SIEMENS

Technical Instructions
Document No. 7636us
VGG…
March 26, 2026

VGG Series

VGG10.xxxU Gas Valves
for use with SKPxx.xxxUx electro-hydraulic actuators



ISO 9001 and 14000 REGISTERED FIRM

Only with series SKPxx.xxxUx actuators

Description

The normally closed VGG10.xxxU series of single body gas valves combined with SKPxx.xxxUx series electro-hydraulic actuators to provide safety shut-off, gas pressure regulation and/or air-gas ratio control for commercial or industrial gas burners.

Table 1. VGG10.xxxU model numbers

Model Numbers	Body style	Connection
VGG10.154U	Single	NPT thread
VGG10.204U	Single	NPT thread
VGG10.254U	Single	NPT thread
VGG10.404U	Single	NPT thread
VGG10.504U	Single	NPT thread
VGG10.654U	Single	NPT thread
VGG10.804U	Single	NPT thread

Features

- UL listed, FM approved, CSA certified, IRI approvable, ISO 9001 and 14000 certified. CE, Australian and Japanese approved versions available
- ¼" NPT pressure taps on the inlet and outlet (see *Table 2* for details)
- Stainless steel mesh inlet filter protects the valve seat as well as downstream components
- Dual stem guides ensure precise disc alignment and tight shut-off
- Valves in connection with SKPxx.xxxUx actuators open slowly and close rapidly
- Contoured valve disc provides smooth release of gas and stable regulating control

Application

All VGG10.xxxU valves can be combined with any SKPxx.xxxUx series actuator. The actuator can be mounted while the valve is installed and under pressure.

SKPxx.xxxUx regulating actuators are applicable for both low and high supply gas pressure applications, eliminating excessive regulator inventories. Maximum pressure ratings vary with valve size (see *Table 2*).

All VGG10.xxxU valves perform these functions in combination with each of the following actuators:

SKP15.xxxUx	Safety shut-off
SKP25.xxxUx	Safety shut-off and constant pressure regulation or zero governor
SKP55.xxxUx	Safety shut-off, pressure regulation and differential pressure air-gas ratio control
SKP75.xxxUx	Safety shut-off, pressure regulation and adjustable air/gas ratio control

Since more than one function can be performed by a single valve, fewer components and fittings are required, significantly reducing both the size and weight of the gas train. In addition, smaller diameter gas valves can be used. For details on valve sizing refer to the flow charts (figures 2 and 3).



CAUTION:
Do not oversize valves equipped with a regulating SKP25.xxxUx / SKP55.xxxUx / SKP75.xxxUx actuator. Oversizing may limit turndown and could cause oscillations.

Ordering information

Gas valves and actuators are ordered separately. For additional SKPxx.xxxUx actuator information, see the following technical instructions:

SKP15.xxxUx	155-751P25
SKP25.xxxUx	155-752P25
SKP55.xxxUx	155-753P25
SKP75.xxxUx	155-754P25

NOTE:
The SKPxx.xxxUx actuators have an operating temperature range of 14 °F to 140 °F (-10 °C to 60 °C)!

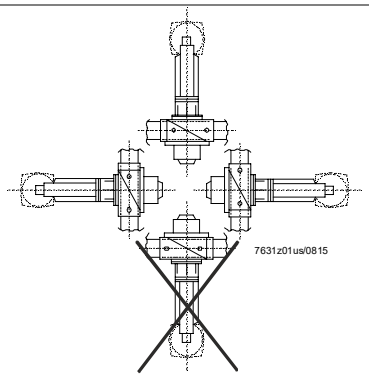
Table 2. Product numbers

Product number	Size NPT	Maximum operating pressure psi	Close-off pressure psi	Capacity CFH Natural gas at P = 1" W.C.	Number of test points, 1/4" NPT		Valve body material
					Inlet	Outlet	
VGG10.154U	½"	20	75	327 / 242*	2	2	Aluminum
VGG10.204U	¾"	20	75	614 / 442*	2	2	Aluminum
VGG10.254U	1"	20	75	914 / 686*	2	2	Aluminum
VGG10.404U	1 ½"	20	75	2,047 / 1,643*	2	2	Aluminum
VGG10.504U	2"	20	75	3,511	2	2	Aluminum
VGG10.654U	2 ½"	10	25	5,085	1	1	Cast iron
VGG10.804U	3"	10	25	6,158	1	1	Cast iron

* VGG10.xxxU valves, ½-through 1 ½-inch have reduced flow when used with AGA66 (NEMA 4 kit). Capacities shown are with/without NEMA 4 kit

