.4	16.0	51.1	50.5	12.3	2.7	16.0	48.8	40.9	9.3	1.4	16.0	36.8	30.7	6.3	0.1	16.0	36.8	30.7	6.3	0.1	16.0		
AEL53/63	4500	51.1	51.1	25.0	16.0	51.1	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0		
AEL54/64	8000	51.1	51.1	25.0	16.0	51.1	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0		
AEL55/65	14000	51.1	51.1	25.0	16.0	51.1	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0		

Actuator type	Valve DN	DN32 - 50 (1/4" - 2")																													
		29						36 - 42						53 - 58																	
		Orifice size		N-P		H		B		C		D		N-P		H		B		C		D		N-P		H		B		C	
AEL3	2000	15.0	11.7	13.6	11.5	8.8	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	
AEL51	1000	4.0	0.7	2.6	2.7	0.0	1.5	1.2	0.4	0.4	1.5	1.2	0.4	0.4	1.5	1.2	0.4	0.4	1.5	1.2	0.4	0.4	1.5	1.2	0.4	0.4	1.5	1.2	0.4	0.4	
AEL52	2000	15.0	11.7	13.6	11.5	8.8	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	10.3	7.5	5.6	6.7	
AEL62	2300	18.3	15.0	16.0	14.1	11.5	13.0	9.4	7.5	8.6	16.0	14.1	11.5	13.0	9.4	7.5	8.6	16.0	14.1	11.5	13.0	9.4	7.5	8.6	16.0	14.1	11.5	13.0	9.4	7.5	
AEL53/63	4500	42.6	39.3	25.0	22.8	16.0	33.5	30.9	20.3	17.7	16.0	23.2	21.3	13.8	11.9	16.0	23.2	21.3	13.8	11.9	16.0	23.2	21.3	13.8	11.9	16.0	23.2	21.3	13.8	11.9	
AEL54/64	8000	51.1	51.1	25.0	16.0	51.1	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0
AEL55/65	14000	51.1	51.1	25.0	16.0	51.1	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	25.0	16.0

Differential pressure CLASS IV metal seat - (TandS) - Flow Under - standard trim - Electric Actuated (continued)

Actuator type	DN65 - 100 (2½" - 4")																													
	Valve DN				18				29				42				73 - 104				116 - 133 - 135				185 - 208					
	Cv	P	H	B	C	D	P	H	B	C	D	P	H	B	C	D	P	H	B	C	D	P	H	B	C	D				
AEL51	1000	9.3				2.2					0.9																			
AEL52	2000	29.7	19.3			11.0	6.6				7.2	4.0									1.5	0.4								
AEL62	2300	35.8	25.4			13.7	9.2				9.1	5.9									2.2	1.0								
AEL53/63	4500	51.1	51.1	25.0	25.0	16.0	33.1	28.6	14.6	10.1	22.9	19.7	9.7	6.5	6.5	2.8	2.8	2.8	2.8	2.8	7.2	6.0	2.4	1.3	1.3	4.0	3.3	1.1	0.3	0.3
AEL54/64	8000	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	16.0	44.9	41.7	25.0	25.0	16.0	15.2	15.2	15.2	15.2	15.2	15.1	13.9	10.3	9.2	9.2	9.0	8.2	6.0	5.3	5.3
AEL55/65	14000	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	25.0	16.0	25.0	25.0	25.0	25.0	25.0	28.7	27.5	23.9	22.8	16.0	17.4	16.7	14.5	13.8	13.8
AEL56/66	25000	51.1	51.1	25.0	25.0	16.0	51.1	51.1	25.0	16.0	51.1	51.1	25.0	25.0	16.0	25.0	25.0	25.0	25.0	25.0	51.1	51.1	25.0	25.0	16.0	33.0	32.2	25.0	25.0	16.0

Differential pressure Class VI (PandC) - Flow Under - Standard Trim - Pneumatic Actuated

Actuator type	DN15 - 25 (1/2" - 1")																						
	0.012 - 0.081		0.12 - 0.23		0.58		1.2		1.8		2.9		4.6		5.7 - 7.3		8.3		12		12.7		
	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	
PN9126E 1.0-2.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	15.3
PN9123E 2.0-4.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	16.0
PN9220E 0.2-1.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	8.0
PN9220E 0.4-1.2	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	16.0

