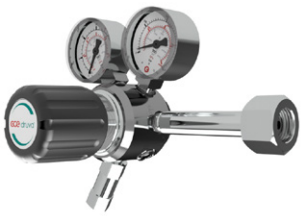
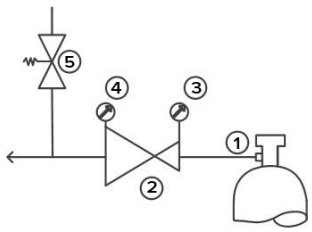
CSLH0SJ | CSLHESJ – DRUVA®PUR CYLINDER REGULATOR

CYLINDER REGULATOR | PURE LINE (STAINLESS STEEL) | 20 m³ SERIES | HIGH PRESSURE RANGE
SINGLE STAGE | 6-PORT VERSION

This single-stage cylinder pressure regulator is used in gas supply systems for pure, inert, flammable, oxidising, corrosive and / or toxic gases and their mixtures up to gas purity 6.0.

Option-**00**:





1 – Cylinder connection
2 – Pressure regulator
3 – Inlet pressure gauge
4 – Outlet pressure gauge
5 – Relief valve

Dimension for standard version see technical drawing

SPECIAL FEATURES:

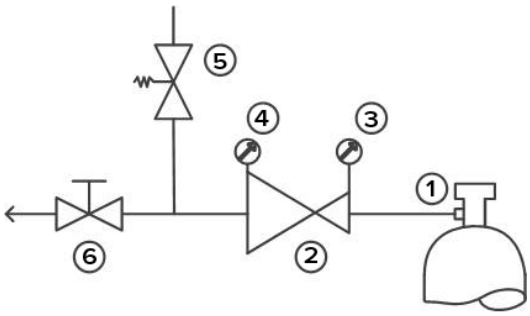
- Hastelloy diaphragm tighting system to atmosphere
- Available with several options (shut-off valve, regulating valve, purge valve, etc.), see drawing
- Available with several international cylinder connections, see drawing
- Compact design
- Excellent pressure adjustment
- Designed and approved regarding ISO 7291
- Relief valve in delivery pressure side available
- Electrostatic chargeability test
  - Fulfills requirements according to ISO 80070-36; IEC TS 60079-32-1 and German TRGS 727
  - Usable in EX- areas zones 1 and 2 for gases with explosion risk group I; IIA; IIB; IIC

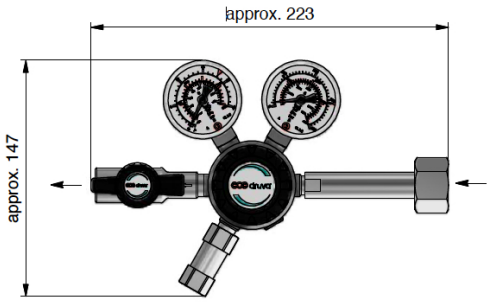
TECHNICAL DATA	
Working temperature:	-20 °C to +60 °C
Inlet port:	Cylinder connection according to national / international directives
Leakage rate seat:	<5x10^{-6} mbar l/s (Helium)
Leakage rate outside:	<1x10^{-9} mbar l/s (Helium)
Filter:	1x for inlet 1x for each outlet
Weight:	4,04 kg
Flow nominal:	20 m³/h (N_2) according to ISO 7291 at 20 bar out
Material gas wetted parts	
Regulator body:	Stainless Steel
Regulator diaphragm:	Hastelloy
Regulator seat:	PCTFE (P in > 50 bar) PTFE (P in ≤ 50 bar)
Relief valve seat: CSLH0SJ-Version CSLHESJ-Version	 FKM EPDM
Regulator poppet:	Stainless Steel
Pressure rates cylinder regulator	
Max. inlet pressure:	300 bar
Delivery pressure:	2/ 3/ 6/ 10/ 14/ 28/ 50/ 100/ 200 bar
Pressure gauges rates (pressure rates):	2,5 (2)/ 5 (3)/ 10 (6)/ 25 (10, 14)/ 40 (28)/ 65 (50)/ 160 (100)/ 200 (315) bar
Contact gauges available – please contact us	
Cracking pressure relief valves:	3,1 (2)/ 4,6 (3)/ 9,2 (6)/ 15,4 (10)/ 21,6 (14)/ 15,4 (10)/ 21,6 (14)/ 43,1 (28)/ 77 (50)/ 154 (100) bar
Test in production:	Pressure test with Helium of each item
	Seat leakage test with Helium of each item
	Helium leak test of each regulator against atmosphere
	Test of functionality of each item
Approvals during development:	Type test in accordance with ISO 7291
	Additional life cycle test
	Electrostatic chargeability test • Fulfills requirements according to ISO 80070-36; IEC TS 60079-32-1 and German TRGS 727 • Usable in EX-areas zones 1 and 2 for gases with explosion risk group I; IIA; IIB; IIC

