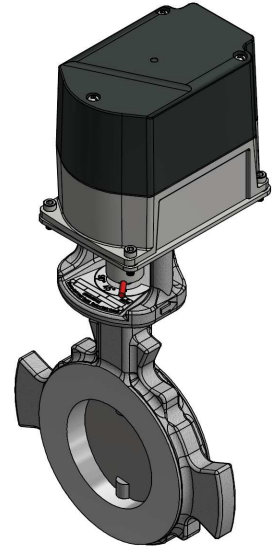


VA Series

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



Description

VA...VKF1x 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, SQM48, or SQM5 actuator

Application

VA...VKF1x valve actuator assemblies mount an SQM33, SQM40, SQM45, SQM48, 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... Valve 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, SQM45, or SQM48 actuator. Technical instructions for SQM33 (n7813), SQM40 (n7817), or SQM45/48 (n7814) actuators are available at www.scccombustion.com.

VA	45.2	- 2.0	VKF	10	- N4
Valve Actuator Assembly					
Actuator					
33 = SQM33.550A9 (stepper, 27 in-lb, for use with LMV3...)					
33.7 = SQM33.750A9 (stepper, 90 in-lb, for use with LMV3...)					
40.11 = SQM40.115R11 (12.5 sec, 4-20 mA/135 Ohm/2-10 VDC, high/low fire feedback)					
40.14 = SQM40.145A21 (12.5 sec, 4-20 mA/135 Ohm/2-10 VDC)					
40.15 = SQM40.155R11 (12.5 sec, 4-20 mA, independent aux switch)					
40.16 = SQM40.165... (12.5 sec, 3-position, high/low fire feedback)					
40.18 = SQM40.185R11 (12.5 sec, 3-position, 3 independent aux switches)					
40.21 = SQM40.215R11 (25 sec, 4-20 mA/135 Ohm/2-10 VDC, high/low fire feedback)					
40.24 = SQM40.245A21 (25 sec, 4-20 mA/135 Ohm/2-10 VDC)					
40.25 = SQM40.255... (25 sec, 4-20 mA, independent aux switch)					
40.26 = SQM40.265... (25 sec, 3-position, high/low fire feedback)					
40.27 = SQM40.275R10 (25 sec, high/low basic version)					
40.28 = SQM40.285R11 (25 sec, 3-position, 3 independent aux switches)					
45.2 = SQM45.295B9 (stepper, 27 in-lb, for use with LMV5...)					
48.4 = SQM48.497B9 (stepper, 177 in-lb, for use with LMV5...)					
Voltage					
Blank = 120 Vac SQM40 or standard SQM33, SQM45, or SQM48					
(220) = 220 Vac (not available for SQM33, SQM45, or SQM48 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					
Valve Type					
10 = Swing-through (360° rotation)					
11 = Mechanical stop at closed position					
Actuator NEMA Rating					
Blank = NEMA 12 SQM33, SQM45, or SQM48; NEMA 4 SQM40 (standard)					
N4 = NEMA 4 SQM33, SQM45, or SQM48					

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	-	N4
Valve Actuator Assembly												
Actuator												
50 = SQM50												
Torque / 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												
Control Board												
Blank = AGA56.41A... (4-20 mA input)												
A = AGA56.1A97 (position proportional control)												
H = AGA56.42A... (0-135 Ω input)												
K = AGA56.43A... (0-10 Vdc input)												
Z = AGA56.9... (all inputs/outputs)												
Potentiometer												
Blank = 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°)												
Voltage												
Blank = 120 Vac												
(220) = 220 Vac												
(24) = 24 Vac												
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												
Valve Type												
10 = Swing-through (360° rotation)												
11 = Mechanical stop at closed position												
Actuator NEMA Rating												
Blank = NEMA 12												
N4 = NEMA 4												

Installation

- VKF1... valves can accommodate flow in either direction. The VA...VKF1x 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
- The limit switches on all assemblies using an SQM40... or SQM5... actuator are set so that the valve will stroke from a fully closed position to a fully open position

Dimensions

Dimensions in inches [mm]

