



EQUIPMENT FOR CALIBRATION
GAS MIXTURES

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All products are tested, adapted and resistant to inert, poisonous and corrosive gases.

APPLICATION 1: FOR GAS CYLINDERS FROM 5 TO 80 LITERS P.004

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APPLICATION 1:

FOR GAS CYLINDERS FROM 5 TO 80 LITERS

SOLUTION A: VALVE WITH INTEGRATED PRESSURE REGULATOR


FLOWCAL

with flow selector integrated

P.018

Material Brass / Stainless steel**Working pressure** 200 bar / 3000 psi**Temperature range** -20°C to + 60 °C / -5°F to +140°F
DUCAL

with pressure regulator integrated

P.019

Material Brass / Stainless steel**Working pressure** 200 bar / 3000 psi**Temperature range** -20°C to + 60 °C / -5°F to +140°F

SOLUTION B: STANDARD


D200

Cylinder valve

P.012

D230

Pressure regulator

P.014

Material Brass / Stainless steel**Working pressure** 200 bar / 3000 psi**Temperature range** -20°C to + 60 °C / -5°F to +140°F
CONNECTORS

Cylinder connectors

P.018

Material Brass / Stainless steel**Working pressure** 200 bar / 3000 psi**Temperature range** -20°C to + 60 °C / -5°F to +140°F

APPLICATION 2:

FOR DISPOSABLE AND NON DISPOSABLE GAS CYLINDERS FROM 0.1 TO 2 LITERS

SOLUTION A



D405	P. 006
Cylinder valve	
Material	Brass / Stainless steel
Working pressure	200 bar / 3000 psi

S70	P. 008
Pressure regulator	
Material	Brass / Stainless steel
Working pressure	200 bar / 3000 psi

Temperature range -20°C to + 60 °C / -5°F to +140°F

-20°C to + 60 °C / -5°F to +140°F

SOLUTION B



D250	P. 007
Cylinder valve	
Material	Brass / Stainless steel
Working pressure	200 bar / 3000 psi

CONNECTORS	P. 010
Cylinder connectors	
Material	Brass / Stainless steel
Working pressure	200 bar / 3000 psi

S75	P. 009
Pressure regulator	
Material	Brass / Stainless steel
Working pressure	200 bar / 3000 psi

Temperature range -20°C to + 60 °C / -5°F to +140°F

A VERY SPECIALIZED RANGE FOR CALIBRATION AND MEDICAL iNO APPLICATIONS

CALIBRATION GAS:

A calibration gas is a reference gas or gas mixture used as a comparative standard in the calibration of analytical instruments, like gas analyzers or gas detectors. The calibration gas itself must maintain a precisely-defined composition, like zero gas or span gas (for example, 500 ppm carbon monoxide in nitrogen).

The Rotarex solution covers two typical cylinder types most commonly used in calibration:

- **Portable cylinders:** smaller cylinders (from 0.1 to 2 liters) covering many grades of mixtures or pure gases.
- **Fixed cylinders:** larger cylinders (from 5 to 80 liters) fixed close to analytical instruments in laboratories

MEDICAL NO MIXTURES:

Inhaled nitric oxide (iNO) selectively targets pulmonary vessels, causing a patent and sustained vaso-dilation and therefore increases pulmonary blood flow. It is mostly used in neonatal and cardio-pulmonary clinical therapies. iNO is highly reactive and must avoid exposure to oxygen.



HOW TO DEFINE THE RIGHT FOR CALIBRATION AND iNO APPLICATIONS, CONSIDER THESE FACTORS:

TRANSPORTABILITY:

Portable systems have somewhat different requirements than fixed systems. Rotarex provides options for both. In all cases, the idea is to have an easy, ready-for-use system.

The classic, cost-effective solution is the use of a small cylinder with a CI0. However, some applications require more sensitive gas control, and for this, cylinder valves with integrated dial flow regulators are available.

SAFETY LEVEL:

Different usage environments require different levels of safety protection. For fixed environments, the classic cylinder valve with separate regulator configuration may be sufficient. However, the regulator is not secured and is vulnerable to accidental impact when cylinders are moved during use. Safety risks in these situations can be minimized by using integrated valves that reduces connection points to regulators and peripheral instrumentation.

Additionally, the changeover of the high-pressure regulator from one cylinder to another is a safety and gas-contamination risk if not done properly. Rotarex integrated valve solutions helps make changeovers safer and easier by keeping the changeover in the low-pressure zone. In all cases, proper training is necessary. Rotarex can also provide precise technical training.

CYLINDER SIZE:

Since multiple cylinder sizes and types are used in the calibration sector, Rotarex has a full range of solutions for each cylinder type.

GAS NATURE:

Calibration and iNO gases require special handling equipment to maintain the gas purity and prevent contamination from ambient pollutants and humidity. Rotarex offers a full choice of materials for compatibility with all major calibration gas types, and our experts can help you to find the best solution for you. Additionally, all components are designed to prevent contamination due to small particles from the equipment itself during storage, connection or use.



Please contact our Rotarex expert to know which solutions best fit your needs.

6-IN-1 DESIGN:

- ★ Valve
- ★ Regulator (or flowmeter)
- ★ Inlet pressure gauge
- ★ Outlet pressure gauge
- ★ Relief device
- ★ Filling port



**NEW!
BEST PRACTICE**

**THE FIRST
INTEGRATED VALVES
ON THE CALIBRATION MARKET**

Makes calibration operations safer and easier by integrating essential peripheral devices into a single mono-body assembly. The end user only needs to open the cylinder and choose from the preset ranges. Integrated Valve units are suited for non-corrosive pure gases as well as gas mixtures that contain non-corrosive and corrosive elements.

INTEGRATED VALVE - FLOWCAL | SERIES D553

Designed for wide range of specialty gases



FILLING OPERATIONS



PLASTIC GUARD ACCESSORIE

KEY FEATURES

All-in one design

- Pre-engineered complete solution to optimize your calibrated gas supply
- Ready to be used system, just take it and use it. No more components assembly and settings before use
- Fully protected & integrated solution with ergonomic and design
- Productivity and with integrated design

Easier and safer

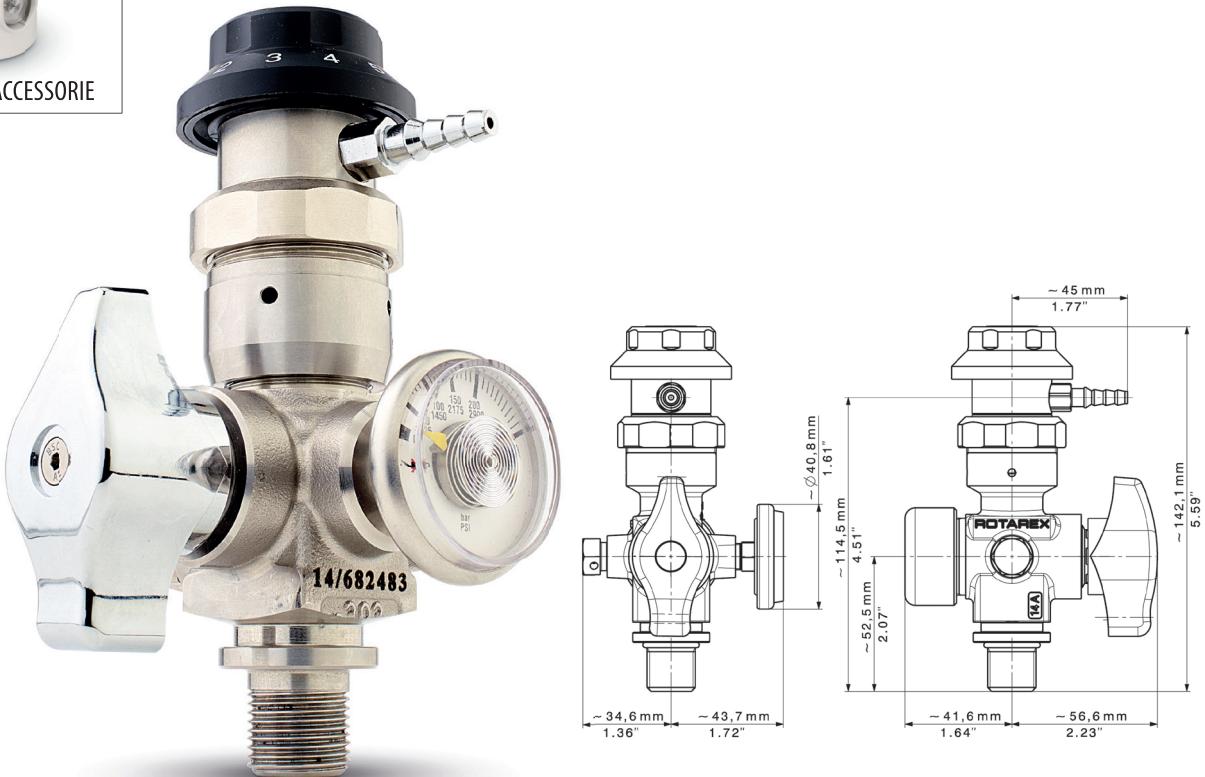
- Easy handling and better protection thanks to plastic guard
- All integrated solution to reduce leak points risks. The

valve is designed to have directly used pressure at the outlet without any additional connection on high pressure ports.

