INCH-POUND

A-A-59860
2 February 2010
SUPERSEDING
MIL-DTL-2G
29 September 2006

COMMERCIAL ITEM DESCRIPTION

VALVES, CYLINDER, GAS
(FOR COMPRESSED OR LIQUEFIED GASES)

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. SCOPE. This commercial item description (CID) provides the acquisition requirements for the purchase of cylinder valves for use with compressed gas cylinders containing liquefied or non-liquefied compressed gases or mixtures.

2. CLASSIFICATION. The valves shall be classified by the following styles, classes, outlet connection numbers, and inlet sizes:

2.1 Style. The valve shall be one of the styles listed below (see 7.3(c)).

Style I	-	Compression packed.
Style IIA	-	O-ring (low-pressure*).
Style IIB	-	O-ring (high-pressure).
Style IV	-	Diaphragm seal.
Style V	-	Medical post.

*Style IIA low-pressure O-ring valves are rated up to 500 psig. A style IIB high-pressure O-ring valve, of the appropriate class (see 2.2), is required for applications using an O-ring valve, where the cylinder's marked operating pressure exceeds 500 psig.

2.2 Class. The valve shall be one of the classes listed in table I (see 7.3(d)).

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: STDZNMGT@dla.mil or Defense Supply Center Richmond (DSCR), ATTN: DSCR-VEB, 8000 Jefferson Davis Highway, Richmond, VA 23297-5616. Since contact information can change, you may want to verify the currency of this address information using the ASSIST database at https://assist.daps.dla.mil/.

TABLE I. Class designations.

Class	Valve design service pressure[1] rating (psig)	Max. marked cylinder service pressure (psig)
05	0 - 500 at 70 °F (21.1 °C)	500 (3450 kPa)
30	0 - 3000 at 120 °F (48.9 °C)	2400 (16550 kPa)
40	3001 - 4000 at 120 °F (48.9 °C)	3000 (20680 kPa)
55	4001 - 5500 at 120 °F (48.9 °C)	3600 (24820 kPa)
75	5501 - 7500 at 120 °F (48.9 °C)	6000 (41370 kPa)

[1] The pressure rating of the outlet connection as specified in CGA V-1.

2.3 Outlet connection numbers. The valve outlet shall be one of the following designations, as specified in CGA V-1, "Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections", (see 7.3(e)):

200	330	540	670	890
240	346	577	677	910
280	347	580	680	920
296	350	590	705	930
300	500	621	820	940
320	510	660	870	950
326				

2.4 Inlet sizes. The valve inlet's size shall be one of the following sizes as specified in CGA V-1 (see 7.3(f)):

Inlet size 3 - 3/8-18NGT.
Inlet size 4 - 1/2-14NGT.
Inlet size 6 - 3/4-14NGT.
Inlet size 8 - 1-11 1/2-NGT.

3. SALIENT CHARACTERISTICS

3.1 Design and construction requirements. The valve's design and construction shall be in accordance with CGA V-9, "Compressed Gas Association Standard for Compressed Gas Cylinder Valves".

3.1.1 Materials. As specified in CGA V-9, all materials in contact with the gas shall be physically and chemically compatible with the products for which the valve is designed.

3.1.1.1 Components. Used, rebuilt or remanufactured components, pieces, and parts shall not be incorporated in the valves.

3.2 Performance requirements. The valve's performance shall be in accordance with the performance requirements specified in CGA V-9.

3.3 Marking. Unless otherwise specified, valves shall be marked in accordance with CGA V-9 (see 7.3 (g)). In addition, when specified by contract, the valve body shall be permanently marked, using one of the methods specified in CGA V-9, with the appropriate nomenclature to indicate the valve's intended gas service. The contracting agent shall provide the required nomenclature.

3.4 Pressure relief device. Unless prohibited or not required (see tables II and III), all valves shall be supplied with a safety device known as a pressure relief device (PRD). This safety device shall be one of the types listed in table II, and conform to the design and performance requirements specified in CGA S-1.1, "Pressure Relief Device Standards Part 1 - Cylinders for Compressed Gases", and CGA S-7, "Method for Selecting Pressure Relief Devices for Compressed Gas Mixtures in Cylinders", (see 7.3(h)).

TABLE II. PRD designations.