Actuator type	DN32 - 50 (1/4" - 2")																								
	4.6		7.3		12		18		20.2 - 21		29		36-42		53-58										
	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D	N-P	H D									
PN9126E 1.0-2.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	11.1	15.6	14.3	8.2	11.7	7.1	3.8	5.7	5.5	2.8	4.3	3.6	1.7		2.8			
PN9123E 2.0-4.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	17.7	14.4	16.0	13.9	11.3	12.8	9.7	7.8		8.8			
PN9220E 0.2-1.0	19.0	17.4	16.0	19.0	8.9	16.0	14.5	4.9	10.3	11.6	3.7	8.2	8.6	2.5	6.0	4.0	0.7	1.9	1.9			1.1			
PN9220E 0.4-1.2	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	19.0	19.0	16.0	11.5	8.2	10.1	9.0	6.4	7.9	6.1	4.3		5.3			
PN9126E 1.0-2.0																19.0	19.0	13.8	11.1	16.0	19.0	17.1	9.5	7.7	16.0

Actuator type	DN65 - 100 (2 1/2" - 4")																							
	18			29			42			73-104			116-133-135			185-208								
	P	H	B	P	H	B	P	H	B	P	H	B	P	H	B	P	H	B	C	D				
PN9230E 0.2-1.0	7.6			2.6			1.6			0.5					0.1									
PN9230E 0.4-1.2	19.0	11.1		8.6	4.1		5.8	2.6		2.9	1.1			1.7	0.5					0.9	0.1			
PN9236E 1.0-2.0	19.0	19.0	19.0	9.8	19.0	9.8	18.7	15.5	5.5	2.2	10.2	8.4	2.7	0.9	6.3	5.1	1.5	0.4	0.4	3.7	3.0	0.8	0.7	
PN9233E 2.0-4.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	16.0	19.0	14.8	13.0	14.0	12.8	9.2	8.1	8.1	8.5	7.8	5.6	4.9	
PN9330E 0.2-1.0	19.0	10.7		8.4	3.9		5.7	2.5		2.9	1.1			1.6	0.5					0.8	0.1			
PN9330E 0.4-1.2				19.0	15.7	1.7	14.1	10.9	0.9		7.6	5.8	0.2		4.7	3.5					2.7	2.0		
PN9336E 1.0-2.0										19.0	19.0	14.4	12.6	13.8	12.6	9.0	7.9	7.9	8.4	7.7	5.4	4.7	4.7	
PN9337E 2.5-3.5																					19.0	19.0	18.9	16.0

Differential pressure Class VI (PandC) - Flow Under - Standard trim - Electric Actuated

Actuator Type	Valve size	DN15 - 25 (½" - 1")																									
		0.012 - 0.081				0.12 - 0.23				0.58				1.2				1.8				2.9					
		N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	
AE13	2000	19.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0
AE151	1000	19.0	19.0			16.0	19.0	19.0		16.0	19.0	19.0		16.0	19.0	19.0		16.0	19.0	19.0		16.0	19.0	19.0		16.0	
AE152	2000	19.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0
AE162	2300	19.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0	19.0	19.0	16.0	19.0
AE163	4500	19.0*	19.0*	19.0*	19.0*	16.0*	19.0*	19.0*	19.0*	16.0*	19.0*	19.0*	19.0*	16.0*	19.0*	19.0*	19.0*	16.0*	19.0*	19.0*	19.0*	16.0*	19.0*	19.0*	19.0*	16.0*	19.0*

Actuator Type	Valve size	DN15 - 25 (½" - 1")																									
		4.6				5.7-7.3				8.3				12				12.7									
		N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	
AE13	2000	19.0	19.0	19.0	2.2	16.0	19.0	19.0	14.9	16.0	19.0	19.0	11.3	16.0	19.0	19.0	8.7	16.0	19.0	19.0	15.1	16.0	19.0	19.0	11.9	16.0	19.0
AE151	1000	19.0	19.0			16.0	19.0	19.0		16.0	19.0	19.0		16.0	19.0	19.0		16.0	19.0	19.0		16.0	19.0	19.0		16.0	
AE152	2000	19.0	19.0	19.0	2.2	16.0	19.0	19.0	14.9	16.0	19.0	19.0	11.3	16.0	19.0	19.0	8.7	16.0	19.0	19.0	15.1	16.0	19.0	19.0	11.9	16.0	19.0
AE162	2300	19.0	19.0	19.0	2.2	16.0	19.0	19.0	14.9	16.0	19.0	19.0	11.3	16.0	19.0	19.0	8.7	16.0	19.0	19.0	15.1	16.0	19.0	19.0	11.9	16.0	19.0
AE163	4500	19.0*	19.0*	19.0*	2.2*	16.0*	19.0*	19.0*	14.9*	16.0*	19.0*	19.0*	11.3*	16.0*	19.0*	19.0*	8.7*	16.0*	19.0*	19.0*	15.1*	16.0*	19.0*	19.0*	11.9*	16.0*	19.0*

Differential pressure Class VI (PandC) - Flow Under - Standard trim - Electric Actuated
(continued)