- Universal hose barb connection to ensure easy "plug-in" system
- Compact and light weight design ideal for mobile applications

Higher productivity

- Buy one complete system instead of many individual components



SPECIFICATIONS

Connections	According to local standard	Temperature range	-20°C to +60°C -5°F to +140°F	Body + internal parts	Stainless Steel
Working pressure	200 bar / 3000 psi	Seat seal	PCTFE	Leak rate	1.10^{-4} m bar L/s. HEL
Nominal flow rate	0.5 - 15 L/min. Others on request	O-ring	EPDM - FPM	Property level	Cleaned for oxygen service

For ordering process according to your needs please contact Rotarex

INTEGRATED VALVE - DUCAL | SERIES D551

Designed for wide range of specialty gases are used to calibrate analyzers cylinder valve with adjustable pressure regulator.



FILLING OPERATIONS



PLASTIC GUARD ACCESSORIE

KEY FEATURES

All-in one design

- Pre-engineered complete solution to optimize your calibrated gas supply
- Fully protected & integrated solution with ergonomic and aesthetic design
- Superior productivity and better sealing due to reduction of potential leak points

Easier and safer

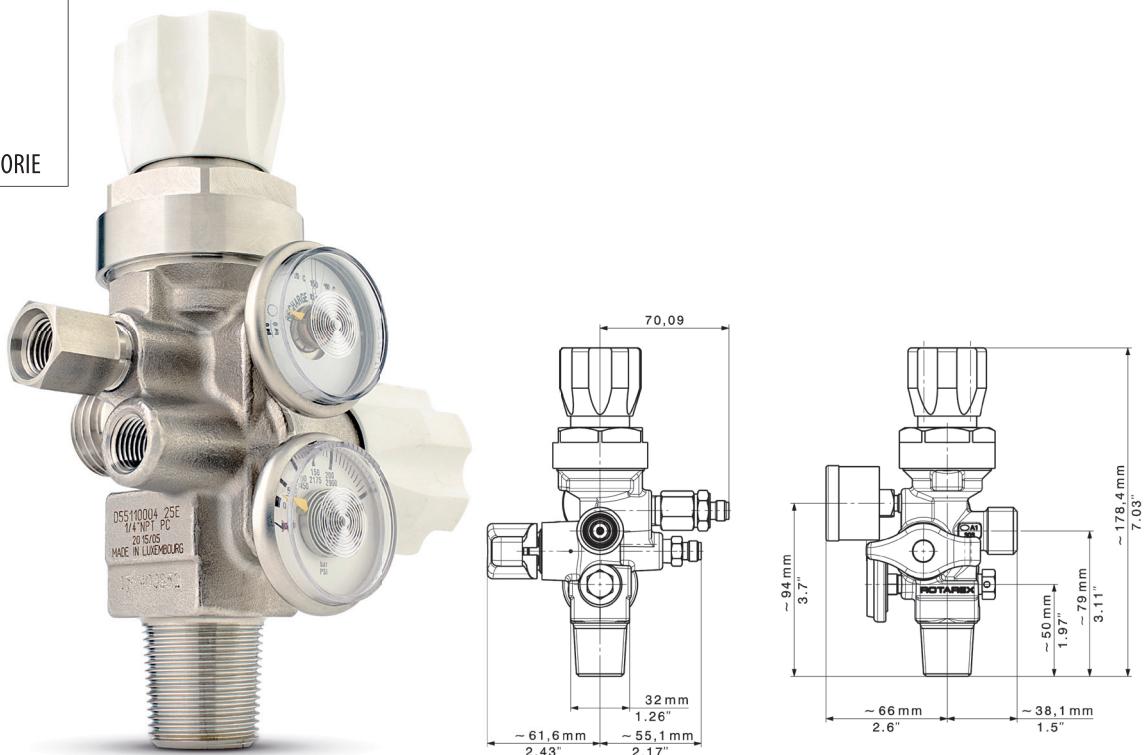
- Easy handling and better protection thanks to plastic guard
- Compact and light weight design ideal for mobile applications key features

- High outlet flow stability and performance thanks to diaphragm technology

- Premium material and components ensure quality of gas mixtures to preserve required properties for calibration application

Higher productivity

- Buy one complete system instead of many individual components
- Save your time and be much more effective with built-in solution



SPECIFICATIONS

Connections	25E – ISO 11363 3/4" NGT CGA-V1	Temperature range	-20°C to +60°C -5°F to +140 °C	Internal components	Stainless Steel
Working pressure	Inlet : 200 Bar / 3000 Psi Outlet:1-4Bar(14-65Psi)	Seat seal	PA - PCTFE	Leak rate	1.10 ⁻⁷ m bar L/s HEL
Nominal flow rate	1L/min at 3 bars Max flow rate 10 L/min at 4bars	O-ring	EPDM or FPM depending of application	Property level	Cleaned for oxygen service
				Filling Tool connection	To be defined according to norms and gas types

For ordering process according to your needs please contact Rotarex

CYLINDER VALVE | SERIES D200

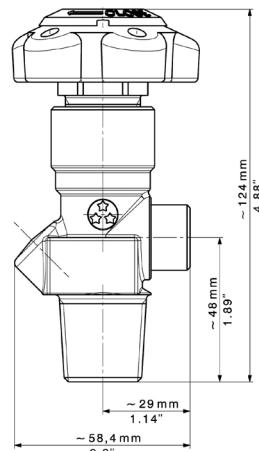
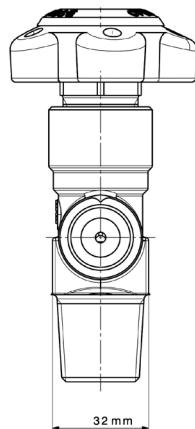
High pressure cylinder valves,
diaphragm seal type,
designed for calibration
applications.

KEY FEATURES

- Soft seat sealing arrangement offers low operating torque
- Valve seat captivated to avoid extrusion and blockage of the valve
- High leak tightness integrity through diaphragm sealing
- High performance thrust pad

OPTIONS

- Chrome or nickel plating, for brass valves
- Alternative seat disc materials: PCTFE, PI (Vespel[®]), PA 6.6 (Nylon[®])
- Gas wetted components electrochemically polished
- Dip tube connections
- Flow restrictor threading



SPECIFICATIONS

Working pressure pmax	200 bar/3000 psi	Helium leak rate at pmax	internal: 10^{-7} mbarl/sec external: 10^{-7} mbarl/sec safety: 10^{-8} mbarl/sec	Seat orifice size	3,5 mm
Temperature range	-20°C up to + 60°C -5°F up to +140°F	Flow coefficient Cv	0,35		

PRODUCT CONFIGURATOR

Body material		Actuation		Inlet Connection		Outlet connection		Safety		Flow Restrictor		Dip tube		Outlet cap		Stem Taping		Gas
D200	L	A	B	C10	0	0	G5	1	0	N2								
Brass	L	Handwheel - standard	A 25E EN ISO 11116	103	DIN 477- 1 Nr.14	14	Without	0	Without	0	Without	0	Without	0	Without	0	Gas list P.22	
Stainless steel AISI 303	I	Painted handwheel	B 3/4"-14 NGT CGA V-1	233	BS 341-3 Nr.14	74	Burst disc 3360 psi CG1	P33	Burst disc 850 psi CG1	P08	Flow restrictor 5/16"-24 UNF	1	M10x0,75	M1	Teflon PTFE taping	1		
Stainless steel AISI 316L	II	Handwheel with logo cap	C V1 JIS B 8246	62	Others list P.18		Burst disc 3000 psi CG1	P30			1/4"- 18NPT	N3						
Nickel	N	Key opertaed Square 7.8	D Others list P.18	CGA 170+110	103		Burst disc 3360 psi CG1	P33			Others list P.18							
		Key opertaed 5.9 x dia 9.3	E	CGA 180+110	233													
				Others list P.19														

CYLINDER VALVE | SERIES D250

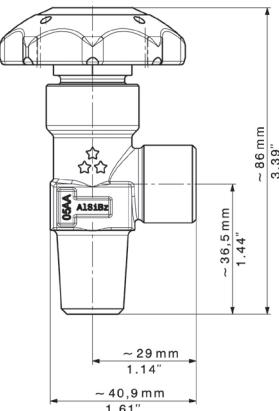
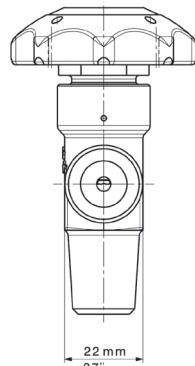
High pressure lecture bottle valves designed for calibration applications.

KEY FEATURES

- Valve seat captivated to avoid extrusion and blockage of the valve
- Easy operation under high pressure
- O-rings fitted into the gland to exclude penetration of humidity
- Side outlet

OPTIONS

- Alternative body materials
- Alternative seat disc materials: PA 6,6 (Nylon[®]), PCTFE, PI (Vespel[®])
- Threading for flow restrictor
- Dip tube connection



SPECIFICATIONS

Working pressure p_{max}	200 bar/3000 psi	Helium leak rate	at p _{max} internal 10 ⁻⁷ mbar/sec external 10 ⁻⁷ mbar/sec	Seat orifice size	4 mm
Temperature range	-20°C to 60°C -5°F to 140°F	Flow coefficient Cv	0,25		

PRODUCT CONFIGURATOR

	Body material	Actuation	Inlet Connection	Outlet connection	Safety	Flow Restrictor	Dip tube	Outlet cap	Stem Taping	Gas
D250	L	B	C10	0	0	G5	1	1	0	N2
Brass	L	Handwheel - standard	35 CGA 170+110	103	Without	0	Without	0	Without	Gas list P.22
Stainless steel AISI 303	I		CGA 180+110	233	Burst disc 3360 psi CG1	P33	Flow restrictor 5/16"-24 UNF	P08	M10x0,75	M1
Stainless steel AISI 316L	II		Others list P.18		Others list P.19				Outlet seal cap	1
AlSiBz	ASB						Burst disc 3000 psi CG1	P30	1/4" - 18NPT	N3
							Burst disc 3360 psi CG1	P33		

CYLINDER VALVE | SERIES D405

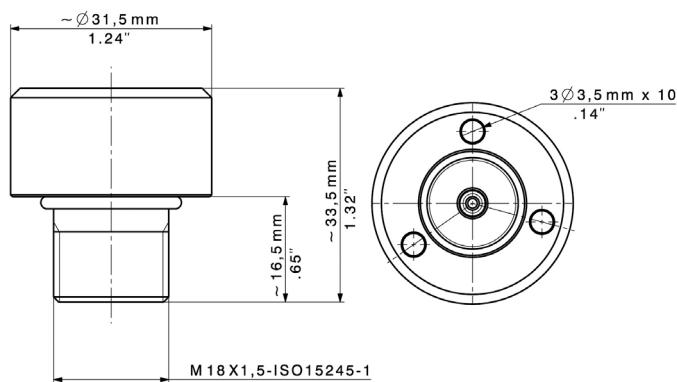
The series was designed for calibration applications. The material compatibility make them suitable for special gas mixtures.