VA33...VKF1x NEMA 12 Valve Actuator Assemblies

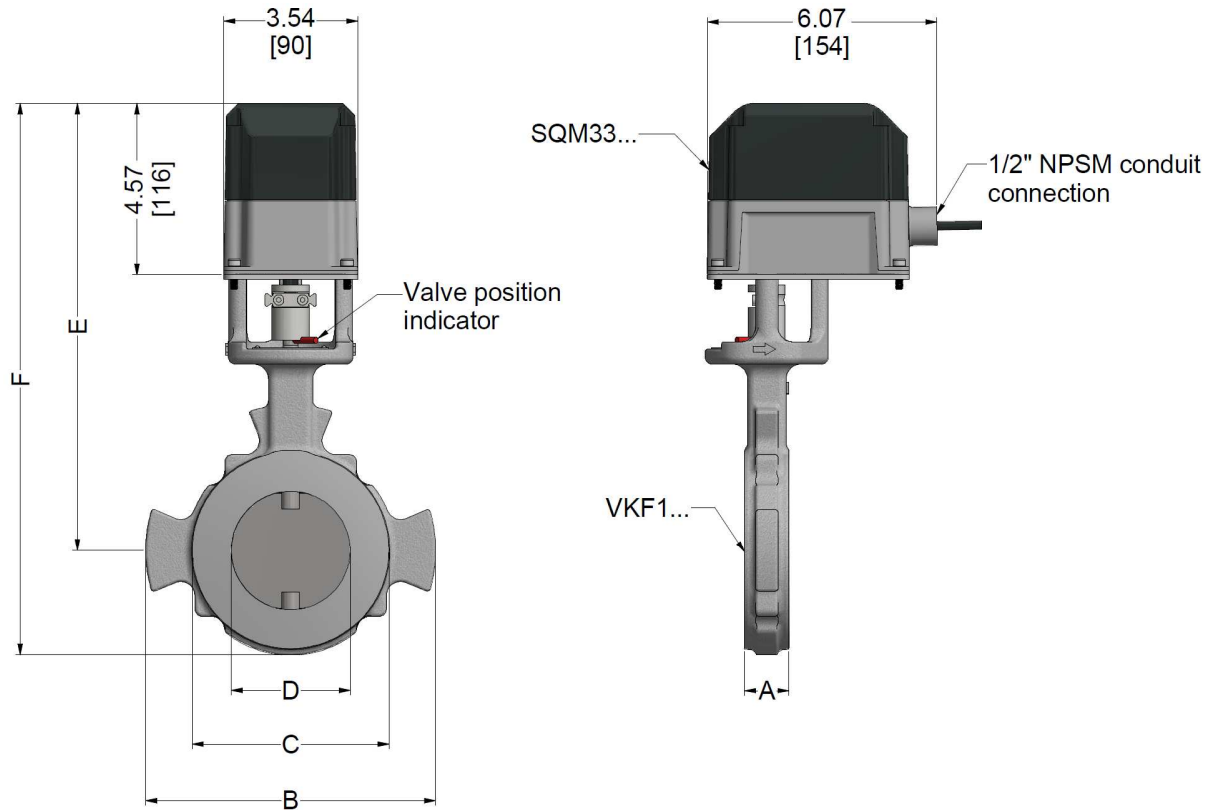


Table 1: VA33...VKF1x Dimensions¹

Valve Part Number	Valve Size	A	B	C	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 ²	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.

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

Dimensions (continued)

Dimensions in inches [mm]