PRD #	CGA S-1.1	Type and description
0	-	None required
1	CG-1	Rupture disk PRD-Service (cylinder) pressure of 1800 psig (12400 kPa)
2	CG-1	Rupture disk PRD-Service (cylinder) pressure of 2015 psig (13890 kPa)
3	CG-1	Rupture disk PRD-Service (cylinder) pressure of 2265 psig (15620 kPa)
4	CG-1	Rupture disk PRD-Service (cylinder) pressure of 2400 psig (16550 kPa)
5	CG-1	Rupture disk PRD-Service (cylinder) pressure of 3000 psig (20680 kPa)
6	CG-1	Rupture disk PRD-Service (cylinder) pressure of 3500 psig (24130 kPa)
7	CG-1	Rupture disk PRD-Service (cylinder) pressure of 4000 psig (27580 kPa)
8	CG-1	Rupture disk PRD-Service (cylinder) pressure of 4500 psig (31000 kPa)
9	CG-1	Rupture disk PRD-Service (cylinder) pressure of 6000 psig (41350 kPa)
10	-	Prohibited[1]
11	CG-2	Fusible plug PRD for service (cylinder) pressures through 500 psig (3450 kPa), 165 °F (74 °C) nominal
12	CG-3	Fusible plug PRD for service (cylinder) pressures through 500 psig (3450 kPa), 212 °F (100 °C) nominal
13	CG-4	Combination rupture disk and fusible plug PRD for service (cylinder) pressures of 1800 psig (12400 kPa) through 2265 psig (15616 kPa), 165 °F (74 °C)
14	CG-5	Combination rupture disk and fusible plug PRD for service (cylinder) pressures of 1800 psig (12400 kPa) through 2265 psig (15616 kPa), 212 °F (100 °C)
15	CG-7	Spring loaded, reseating PRD[2]--Service (cylinder) pressure 225 psig (1550 kPa)
16	CG-7	Spring loaded, reseating PRD--Service (cylinder) pressure 240 psig (1653 kPa)
17	CG-7	Spring loaded, reseating PRD--Service (cylinder) pressure 260 psig (1790 kPa)
18	CG-7	Spring loaded, reseating PRD--Service (cylinder) pressure 300 psig (2066 kPa)
19	CG-7	Spring loaded, reseating PRD--Service (cylinder) pressure 400 psig (2755 kPa)

[1] The use of PRDs is prohibited in certain gas service applications by 49 CFR 173.301.
[2] A spring loaded, reseating PRD (CG-7) is also known as a pressure relief valve (PRV).

3.5 Testing and inspections. Unless otherwise specified, the valves shall pass all qualification tests and inspections as specified in CGA V-9. Documentation of these tests shall be maintained in accordance with CGA V-9 and made available to the government upon request. When specified by contract, representative valves shall be required to pass the optional vibration test specified in CGA V-9 (see 7.3(j)). When specified (see 7.3(k)), representative valves shall be required to pass additional endurance testing, up to 5,000 total cycles, conforming to the endurance test method specified in CGA V-9.

4. REGULATORY REQUIREMENTS

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. PRODUCT CONFORMANCE PROVISIONS

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The government reserves the right to require proof of such conformance, and to perform, at its own expense, those additional inspections, tests and other evaluations the contracting agency deems necessary.

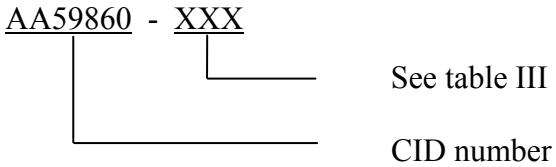
5.2 Market acceptability. The product offered must have been previously sold either to the government or on the commercial market.

6. PACKAGING

6.1 Preservation, packing, and marking. Preservation, packing, and marking shall be as specified in the contract or order (see 7.3(l)).

7. NOTES

7.1 Part or identification number (PIN). The following PIN procedure is for government purposes and does not constitute a requirement for the contractor.



Example reference part number AA59860- 001 indicates: MIL-DTL-2G designator V1-510-0, outlet app. 510, inlet size 6, style I, class 05, PRD designator 0, for acetylene gas, which may require a wrench or key and a strainer.

7.2 Sources of documents.

7.2.1 CFR and FAR. Copies of CFR and FAR may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Electronic copies of CFR documents may be obtained from http://www.gpoaccess.gov/cfr/. Electronic copies of FAR documents may be obtained from http://www.arnet.gov/far/.

7.2.2 CGA standards. Copies of CGA standards may be obtained from the Compressed Gas Association, 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923. Electronic copies of CGA standards may be obtained from http://www.cganet.com/.

7.3 Ordering data. The acquisition order should specify the following information:

a. CID document number, revision, and CID PIN (see table III).
b. Intended gas service.
c. Valve style (see 2.1).
d. Maximum marked cylinder service pressure (see table I).
e. Outlet connection number (see 2.3).
f. Inlet size (see 2.4).
g. When valve body marking shall be other than specified by CGA V-9 (see 3.3).
h. PRD type (see 3.4).
i. When the spring tension adjustment for a PRD is required to be different than that normally specified (see table II).
j. When the optional vibration testing specified in CGA V-9 is required (see 3.5).
k. When additional endurance testing (5,000 cycles) is required (see 3.5).
l. Preservation, packing, and marking (see 6.1).
m. Cylinder diameter or actual dip tube length when a dip tube is required (see table III).
n. When dip tube is required to be assembled to valve (see table III).
o. When a metal outlet cap or plug, with chain and retaining ring is required or when a disposable plastic dust cap or plug is required (see table III). Note: All valves (with non-pin indexed outlets) may require a cap or plug.
p. When a handwheel is not required (see table III).
q. When a wrench or key is required (see table III).
r. When a strainer is required (see table III).
s. When chrome plated valves are not required for medical valve applications (see table III).