KEY FEATURES

- O-Ring seal provides durability for multiple use calibration applications
- Compact, light weight design ideal for portability
- Cylinder valve, pressure regulator and fill adapter - entire delivery system available from one supplier.

OPTIONS

- Safety device acc. to CGA S1.1
- Choice of o-ring materials: EPDM



SPECIFICATIONS

Working pressure max.	200 bar / 3000 psi	Temperature range max pressure for Aluminum	-20°C to 60°C -5°F to 140°F	Valve seat/seal	FPM
Helium leak rate	1×10^{-4} cc/sec	Body	stainless steel, brass, nickel plated brass, aluminum	O-ring	FPM
				Internal parts	stainless steel

PRODUCT CONFIGURATOR

	Body material	Working pressure		Version	Inlet connection		Outlet connection		Safety		Gas	
D405	L	70	35	R	16	U12	5/8" x 18 UNF	C10	0	N2		
Brass	L	500 psi 34.5bar	35	Refillable	R	3/4"-16 UNF-2A - standard			Without	0	Gas list P.22	N2
Nickel plated brass	NL	1000 psi 70 bar	70	Non refillable	N	1"-14 UNF-2A	CGA 625	305	Burst disc 850 psi CG1	P08		
Chrome plated brass	CL	3000 psi 200 bar	200	3000 psi 200 bar	200	M 18 x 1,5 EN 144-1	CGA 626	286	Burst disc 3000 psi CG1	P30		
Aluminum	A								Burst disc 3360 psi CG1	P33		
Stainless steel AISI303	I											

DUAL STAGE HP REGULATOR | SERIES DL 230

- Piston/bellow dual stage
- Purity up to 6.0
- Inlet pressure: 200 bar (3000 psi)
- Outlet pressure: 1/3/10 bar
14.5/44/145psi

- ★ Compact and lightweight design
- ★ 1 inlet / 2 outlets
- ★ O₂ application compatible (brass only)
- ★ Inlet/outlet pressure gauges
- ★ 1 relief valve

Special requirements on request

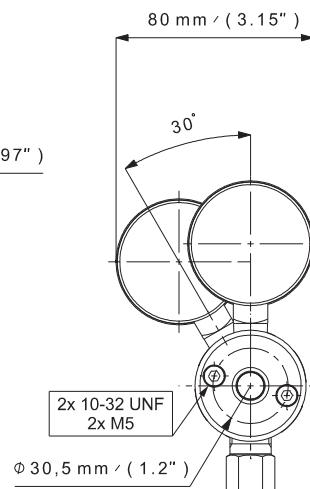
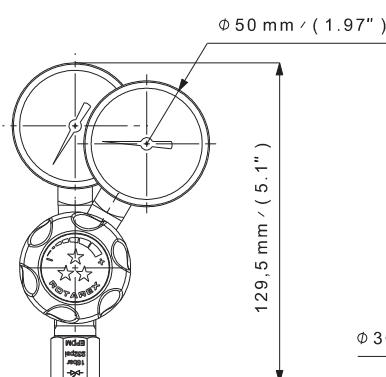
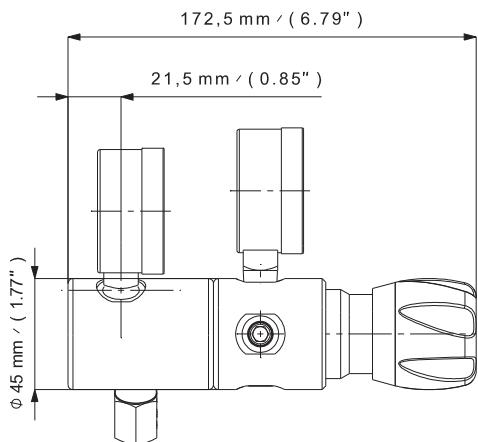


APPLICATIONS

- Designed for cylinder regulator applications.
- Ideally suited for pure, inert and mildly corrosive gas applications requiring a very stable outlet pressure together with a very sensitive set up of this outlet pressure.

KEY FEATURES

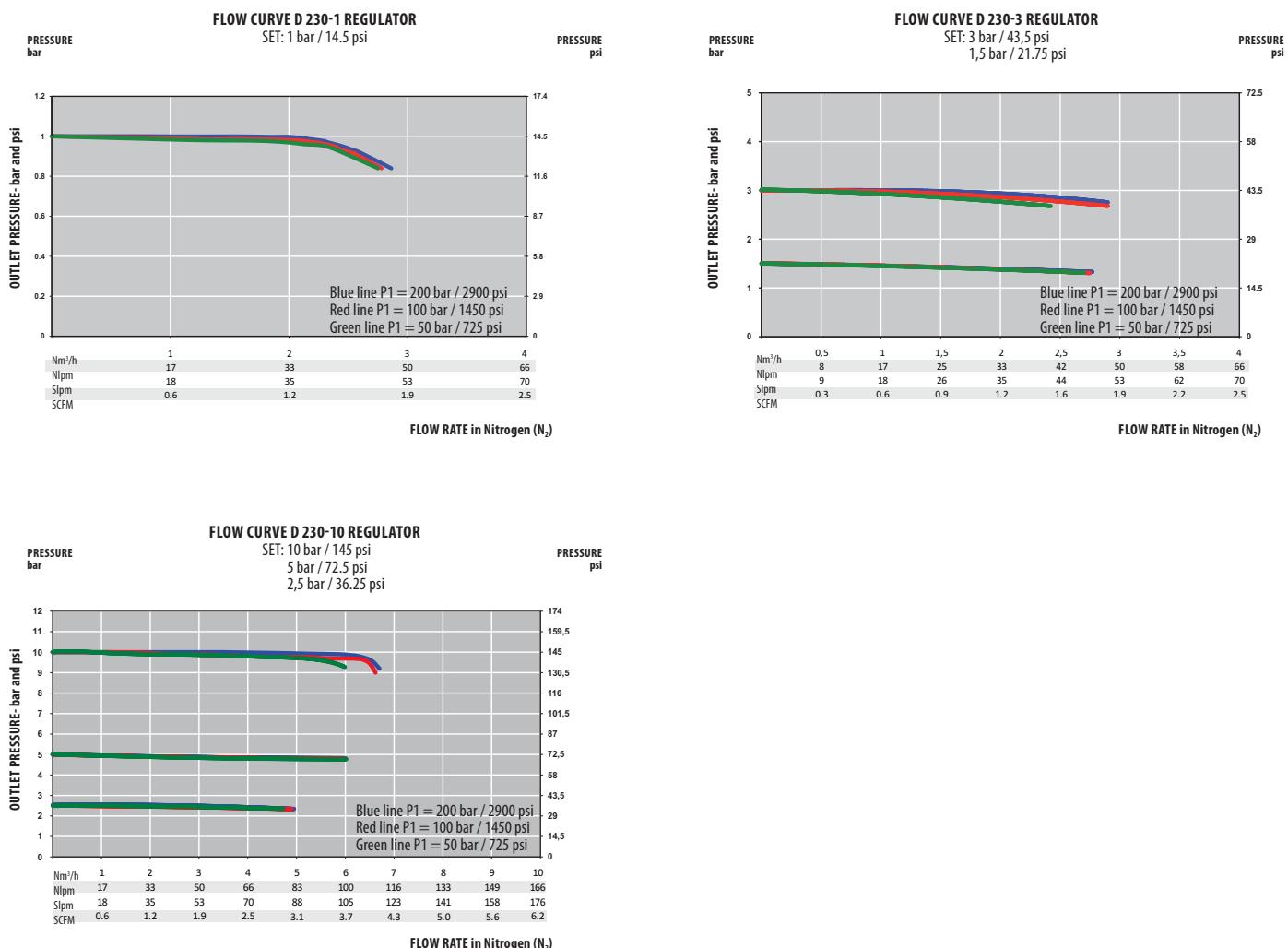
- The D 230 regulator is based on the S 20 proven bellow technology.
- Accurate pressure control for reliable service and guarantees a stable outlet pressure due to the combination of the piston and bellow technology.
- Compact and lightweight design.
- Fixed outlet pressure version available.