OPTIONS OF CYLINDER PRESSURE REGULATOR CSLH0SJ | CSLHESJ:

Option-**0S**: with low pressure shut-off valve

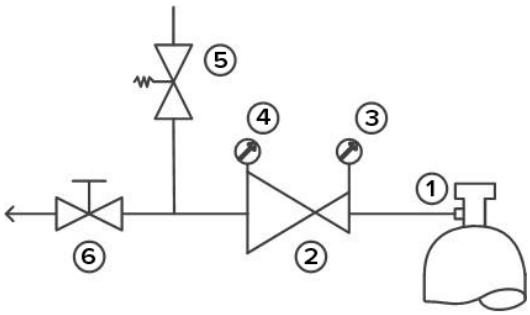
1 – Cylinder connection
2 – Pressure regulator
3 – Inlet pressure gauge
4 – Outlet pressure gauge
5 – Relief valve
6 – Outlet shut-off valve

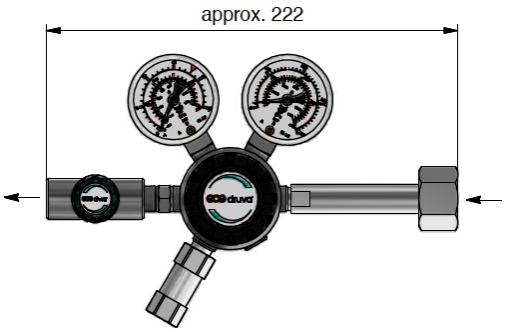




Option-**0R**: with low pressure regulating valve

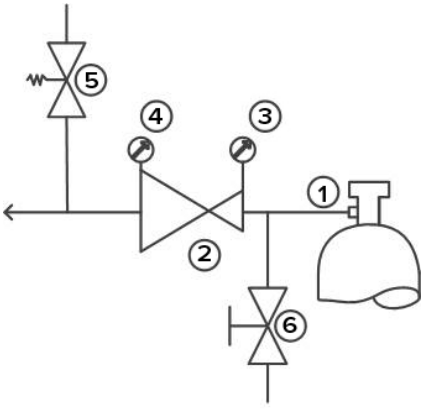
1 – Cylinder connection
2 – Pressure regulator
3 – Inlet pressure gauge
4 – Outlet pressure gauge
5 – Relief valve
6 – Outlet regulating valve

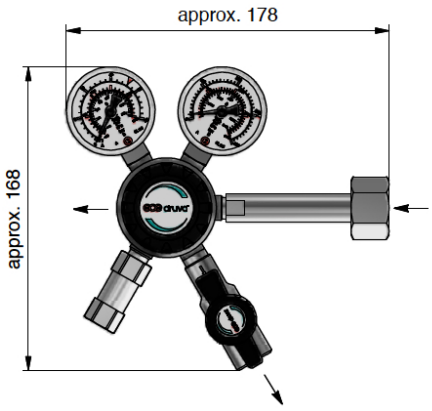




Option-**P0**: with high pressure purge valve

1 – Cylinder connection
2 – Pressure regulator
3 – Inlet pressure gauge
4 – Outlet pressure gauge
5 – Relief valve
6 – Purge valve

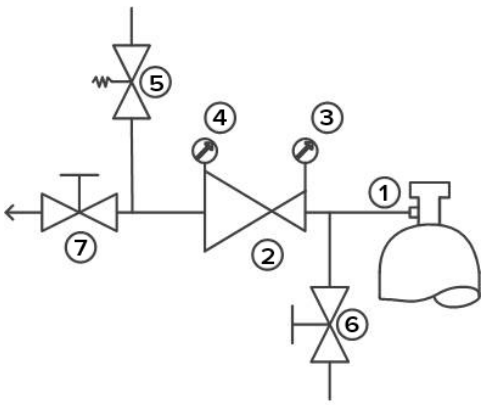


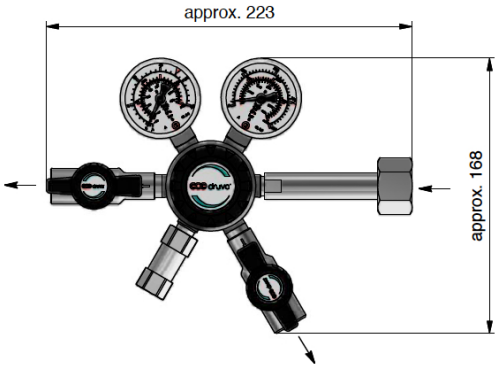


OPTIONS OF CYLINDER PRESSURE REGULATOR CSLH0SJ | CSLHESJ:

Option-**PS**: with high pressure purge valve & low pressure shut-off valve

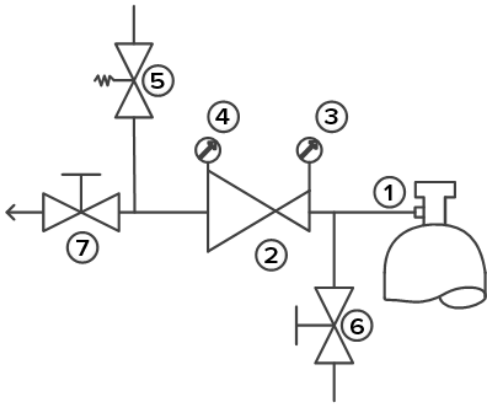
1 – Cylinder connection
2 – Pressure regulator
3 – Inlet pressure gauge
4 – Outlet pressure gauge
5 – Relief valve
6 – Purge valve
7 – Outlet shut-off valve

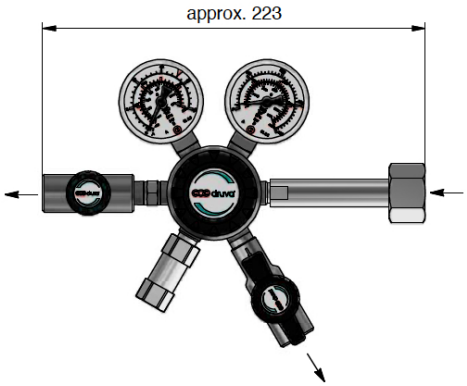




Option-**PR**: with high pressure purge valve & low pressure regulating valve

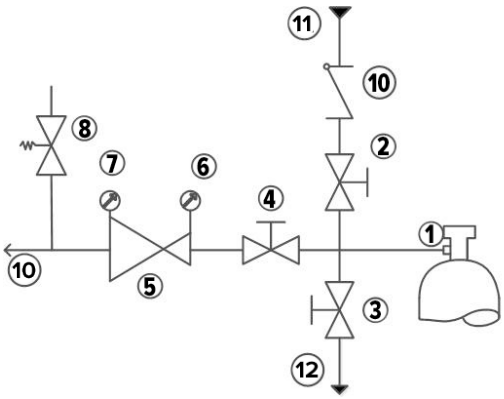
1 – Cylinder connection
2 – Pressure regulator
3 – Inlet pressure gauge
4 – Outlet pressure gauge
5 – Relief valve
6 – Purge valve
7 – Outlet regulating valve

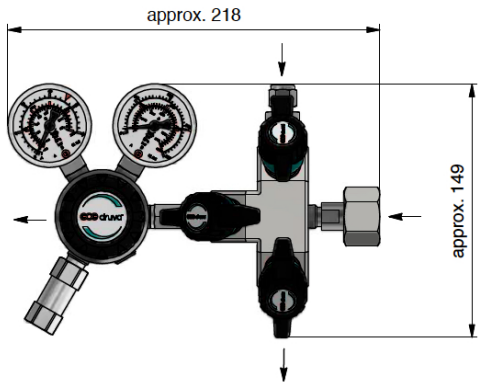




Option-**30**: with high pressure triple purge block

1 – Cylinder connection
2 – Purge inlet valve
3 – Purge outlet valve
4 – Inlet shut-off valve
5 – Pressure regulator
6 – Inlet pressure gauge
7 – Outlet pressure gauge
8 – Relief valve
9 – Check valve
10 – Process gas outlet
11 – Purge inlet
12 – Purge outlet

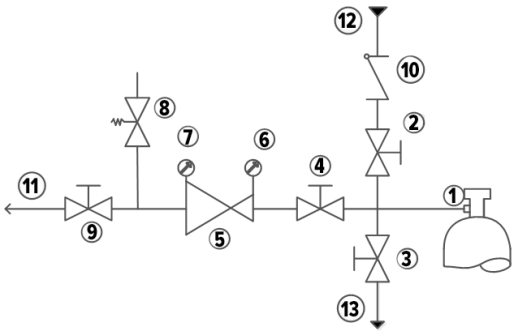


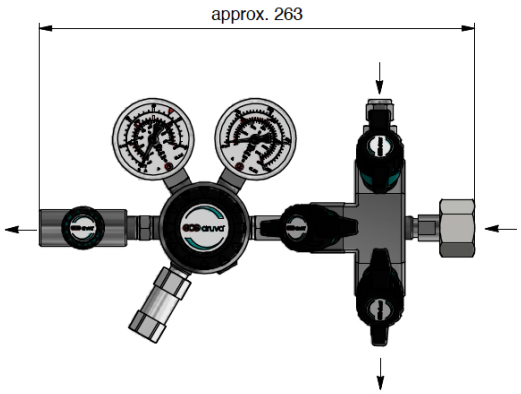


OPTIONS OF CYLINDER PRESSURE REGULATOR CSLH0SJ | CSLHESJ:

Option-**3R**: with high pressure triple purge block & low pressure regulating valve

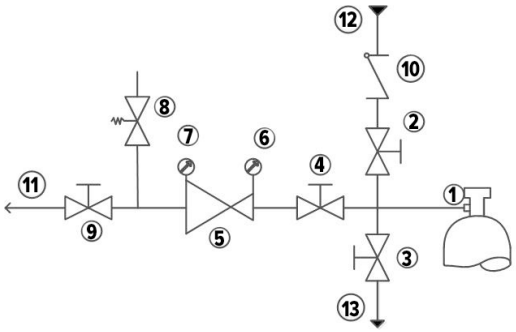
1 – Cylinder connection
2 – Purge inlet valve
3 – Purge outlet valve
4 – Inlet shut-off valve
5 – Pressure regulator
6 – Inlet pressure gauge
7 – Outlet pressure gauge
8 – Relief valve
9 – Outlet regulating valve
10 – Check valve
11 – Process gas outlet
12 – Purge inlet
13 – Purge outlet

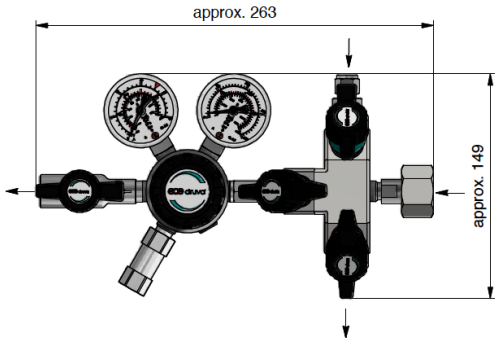




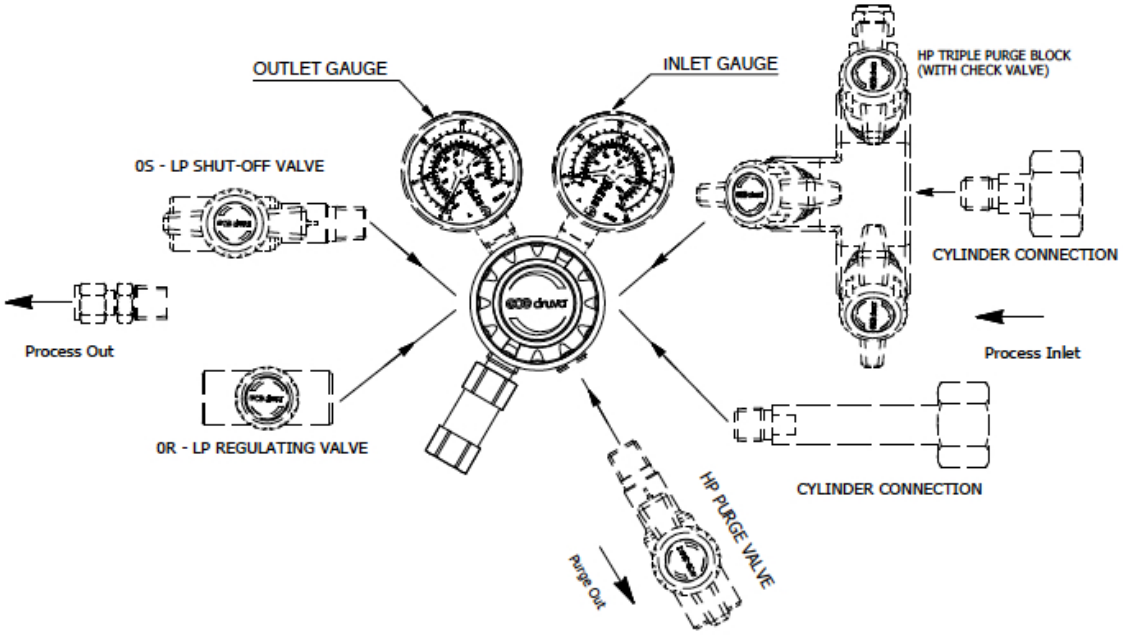
Option-**3S**: with high pressure triple purge block & low pressure shut-off valve

1 – Cylinder connection
2 – Purge inlet valve
3 – Purge outlet valve
4 – Inlet shut-off valve
5 – Pressure regulator
6 – Inlet pressure gauge
7 – Outlet pressure gauge
8 – Relief valve
9 – Outlet shut-off valve
10 – Check valve
11 – Process gas outlet
12 – Purge inlet
13 – Purge outlet