Actuator Type	Valve size	DN32 - 50 (1/4" - 2")																													
		4.6							7.3							12							18								
		N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D					
		Actuator thrust (N)																													
AE13	2000	19.0	19.0	19.0	2.0	16.0	19.0	19.0	14.9		16.0	19.0	19.0	8.7		16.0	19.0	19.0	8.7		16.0	19.0	19.0	12.1		16.0	19.0	19.0	6.9		16.0
AE151	1000	19.0	19.0			16.0	19.0	19.0			16.0	19.0	15.1			16.0	19.0	19.0			16.0	19.0	19.0	12.1		16.0				16.0	
AE152	2000	19.0	19.0	19.0	2.0	16.0	19.0	19.0	14.9		16.0	19.0	19.0	8.7		16.0	19.0	19.0	8.7		16.0	19.0	19.0	6.9		16.0				16.0	
AE162	2300	19.0	19.0	19.0	19.0	16.0	19.0	19.0	14.9	19.0	16.0	19.0	18.3	8.7		16.0	19.0	19.0	14.8	6.9		16.0								16.0	
AE163	4500	19.0*	19.0*	19.0*	19.0*	16.0*	19.0*	19.0*	14.9*	19.0*	16.0*	19.0*	18.3*	8.7*		16.0*	19.0*	19.0*	13.5*	6.9*		16.0*								16.0*	

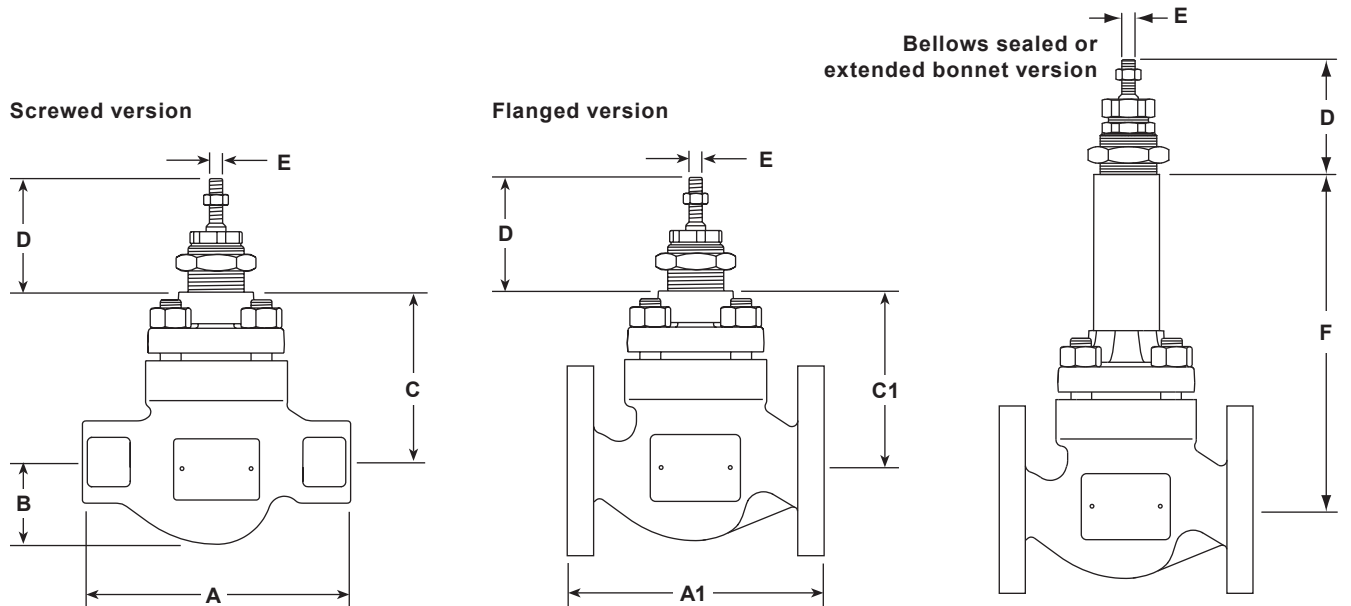
Actuator Type	Valve size	DN32 - 50 (1/4" - 2")																																							
		20.2 - 21										29										36 - 42										53 - 58									
		N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D	N-P	H	B	C	D										
		Actuator thrust (N)																																							
AE13	2000	19.0	19.0	4.9		16.0	18.6	15.3	2.1		16.0	14.6	12.0	1.4		13.5	10.2	8.3	0.7		9.4											9.4									
AE151	1000	15.1	9.0			12.5	7.6	4.3			6.1	5.8	3.2			4.7	3.9	2.0			3.1									3.1											
AE152	2000	19.0	19.0	4.9		16.0	18.6	15.3	2.1		16.0	14.6	12.0	1.4		13.5	10.2	8.3	0.7		9.4										9.4										
AE162	2300	19.0	19.0	11.1	4.9	16.0	19.0	18.6	5.4	2.1	16.0	17.3	14.6	4.1	1.4	16.0	12.1	10.2	2.6	0.7		11.2																			
AE163	4500	19.0*	19.0*	10.0*	4.9*	16.0*	19.0*	18.0*	5.4*	2.1*	16.0*	17.3*	14.6*	4.1*	1.4*	16.0*	12.1*	10.2*	2.6*	0.7*		11.2*																			