Accessories

Part Number	Description
AGA61 	Manual adjusting throttle attachment AGA61 permits VGG10.xxxU series valves to be used as adjustable limiting orifice valves. Once adjusted, the AGA61 has a provision to be sealed from tampering.
AGA66 	Sealing gasket to provide NEMA 3, NEMA 3R, and NEMA 4 protection. - Gasket kit to mount between actuator SKPxx.xxxUx and valve VGG10.xxxU - Degree of protection increased from IP54 to IP65 - Refer to Mounting Instruction M7643.2 (74 319 0421 0)

Specifications **Approvals**	Agency approvals/standards	UL/429, FM/7400, CSA/ANSI Z21.21/CSA 6.5 C/I IRI approvable Agency marks apply only for VGG10.xxxU series gas valve bodies assembled with SKPxx.xxxUx actuators.
Operating environment	Maximum operating pressure Maximum back pressure (differential) Close-off pressure Permissible gas temperature Permissible operating temperature	See *Table 2* 2 psi (150 mbar) See *Table 2* 14 °F to 140 °F (-10 °C to 60 °C) 14 °F to 140 °F (-10 °C to 60 °C)
Use	Siemens gas valves in accordance with UL429. The valve is used as: - Safety shutoff valve (in connection with SKP15.xxxUx) - Pressure regulation with safety shutoff function (in connection with SKP25.xxxUx, SKP55.xxxUx or SKP75.xxxUx)	
Perm. mounting position		
Operating pressure	See *Type summary*	
Types of gases	Suitable natural gases, propane, butane and air	
Strainer	Built-in, mesh size 0.9 mm	
Physical characteristics	Body materials Weight	See *Table 2* See *Table 3*
Connections	Pipe connections Pressure and vent taps Closing time in connection with SKPx5	NPT threads (see *Table 2*) See *Table 2* <1 s (when switched off)

Operation

All VGG10.xxxU gas valves are normally closed, two-way valves. The valves have a standard, integral, stainless steel mesh filter (0.9 mm) in the inlet to protect the downstream components against contamination.

VGG10.xxxU series gas valves have a contoured valve disc for stable regulating control and smooth release (see *Figure 1*).

Sectional view of VGG10.xxxU valve

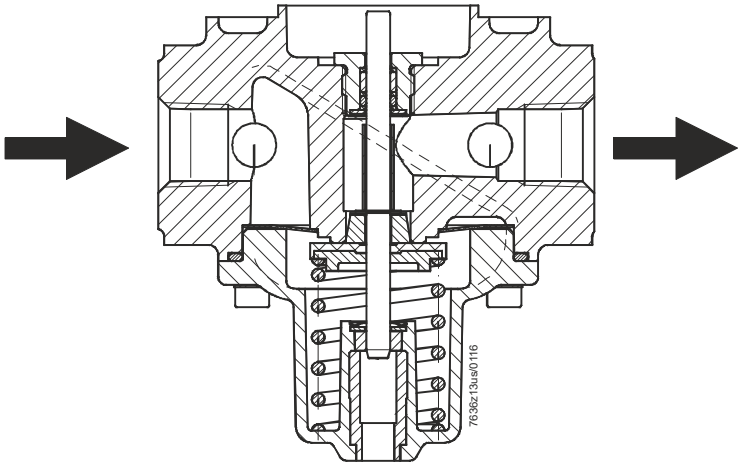


Figure 1. Sectional view of VGG10.xxxU models

Closing spring:
The valve includes a closing spring. The spring force acts as closing force on the valve seat.