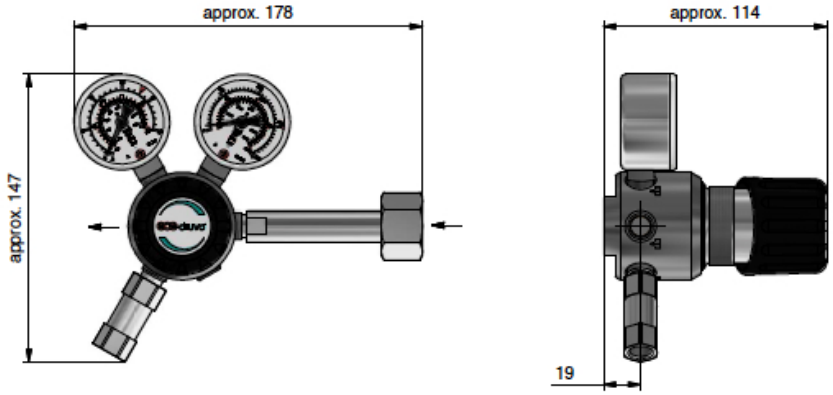




TECHNICAL DRAWING:



STANDARD VERSION



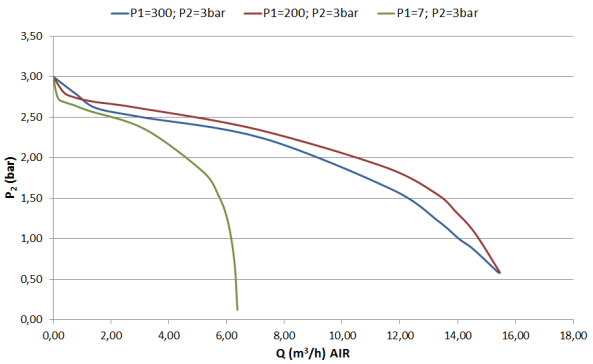
List of possible cylinder connections

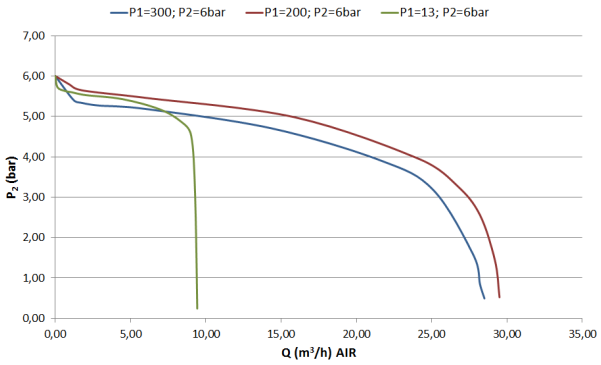
N14F00 - NPT1/4″ female
BS003W - BSI341-3 Wrench
BS004W - BSI341-4 Wrench
BS008W - BSI341-8 Wrench
BS010W - BSI341-10 Wrench
BS014W - BSI341-14 Wrench
CG170W - CGA No 170 Wrench
CG330W - CGA No 330 Wrench
CG580W - CGA No 580 Wrench
CG590W - CGA No 590 Wrench
DI001H - DIN477 No 1 Hand
DI001W - DIN477 No 1 Wrench
DI005W - DIN477 No 5 Wrench
DI006H - DIN477 No 6 Hand
DI006W - DIN477 No 6 Wrench
DI007W - DIN477 No 7 Wrench
DI008W - DIN477 No 8 Wrench
DI009W - DIN477 No 9 Wrench
DI010H - DIN477 No 10 Hand
DI010W - DIN477 No 10 Wrench
DI011W - DIN477 No 11 Wrench
DI013W - DIN477 No 13 Wrench
DI014H - DIN477 No 14 Hand
DI014W - DIN477 No 14 Wrench
DI054H - DIN477 No 54 Hand
DI054W - DIN477 No 54 Wrench
DI057W - DIN477 No 57 Wrench
DI059W - DIN477 No 59 Wrench
NELU1W - NEN LU1 Wrench
NELU4W - NEN LU4 Wrench
NERI2W - NEN RI2 Wrench
NERU1W - NEN RU1 Wrench
NERU3W - NEN RU3 Wrench
NF00CW - AFNOR Type C Wrench
NF00FW - AFNOR Type F Wrench
other connections on request