Actuator Type	Valve size	DN65 - 100 (2 1/2" - 4")																																									
		18						29						42						73 - 104						116 - 133 - 135						185 - 208											
		N-P	H	P	H	P	H	N-P	H	P	H	P	N-P	H	P	H	N-P	H	P	H	N-P	H	P	N-P	H	P	H	N-P	H	P	N-P	H	P	N-P	H	P	N-P	H	P				
		Actuator thrust (N)																																									
AE151	1000	14.1	3.7	5.4	0.9	3.6	0.4	1.7																													0.4						
AE152	2000	19.0	19.0	14.2	9.7	9.9	6.6	5.2	3.4																														1.8	1.0			
AE162	2300	19.0	19.0	16.9	12.4	11.7	8.5	6.3	4.5																															2.2	1.5		
AE163	4500	19.0*	19.0*	16.9*	12.4*	11.7*	8.5*	14.1	12.2	6.6	4.8	4.8	8.8	7.6	4.0	2.9	2.9	2.9	5.3	4.6	2.3	1.6																					
AE153	4500																																										
AE154/64	8000																																										
AE155/65	14000																																										

Note* Actuator Thrust must be set to 50% of maximum.

Dimensions for the **Spira-trol™ two-port control valve** approximate in mm and (inches)

Valve size	Screwed NPT			Flanged			D	E Thread	F	
	A	B	C	A1		C1			Bellows seals	Extended bonnet
				KS 10 ASME 125 and 150	KS 20 ASME 250 and 300					
DN15 (½")	165 (6½")	44 (1¾")	102 (4")	184 (7"1/4)	190 (7½")	102 (4")	69 (2¾")	M8	237 (9")	336 (13.25")
DN20 (¾")	165 (6½")	44 (1¾")	102 (4")	184 (7"1/4)	190 (7½")	102 (4")				
DN25 (1")	197 (7¾")	57 (2¼")	102 (4")	184 (7¾")	197 (7¾")	102 (4")				
DN32 (1¼")	216 (8½")	57 (2¼")	127 (5")	222 (8"3/4)	127 (8"3/4)	127 (5")			267 (10½")	354 (13.94)
DN40 (1½")	235 (9¼")	63 (2½")	127 (5")	222 (8¾")	235 (9¼")	127 (5")				
DN50 (2")	267 (10½")	76 (3")	127 (5")	254 (10")	267 (10½")	127 (5")	81 (3")	M12	368 (14½")	416 (16.38")
DN65 (2½")				267 (10½)	292 (11½")	200 (7¾")			368 (14½")	
DN80 (3")				298 (11¾)	317 (12½")	200 (7¾")			381 (15")	431 (17")
DN100 (4")				349 (13¾)	368 (14½")	216 (8½")				

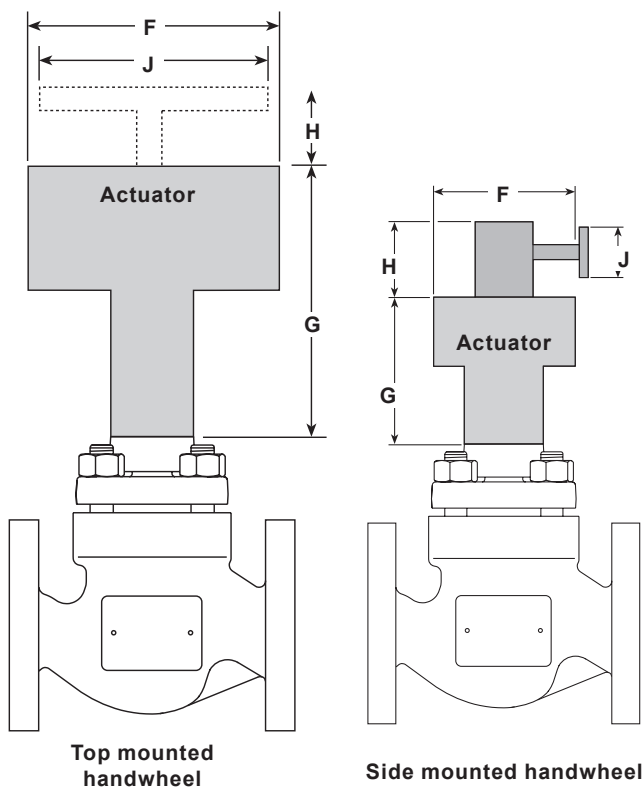


Weights approximate in kg (and lbs)