7.4 Subject term (key word) listing.

Compression packed
Diaphragm seal
Dip tube
Eductor tube
Fusible plug
Inlet
Outlet
Pressure relief device
Rupture disk
Medical
O-ring

7.5 Cross-reference data. Table III contains cross-reference data for valves previously specified by MIL-DTL-2G and its associated specification sheets, including the individual specification sheet numbers and valve type designators. This information has been included for continuity and to facilitate the transition to this document.

TABLE III. PIN designation and cross-reference data for valves.

CID PIN	Former detail spec. number	MIL-DTL-2G designator	Outlet app.	Inlet size	Style	Class	PRD des.	DT[1]	DC[2]	WK[3]	Gas service	Remarks
AA59860-001	MIL-DTL-2/1	V1-510-0	510	6	I	05	0			X	Acetylene	Strainer may be required
AA59860-002	MIL-DTL-2/1	V1-510-0	510	6	IIA	05	0					Strainer may be required
AA59860-003	MIL-DTL-2/2	V2-510-0	510	8	I	05	0			X	Acetylene	Strainer may be required
AA59860-004	MIL-DTL-2/2	V2-510-0	510	8	IIA	05	0					Strainer may be required
AA59860-005	MIL-DTL-2/3	V3-200-1	200	3	I	05	12			X	Acetylene (10-ft^3 cylinders)	Valve configuration[4], "MC tank"
AA59860-006	MIL-DTL-2/3	V3-200-1	520	3	I	05	12			X	Acetylene (40-ft^3 cylinders)	Valve configuration[4], "B tank"
AA59860-007	MIL-DTL-2/5	V5-346-2	346	6	IIB	30	14				Air for human respiration (non-medical)	Press. not specified[5], 1800-2400
AA59860-008	MIL-DTL-2/5	V5-346-3	346	6	IIB	30	1					
AA59860-009	MIL-DTL-2/5	V5-346-4	346	6	IIB	30	2					
AA59860-010	MIL-DTL-2/5	V5-346-5	346	6	IIB	30	3					
AA59860-011	MIL-DTL-2/5	V5-346-6	346	6	IIB	30	4					
AA59860-012	MIL-DTL-2/6	V6-590-2	590	6	IIB	30	14				Air (Oil tolerant; industrial)	Press. not specified[5], 1800-2400
AA59860-013	MIL-DTL-2/6	V6-590-3	590	6	IIB	30	1					
AA59860-014	MIL-DTL-2/6	V6-590-4	590	6	IIB	30	2					
AA59860-015	MIL-DTL-2/6	V6-590-5	590	6	IIB	30	3					
AA59860-016	MIL-DTL-2/6	V6-590-6	590	6	IIB	30	4					
AA59860-017	MIL-DTL-2/7	V7-240-0	240	6	I	05	0	X[6]		X	Anhydrous ammonia	Valve config.[7]; dished head cyl.
AA59860-018	MIL-DTL-2/8	V8-240-0	240	6	I	05	0	X[6]		X	Anhydrous ammonia	3/4" inlet, convex head cylinder
AA59860-019	MIL-DTL-2/9	V9-240-0	240	8	I	05	0	X[6]		X	Anhydrous ammonia	Valve config.[7]; dished head cyl.
AA59860-020	MIL-DTL-2/10	V10-240-0	240	8	I	05	0	X[6]		X	Anhydrous ammonia	1" inlet, convex head cylinder
AA59860-021	MIL-DTL-2/11	V11-580-2	580	6	IIB	30	14				Argon, helium, nitrogen, neon, and xenon (Inert - oil free)	Press. not specified[5], 1800-2400
AA59860-022	MIL-DTL-2/11	V11-580-3	580	6	IIB	30	1					
AA59860-023	MIL-DTL-2/11	V11-580-4	580	6	IIB	30	2					
AA59860-024	MIL-DTL-2/11	V11-580-5	580	6	IIB	30	3					
AA59860-025	MIL-DTL-2/11	V11-580-6	580	6	IIB	30	4					
AA59860-026	MIL-DTL-2/14	V14-510-14	510	6	IIA	05	16	X			Butane, propane, butane-propane mixtures, MAPP Gas, and propylene	PRD start to discharge: 375psig Flow rating pressure: 480 psig Flow cap: not less than 360 cfm Max cap: 100#LPG (240# H_20)
AA59860-027	MIL-DTL-2/14	V14-510-15	510	6	IIA	05	17	X				
AA59860-028	MIL-DTL-2/14	V14-510-14	510	6	IV	05	16	X				
AA59860-029	MIL-DTL-2/14	V14-510-15	510	6	IV	05	17	X				
AA59860-030	MIL-DTL-2/15	V15-320-3	320	6	IIB	30	1				Carbon dioxide (Industrial; non-medical)	
AA59860-031	MIL-DTL-2/15	V15-320-4	320	6	IIB	30	2					
AA59860-032	MIL-DTL-2/16	V16-320-4	320	6	IIB	30	2				Carbon dioxide (Medical)	Chrome plated; outlet cap required
AA59860-033	MIL-DTL-2/16	V16-320-4	320	6	IV	30	2					
AA59860-034	MIL-DTL-2/17	V17-940-4	940	4	V	30	2			X	Carbon dioxide (Medical)	Pin-index outlet; chrome plated
AA59860-035	MIL-DTL-2/18	V18-350-2	350	6	IIB	30	14				Carbon monoxide	Outlet cap required
AA59860-036	MIL-DTL-2/19	V19-350-3	350	6	IIB	30	1	X			Ethylene oxide-carbon dioxide mixture (Carboxide: 10% ethylene oxide, 90% carbon dioxide)	Sterilization / fumigation agent
AA59860-037	MIL-DTL-2/19	V19-350-4	350	6	IIB	30	2	X				
AA59860-038	MIL-DTL-2/19	V19-350-5	350	6	IIB	30	3	X				