SPECIFICATIONS

Female ports	16 x 1.336 (inlet) - G 3/8 (outlet) or 1/4 NPT (inlet/outlet)	Weight	$\pm 1,6 \text{ kg}$ $\pm 3.5 \text{ lbs}$	Inlet pressure	200 bar 2900 psi
Seat seal	PTFE	Leak rate	$10^{-8} \text{ mbar l/s He}$	Outlet pressure	1/3/10 bar 14.5/44/145 psi
O-ring	EPDM - Standard NBR FPM	Temperature range	- 20°C to + 60°C - 4°F to + 140°F	Nominal Flow	2/2,5/3,5 $\text{Nm}^3/\text{h} (\text{N}_2)$
Piston	Brass (Brass version) AISI 316L (SS version)	Gauges	High and low pressure (M10 x 1 or 1/4 NPT)	Oxygen use	Brass only
Below	Bronze or AISI 316L (SS version)				

FLOW CURVES



PRODUCT CONFIGURATOR

Body Material		Outlet Pressure		End Connections		O-ring Material		Gauges		Handwheel	
D230	L	10		N		EPDM		1		H	
Chrome plated brass	L	1 bar 14.5 psi	1	In: 16 x 1.336 Out: G 3/8	16	EPDM - Standard		Without		0	With - standard
	I	3 bar 44 psi	3	1/4 NPT	N	NBR		With		1	Without (fixed outlet pressure)
		10 bar 145 psi	10			FPM					

CONSTANT FLOW REGULATOR | SERIES S 70

- Piston single stage
- Purity up to 6.0
- Inlet pressure: 200 bar (3000 psi)
- Outlet pressure: 4,13 bar (60 psi)
- Rear inlet

- ★ Extreme accurate flow delivery
- ★ Compact design
- ★ 1 inlet / 1 outlet
- ★ O₂ application compatible

Special requirements on request

APPLICATIONS

- Designed for calibration applications where predetermined pressure and flow are required, and for portable cylinder use.

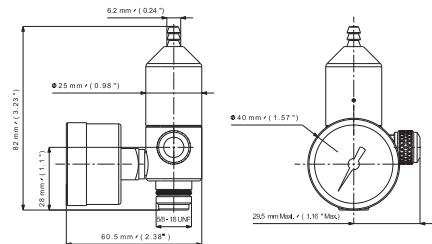
KEY FEATURES

- This piston regulator has 1 inlet/1 outlet.
- Exist as single (S 70) or dual stage (D 70 special version).
- Compact, light weight design, ideal for portability.
- Hand tightened assembly to cylinder is excellent for field applications.
- Actuation with control knob or push button.
- Please indicate, on any order, the maximum inlet pressure, the setting pressure and the set flow.

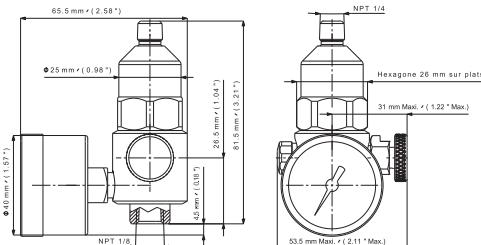


S 70 single stage

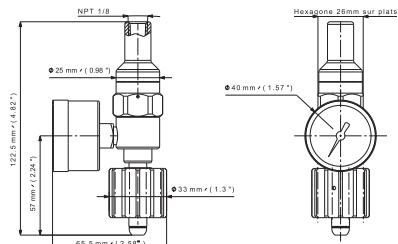
CK - CONTROL KNOB



PB - PUSH BUTTON



NV - NO VALVE



SPECIFICATIONS

Female ports	Inlet: C10 or 1/8 NPT Outlet: Hose barb or 1/8 NPT	Weight	$\pm 0,31 \text{ kg}$ $\pm 0,83 \text{ lbs}$	Inlet pressure	200 bar / 3000 psi
Seat seal	PCTFE	Leak rate	$1.10^{-4} \text{ mbar l/s He}$	Outlet pressure	4,13 bar (60 psi) - standard 2,06 bar (30 psi) - option
O-ring	FPM - Standard EPDM NBR	Temperature range	-20°C to + 60°C -5°F to + 140°F	Nominal Flow	preset from 0,25 to 7 lpm
Piston	Brass (brass version) AISI 303 (SS version)	Gauges	High pressure 1/8 NPT	Oxygen use	OK for brass and stainless steel
Actuation	Control knob or Push button				

PRODUCT CONFIGURATOR

	Body Material		Outlet Pressure		Inlet Connection		Outlet Connection		Actuation		O-ring Material	Gauge
S70	L		60		C10		HB		CK	FPM	1	
Nickel plated brass	L	4,13 bar (60 psi) - standard	60	5/8" x 18 UNF	C10	Hose barb	HB	Control Knob standard	CK	FPM standard	Without	0
Stainless steel	I	2,06 bar (30 psi)	30	1/8 NPT - Female	N	1/8 NPT - Female	N1	Push Buton	PB	EPDM	With 1000 psi	1
						1/8 NPT - Male	N2	No valve	NV	NBR	With 3000 psi	2
											With 4000 psi	3
											With 315 bar	4

CONSTANT FLOW REGULATOR | SERIES S 75

- Piston single stage
- Purity up to 6.0
- Inlet pressure: 200 bar (3000 psi)
- Outlet pressure: 3,5/6 bar (50/87 psi)
- Rear inlet
- Flow selector (0,3 - 15 lpm)

- ★ Extremely accurate flow delivery
- ★ Compact design
- ★ 1 inlet / 1 outlet
- ★ O₂ application compatible (brass only)

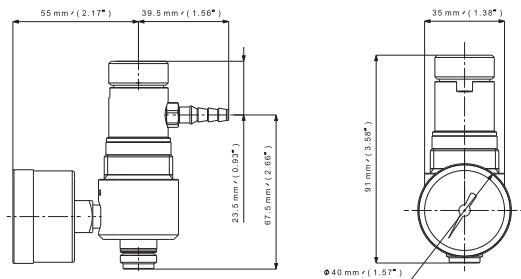
Special requirements on request

APPLICATIONS

- Designed for calibration applications where predetermined pressure and adjustable flow are required, and for portable cylinder use.

KEY FEATURES

- Piston technology allows having a very stable flow outlet pressure.
- Equipped with a flow selector (10 positions) with 3 different maximum outlet flows (3 - 5 - 15 lpm).
- Compact, light weight design, ideal for portability.
- Integrated relief valve.



SPECIFICATIONS

Female ports	Inlet: C 10 or 1/4 NPT Outlet: Hose barb or DR 6 or 1/4" tube fitting	Weight	± 0,70 kg ± 1.54 lbs	Inlet pressure	200 bar / 3000 psi
Seat seal	PCTFE	Leak rate	10 ⁻⁴ mbar l/s He	Outlet pressure	3,5 bar (50 psi) - standard 6 bar (87 psi) - option
O-ring	FPM - Standard EPDM NBR	Temperature range	-20°C to +60°C -5°F to +140°F	Nominal Flow	Preset from 0,3 to 15 lpm
Piston	Brass (brass version) AISI 316L (SS version)	Gauges	High pressure (1/8 NPT)	Oxygen use	Brass only

PRODUCT CONFIGURATOR

	Body Material	Outlet Pressure	Inlet Connection	Outlet Connection	Flow Selector	O-ring Material	Gauge
S75	L	3.5	C10	HB	B05	FPM	1
Nickel plated brass	L	3.5 bar 50 psi - standard	3.5 5/8" x 18 UNF	C10 Hose barb (standard)	3 lpm B03	FPM - standard	Without 0
Stainless steel	I	6 bar 87 psi	6 1/4 NPT	N G 1/8 - Female	G1 5 lpm - standard	B05 EPDM	With 4000 psi 1
				6 mm tube fitting 1/4 tube fitting	DB6 15 lpm B15 NBR		With 315 bar 2

CYLINDER CONNECTORS

Connects regulators, supply boards or switch over boards to gas cylinders directly, or via a flexible hose or pigtail

CYLINDER FITTINGS

- ★ High pressure
- ★ 200 bar / 3000 psi
- ★ Chrome plated brass or stainless steel

Special requirements on request



KEY FEATURES

- Cylinder connector according to the following standards: AFNOR, DIN, BS, CGA, NEN, UNI, FTSC 300 bar ...
- Other connections on demand
- Outlet connection: 16 x 1.336 - Male or 1/4 NPT - Male
- Material: chrome plated brass or stainless steel

OPTIONS

- 300 bar (FTSC) version
- Raw brass version
- Mounted on flexible hose or pigtail



CYLINDER CONNECTIONS BS 341

PART No.	TYPE (INLET)	MATERIAL	MALE OUTLET THREAD
381040990000	BS 3	Chrome plated brass	16 x 1.336 1/4 NPT
360232990000		Stainless steel	16 x 1.336 1/4 NPT
360137990000		Chrome plated brass	16 x 1.336 1/4 NPT
360232990300		Stainless steel	16 x 1.336 1/4 NPT
360048990000	BS 2 / BS 4	Chrome plated brass	16 x 1.336 1/4 NPT
360234990000		Stainless steel	16 x 1.336 1/4 NPT
360138990000		Chrome plated brass	16 x 1.336 1/4 NPT
360234990300		Stainless steel	16 x 1.336 1/4 NPT
360139990000	BS 6	Stainless steel	16 x 1.336
360136990000	BS 8	Stainless steel	16 x 1.336
360014990300	BS 13	Stainless steel	16 x 1.336
381041990000	BS 14	Stainless steel	16 x 1.336

CYLINDER CONNECTIONS UNI 11144

PART No.	TYPE (INLET)	MATERIAL	MALE OUTLET THREAD
300819990000	UNI 1 - 4405	Chrome plated brass	16 x 1.336
300640990300		Stainless steel	
300815990000	UNI 2 - 4406	Chrome plated brass	16 x 1.336
300639990300		Stainless steel	
300638990300	UNI 3 - 4407	Stainless steel	16 x 1.336
300812990000	UNI 5 - 4409	Chrome plated brass	16 x 1.336
300813990000	UNI 6 - 4410	Chrome plated brass	16 x 1.336
300811990000	UNI 8 - 4412	Chrome plated brass	16 x 1.336