Valve size	KEA valves				LEA valves				Additional bellows and Extended bonnet
	KEA43	KEA63	KEA73	KEA41 KEA42 KEA61 KEA62 KEA71	LEA31	LEA33	LEA43	LEA63	
DN15 (½")	7.3 (16)	7.3 (16)	7.3 (16)	7.3 (16)	7.3 (16)	7.3 (16)	7.3 (16)	7.3 (16)	4.5 (10)
DN20 (¾")	8.2 (18)	8.2 (18)	8.2 (18)	7.3 (16)	7.3 (16)	8.2 (18)	8.2 (18)	8.2 (18)	
DN25 (1")	9.1 (20)	9.1 (20)	9.1 (20)	10 (22)	10 (22)	13.2 (29)	13.6 (30)	13.6 (30)	
DN32 (1¼")	14.1 (31)	14.1 (31)	13.2 (29)	11.3 (25)	11.3 (25)	13.6 (30)	14.1 (31)	14.1 (31)	5.5 (12)
DN40 (1½")	16.3 (36)	16.3 (36)	14.1 (31)	14.1 (31)	14.1 (31)	14.1 (31)	16.3 (36)	16.3 (36)	
DN50 (2")	17.2 (38)	18.1 (40)	17.2 (38)	15 (33)	15 (33)	17.2 (38)	17.2 (38)	17.2 (38)	
DN65 (2½")	35.4 (78)	35.4 (78)	38.1 (84)			38 (84)	38 (84)	38 (84)	10 (21)
DN80 (3")	39 (86)	40.4 (89)	41.3 (91)			41 (91)	40 (89)	40 (89)	
DN100 (4")	56.2 (124)	56.2 (124)	59.9 (132)			60 (132)	56 (124)	56 (124)	

Dimensions/weights for the **PN actuator range** approximate in mm and kgs (inches and lbs)

Actuator range and variants	F		G		H		J		Weight			
	mm	inches	mm	inches	mm	inches	mm	inches	Actuator		With handwheel	
									kg	lbs	kg	lbs
PN9100E	170	6 A"	275	10 ⁷ / ₈ "	55	2 ³ / ₁₆ "	225	8 ⁷ / ₈ "	6	13.25	+5.86	+13.00
PN9100R					140	5 ¹ / ₂ "					+2.50	+5.50
PN9200E	300	11 ¹ / ₈ "	300	11 ¹ / ₈ "	55	2 ³ / ₁₆ "	225	8 ⁷ / ₈ "	17	37.50	+7.20	+15.75
PN9200R					140	5 ¹ / ₂ "					+3.77	+8.50
PN9320E	390	15 ¹ / ₂ "	325	12 ¹ / ₈ "	65	2 ⁹ / ₁₆ "	350	13 ³ / ₄ "	27	59.50	+7.20	+15.75
PN9320R					150	15 ¹ / ₈ "					+3.77	+8.50
PN9330E	390	15 ¹ / ₂ "	335	13 ³ / ₈ "	65	2 ⁹ / ₁₆ "	350	13 ³ / ₄ "	27	59.50	+7.20	+15.75
PN9330R					150	15 ¹ / ₈ "					+3.77	+8.50
TN2000E	284	11 ¹ / ₄ "	334	13 ⁵ / ₃₂ "	144	5 ⁴³ / ₆₄ "	350	13 ³ / ₄ "	18	40.50	+5.00	+11.25
TN2000R											+6.00	+13.50
TN2000DA	284	11 ¹ / ₄ "	334	13 ⁵ / ₃₂ "					16	36.00		
TN2100E	405	16"	369	14 ¹ / ₂ "	402	15 ⁵³ / ₆₄ "	330	13"	37	83.25	+23.00	+51.75
TN2100R												
TN2100DA	405	16"	369	14 ¹ / ₂ "					30	67.50		



Dimensions/weights for the **AEL actuator ranges**

approximate in mm and kgs (and in inches and lbs)

Actuator range	F		G		Weight	
	mm	inches	mm	inches	kg	lbs
AEL3	230 x 149	9" x 6"	283	11 1/4"	5.7	12.5
AEL55 and AEL65	180	7"	557	22"	10.0	22.0
AEL51, AEL52, AEL53, AEL62 and AEL63	177	7"	459	18"	5.0	11.0
AEL54 and AEL64	177	7"	490	19"	7.0	15.5
AEL56 and AEL66	226	9"	760	30"	20.0	44.0

Spare parts

Spira-trol™ two-port control valve DN15 to DN100 - ½" to 4"

The spare parts available are shown in solid outline. Parts drawn in broken line are not supplied as spares.