Gas flow charts

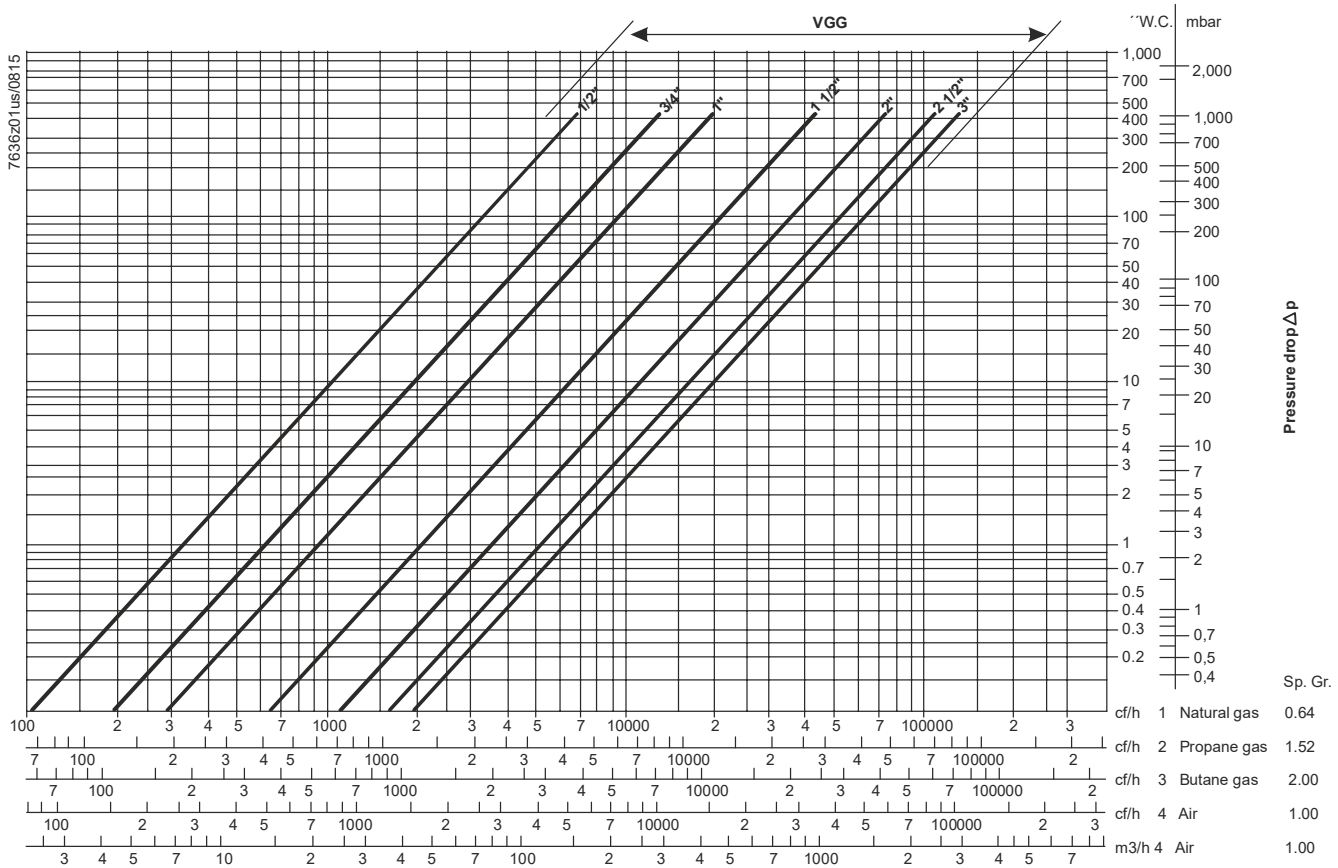


Figure 2. Sizing VGG10.xxxU valves without AGA66 NEMA 4 kit

Assumptions:
1) Pressure downstream of valve is atmospheric
2) Maximum temperature is 140 °F
3) Valve in fully open position

NOTE:
Pressure drop is for one valve when using SKPx5.xxxUx actuator, without a NEMA 4 kit (AGA66).

CAUTION:
Do not oversize valves equipped with regulating actuators SKP25.xxxUx, SKP55.xxxUx or SKP75.xxxUx Oversizing may limit turndown and could cause oscillations.