VA33...VKF1x-N4 NEMA 4 Valve Actuator Assemblies

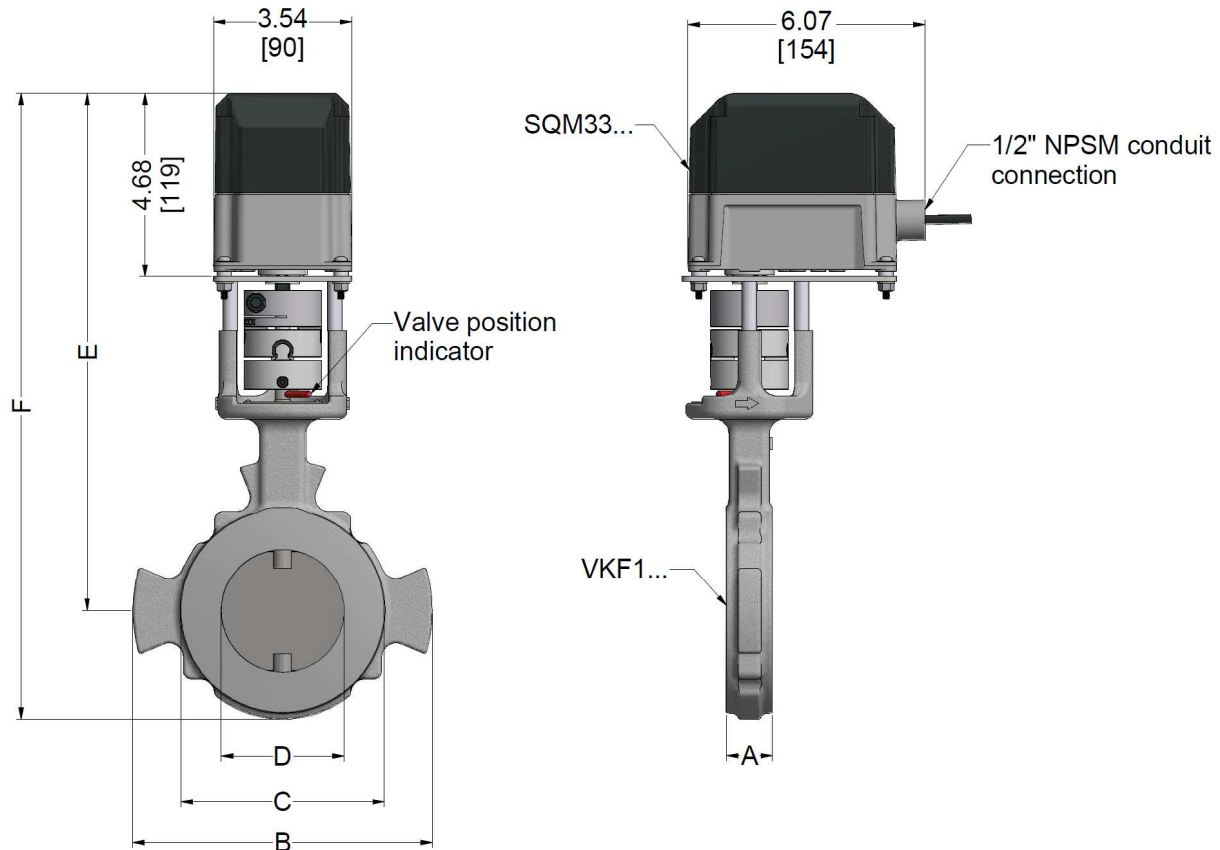


Table 2: VA33...VKF1x-N4 Dimensions¹

Valve Part Number	Valve Size	A	B	C	D	E	F
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	12.34 [313]	13.77 [350]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	12.50 [318]	14.12 [359]
VKF1x.050	2"	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	12.69 [322]	14.70 [373]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	12.99 [330]	16.23 [412]
VKF1x.080	3"	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	13.28 [337]	16.06 [408]
VKF1x.100	4"	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	13.68 [347]	17.46 [443]
VKF1x.125	5"	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	15.15 [385]	19.47 [495]
VKF1x.150 ²	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	15.65 [398]	21.15 [537]
VKF1x.200	8"	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	16.63 [422]	23.32 [592]

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

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

Dimensions (continued)

Dimensions in inches [mm]