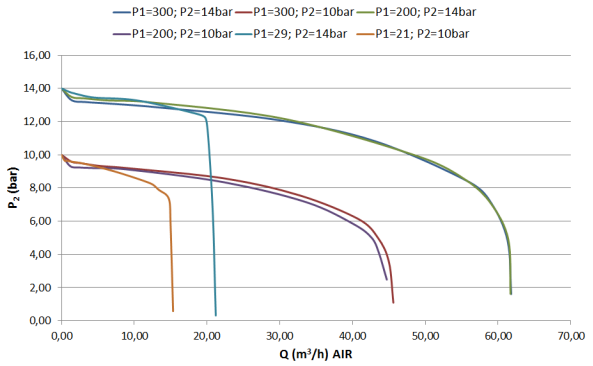
List of possible connections

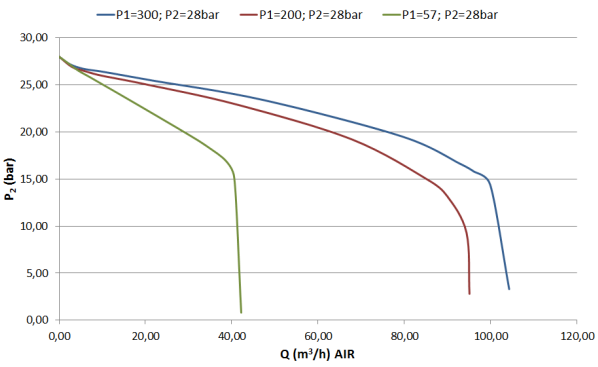
N14F - NPT1/4″ female
M03S - Compression fitting ø 3 MM Stainless Steel
M06S - Compression fitting ø 6 MM Stainless Steel
M08S - Compression fitting ø 8 MM Stainless Steel
M10S - Compression fitting ø 10 MM Stainless Steel
M12S - Compression fitting ø 12 MM Stainless Steel
IX2S - Compression fitting ø 1/8“ Stainless Steel
IX4S - Compression fitting ø 1/4“ Stainless Steel
IX6S - Compression fitting ø 3/8“ Stainless Steel
IX8S - Compression fitting ø 1/2“ Stainless Steel
H04S - Hose nozzle 4,8 mm Stainless Steel
H06S - Hose nozzle 6,4 mm Stainless Steel
H08S - Hose nozzle 8,0 mm Stainless Steel
Hose nozzle max. 15 bar.

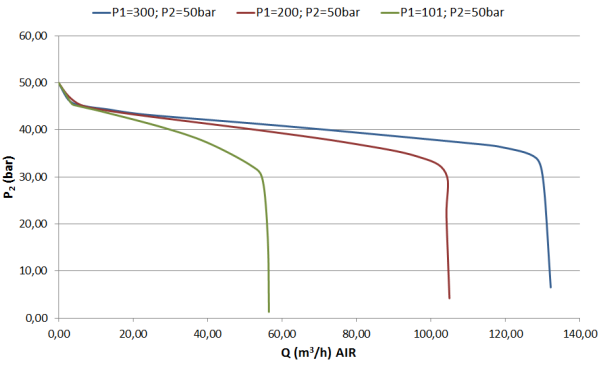
FLOW CURVES:











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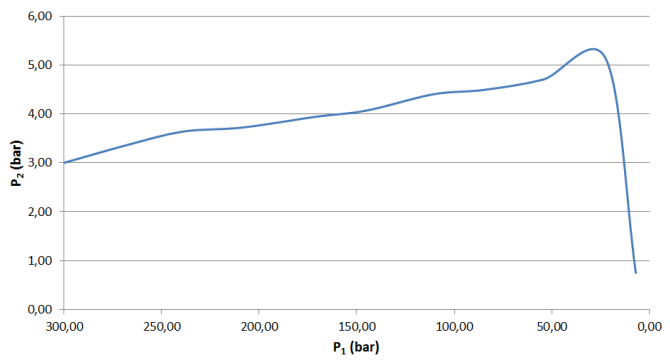
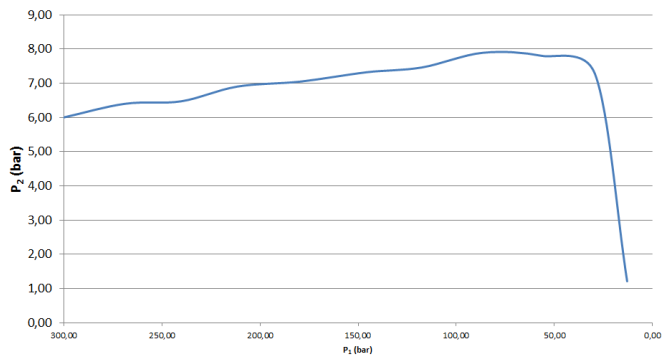
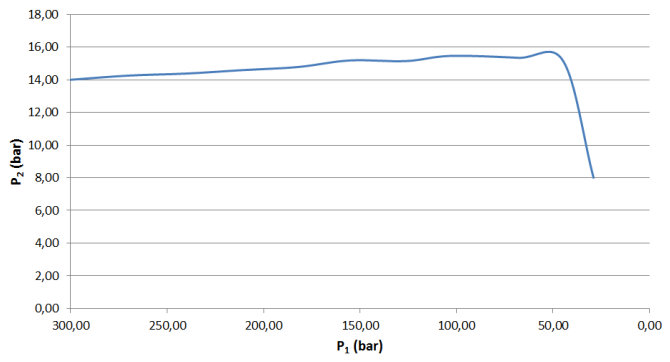
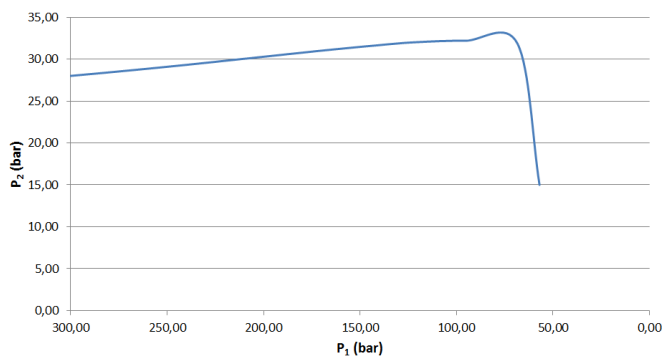
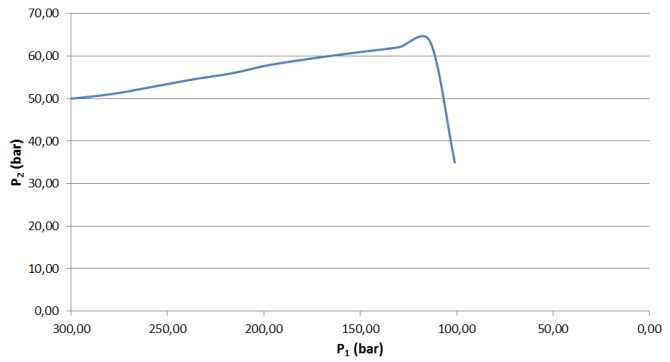