TABLE III. PIN designation and cross-reference data for valves - Continued.

CID PIN	Former detail spec. number	MIL-DTL-2G designator	Outlet app.	Inlet size	Style	Class	PRD des.	DT[1]	DC[2]	WK[3]	Gas service	Remarks
AA59860-039	MIL-DTL-2/20	V20-820-1	820	6	I	05	11			X	Chlorine	3/4-14NGT(C1)-1 inlet threads or -2, -3, -4, -5 optional; outlet cap required
AA59860-040	MIL-DTL-2/21	V21-820-0	820	6	I	05	0			X	Chlorine (1-ton container)	3/4-14NGT(C1)-1 inlet threads or -2, -3, -4, -5 optional; outlet cap required
AA59860-041	MIL-DTL-2/22	V22-660-13	660	6	I	05	15	X	D	H	R-11 Trichlorofluoromethane R-12 Dichlorodifluoromethane R-13 Chlorotrifluoromethane R-22 Chlorodifluoromethane R-23 Trifluoromethane R-31 Chlorofluoromethane R-32 Difluoromethane R-113 Trichlorotrifluoroethane R-114 Dichlorotetrafluoroethane R-115 Chloropentafluoroethane R-123 Dichlorotrifluoroethane R-124 Chlorotetrafluoroethane R-125 Pentafluoroethane R-134a Tetrafluoroethane R-143a Trifluoroethane R-152a Difluoroethane R-227 Heptafluoropropane R-290 Propane R-401A (R-22/R-125/R-124) (53/13/34) R-401B (R-22/R-152a/R-124) (61/28/11) R-402A (R-22/R-125/R-290) (38/60/2) R-402B (R-22/R-125/R-290) (60/38/2) R-404A (R-125/R-143a/R-134a) (44/52/4) R-500 (R-12/R-152a) (73.8/26.2) R-501 (R-22/R-12) (75.0/25.0) R-502 (R-22/R-115) (48.8/51.2) R-503 (R-23/R-13) (40.1/59.9) R-504 (R-32/R-115) (48.2/51.8) R-505 (R-12/R-31) (78.0/22.0) R-506 (R-31/R-114) (55.1/44.9)	single flow cntrl, single outlet
AA59860-042	MIL-DTL-2/22	V22-660-14	660	6	I	05	16	X	D	H		single flow cntrl, single outlet
AA59860-043	MIL-DTL-2/22	V22-660-15	660	6	I	05	17	X	D	H		single flow cntrl, single outlet
AA59860-044	MIL-DTL-2/22	V22-660-16	660	6	I	05	18	X	D	H		single flow cntrl, single outlet
AA59860-045	MIL-DTL-2/22	V22-660-17	660	6	I	05	19	X	D	H		single flow cntrl, single outlet
AA59860-046	MIL-DTL-2/22	V22-660-18	660	6	I	05	18	X	D	H		dual flow cntrl, single outlet
AA59860-047	MIL-DTL-2/22	V22-660-19	660	6	I	05	19	X	D	H		dual flow cntrl, single outlet
AA59860-048	MIL-DTL-2/22	V22-660-20	660	6	I	05	16	X	D	H		dual flow cntrl, dual outlet
AA59860-049	MIL-DTL-2/22	V22-660-21	660	6	I	05	18	X	D	H		dual flow cntrl, dual outlet
AA59860-050	MIL-DTL-2/22	V22-660-22	660	6	I	05	19	X	D	H		dual flow cntrl, dual outlet
AA59860-051	MIL-DTL-2/22	V22-660-13	660	6	IIA	05	15	X	D			single flow cntrl, single outlet
AA59860-052	MIL-DTL-2/22	V22-660-14	660	6	IIA	05	16	X	D			single flow cntrl, single outlet
AA59860-053	MIL-DTL-2/22	V22-660-15	660	6	IIA	05	17	X	D			single flow cntrl, single outlet
AA59860-054	MIL-DTL-2/22	V22-660-16	660	6	IIA	05	18	X	D			single flow cntrl, single outlet
AA59860-055	MIL-DTL-2/22	V22-660-17	660	6	IIA	05	19	X	D			single flow cntrl, single outlet
AA59860-056	MIL-DTL-2/22	V22-660-18	660	6	IIA	05	18	X	D			dual flow cntrl, single outlet
AA59860-057	MIL-DTL-2/22	V22-660-19	660	6	IIA	05	19	X	D			dual flow cntrl, single outlet
AA59860-058	MIL-DTL-2/22	V22-660-20	660	6	IIA	05	16	X	D			dual flow cntrl, dual outlet
AA59860-059	MIL-DTL-2/22	V22-660-21	660	6	IIA	05	18	X	D			dual flow cntrl, dual outlet
AA59860-060	MIL-DTL-2/22	V22-660-22	660	6	IIA	05	19	X	D			dual flow cntrl, dual outlet