VA40...VKF1x Valve Actuator Assemblies

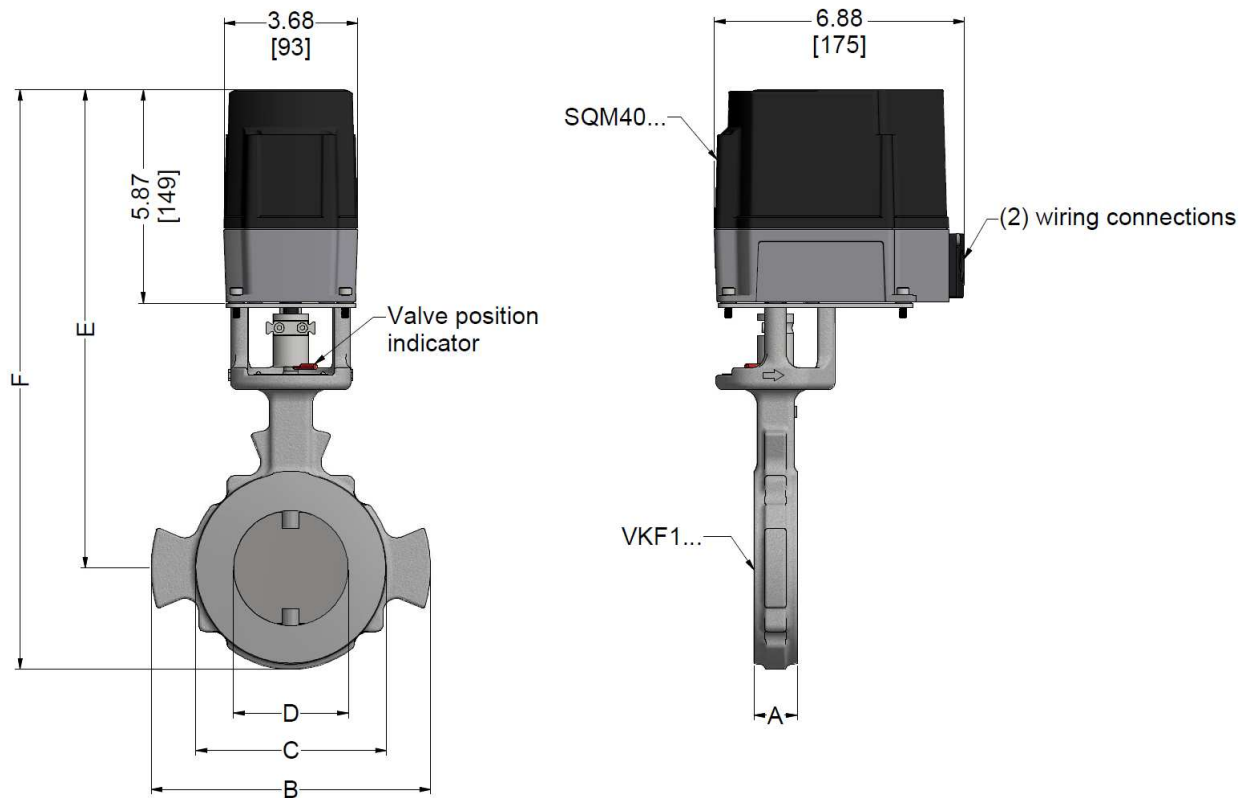


Table 3: VA40...VKF1x Dimensions¹

Valve Part Number	Valve Size	A	B	C	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 ²	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.

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

Dimensions (continued)

Dimensions in inches [mm]

