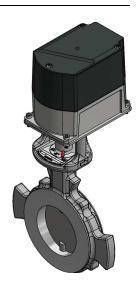
SCC Inc.

Technical Instructions

Document No. VA-3100 July 9, 2019

VA Series

VA...VKF1x Valve Actuator Assemblies with VKF1... Butterfly Valves



Description	VAVKF1x valve actuator assemblies include a Siemens SQM actuator reliably mounted to a VKF1 butterfly valve.					
Features	Precision machined components enable a solid shaft coupling					
	 Shaft coupling provides a positive connection without actuator or valve shaft damage 					
	 VKF1 valve sizes from 1-1/4" to 8" 					
	 Includes Siemens SQM33, SQM40, SQM45, or SQM5 actuator 					
Application	VAVKF1x valve actuator assemblies mount an SQM33, SQM40, SQM45, or SQM5 actuator to a VKF1 butterfly valve. The Siemens VKF1 valve and SQM actuator are rigidly mounted with precisely engineered brackets and couplings to ensure shaft alignment. VKF1 technical instructions (n7673us) provide sizing and additional valve information.					

Product Part Numbers

The following chart provides VA...VKF1x assembly part number identification including an SQM33, SQM40, or SQM45 actuator. Technical instructions for SQM33 (n7813), SQM40 (n7817), or SQM45 (n7814) actuators are available at www.scccombustion.com.

	VA	45.2	- 2.0	VKF	10
Valve Actuator Assembly					
Actuator					
33 = SQM33.550A9 (stepper, 27 in-lb, fo	r use with LMV3)				
33.7 = SQM33.750A9 (stepper, 90 in-lb, fo	r use with LMV3)				
40.11 = SQM40.115R11 (12.5 sec, 135 Ohm	n/2-10 VDC, high/lov	v fire feedback)			
40.14 = SQM40.145A21 (12.5 sec, 4-20 mA/	/135 Ohm/2-10 VDC	2)			
40.15 = SQM40.155R11 (12.5 sec, 4-20 mA,	independent aux s	witch)			
40.16 = SQM40.165 (12.5 sec, 3-position,	high/low fire feedb	ack)			
40.18 = SQM40.185R11 (12.5 sec, 3-positio	n, 3 independent au	ıx switches)			
40.21 = SQM40.215R11 (25 sec, 135 Ohm/2	2-10 VDC, high/low	fire feedback)			
40.24 = SQM40.245A21 (25 sec, 4-20 mA/12	35 Ohm/2-10 VDC)				
40.25 = SQM40.255 (25 sec, 4-20 mA, ind	ependent aux switc	h)			
40.26 = SQM40.265 (25 sec, 3-position, h	igh/low fire feedbad	ck)			
40.27 = SQM40.275R10 (25 sec, high/low b	asic version)				
40.28 = SQM40.285R11 (25 sec, 3-position,	3 independent aux	switches)			
45.2 = SQM45.295B9 (stepper, for use wit	h LMV5)				
Voltage					
Blank = 120 Vac SQM40 or standard SQM33	3 or SQM45		-		
(220) = 220 Vac (not available for SQM33 o	or SQM45 actuators)				
Valve Size					
1.25 = 1-1/4" VKF1x.032					
1.5 = 1-1/2" VKF1x.040					
2.0 = 2" VKF1x.050					
2.5 = 2-1/2" VKF1x.065					
3.0 = 3" VKF1x.080					
4.0 = 4" VKF1x.100					
5.0 = 5" VKF1x.125					
6.0 = 6" VKF1x.150					
8.0 = 8" VKF1x.200					
VKF Valve					
Value Ture					
Valve Type					

10 = Swing-through (360° rotation)

11 = Mechanical stop at closed position

Product Part Numbers (continued)

The following chart provides VA...VKF1x assembly part number identification including an SQM50 actuator. Technical instructions for SQM5 (155-517) actuators are available at www.scccombustion.com.