Gas flow charts, continued

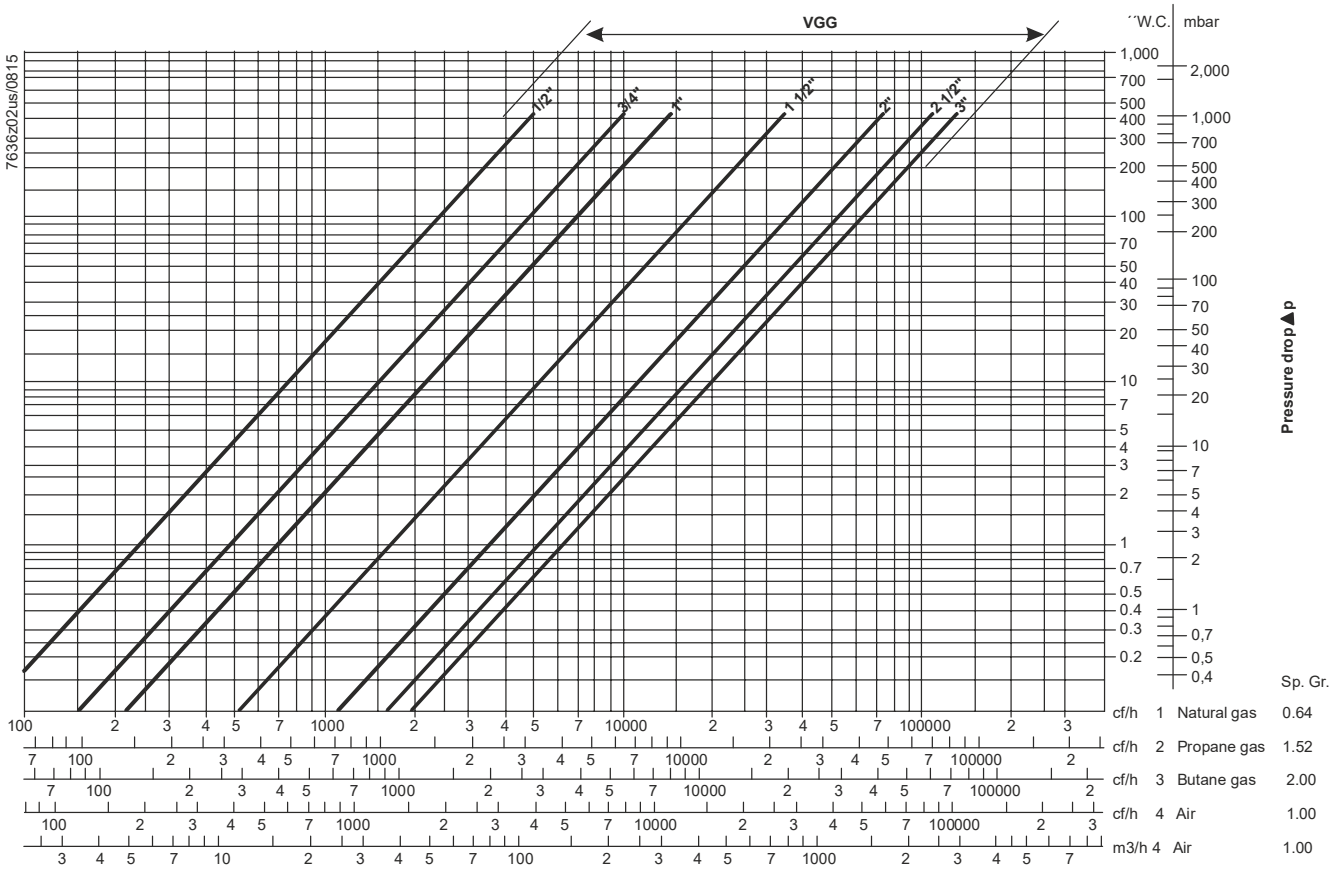


Figure 3. Sizing VGG10.xxxU valves with AGA66 NEMA 4 kit

Assumptions:
1) Pressure downstream of valve is atmospheric
2) Maximum temperature is 140 °F
3) Valve in fully open position