VA45...VKF1x NEMA 12 Valve Actuator Assemblies

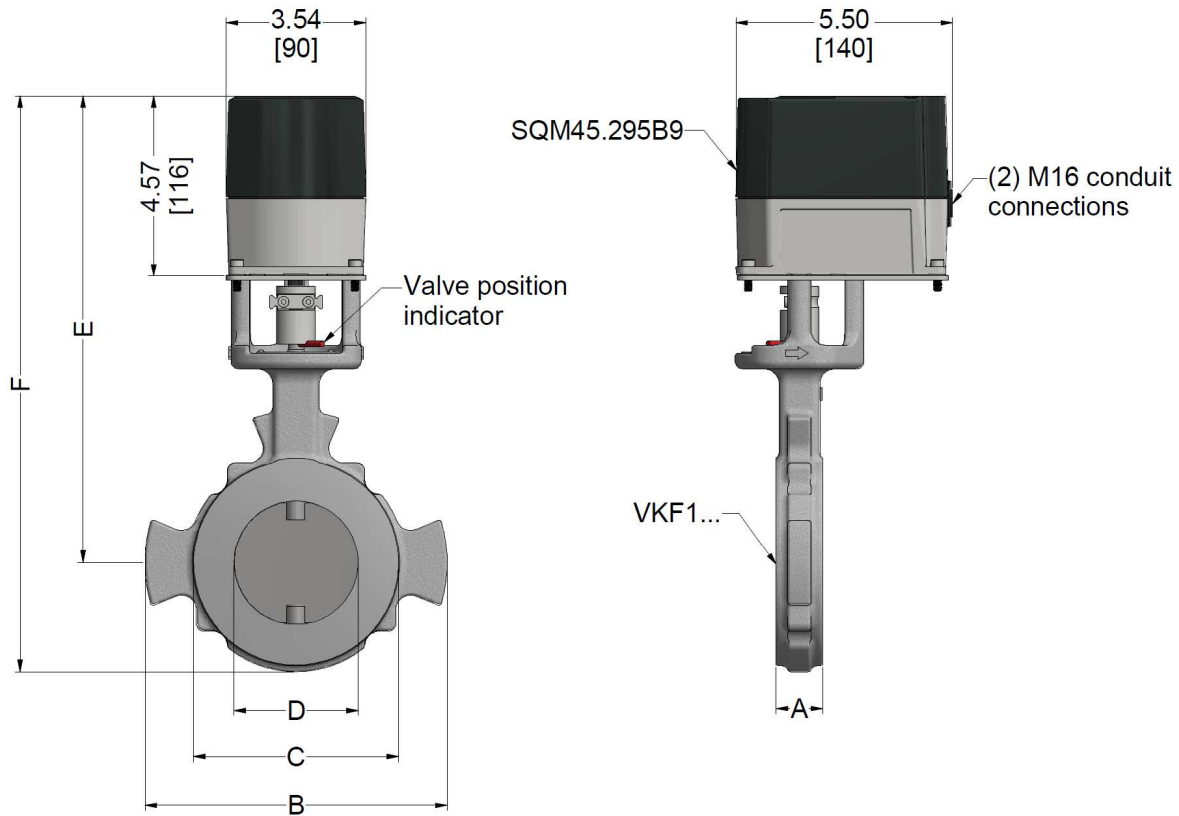


Table 4: VA45...VKF1x Dimensions¹

Valve Part Number	Valve Size	A	B	C	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 ²	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.

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

Dimensions (continued)

Dimensions in inches [mm]