Note: When placing an order for spare parts please specify clearly the full product description as found on the label of the valve body, as this will ensure that the correct spare parts are supplied.

Available spares - K series

Actuator clamping nut		A
Gasket set	(Non-bellows sealed)	B, G
	PTFE packing	C
Stem seal kits	Graphite packing	C1
	Graphite seal set	C2
Plug stem and seat kit	* Equal percentage trim (No gaskets supplied)	D, E
	Fast opening trim (No gaskets supplied)	D1, E
	Linear trim (No gaskets supplied)	D2, E
PTFE soft seat seal		H

Specify if reduced trim.

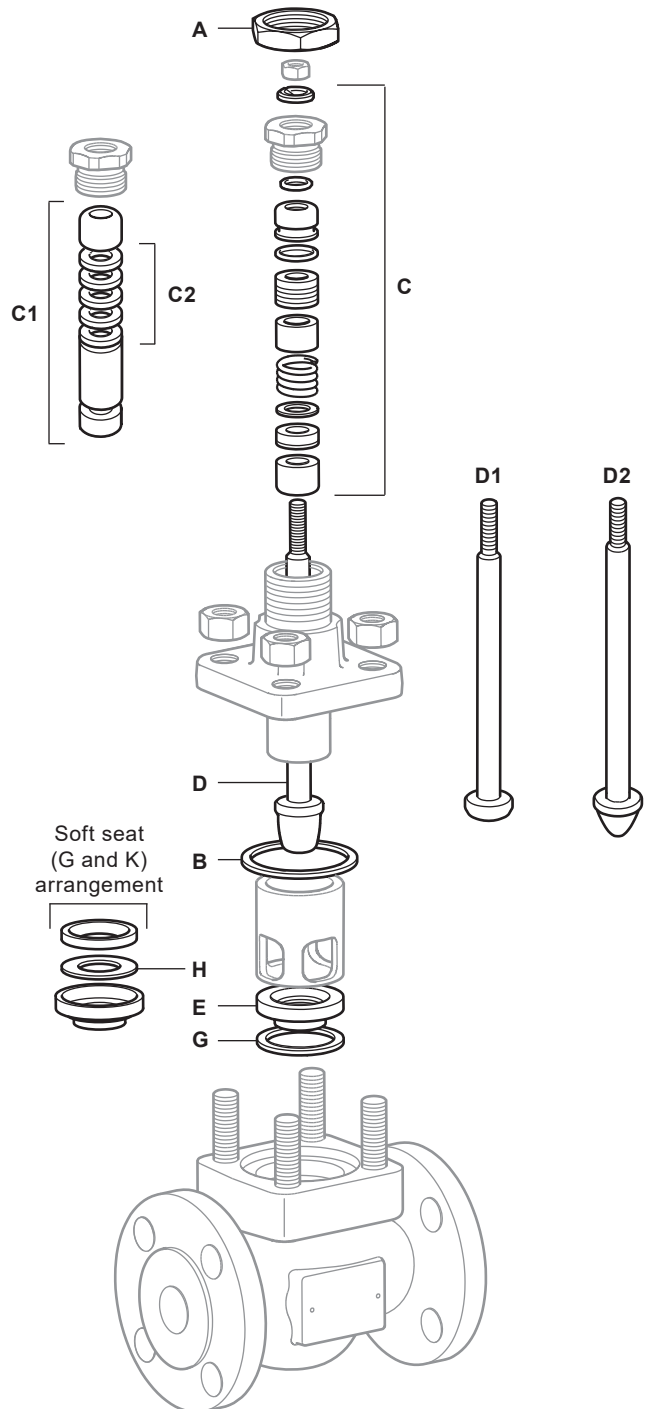
How to order spares

* Always order spares by using the description given in the column headed 'Available spares', and state the size and type of valve including the full product description of the product.

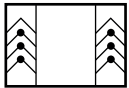
Example: 1 - PTFE stem seal kit for a Spirax Sarco DN25 Spira-trol™ two-port KE43 PTSUSS.2 K_V 10 control valve.

How to fit spares

Full fitting instructions are given in the Installation and Maintenance Instructions supplied with the spare.



* PTFE stem sealing



PTFE stem sealing for vacuum service



Spare parts

Spira-trol™ two-port control valve with bellows seal - Type D DN15 to DN100 - ½" to 4"

The spare parts available are shown in solid outline. Parts drawn in a grey line are not supplied as spares.

Note: When placing an order for spare parts please specify clearly the full product description as found on the label of the valve body, as this will ensure that the correct spare parts are supplied.