TABLE III. PIN designation and cross-reference data for valves - Continued.

CID PIN	Former detail spec. number	MIL-DTL-2G designator	Outlet app.	Inlet size	Style	Class	PRD des.	DT[1]	DC[2]	WK[3]	Gas service	Remarks
AA59860-061	MIL-DTL-2/23	V23-300-1	300	6	I	05	0[8]			X	Ethyl chloride (R-160)	No aluminum cylinders
AA59860-062	MIL-DTL-2/24	V24-510-1	510	6	I	05	11	X		X	Ethylene oxide	Specify cylinder diameter
AA59860-063	MIL-DTL-2/26	V26-590-2	590	6	IIB	30	14				Helium and nitrogen (Inert - oil tolerant)	Press. not specified[5], 1800-2400
AA59860-064	MIL-DTL-2/26	V26-590-3	590	6	IIB	30	1					
AA59860-065	MIL-DTL-2/26	V26-590-4	590	6	IIB	30	2					
AA59860-066	MIL-DTL-2/26	V26-590-5	590	6	IIB	30	3					
AA59860-067	MIL-DTL-2/26	V26-590-6	590	6	IIB	30	4					
AA59860-068	MIL-DTL-2/27	V27-280-2	280	6	IIB	30	13				Oxygen-helium mixture (Medical) (Helium not over 80%)	Chrome plated; outlet cap required
AA59860-069	MIL-DTL-2/27	V27-280-2	280	6	IV	30	13					
AA59860-070	MIL-DTL-2/28	V28-890-2	890	4	V	30	13			X	Oxygen-helium mixture (Medical) (Helium not over 80%)	Pin-index outlet; chrome plated
AA59860-071	MIL-DTL-2/29	V29-350-2	350	6	IIB	30	14				Hydrogen	
AA59860-072	MIL-DTL-2/29	V29-350-2	350	6	IV	30	14					
AA59860-073	MIL-DTL-2/37	V37-326-4	326	6	IIB	30	2				Nitrous oxide (Medical)	Chrome plated; outlet cap required
AA59860-074	MIL-DTL-2/37	V37-326-4	326	6	IV	30	2					
AA59860-075	MIL-DTL-2/38	V38-910-4	910	4	V	30	2			X	Nitrous oxide (Medical)	Pin-index outlet; chrome plated
AA59860-076	MIL-DTL-2/39	V39-540-2	540	6	IIB	30	14				Oxygen (non-medical)	Press. not specified[5], 1800-2400
AA59860-077	MIL-DTL-2/39	V39-540-3	540	6	IIB	30	1					
AA59860-078	MIL-DTL-2/39	V39-540-4	540	6	IIB	30	2					
AA59860-079	MIL-DTL-2/39	V39-540-5	540	6	IIB	30	3					
AA59860-080	MIL-DTL-2/39	V39-540-6	540	6	IIB	30	4					
AA59860-081	MIL-DTL-2/41	V41-540-2	540	6	IIB	30	14				Oxygen (Medical)	Chrome plated; outlet cap required
AA59860-082	MIL-DTL-2/41	V41-540-2	540	6	IV	30	14					
AA59860-083	MIL-DTL-2/42	V42-870-2	870	4	V	30	13			X	Oxygen (Medical)	Pin-index outlet; chrome plated
AA59860-084	MIL-DTL-2/43	V43-660-12	660	6	I	30	10			X	Phosgene (1-ton container)	Outlet cap and chain required
AA59860-085	MIL-DTL-2/44	V44-510-14	510	6	IIA	05	16				Butane, propane, butane-propane mixtures, MAPP gas, and propylene	PRD start to discharge: 375psig Flow rating pressure: 480 psig Flow cap: not less than 720 cfm Max cap: 200#LPG (480# H_2O)
AA59860-086	MIL-DTL-2/44	V44-510-15	510	6	IIA	05	17					
AA59860-087	MIL-DTL-2/44	V44-510-14	510	6	IV	05	16					
AA59860-088	MIL-DTL-2/44	V44-510-15	510	6	IV	05	17					
AA59860-089	MIL-DTL-2/46	V46-590-2	590	6	IIB	30	14				Sulfur hexafluoride	Press. not specified[5], 1800-2400
AA59860-090	MIL-DTL-2/46	V46-590-3	590	6	IIB	30	1					
AA59860-091	MIL-DTL-2/46	V46-590-4	590	6	IIB	30	2					
AA59860-092	MIL-DTL-2/46	V46-590-5	590	6	IIB	30	3					
AA59860-093	MIL-DTL-2/46	V46-590-6	590	6	IIB	30	4					
AA59860-094	MIL-DTL-2/47	V47-950-2	950	4	V	30	13			X	Air for human respiration (Medical)	Pin-index outlet; chrome plated
AA59860-095	MIL-DTL-2/48	V48-346-2	346	6	IIB	30	13				Air for human respiration (Medical)	Chrome plated; outlet cap required
AA59860-096	MIL-DTL-2/48	V48-346-2	346	6	IV	30	13					
AA59860-097	MIL-DTL-2/50	V50-330-12	330	6	IV	30	10	X			Methyl bromide	Optional 1/2" NPT outlet
AA59860-098	MIL-DTL-2/51	V51-677-9	677	6	IIB	75	9				Argon, helium, nitrogen, neon, xenon and krypton (Inert-oil free)	5501 - 7500 psig cylinders