	VA 50.4 Z 7 -	4.0	VKF	10
Valv	/e Actuator Assembly			
Actu	uator			
50	= SQM50			
Toro	que / Timing			
2	= 90 in-lb, 8 sec for 90° stroke			
3	= 140 in-lb, 12 sec for 90° stroke			
4	= 140 in-lb, 25 sec for 90° stroke			
Cont	trol Board			
Blank	K = AGA56.41A (4-20 mA input)			
A	= AGA56.1A97 (position proportional control)			
н	= AGA56.42A (0-135 Ω input)			
К	= AGA56.43A (0-10 Vdc input)			
Z	= AGA56.9 (all inputs/outputs)			
Pote	entiometer			
Blank	A = ASZ12.30 (1000Ω, 90°) on "G", "H", "K", or "Z" board; none on "A" board			
3	= ASZ12.30 (1000Ω, 90°) on "A" board only			
7	= ASZ22.30 (1000Ω/1000Ω, 90°)			
Volt	tage			
Blank	<pre>x = 120 Vac</pre>			
(220)	= 220 Vac			
(24)	= 24 Vac			
Valv	/e Size			
1.25	= 1-1/4" VKF1x.032			
1.5	= 1-1/2" VKF1x.040			
2.0	= 2" VKF1x.050			
2.5	= 2-1/2" VKF1x.065			
3.0	= 3" VKF1x.080			
4.0	= 4" VKF1x.100			
5.0	= 5" VKF1x.125			
6.0	= 6" VKF1x.150			
8.0	= 8" VKF1x.200			
VKF	Valve			
Valv	ие Туре			
10	= Swing-through (360° rotation)			

10 = Swing-through (360° rotation)

11 = Mechanical stop at closed position

Installation		VKF1 valves can accommodate flow in either direction. The VAVKF1x assembly may be mounted in either direction for actuator wiring convenience.
	•	Assembly may be mounted in any position except upside down.
	•	Valve position indicator shows valve position.

Dimensions

Dimensions in inches; millimeters in brackets



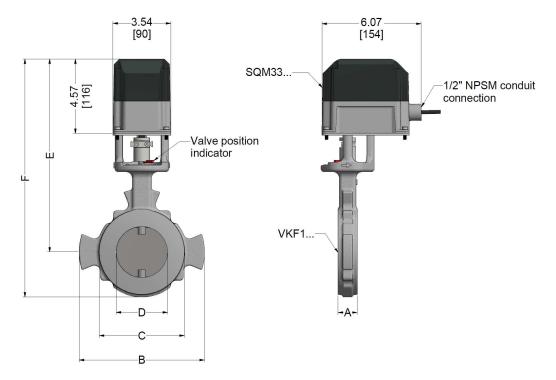


Table 1: VA33...VKF1x Dimensions¹

Valve Part	Valve	А	В	ſ	D	E	F
Number	Size	7	D	,	D	L	•
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	10.91 [277]	12.34 [313]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	11.07 [281]	12.69 [322]
VKF1x.050	2″	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	11.26 [286]	13.27 [337]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	11.56 [294]	14.80 [376]
VKF1x.080	3″	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	11.85 [301]	14.63 [372]
VKF1x.100	4"	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	12.25 [311]	16.03 [407]
VKF1x.125	5″	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	13.72 [348]	18.04 [458]
VKF1x.150	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	14.22 [361]	19.72 [501]
VKF1x.200	8″	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	15.20 [386]	21.89 [556]

¹ Mating flange bolt circles and recommended bolts can be found in VKF1... Technical Instructions n7673us.

Dimensions (continued)

Dimensions in inches; millimeters in brackets

VA40...VKF1x Valve Actuator Assemblies

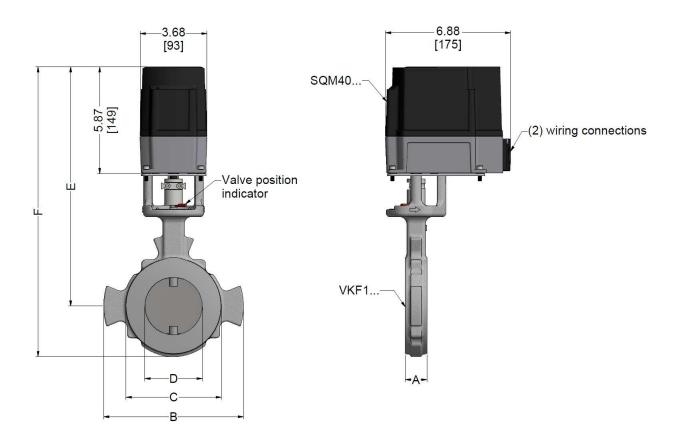


Table 2: VA40...VKF1x Dimensions¹

Valve Part Number	Valve Size	A	В	С	D	E	F
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	12.21 [310]	13.64 [346]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	12.37 [314]	13.99 [355]
VKF1x.050	2″	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	12.56 [319]	14.57 [370]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	12.86 [327]	16.10 [409]
VKF1x.080	3″	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	13.15 [334]	15.93 [405]
VKF1x.100	4"	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	13.55 [344]	17.33 [440]
VKF1x.125	5″	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	15.02 [382]	19.34 [491]
VKF1x.150	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	15.52 [394]	21.02 [534]
VKF1x.200	8"	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	16.50 [419]	23.19 [589]