Available spares - K series

Actuator clamping nut		A
Gasket set	(Bellows sealed)	B, G
Stem seal kit	Graphite secondary seal and gasket set	C3
	*Equal percentage trim (No gaskets supplied)	D6, E
Plug stem and seat kit	Fast opening trim (No gaskets supplied)	D7, E
	Linear trim (No gaskets supplied)	D8, E
Bellows seal assembly		F
* PTFE soft seat seal		H

Specify if reduced trim.

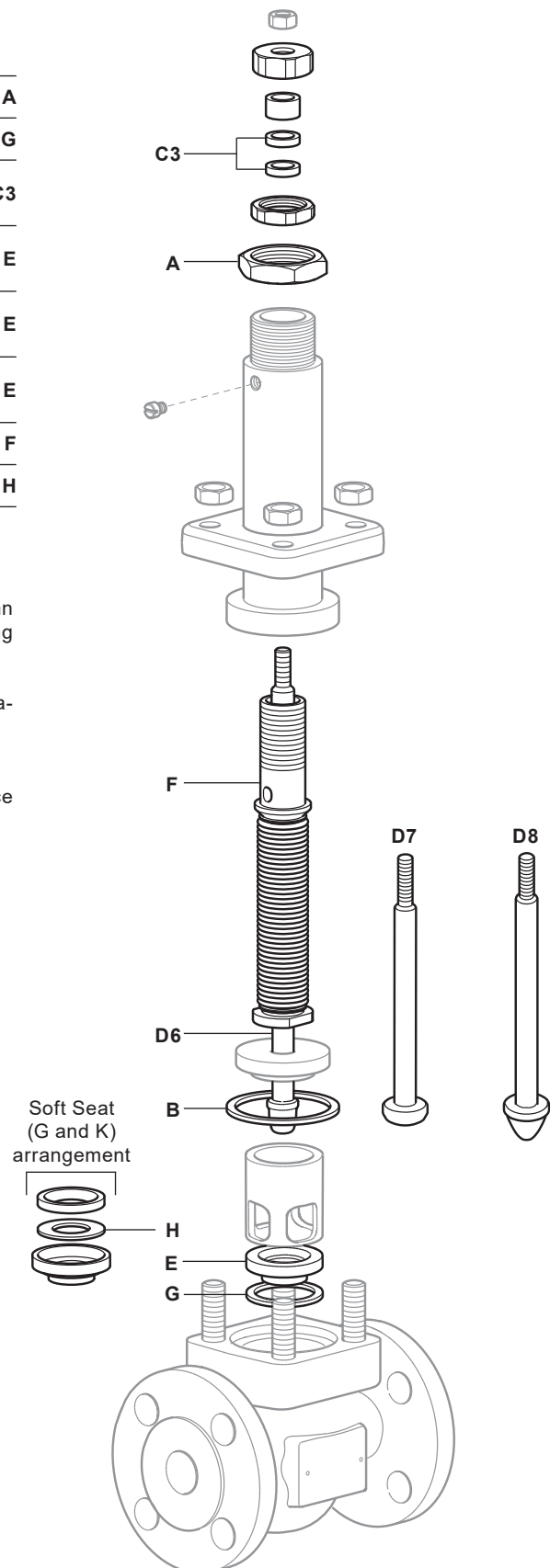
How to order spares

Always order spares by using the description given in the column headed 'Available spares', and state the size and type of valve including the full product description of the product.

Example: 1 - Graphite stem seal kit for a Spirax Sarco DN25 Spira-trol™ two-port KE43B TSUSS.2 Kv 10 control valve.

How to fit spares

Full fitting instructions are given in the Installation and Maintenance Instructions supplied with the spare.



Spare parts

Spira-trol™ two-port control valve with bellows seal - Types B and C

DN15 to DN100 - ½" to 4"

The spare parts available are shown in solid outline. Parts drawn in grey line are not supplied as spares.

Note: When placing an order for spare parts please specify clearly the full product description as found on the label of the valve body, as this will ensure that the correct spare parts are supplied.

Available spares - K series

Actuator clamping nut		A
Gasket set	(Bellows sealed)	B, G
	PTFE packing	C
Stem seal kits	Graphite packing	C1
	Graphite seal set	C2
	* Equal percentage trim (No gaskets supplied)	D9, E
Plug stem and seat kit	Fast opening trim (No gaskets supplied)	D10, E
	Linear trim (No gaskets supplied)	D11, E
Bellow seal assembly		F
PTFE soft seat seal		H

Specify if reduced trim.