VA48...VKF1x NEMA 12 Valve Actuator Assemblies

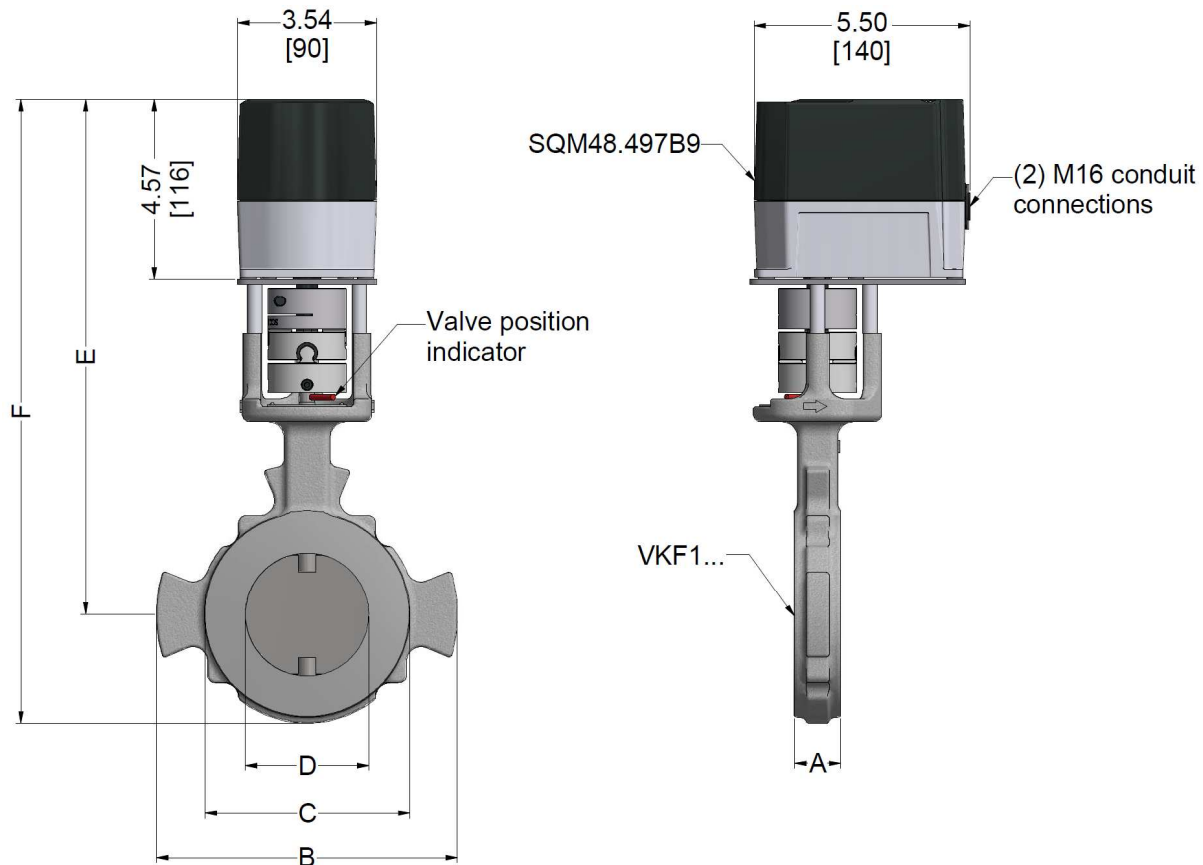


Table 5: VA48...VKF1x Dimensions¹

Valve Part Number	Valve Size	A	B	C	D	E	F
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	12.22 [310]	13.65 [347]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	12.38 [314]	14.00 [356]
VKF1x.050	2"	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	12.57 [319]	14.58 [370]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	12.87 [327]	16.11 [409]
VKF1x.080	3"	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	13.16 [334]	15.94 [405]
VKF1x.100	4"	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	13.56 [344]	17.34 [440]
VKF1x.125	5"	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	15.03 [382]	19.35 [491]
VKF1x.150 ²	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	15.53 [394]	21.03 [534]
VKF1x.200	8"	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	16.51 [419]	23.20 [589]

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

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

Dimensions (continued)

Dimensions in inches [mm]