OTHERS: ON DEMAND

SPECIFICATIONS

CYLINDER CONNECTIONS DIN477-1

PART No.	TYPE (INLET)	MATERIAL	MALE OUTLET THREAD
300601990000	DIN 1	Chrome plated brass	16 x 1.336
300618990000		Stainless steel	1/4 NPT
3006159900300	DIN 5	Chrome plated brass	16 x 1.336
3006329900300		Stainless steel	1/4 NPT
300609990000	DIN 6	Chrome plated brass	16 x 1.336
3006169900300		Stainless steel	1/4 NPT
300602990000	DIN 7	Chrome plated brass	16 x 1.336
300619990000		Stainless steel	1/4 NPT
3006179900300	DIN 8	Chrome plated brass	16 x 1.336
3006339900300		Stainless steel	1/4 NPT
300603990000	DIN 9	Chrome plated brass	16 x 1.336
3006189900300		Stainless steel	1/4 NPT
300610990000	DIN 10	Chrome plated brass	16 x 1.336
3006249900300		Stainless steel	1/4 NPT
300600990007	DIN 13	Chrome plated brass	16 x 1.336
300605990000		Stainless steel	16 x 1.336
300605990001	DIN 14	Chrome plated brass	16 x 1.336
300619990300		Stainless steel	1/4 NPT
300606990000	DIN 13	Chrome plated brass	16 x 1.336
300646990000		Stainless steel	1/4 NPT
300620990300	DIN 14	Chrome plated brass	16 x 1.336
300646990300		Stainless steel	1/4 NPT
300607990000	DIN 13	Chrome plated brass	16 x 1.336
300621990300		Stainless steel	1/4 NPT
300600990000	DIN 14	Chrome plated brass	16 x 1.336
300620990000		Stainless steel	1/4 NPT
300604990302	DIN 13	Chrome plated brass	16 x 1.336
300604990304		Stainless steel	1/4 NPT

OTHERS: ON DEMAND

CYLINDER CONNECTIONS DIN477-5 (300 bar)

PART No.	TYPE (INLET)	MATERIAL	MALE OUTLET THREAD
350000990003	DIN 5 - 54	Chrome plated brass	16 x 1.336
300641990300		Stainless steel	16 x 1.336
350000990002	DIN 5 - 56	Chrome plated brass	16 x 1.336
300642990300		Stainless steel	16 x 1.336
350000990001	DIN 5 - 57	Chrome plated brass	16 x 1.336
300644990300		Stainless steel	16 x 1.336
350000990000	DIN 5 - 59	Chrome plated brass	16 x 1.336
300643990300		Stainless steel	16 x 1.336

OTHERS: ON DEMAND

CYLINDER CONNECTIONS NEN 3268

PART No.	TYPE (INLET)	MATERIAL	MALE OUTLET THREAD
381013990000	LU1		
381012990000	RU1		
381015990000	RU6	Chrome plated brass	16 x 1.336
381016990000	R12		

OTHERS: ON DEMAND

CYLINDER CONNECTIONS CGA -V1

PART No.	TYPE (INLET)	MATERIAL	MALE OUTLET THREAD
360140990000	CGA 320	Chrome plated brass	16 x 1.336
360132990000	CGA 330	Stainless Steel	16 x 1.336
360147990000	CGA 350	Stainless Steel	16 x 1.336
360135990000	CGA 510	Chrome plated brass	16 x 1.336
360141990000	CGA 540	Stainless Steel	16 x 1.336
360144990000	CGA 580	Chrome plated brass	16 x 1.336
360133990000	CGA 590	Stainless Steel	16 x 1.336
299164990000	CGA 660	Chrome plated brass	16 x 1.336
360146990000		Stainless Steel	

OTHERS: ON DEMAND

CYLINDER CONNECTIONS AFNOR NFE 29-650

PART No.	TYPE (INLET)	MATERIAL	MALE OUTLET THREAD
300805990000	TYPE A	Chrome plated brass	16 x 1.336
300806990000	TYPE B	Chrome plated brass	16 x 1.336
300800990000		Chrome plated brass	16 x 1.336
300800990002	TYPE C	1/4 NPT	
300602990302		Stainless steel	16 x 1.336
300600990302		Stainless steel	1/4 NPT
360062990000	TYPE D	Chrome plated brass	16 x 1.336
360062990001		Stainless steel	16 x 1.336
300801990000		Chrome plated brass	16 x 1.336
300801990002	TYPE E	1/4 NPT	
300603990302		Stainless steel	16 x 1.336
300601990302		Stainless steel	1/4 NPT
300802990000	TYPE F	Chrome plated brass	16 x 1.336
300629990300		Stainless steel	16 x 1.336
300803990000	TYPE G	Chrome plated brass	16 x 1.336
300803990001		Stainless steel	16 x 1.336
300804990000	TYPE H	Chrome plated brass	16 x 1.336
300637990300		Stainless steel	16 x 1.336
300636990300	TYPE J	Stainless steel	16 x 1.336
360059990000		Chrome plated brass	16 x 1.336
360059990001	TYPE L	Stainless steel	16 x 1.336
360060990001	TYPE M	Stainless steel	16 x 1.336
360061990001	TYPE N	Stainless steel	16 x 1.336

OTHERS: ON DEMAND

20 OPTION AND CONNECTORS OVERVIEW

INLET OVERVIEW

Country	Inlet Connection	
Australia	1" AS 2473	W1
China	PZ 19,2 GB 8335-1998	PZ19
China	PZ 27,8 GB 8335-1998	PZ27
China	PZ 39 GB 8335-1998	PZ39
Europe	17E EN ISO 11116	17E
Europe	25E EN ISO 11116	25E
Europe	28E EN ISO 11116	28E
Europe	M 18 x 1,5 EN 144-1	M18
Europe	M 25 x 2 EN 144-1	M25
France	34 x 2 SI-5° NF E29-682	34SI
INT	M 18 x 1,5 - 18P EN ISO 15245-1	18P
INT	M 25 x 2 - 25P EN ISO 15245-1	25P
INT	M 30 x 2 - 30P EN ISO 15245-1	30P
Japan	V1 JIS B 8246	V1
Japan	V2 JIS B 8246	V2
Russia	W19,2 GOST 9909-81	W19
Russia	W27,8 GOST 9909-81	W27
UK	18T - 0.715" BS 341:1993	18T
UK	19T - 0.735" BS 341:1993	19T
UK	26T - 1.025" BS 341:1993	26T
UK	32T - 1.25" BS 341:1993	32T
UK	1" BS BS 341:1962	W1
USA	1/4"-18 NGT CGA V-1	04N
USA	3/8"-18 NGT CGA V-1	06N
USA	3/8"-18 NGT (+7) CGA V-1	06N7
USA	1/2"-14 NGT CGA V-1	08N
USA	1/2"-14 NGT (+7) CGA V-1	08N7
USA	3/4"-14 NGT CGA V-1	12N
USA	3/4"-14 NGT(+14) CGA V-1	12N14
USA	3/4"-14 NGT(+24) CGA V-1	12N24
USA	3/4"-14 NGT (+3) CGA V-1	12N3
USA	3/4"-14 NGT (+4) CGA V-1	12N4
USA	3/4"-14 NGT (+6) CGA V-1	12N6
USA	3/4"-14 NGT (+7) CGA V-1	12N7
USA	3/4"-14 NGT (+9) CGA V-1	12N9
USA	1"-11 1/2 NGT CGA V-1	16N
USA	1"-11 1/2NGT(+4) CGA V-1	16N4
USA	1"-11 1/2NGT(+7) CGA V-1	16N7
USA	1 1/4"-11 1/2NGT CGA V-1	20N
USA	1 1/2"-11 1/2NGT CGA V-1	24N
USA	5/8"-18 UNF-2A	U10
USA	3/4"-16 UNF-2A	U12
USA	7/8"-14 UNF-2A	U14
USA	1" - 14 UNF - 2A	U16
USA	1 1/8"-12 UNF-2A	U18

SAFETY OVERVIEW

Safety	
Without	0
Burst disc 160 bar	160
Burst disc 190 bar	190
Burst disc 225 bar	225
Burst disc 250 bar	250
Burst disc 380 bar	380
Burst disc 405 bar	405
Burst disc 450 bar	450
Burst disc 850 psi CG1	P08
Burst disc 2700 psi CG1	P27
Burst disc 3000 psi CG1	P30
Burst disc 3360 psi CG1	P33
Burst disc 3375 psi CG1	P34
Burst disc 4000 psi CG1	P30
Burst disc 4917 psi CG1	P49
Burst disc 6750 psi CG1	P67
Burst disc 7500 psi CG1	P75
Fusible metal 165°F (75°C) CG2	1F
Fusible metal 212°F (100°C) CG3	2F
BD & FM 165°F CG4	BF4
BD & FM 212°F CG5	BF5
Safety tube trailer CG1	TT1
Safety tube trailer CG2	TT2
Safety tube trailer CG4	TT4
Safety tube trailer CG5	TT5

DIP TUBE OVERVIEW

Dip Tube	
1/16" - 27NPT	N1
1/2" - 14NPT	N4
1/2" - 20UNF	U1
1/4" - 18NPT	N3
1/8" - 27NPT	N2
3/8"- 16UNC - 2B	C1
3/8"- 18NPT	N5
3/8"- BSF	B1
3/8"x19TPI	T1
7/16" BSF	B2
G1/4"(ISO 228/1)	G2
G1/8"(ISO 228/1)	G1
G3/8"(ISO 228/1)	G3
M10x0,75	M1
M10x1	M2
M10x1,25	M3
M10x1,5	M4
M11x1	M5
M12x1	M6
M15x1	M7
M16 x1	M8
M18x1,5	M9
M8x0,75	M0
Rc 1/4" conical (ISO7/1)	RC
Without	0