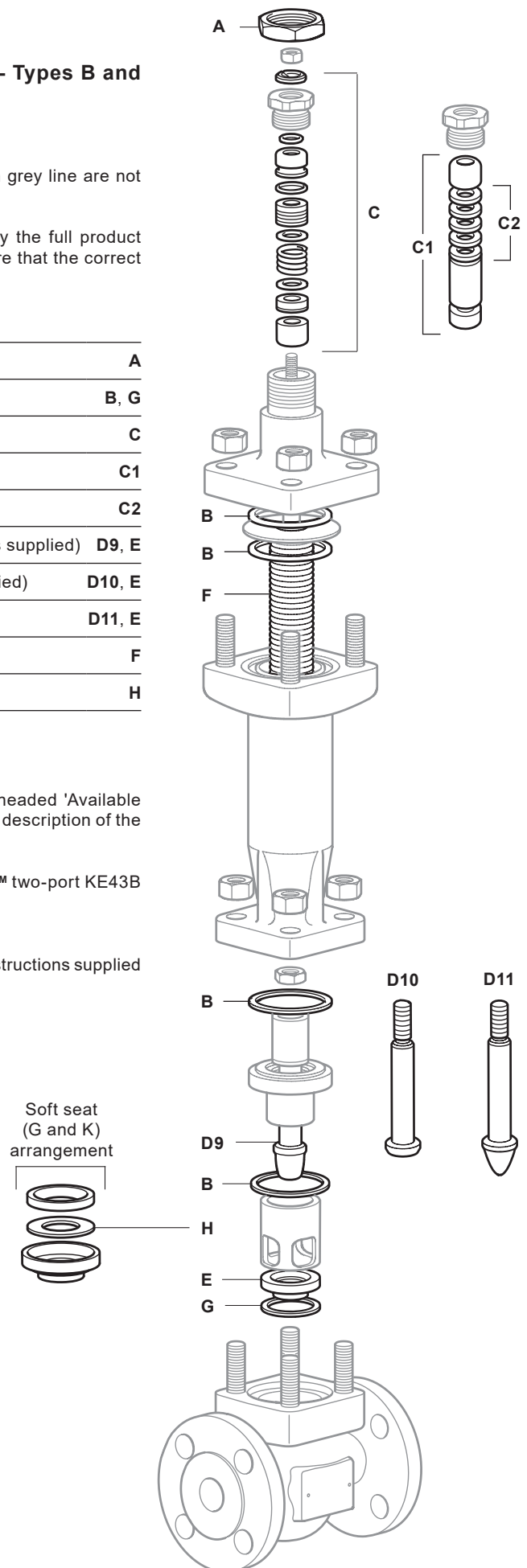
* How to order spares

Always order spares by using the description given in the column headed 'Available spares', and state the size and type of valve including the full product description of the product.

Example: 1 - PTFE stem seal kit for a Spirax Sarco DN25 Spira-trol™ two-port KE43B TSUSS.2 K_v 10 control valve.

How to fit spares

Full fitting instructions are given in the Installation and Maintenance Instructions supplied with the spare.



Spira-trol™ selection guide:

Valve size	ASME standard = 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3" and 4"	1"1/2
Valve series	K = K series 2-port control valve L = L Series 2-port control valve	K
Valve characteristic	E = Equal percentage F = Fast opening L = Linear	E
Flange type	A = ASME	A
Flow	Blank = under T = over	Blank
Body material	3 = Cast iron 4 = Carbon steel 6 = Stainless steel 7 = SG iron	4
Connections	1 = Screwed 2 = Socket weld 3 = Flanged	3
Stem sealing	B = Bellows/PTFE secondary seals C = Bellows/graphite secondary seals D = Bellows/graphite secondary seals H = Graphite N = PTFE with Nitronic™ bush - DN15 to DN50 only P = PTFE V = PTFE for vacuum service	P
Seating	C = Reverseable PEEK Seat G = PTFE soft seat K = PEEK soft seat P = Full PEEK S = 316L stainless steel T = 431 stainless steel W = 316L with stellite™ 6 facing	T
Type of trim	A1 = 1 stage anti-cavitation A2 = 2 stage anti-cavitation P1 = 1 stage low noise cage P2 = 2 stage low noise cage P3 = 3 stage low noise cage S = Standard trim	S

Trim balancing	B = Balanced (not available with seating option C) U = Unbalanced	U
Bonnet type	E = Extended S = Standard	S
Bolting	S = Standard	S
Finish	Blank = Standard N = ENP coating	
Series	2 = .2	.2
Cv	To be specified	Cv29
Connection type	To be specified	Flanged Class 300

Selection example:

1"1/2 - K E A 4 3 P T S U S S .2 - Cv29 - Flanged Class 300

How to order

Example: 1 off Spirax Sarco Spira-trol™ KEA43PTSUSS.2 Cv29 two-port control valve having flanged Class 300 connections.