VA45...VKF1x-N4 NEMA 4 Valve Actuator Assemblies

VA48...VKF1x-N4 NEMA 4 Valve Actuator Assemblies

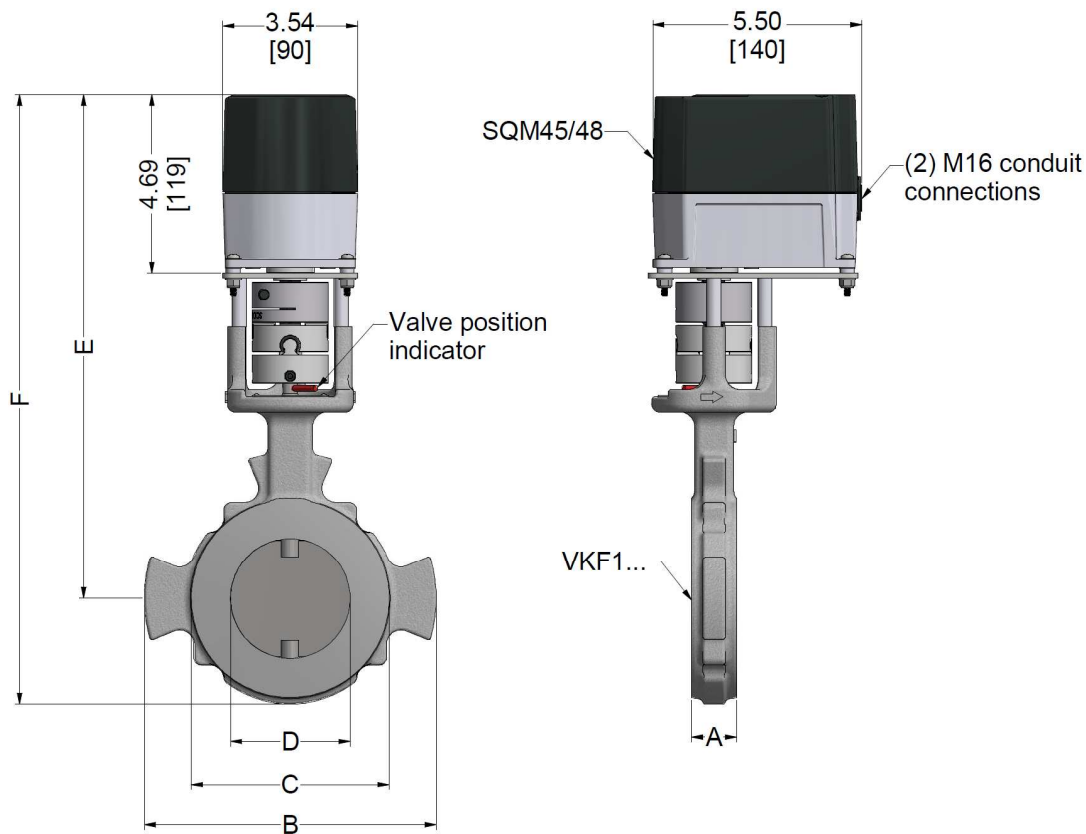


Table 6: VA45...VKF1x-N4, VA48...VKF1x-N4 Dimensions¹

Valve Part Number	Valve Size	A	B	C	D	E	F
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	12.34 [313]	13.77 [350]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	12.50 [318]	14.12 [359]
VKF1x.050	2"	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	12.69 [322]	14.70 [373]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	12.99 [330]	16.23 [412]
VKF1x.080	3"	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	13.28 [337]	16.06 [408]
VKF1x.100	4"	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	13.68 [347]	17.46 [443]
VKF1x.125	5"	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	15.15 [385]	19.47 [495]
VKF1x.150 ²	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	15.65 [398]	21.15 [537]
VKF1x.200	8"	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	16.63 [422]	23.32 [592]

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

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

Dimensions (continued)

Dimensions in inches [mm]

VA50...VKF1x NEMA 12 Valve Actuator Assemblies

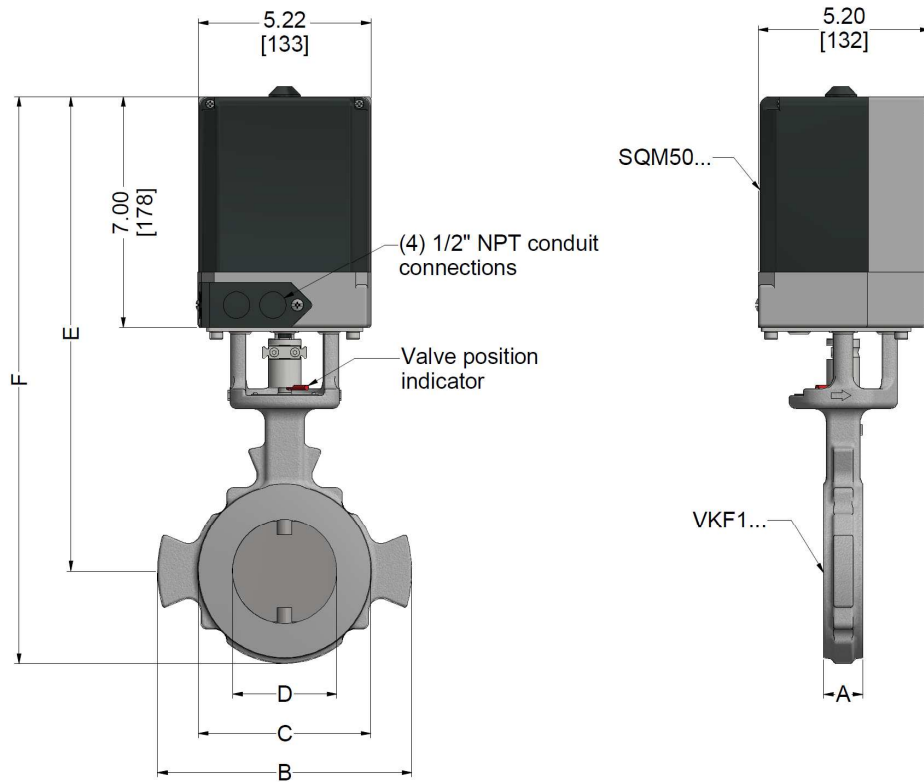


Table 7: VA50...VKF1x Dimensions¹

Valve Part Number	Valve Size	A	B	C	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 ²	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.