Note: To define connections according to gas types please refer to ISO xxxx standard

OUTLET OVERVIEW

Country Code	Country	Thread	Norm	
INT	INTERNATIONAL	W30x2-LH-20,8/15,2	ISO 5145 Nr.38	238
INT	INTERNATIONAL	W30x2-20,1/15,9	ISO 5145 Nr.30	239
INT	INTERNATIONAL	W24x2-16,1/11,9	ISO 5145 Nr.2	242
INT	INTERNATIONAL	W30x2-19,4/16,6	ISO 5145 Nr.31	244
INT	INTERNATIONAL	W30x2-18,7/17,3	ISO 5145 Nr.32	245
INT	INTERNATIONAL	W24x2-LH-14/14	ISO 5145 Nr.10	246
INT	INTERNATIONAL	W24x2-LH-16,1/11,9	ISO 5145 Nr.7	259
INT	INTERNATIONAL	W27x2-17,4/14,6	ISO 5145 Nr.15	260
INT	INTERNATIONAL	W27x2-19,5/12,5	ISO 5145 Nr.12	289
INT	INTERNATIONAL	W30x2-20,8/15,2	ISO 5145 Nr.29	307
INT	INTERNATIONAL	W27x2-16/16	ISO 5145 Nr.17	317
INT	INTERNATIONAL	W30x2-LH-20,1/15,9	ISO 5145 Nr.39	461
INT	INTERNATIONAL	W30x2-LH-19,4/16,6	ISO 5145 Nr.40	494
INT	INTERNATIONAL	W24x2-14,7/13,3	ISO 5145 Nr.4	495
INT	INTERNATIONAL	W30x2-LH-18/18	ISO 5145 Nr.42	509
INT	INTERNATIONAL	W27x2-16,7/15,3	ISO 5145 Nr.16	555
INT	INTERNATIONAL	W30x2-22,9/13,1	ISO 5145 Nr.26	570
INT	INTERNATIONAL	W30x2-20,8	ISO 5145 Nr.29	572
INT	INTERNATIONAL	M24x1,5	EN ISO 8434-1	621
INT	INTERNATIONAL	M20x1,5	EN ISO 8434-1	637
DE	GERMANY	W21,8x1/4"-LH	DIN 477-1 Nr.1	1
DE	GERMANY	W21,8x1/4"-LH	DIN 477-1 Nr.2	2
DE	GERMANY	DIA15,3/7,5	DIN 477-1 Nr.3	3
DE	GERMANY	G3/8"-LH	DIN 477-1 Nr.4	4
DE	GERMANY	1"-LH	DIN 477-1 Nr.5	5
DE	GERMANY	W21,8x3/4"	DIN 477-1 Nr.6	6
DE	GERMANY	G5/8"	DIN 477-1 Nr.7	7
DE	GERMANY	1"	DIN 477-1 Nr.8	8
DE	GERMANY	G3/4"	DIN 477-1 Nr.9	9
DE	GERMANY	W24,32x3/4"	DIN 477-1 Nr.10	10
DE	GERMANY	G3/8"	DIN 477-1 Nr.11	11
DE	GERMANY	G3/4"	DIN 477-1 Nr.12	12
DE	GERMANY	G5/8"	DIN 477-1 Nr.13	13
DE	GERMANY	M19x1,5-LH	DIN 477-1 Nr.14	14
DE	GERMANY	W21,8x1/14"-LH	DIN 477-1 Nr.15	15
DE	GERMANY	W30x2-LH-20,8/15,2	DIN 477-5 Nr.57	238
DE	GERMANY	W30x2-20,1/15,9	DIN 477-5 Nr.54	239
DE	GERMANY	W30x2-19,4/16,6	DIN 477-5 Nr.56	244
DE	GERMANY	W30x2-18,7/17,3	DIN 477-5 Nr.59	245
DE	GERMANY	M28x1,5-19,5/13,5	DIN 477-9 Nr.1	153
DE	GERMANY	M28x1,5-19,9/13,9	DIN 477-9 Nr.2	154
DE	GERMANY	M28x1,5-20,3/14,3	DIN 477-9 Nr.3	155
DE	GERMANY	M28x1,5-20,7/14,7	DIN 477-9 Nr.4	156
DE	GERMANY	M28x1,5-21,1/15,1	DIN 477-9 Nr.5	157
DE	GERMANY	M28x1,5-21,5/15,5	DIN 477-9 Nr.6	158
DE	GERMANY	M28x1,5-21,9/15,9	DIN 477-9 Nr.7	159
DE	GERMANY	M28x1,5-22,3/16,3	DIN 477-9 Nr.8	160
DE	GERMANY	M24x2-LH/DIA.15,3/7,5	DIN 477-1 Nr.3.1	270
GB	UK	G5/8"	BS 341-3 Nr.3	44
GB	UK	G5/8"	BS 341-3 Nr.3	44
GB	UK	G5/8"-LH	BS 341-1 Nr.5	46

Country Code	Country	Thread	Norm	
GB	UK	G5/8"	BS 341-3 Nr.6	47
GB	UK	G5/8"-LH	BS 341-3 Nr.7	48
GB	UK	G1/2"	BS 341-3 Nr.10	60
GB	UK	0,860"-14T.P.I.-WHITWORTH	BS 341-3 Nr.8	61
GB	UK	G3/8"-LH	BS 341-3 Nr.15	62
GB	UK	G1/2"-LH	BS 341-3 Nr.11	64
GB	UK	1 1/16"-20T.P.I.-WITHWORTH	BS 341-3 Nr.13	66
GB	UK	G1/2"	BS 341-1 Nr.12	69
GB	UK	G3/8"	BS 341-3 Nr.14	74
GB	UK	21,8x1,814SI-LH	BS 341-1 Nr.9	82
GB	UK	G5/8"-LH	BS 341-3 Nr.2	122
GB	UK	G5/8"-LH	BS 341-3 Nr.4	122
GB	UK	G5/8"	BS 341-3 Nr.6	130
GB	UK	G3/8"-LH	BS 341-3 Nr.7	178
GB	UK	G5/8"	BS 341-3 Nr.6	199
GB	UK	W30x2-LH-20,8/15,2	BS 341-3 Nr.38	238
GB	UK	W30x2-20,1/15,9	BS 341-3 Nr.30	239
GB	UK	W30x2-19,4/16,6	BS 341-3 Nr.31	244
GB	UK	W30x2-18,7/17,3	BS 341-3 Nr.32	245
GB	UK	G5/8"	BS 341-3 Nr.6	264
GB	UK	G1/2"	BS 341-3 Nr.10	408
GB	UK	G3/4"	BS 341-3 Nr.1	587
AR	ARGENTINA	G3/4"	IRAM 2539 No. 1	363
AR	ARGENTINA	G5/8"-LH	IRAM 2539 No. 3	364
AR	ARGENTINA	G3/8"	IRAM 2539 No. 5	365
AR	ARGENTINA	W21,8x3/4"	IRAM 2539 No. 2	390
AR	ARGENTINA	W21,8x1/4"-LH	IRAM 2539 No. 4	473
AU	AUSTRALIA	0,860-14BSW	AS 2473.2 Type 30	268
AU	AUSTRALIA	G1/2"-LH	AS 2473.2 Type 42	277
AU	AUSTRALIA	G3/4"	AS B240 Type 34	290
AU	AUSTRALIA	1,045"-14NGO-RH-INT	AS 2473.2 Type 51	297
AU	AUSTRALIA	G5/8"-LH	AS 2473.2 Type 40	311
AU	AUSTRALIA	G3/4"	AS 2473.2 Type 34	314
AU	AUSTRALIA	G5/8"	AS 2473.2 Type 10	316
AU	AUSTRALIA	G5/8"-LH	AS 2473.2 Type 20	318
AU	AUSTRALIA	1,103"-14NGO-RH-EXT	AS 2473.2 Type 16	438
AU	AUSTRALIA	G5/8"	AS 2473.2 Type 31	600
AU	AUSTRALIA	W27x2-18,1/13,9	AS 2473.2 Type 60	607
AU	AUSTRALIA	W24x2-14,7/13,3	AS 2473.2 Type 50	628
BR	BRAZIL	0,965"-14NGO-RH-INT	NBR 11725 ABNT245-1	65
BR	BRAZIL	0,825"-14NGO-RH-EXT	NBR 11725 ABNT209-1	67
BR	BRAZIL	0,803"-14UNS-2B-RH-INT	NBR 11725 ABNT204-1	218
BR	BRAZIL	G3/8"	NBR 11725 ABNT166-1	486
BR	BRAZIL	W27x2-LH-18,1/13,9	NBR 11725 ABNT270-2	487
BR	BRAZIL	0,965"-14NGO-RH-INT	NBR 11725 ABNT245-1	488
BR	BRAZIL	W21,8x3/4"	NBR 11725 ABNT218-1	531
BR	BRAZIL	W21,8x1/4"-LH	NBR 11725 ABNT218-2	547
CN	CHINA	G5/8"	GB 15383 Nr.4	548
CN	CHINA	G3/4"	GB 15383 Nr.2	635
CN	CHINA	G3/4"	GB 15383 Nr.21	635

22 OPTION AND CONNECTORS OVERVIEW

OUTLET OVERVIEW (continued)