TABLE III. PIN designation and cross-reference data for valves - Continued.

CID PIN	Former detail spec. number	MIL-DTL-2G designator	Outlet app.	Inlet size	Style	Class	PRD des.	DT[1]	DC[2]	WK[3]	Gas service	Remarks
AA59860-099	MIL-DTL-2/52	V52-660-14	660	6	I	05	16	X	D	H	Halon Halon-1202 (Dibromodifluoromethane) Halon-1211 (Bromochlorodifluoromethane) Halon-1301 (Bromotrifluoromethane) Halon-2402 (Dibromotetrafluoroethane)	Single outlet
AA59860-100	MIL-DTL-2/52	V52-660-16	660	6	I	05	18	X	D	H		Single outlet
AA59860-101	MIL-DTL-2/52	V52-660-17	660	6	I	05	19	X	D	H		Single outlet
AA59860-102	MIL-DTL-2/52	V52-660-18	660	6	I	05	18	X	D	H		Dual outlet
AA59860-103	MIL-DTL-2/52	V52-660-19	660	6	I	05	19	X	D	H		Dual outlet
AA59860-104	MIL-DTL-2/52	V52-660-14	660	6	IV	05	16	X	D			Single outlet
AA59860-105	MIL-DTL-2/52	V52-660-16	660	6	IV	05	18	X	D			Single outlet
AA59860-106	MIL-DTL-2/52	V52-660-17	660	6	IV	05	19	X	D			Single outlet
AA59860-107	MIL-DTL-2/52	V52-660-18	660	6	IV	05	18	X	D			Dual outlet
AA59860-108	MIL-DTL-2/52	V52-660-19	660	6	IV	05	19	X	D			Dual outlet
AA59860-109	MIL-DTL-2/53	V53-660-2	660	6	IIB	30	13				Hexafluoroethane	Press. not specified[5], 1800-2400
AA59860-110	MIL-DTL-2/53	V53-660-3	660	6	IIB	30	1					
AA59860-111	MIL-DTL-2/53	V53-660-4	660	6	IIB	30	2					
AA59860-112	MIL-DTL-2/53	V53-660-5	660	6	IIB	30	3					
AA59860-113	MIL-DTL-2/54	V54-660-1	660	6	I	05	11			X	Sulfur dioxide	Strainer may be required; For sulfur dioxide use ONLY
AA59860-114	MIL-DTL-2/54	V54-660-1	660	6	IV	05	11					
AA59860-115	MIL-DTL-2/55	V55-540-2	540	4	IIB	30	14				Oxygen (non-medical)	Press. not specified[5], 1800-2400
AA59860-116	MIL-DTL-2/55	V55-540-3	540	4	IIB	30	1					
AA59860-117	MIL-DTL-2/55	V55-540-4	540	4	IIB	30	2					
AA59860-118	MIL-DTL-2/55	V55-540-5	540	4	IIB	30	3					
AA59860-119	MIL-DTL-2/55	V55-540-6	540	4	IIB	30	4					
AA59860-120	MIL-DTL-2/56	V56-680-8	680	6	IIB	55	6[9]				Argon, helium, nitrogen, neon, xenon, and krypton (Inert-oil free)	
AA59860-121	MIL-DTL-2/56	V56-680-10	680	6	IIB	55	7					
AA59860-122	MIL-DTL-2/56	V56-680-11	680	6	IIB	55	8					
AA59860-123	MIL-DTL-2/57	V57-621-8	621	6	IIB	55	6[9]				Helium and nitrogen (Inert-oil tolerant)	
AA59860-124	MIL-DTL-2/57	V57-621-10	621	6	IIB	55	7					
AA59860-125	MIL-DTL-2/57	V57-621-11	621	6	IIB	55	8					
AA59860-126	MIL-DTL-2/58	V58-677-9	677	8	IIB	75	9				Argon, helium, nitrogen, neon, xenon, and krypton (Inert-oil free)	
AA59860-127	MIL-DTL-2/59	V59-347-8	347	6	IIB	55	6[9]				Air	
AA59860-128	MIL-DTL-2/59	V59-347-10	347	6	IIB	55	7					
AA59860-129	MIL-DTL-2/59	V59-347-11	347	6	IIB	55	8					
AA59860-130	MIL-DTL-2/60	V60-500-2	500	6	IIB	30	13				Oxygen-helium mixture (Medical) (Helium over 80%)	Chrome plated; outlet cap required
AA59860-131	MIL-DTL-2/60	V60-500-2	500	6	IV	30	13					
AA59860-132	MIL-DTL-2/61	V61-930-2	930	4	V	30	13			X	Oxygen-helium mixture (Medical) (Helium not over 80%)	Pin-index outlet; chrome plated
AA59860-133	MIL-DTL-2/62	V62-350-2	350	6	IIB	30	14				Methane	
AA59860-134	MIL-DTL-2/63	V63-350-2	350	6	IIB	30	14				Natural gas	