¹ Mating flange bolt circles and recommended bolts can be found in VKF1... Technical Instructions n7673us.

Dimensions (continued)

Dimensions in inches; millimeters in brackets



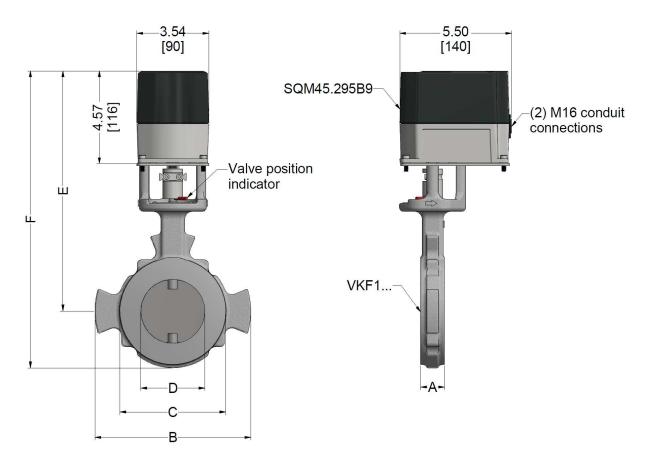


Table 3: VA45...VKF1x Dimensions¹

Valve Part Number	Valve Size	Α	В	С	D	E	F
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	10.91 [277]	12.34 [313]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	11.07 [281]	12.69 [322]
VKF1x.050	2″	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	11.26 [286]	13.27 [337]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	11.56 [294]	14.80 [376]
VKF1x.080	3″	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	11.85 [301]	14.63 [372]
VKF1x.100	4″	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	12.25 [311]	16.03 [407]
VKF1x.125	5″	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	13.72 [348]	18.04 [458]
VKF1x.150	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	14.22 [361]	19.72 [501]
VKF1x.200	8″	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	15.20 [386]	21.89 [556]

¹ Mating flange bolt circles and recommended bolts can be found in VKF1... Technical Instructions n7673us.

Dimensions (continued)

Dimensions in inches; millimeters in brackets

VA50...VKF1x Valve Actuator Assemblies

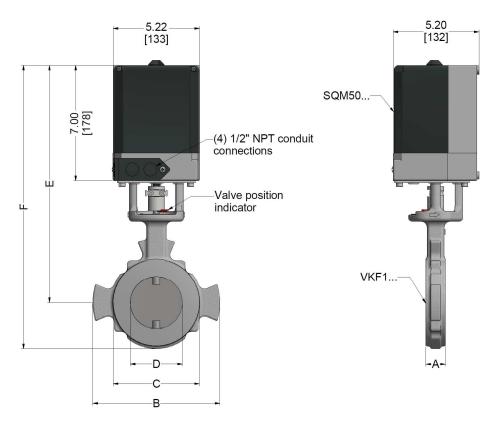


Table 4: VA50...VKF1x Dimensions¹

Valve Part	Valve	Α	P	6	D	E	r
Number	Size		В	С	D	E	F
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	13.34 [310]	14.77 [375]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	13.50 [314]	15.12 [384]
VKF1x.050	2″	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	13.69 [319]	15.70 [399]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	13.99 [327]	17.23 [438]
VKF1x.080	3″	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	14.28 [334]	17.06 [433]
VKF1x.100	4"	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	14.68 [344]	18.46 [469]
VKF1x.125	5″	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	16.15 [382]	20.47 [520]
VKF1x.150	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	16.65 [394]	22.15 [563]
VKF1x.200	8″	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	17.63 [419]	24.32 [618]

¹ Mating flange bolt circles and recommended bolts can be found in VKF1... Technical Instructions n7673us.

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