Country Code	Country	Thread	Norm	
CN	CHINA	G3/4"	GB 15383 Nr.8	635
ES	SPAIN	W25,4x1/4"(1"BSW)	MIE BQ-E5,15 NORMA3 TIPO J	76
ES	SPAIN	26x1,5SI	MIE BQ-E5,15 NORMA3 TIPO G	77
ES	SPAIN	M30x1,75	MIE BQ-E5,15 NORMA3 TIPO B	96
ES	SPAIN	W21,7x1/4"	MIE BQ-E5,15 NORMA3 TIPO C	161
ES	SPAIN	W21,7x1/4"-LH	MIE BQ-E5,15 NORMA3 TIPO E	163
ES	SPAIN	M19x1,5-LH	MIE BQ-E5,15 NORMA3 TIPO M	165
ES	SPAIN	G5/8"	MIE BQ-E5,15 NORMA3 TIPO U	166
ES	SPAIN	W22,91x1/14"-LH (=G5/8"-LH)	MIE BQ-E5,15 NORMA3 TIPO H	265
ES	SPAIN	W22,91x1/14" (=G5/8")	MIE BQ-E5,15 NORMA3 TIPO S	308
ES	SPAIN	G5/8"	MIE BQ-E5,15 NORMA3 TIPO V2	309
ES	SPAIN	G5/8"	MIE BQ-E5,15 NORMA3 TIPO F	518
FR	FRANCE	22,91x1,814SI	NF E29-650 Type F	38
FR	FRANCE	25,4x3,175	NF E29-650 Type J	76
FR	FRANCE	W24x2-15,4/12,6	NF E29-650 Type D	93
FR	FRANCE	W27x2-18,8/13,2	NF E29-650 Type L	94
FR	FRANCE	26,1x1,814SI-LH	NF E29-660 Type K	119
FR	FRANCE	22,91x1/14"-LH	NF E29-650 Type H	122
FR	FRANCE	W30x2-22,2/13,8	NF E29-650 Type M	167
FR	FRANCE	W30x2-21,5/14,5	NF E29-650 Type N	168
FR	FRANCE	W27x2-17,4/14,6	NF E29-650 Type K	176
FR	FRANCE	W27x2-19,5/12,5	NF E29-650 Type P	177
FR	FRANCE	21,7x1,814SI-LH	NF E29-650 Type E	202
FR	FRANCE	21,7x1,814SI	NF E29-650 Type C	203
FR	FRANCE	30x1,75SI	NF E29-650 Type B	215
FR	FRANCE	26x1,5SI	NF E29-650 Type G	226
FR	FRANCE	22,91x1/4"SI	NF E29-650 Type F	228
FR	FRANCE	DIA21/10	NF E29-650 Type A	255
IT	ITALY	W21,7x1/4"	UNI 11144 No.5	115
IT	ITALY	W20x1/4"-LH	UNI 11144 No.1H	116
IT	ITALY	W21,7x1/4"	UNI 11144 No.2	120
IT	ITALY	W24,5x1/4"	UNI 11144 No.8	143
IT	ITALY	W30x1/4"	UNI 11144 No.6	196
IT	ITALY	G5/8"	UNI 11144 No.9	267
IT	ITALY	W27x2-16/16	UNI 11144 No.10	317
IT	ITALY	W30x1/4"-LH	UNI 11144 No.3	348
IT	ITALY	DIA22/10	UNI 11144 No.7S	361
IT	ITALY	G5/8"-LH	UNI 11144 No.7F	471
IT	ITALY	W1"x1/8"	UNI 11144 No.4	567
JP	JAPAN	W22x1/4"	JIS B 8246	234
JP	JAPAN	W22x1/4"-LH	JIS B 8246	240
JP	JAPAN	W23x1/4"	JIS B 8246	247
JP	JAPAN	W26x1/4"	JIS B 8246	287
JP	JAPAN	W20x1/4"-LH	JIS B 8246	566
SE	SWEDEN	W21,8x1/4"	SS 2238	30
SE	SWEDEN	W24,32x1,814	SS 2238	131
SE	SWEDEN	W27x2-16/16	SS 367615 - F	317
SE	SWEDEN	G3/4"	SS 367615 - B	452
SE	SWEDEN	W21,8x1/4"-LH	SS 367615 - D	534
SE	SWEDEN	W21,8x1/4"	SS 367615 - E1	541
SE	SWEDEN	W21,8x1/4"	SS 367615 - E2	541

Country Code	Country	Thread	Norm	
SE	SWEDEN	W24,32x1/4"	SS 367615 - C	542
SE	SWEDEN	G5/8"	SS 367615 - H	573
CH	SWITZERLAND	W21,8x1/4"-LH	SN 219505-24	1
CH	SWITZERLAND	W21,8x1/4"-LH	SN 219505-3	1
CH	SWITZERLAND	DIA15,3/7,5	SN 219506-2	3
CH	SWITZERLAND	G3/8"-LH	SN 219505-5	4
CH	SWITZERLAND	W1"-LH	SN 219505-12	5
CH	SWITZERLAND	W21,8x1/4"	SN 219505-23	6
CH	SWITZERLAND	W21,8x1/4"	SN 219505-7	6
CH	SWITZERLAND	G5/8"	SN 219505-14	7
CH	SWITZERLAND	W1"	SN 219505-13	8
CH	SWITZERLAND	G3/8"	SN 219505-26	11
CH	SWITZERLAND	G3/8"	SN 219505-9	11
CH	SWITZERLAND	G3/8"	SN 219505-10	13
CH	SWITZERLAND	G3/8"	SN 219505-22	13
CH	SWITZERLAND	G3/4"	SN 219505-25	97
CH	SWITZERLAND	G3/4"	SN 219505-6	97
CH	SWITZERLAND	W24,32x1/4"	SN 219505-21	451
CH	SWITZERLAND	W24,32x1/4"	SN 219505-8	451
CH	SWITZERLAND	G3/4"	SN 219505-2	464
CH	SWITZERLAND	G3/4"	SN 219505-20	464
TR	TURKEY	W21,8x1/4"-LH	TS 1520 Nr.1	1
TR	TURKEY	DIA15,3/7,5	TS 1520 Nr.3	3
TR	TURKEY	W21,8x1/4"	TS 1520 Nr.6	6
TR	TURKEY	G5/8"	TS 1520 Nr.7	7
TR	TURKEY	G3/4"	TS 1520 Nr.9	9
TR	TURKEY	W24,32x1/4"	TS 1520 Nr.10	10
TR	TURKEY	G3/8"	TS 1520 Nr.11	11
TR	TURKEY	G3/4"	TS 1520 Nr.12	12
TR	TURKEY	G3/8"	TS 1520 Nr.13	13
TR	TURKEY	M19x1,5-LH	TS 1520 Nr.14	14
TR	TURKEY	G3/8"	TS 1520 Nr.19	44
TR	TURKEY	G3/8"-LH	TS 1520 Nr.16	122
TR	TURKEY	W23x1/8"	TS 1520 Nr.18	272
TR	TURKEY	G3/4"	TS 1520 Nr.17	363
UY	URUGUAY	W21,8x1/4"	UNIT 768 connexion 218-1	6
UY	URUGUAY	W24,32x1/4"	UNIT 768 connexion 243-1	10
UY	URUGUAY	G3/4"	UNIT 768 connexion 264-1	12
US	USA	1/2"-14NGT	CGA 341	49
US	USA	0,885"-14NGO-LH-INT	CGA 510	50
US	USA	1,030"-14NGO-RH-EXT	CGA 621	51
US	USA	7/16"-20UNF-2A-RH-EXT (1/4"SAE FLARE)	CGA 165	53
US	USA	5/16"-18UNF-2A-RH-EXT (5/16"SAE FLARE)	CGA 182	55
US	USA	0,903"-14NGO-RH-EXT	CGA 540	58
US	USA	1,030"-14NGO-RH-EXT	CGA 660	59
US	USA	0,965"-14NGO-RH-INT	CGA 580	65
US	USA	0,825"-14NGO-RH-EXT	CGA 320	67
US	USA	0,825"-14NGO-LH-EXT	CGA 350	68
US	USA	0,825"-14NGO-LH-EXT	CGA 330	75
US	USA	1,030"-14NGO-RH-EXT	CGA 668	92
US	USA	0,825"-14NGO-RH-EXT	CGA 300	95