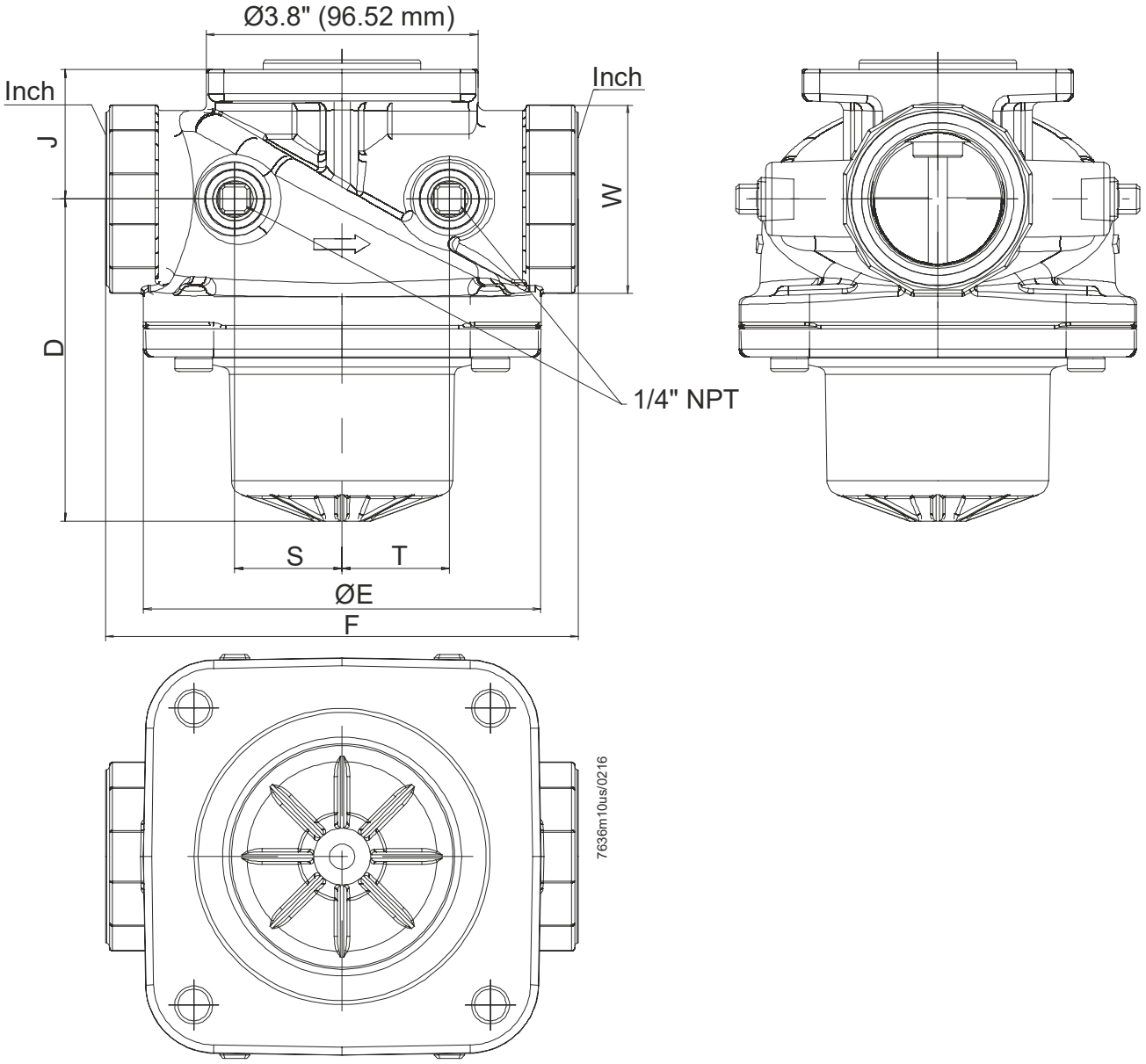
NOTE:
Pressure drop is for one valve when using SKPx5.xxxUx actuator, with a NEMA 4 kit (AGA66).

CAUTION:
Do not oversize valves equipped with regulating actuators SKP25.xxxUx, SKP55.xxxUx or SKP75.xxxUx. Oversizing may limit turndown and could cause oscillations.

Dimensions

Dimensions in Inches (mm)

VGG10.xxxU



Dimensions

Dimensions in Inches (mm)

Table 3. VGG10.xxxU models

Valve model	**Nominal size**	D inch (mm)	Ø E inch (mm)	F inch (mm)	J inch (mm)	S inch (mm)	T inch (mm)	W inch (mm)	**Weight** pounds (kg)
VGG10.154U	½"	3.11 (79)	3.15 (80)	4.29 (109)	1.26 (32)	1.22 (31)	1.10 (28)	1.81 (46)	1.65 (0.75)
VGG10.204U	¾"	3.11 (79)	3.15 (80)	4.29 (109)	1.26 (32)	1.22 (31)	1.10 (28)	1.81 (46)	1.65 (0.75)
VGG10.254U	1"	3.11 (79)	3.15 (80)	4.29 (109)	1.26 (32)	1.22 (31)	1.10 (28)	1.81 (46)	1.50 (0.70)
VGG10.404U	1 ½"	4.02 (102)	4.96 (126)	5.89 (149.7)	1.61 (41)	1.34 (34)	1.34 (34)	2.36 (60)	3.30 (1.50)
VGG10.504U	2"	4.21 (107)	4.96 (126)	6.68 (169.7)	1.97 (50)	1.34 (34)	1.34 (34)	2.95 (75)	4.00 (1.80)
VGG10.654U	2 ½"	5.91 (150)	7.28 (185)	11.42 (290)	3.62 (92)	2.44 (62)	---	3.94 (100)	32.50 (15.80)
VGG10.804U	3"	5.91 (150)	7.28 (185)	12.20 (310)	3.94 (100)	2.44 (62)	---	4.72 (120)	34.00 (15.50)

Information in this publication is based on current specifications. The company reserves the right to make changes in specifications and models as design improvements are introduced. Other product or company names mentioned herein may be the trademarks of their respective owners.

Siemens AG Building Technologies Division
Berliner Ring 23
76437 Rastatt
GERMANY

Your feedback is important to us. If you have comments about this document, please send them to techsupport@SCCcombustion.com

Document No. CC1N7636us
Country of Origin: DE