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

Dimensions (continued)

Dimensions in inches [mm]

VA50...VKF1x-N4 NEMA 4 Valve Actuator Assemblies

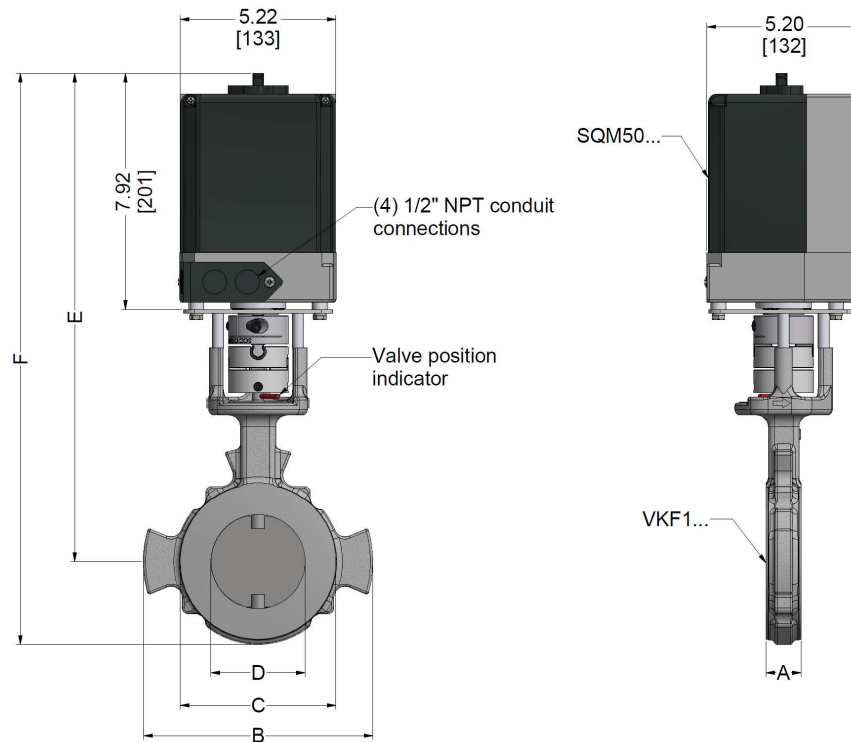


Table 8: VA50...VKF1x-N4 Dimensions¹

Valve Part Number	Valve Size	A	B	C	D	E	F
VKF1x.032	1-1/4"	1.18 [30]	4.72 [120]	2.83 [72]	1.26 [32]	15.42 [392]	16.86 [428]
VKF1x.040	1-1/2"	1.18 [30]	5.12 [130]	3.21 [81]	1.57 [40]	15.58 [396]	17.20 [437]
VKF1x.050	2"	1.18 [30]	6.10 [155]	3.97 [101]	1.97 [50]	15.77 [401]	17.78 [452]
VKF1x.065	2-1/2"	1.18 [30]	6.50 [165]	4.72 [120]	2.56 [65]	16.07 [408]	19.32 [491]
VKF1x.080	3"	1.18 [30]	7.68 [195]	5.21 [132]	3.15 [80]	16.36 [416]	19.14 [486]
VKF1x.100	4"	1.18 [30]	8.66 [220]	6.30 [160]	3.94 [100]	16.76 [426]	20.54 [522]
VKF1x.125	5"	1.57 [40]	9.84 [250]	7.48 [190]	4.92 [125]	18.24 [463]	22.55 [573]
VKF1x.150 ²	6"	1.57 [40]	11.81 [300]	8.50 [216]	5.91 [150]	18.73 [476]	24.24 [616]
VKF1x.200	8"	1.57 [40]	13.39 [340]	10.67 [271]	7.87 [200]	19.71 [501]	26.40 [671]

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

² Butt-weld flanges and non-standard gaskets must be used when mounting a 6" valve between 8" flanges. See VKF1... Technical Instructions n7673us for more details.

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