Country Code	Country	Thread	Norm	
US	USA	0,825"-14NGO-RH-EXT	CGA 326	100
US	USA	0,825"-14NGO-RH-EXT	CGA 346	101
US	USA	5/16"-32UNEF-2B-RH-INT	CGA 110	102
US	USA	%16"-18UNF-2A-RH-EXT	CGA 170+110	103
US	USA	0,965"-14NGO-LH-INT	CGA 590	105
US	USA	1,030"-14NGO-LH-EXT	CGA 679	136
US	USA	1,030"-14NGO-LH-EXT	CGA 678	144
US	USA	1,030"-14NGO-LH-EXT	CGA 670	148
US	USA	1,030"-14NGO-RH-EXT	CGA 660+160	150
US	USA	1,030"-14NGO-RH-EXT-20,22/16,49	CGA/DISS 632	170
US	USA	1,030"-14NGO-RH-EXT-19,86/16,84	CGA/DISS 634	172
US	USA	1,030"-14NGO-RH-EXT-19,51/17,2	CGA/DISS 636	173
US	USA	1,030"-14NGO-RH-EXT	CGA 660	181
US	USA	1,125"-14UNS-2A-RH-EXT	CGA 705	183
US	USA	1,125"-14UNS-2A-RH-EXT	CGA 845	183
US	USA	1,030"-14NGO-RH-EXT-19,15/17,55	CGA/DISS 638	190
US	USA	1,030"-14NGO-RH-EXT-18,80/17,91	CGA/DISS 640	191
US	USA	1,030"-14NGO-RH-EXT-18,26/18,26	CGA/DISS 642	192
US	USA	1,125"-14NGO-RH-EXT-21,01/17,91	CGA/DISS 720	194
US	USA	1,125"-14NGO-RH-EXT-21,37/17,56	CGA/DISS 718	206
US	USA	1,125"-14NGO-RH-EXT-21,72/17,20	CGA/DISS 716	212
US	USA	0,745"-14NGO-RH-EXT	CGA 280	213
US	USA	0,885"-14NGO-RH-INT	CGA 500	214
US	USA	0,5"-16-ACME-2G-RH-EXT	CGA 167	217
US	USA	0,803"-14UNS-2B-RH-INT	CGA 296	218
US	USA	1,125"-14NGO-RH-EXT-22,43/16,48	CGA/DISS 712	219
US	USA	1,125"-14NGO-RH-EXT-20,30/18,62	CGA/DISS 724	220
US	USA	1,125"-14NGO-RH-EXT-22,08/16,84	CGA/DISS 714	221
US	USA	1,125"-14NGO-RH-EXT-20,65/18,27	CGA/DISS 722	222
US	USA	1,125"-14NGO-RH-EXT-19,94/18,98	CGA/DISS 726	223
US	USA	1,125"-14NGO-RH-EXT-19,33/19,33	CGA/DISS 728	224
US	USA	0,745"-14NGO-LH-EXT	CGA 290	232
US	USA	0,625"-18UNF-2A-RH-EXT	CGA 180+110	233
US	USA	1,030"-14NGO-RH-EXT	CGA 820	254
US	USA	1,030"-14NGO-RH-EXT	CGA 660	257
US	USA	1,030"-14NGO-RH-EXT	CGA 660	258
US	USA	DIA18/15,6/10,8	CGA 850	284
US	USA	1,030"-14NGO-RH-EXT-13,11/10,54	CGA 626	286
US	USA	0,903"-14NGO-LH-EXT	CGA 555	292
US	USA	0,825"-14NGO-RH-EXT	CGA 347	293
US	USA	0,960"-14NGO-RH-EXT	CGA 577	295
US	USA	1,030"-14NGO-LH-EXT	CGA 677	296
US	USA	1,045"-14NGO-RH-INT	CGA 680	297
US	USA	1,045"-14NGO-LH-INT	CGA 695	298
US	USA	1,125"-14NGO-RH-INT	CGA 702	299
US	USA	1,030"-14NGO-LH-EXT-13,2/10,6	CGA 625	305
US	USA	1,030"-14NGO-RH-EXT	CGA 820	319
US	USA	5/16"-20UNF-2A-RH-EXT (1/4"SAE FLARE)	CGA 165	340
US	USA	3/4"-16UNF (1/2"SAE)	CGA 295	345
US	USA	3/4"-16UNF (1/2"SAE)	CGA 295	394
US	USA	1,125"-14NGO-LH-INT	CGA 703	437

Country Code	Country	Thread	Norm	
US	USA	1,103"-14NGO-RH-EXT	CGA 701	438
US	USA	7/16"-20UNF-2?-RH-INT (1/4"SAE FLARE)	CGA 165	474
US	USA	0,5"-16-ACME-2G-RH-EXT	CGA 167	491
US	USA	DIA25,4	CGA 800+240	506
US	USA	1,030"-14NGO-RH-EXT	CGA 660	535
US	USA	0,850"-14NGO-LH-EXT	CGA 410	536
US	USA	1"-11,5NPS-RH-EXT	CGA 1340	590
US	USA	1"-11,5NPS-LH-EXT	CGA 1350	610
US	USA	1,4375"-12UN-RH-EXT	CGA 1440	611
US	USA	1,4375"-12UN-LH-EXT	CGA 1450	612
US	USA	1,25"-11,5NPS-RH-EXT	CGA 1540	613
US	USA	1,25"-11,5NPS-LH-EXT	CGA 1550	614
US	USA	0,5"-16-ACME-2G-LH-EXT	CGA 166	630
US	USA	0,5"-16-ACME-2G-LH-EXT	CGA 166	631

24 OPTION AND CONNECTORS OVERVIEW

CYLINDER OUTLETS

GAS	SYMBOL	UHP CGA/Diss	CGA	BS	DIN	AFNOR	JIS	UNI
Ammoniac	NH ₃	720	-	10	6	C	22R	4407
Argon	Ar	718	580	3	6	C	22R - 23R	4412
Arsenic Pentafluoride	As ₂ F ₅	642	-	-	-	-	-	-
Arsine	ASH ₃	632	350	-	1	E	22L	-
Boron Trichloride	BCL ₃	634	660	-	8	K	-	-
Boron Trifluoride	BF ₃	642	330	-	8	K	22L	4408
BromoChlorodifluoromethane	BrClF ₂	-	660	6	6	C	-	4406
Bromotrifluoromethane	BrCF ₃	-	660	6	6	C	-	4406
Butane	C ₄ H ₁₀	-	510	2	1; 2; 4	E	23L	4405P
Carbon Dioxide	CO ₂	716	320	8	6	C	22R	4406
Carbon Monoxide	CO	724	350	4	5	E	22L	4405H
Carbonyl Sulfide	COS	-	330	-	-	E	22L	-
Chlorine	CL	728	660*	6	8	J	26R	4408
Chlorine Trifluoride	CLF ₃	-	670	6	1	P	26L	-
Chlorodifluoromethane	CCLF ₂ H	-	660	6	6	C	-	4406
Chlorotrifluoromethane	CCLF ₃	716	660	-	6	C	-	4406
Diborane	B ₂ H ₆	632	350	-	1	E	22L	-
Dichlorodifluoromethane	CCL ₂ F ₂	716	660	6	6	C	-	4406
Dichlorofluoromethane	CCL ₂ FH	-	660	6	6	C	-	4406
Dichlorosilane	H ₂ SiCL ₂	636	678	-	5	-	-	-
Dichlorotetrafluoroethane	C ₂ CL ₂ F ₄	-	660	6	6	C	-	4406
Diethylzinc	(C ₂ H ₅) ₂ Zn	726	510	-	1	-	-	-
1,1-Difluoroethylene	C ₂ F ₂ H ₂	-	350	-	1	E	22L	-
Dimethylzinc	(CH ₃) ₂ Zn	726	-	-	-	-	-	-
Dimethylamine	C ₂ H ₇ N	-	705	11	1	E	22L - 26L	4407
Dimethylether	C ₂ H ₆ O	-	510	-	1	E	26L	4405H
Disilane	Si ₂ H ₆	632	-	-	1	E	-	-
Ethane	C ₂ H ₆	-	350	-	1	E	22L	4405H
Ethyl Chloride	C ₂ CLH ₅	-	300	7	1	E	26L	4405H
Ethylene	C ₂ H ₄	-	350	2	1	E	22L	4405H
Fluorine	F ₂	-	679	-	8	P	26R	-
Germane	GeH ₄	632	350	-	1	E	-	-
Helium	He	718	580	3	6	C	22R - 23R	4412
Hydrogen	H ₂	724	350	2	1	E	22L	4405H
Hydrogen Bromide	HBr	634	330	-	8	K	26R	4408
Hydrogen Chloride	HCl	634	330	6; 14	8	K	26R	4408
Hydrogen Fluoride	HF	638	670	6	-	K	26R	4408
Hydrogen Iodide	HI	-	330	-	-	K	-	-
Hydrogen Selenide	H ₂ Se	632	350	2	-	E	-	-
Hydrogen Sulfide	H ₂ S	722	330	15	5	E	-	4405H
Isobutane	C ₄ H ₁₀	-	510	2	1; 2; 4	E	23L	4405P
Isobutylene	C ₄ H ₈	-	510	2	1	E	23L	4405P
Krypton	Kr	718	580	3	6	C	22R - 23R	4412
Neon	Ne	718	580	3	6	C	-	4412
Nitrogen	N ₂	718	580	13	10	C	-	4409
Nitrous Oxide	N ₂ O	712	326	13	11; 12	G	-	-
Oxygen	O ₂	714	540	3	9	F	22R - 23R	4406
Perfluoropropane	C ₃ F ₈	716	660	3	6	-	-	-
Phosgene	CCL ₂ O	-	660	6; 14	8	K	26R	4406
Phosphine	PH ₃	632	350	4	1	E	-	-
Phosphorus Pentafluoride	PF ₅	642	330	-	-	-	-	-
Silane	SiH ₄	632	350	3	1	E	-	-
Silicon Tetrachloride	SiCL ₄	636	-	-	1	-	-	-
Silicon Tetrafluoride	SiF ₄	642	330	-	1	-	26L	-
Sulphur Dioxide	SO ₂	-	660	10	7	K	26R	4406
Sulphur Hexafluoride	SF ₆	716	590	6	6	C	-	4406
Trichlorosilane	HSiCL ₃	-	636	-	1	-	-	-
1,1,1-Trichlorotrifluoroethane	C ₂ CL ₃ F ₃	-	660	-	-	-	-	-
Trichlorofluoromethane	CCL ₃ F	-	660	-	-	C	-	-
Triethylaluminium	ALC ₆ H ₁₅	726	510	-	1	-	-	-
Trifluoromethane	CF ₃ H	-	660	6	6	C	-	4406
Trimethylamine	C ₃ H ₉ N	-	705	11	1	E	26L	4407
Tungsten Hexafluoride	WF ₆	638	670	-	8	-	-	-
Vinyl Bromide	BrC ₂ H ₃	-	510	-	1	E	26L	4406
Vinyl Chloride	C ₂ CLH ₃	-	510	7	1	E	26L	4405H
Vinyl Fluoride	C ₂ FH ₃	-	350	-	1	E	22L	-
Xenon	Xe	718	580	3	6	C	22R/L - 26L	4412

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