TABLE III. PIN designation and cross-reference data for valves - Continued.

CID PIN	Former detail spec. number	MIL-DTL-2G designator	Outlet app.	Inlet size	Style	Class	PRD des.	DT[1]	DC[2]	WK[3]	Gas service	Remarks
AA59860-135	MIL-DTL-2/64	V64-330-2	330	6	I	30	13			X	Hydrogen chloride	
AA59860-136	MIL-DTL-2/64	V64-330-2	330	6	IV	30	13					Stainless Steel composition Only
AA59860-137	MIL-DTL-2/65	V65-330-2	330	6	I	30	13			X	Hydrogen sulfide	
AA59860-138	MIL-DTL-2/65	V65-330-2	330	6	IV	30	13					Stainless Steel composition Only
AA59860-139	MIL-DTL-2/66	V66-590-2	590	6	IIB	30	14				Mildly oxidizing mixtures (5% to 23% Oxygen)	Press. not specified[5], 1800-2400
AA59860-140	MIL-DTL-2/66	V66-590-3	590	6	IIB	30	1					
AA59860-141	MIL-DTL-2/66	V66-590-4	590	6	IIB	30	2					
AA59860-142	MIL-DTL-2/66	V66-590-5	590	6	IIB	30	3					
AA59860-143	MIL-DTL-2/66	V66-590-6	590	6	IIB	30	4					
AA59860-144	MIL-DTL-2/67	V67-510-1	510	6	I	05	11			X	Low pressure, flammable and toxic mixtures	Check the LC50 of the mixture[10]
AA59860-145	MIL-DTL-2/67	V67-510-1	510	6	IIA	05	11			X		
AA59860-146	MIL-DTL-2/68	V68-580-2	580	6	IIB	30	14				Inert-oil free mixtures (With less than 5% Oxygen)	Press. not specified[5], 1800-2400
AA59860-147	MIL-DTL-2/68	V68-580-3	580	6	IIB	30	1					
AA59860-148	MIL-DTL-2/68	V68-580-4	580	6	IIB	30	2					
AA59860-149	MIL-DTL-2/68	V68-580-5	580	6	IIB	30	3					
AA59860-150	MIL-DTL-2/68	V68-580-6	580	6	IIB	30	4					
AA59860-151	MIL-DTL-2/69	V69-330-12	330	6	IV	30	10[11]	X			Corrosive (acidic) mixtures	Optional 1/2" NPT outlet
AA59860-152	MIL-DTL-2/70	V70-350-2	350	6	IIB	30	14				High pressure, flammable and toxic mixtures	Check the LC50 of the mixture[10]
AA59860-153	MIL-DTL-2/70	V70-350-2	350	6	IV	30	14					
AA59860-154	MIL-DTL-2/71	V71-660-2	660	6	IIB	30	14				High pressure, toxic and oxidizing mixtures	Press. not specified[5], 1800-2400; Check the LC50 of the mixture[10]
AA59860-155	MIL-DTL-2/71	V71-660-3	660	6	IIB	30	1					Check the LC50 of the mixture[10]
AA59860-156	MIL-DTL-2/71	V71-660-4	660	6	IIB	30	2					
AA59860-157	MIL-DTL-2/71	V71-660-5	660	6	IIB	30	3					
AA59860-158	MIL-DTL-2/71	V71-660-6	660	6	IIB	30	4					
AA59860-159	MIL-DTL-2/71	V71-660-2	660	6	IV	30	14					Press. not specified[5], 1800-2400; Check the LC50 of the mixture[10]
AA59860-160	MIL-DTL-2/71	V71-660-3	660	6	IV	30	1					Check the LC50 of the mixture[10]
AA59860-161	MIL-DTL-2/71	V71-660-4	660	6	IV	30	2					
AA59860-162	MIL-DTL-2/71	V71-660-5	660	6	IV	30	3					
AA59860-163	MIL-DTL-2/71	V71-660-6	660	6	IV	30	4					
AA59860-164	MIL-DTL-2/72	V72-670-12	670	6	I	30	10			X	Fluorinating compound mixtures	PRD prohibited
AA59860-165	MIL-DTL-2/72	V72-670-12	670	6	IIB	30	10					
AA59860-166	MIL-DTL-2/72	V72-670-12	670	6	IV	30	10					
AA59860-167	MIL-DTL-2/73	V73-705-0	705	6	IV	05	0[11]				Corrosive (basic) mixtures	
AA59860-168	MIL-DTL-2/74	V74-660-1	660	6	IIB	05	11				Low pressure, toxic and oxidizing mixtures	Check the LC50 of the mixture[10]
AA59860-169	MIL-DTL-2/74	V74-660-1	660	6	IV	05	11					
AA59860-170	MIL-DTL-2/75	V75-577-8	577	6	IIB	40	6[9]				Oxygen (non-medical)	
AA59860-171	MIL-DTL-2/75	V75-577-10	577	6	IIB	40	7					

TABLE III. PIN designation and cross-reference data for valves - Continued.

CID PIN	Former detail spec. number	MIL-DTL-2G designator	Outlet app.	Inlet size	Style	Class	PRD des.	DT[1]	DC[2]	WK[3]	Gas service	Remarks
AA59860-172	MIL-DTL-2/76	V76-296-2	296	6	IIB	30	14				Oxidizing mixtures	Press. not specified[5], 1800-2400
AA59860-173	MIL-DTL-2/76	V76-296-3	296	6	IIB	30	1					
AA59860-174	MIL-DTL-2/76	V76-296-4	296	6	IIB	30	2					
AA59860-175	MIL-DTL-2/76	V76-296-5	296	6	IIB	30	3					
AA59860-176	MIL-DTL-2/76	V76-296-6	296	6	IIB	30	4					
AA59860-177	MIL-DTL-2/77	V77-660-13	660	6	I	05	15			X	Methyl chloride	Strainer may be required; For methyl chloride use ONLY
AA59860-178	MIL-DTL-2/77	V77-660-14	660	6	I	05	16			X		
AA59860-179	MIL-DTL-2/77	V77-660-16	660	6	I	05	18			X		
AA59860-180	MIL-DTL-2/77	V77-660-13	660	6	IV	05	15					
AA59860-181	MIL-DTL-2/77	V77-660-14	660	6	IV	05	16					
AA59860-182	MIL-DTL-2/77	V77-660-16	660	6	IV	05	18					

[1] Dip tube (DT): An "X" in this column indicates the valve has a dip tube, also known as an eductor tube (see 7.3(m) and 7.3(n)).
[2] Disposable cap (DC): A "D" in this column indicates the valve may require a disposable outlet cap or plug (see 7.3(o)).
[3] Wrench or key (WK): An "X" in this column indicates there is no handwheel and the valve requires a wrench or key (see 7.3(p) and 7.3(q)) to be operated. An "H" indicates that there is a handwheel, but a wrench or key may still be required.
[4] Valve configuration: The centerline of the inlet shall meet the centerline of the stem at an angle of 50º and shall meet the centerline of the outlet at an angle of 40º in a common geometric plane.
[5] When the cylinder service pressure is not specified, a combination PRD (CG-4 or CG-5, depending on desired yield temperature) shall be supplied with a rupture disk having a burst range between 2700 and 3000 psig. This device shall be utilized only on cylinders of 1800 to 2400 psig rating.
[6] Unless otherwise specified, this valve shall be supplied with a dip tube for 15.00" diameter cylinders (see 7.3(m)).
[7] Valve configuration: The centerline of the outlet shall meet the centerline of the valve body at an angle of 34º to 40º in a common geometric plane.
[8] A PRD is not required for this application, but if a PRD is used a #11 (CG-2) PRD shall be specified (see table II).
[9] This valve is for use on cylinders with a service pressure rating of 3500 - 3600 psig, and shall only be furnished with a rupture disk with a burst range of 5250 - 5833 psig (36200 - 40127 kPa).
[10] If the LC50 of the mixture is equal to or less than 200 ppm, a PRD is prohibited. If the LC50 is greater than 200 ppm and contains a hazard zone A component, then no PRD is required; but if a PRD is used, it shall be a CG-4 (PRD #13).
[11] The PRD for this valve depends on the composition of the corrosive (acidic or basic) mixture. It shall be in accordance with CGA S-7, CGA S1.1, and 49 CFR, "Transportation".

MILITARY INTERESTS:

Custodians:
Army - AT
Navy - SH
Air Force - 68
DLA - GS

Review Activities:
Army - AV
Navy - AS, MC

CIVIL AGENCY
COORDINATING ACTIVITY:

GSA - FAS

Preparing Activity:
DLA - GS7

(Project 8120-2009-005)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST database at https://assist.daps.dla.mil/.