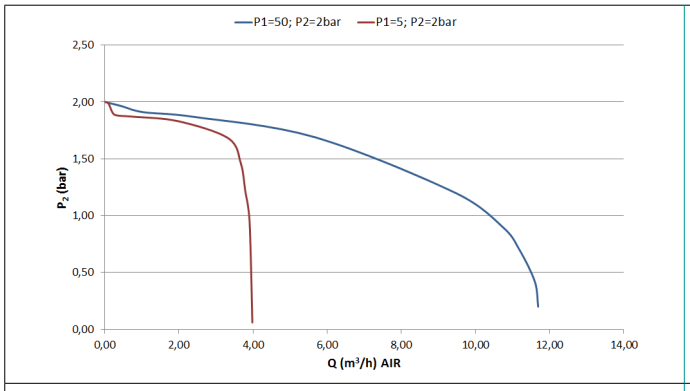


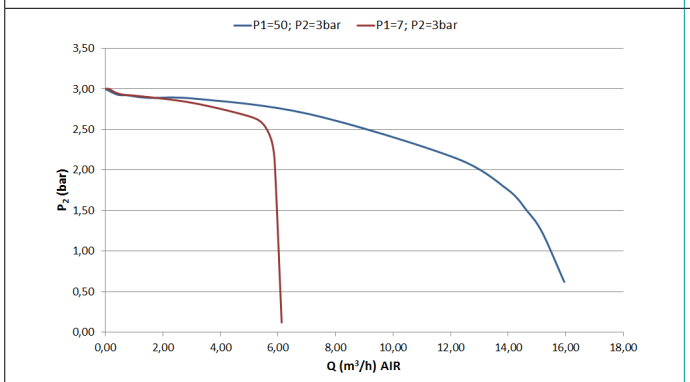


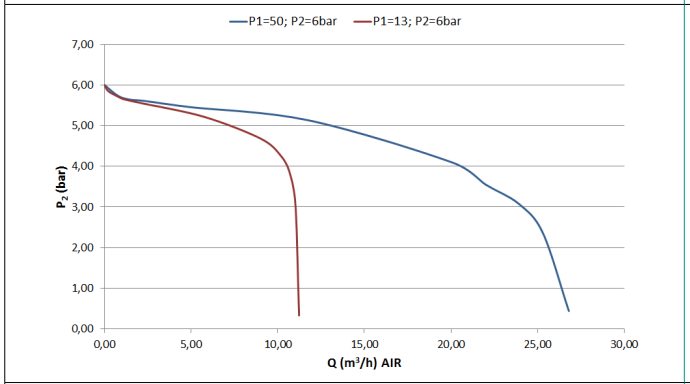


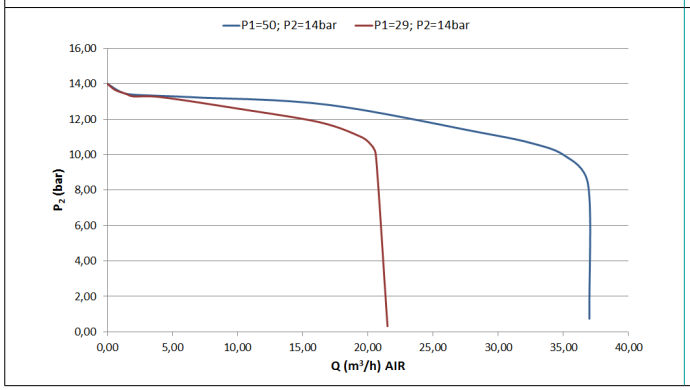


FLOW CURVES:









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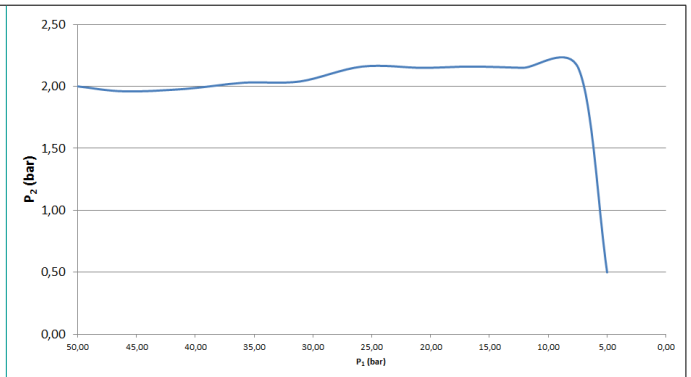
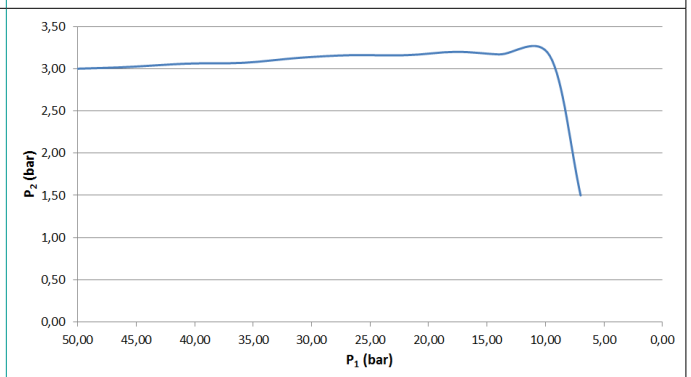
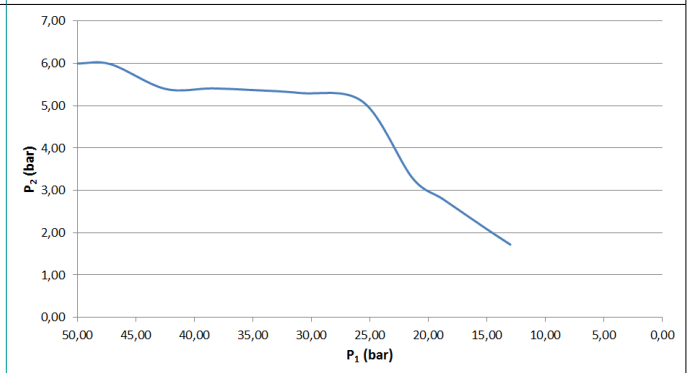
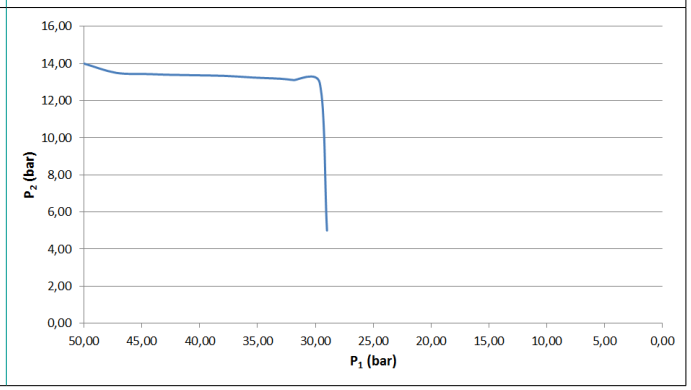








ORDER CODE:

Example Cylinder Regulator | PUR Linie | Stainless Steel | Low Flow | High Pressure | Single Stage | 6-Port Version | Inlet Right

CSLH0SJ CSLHESJ	R	00	EX	AX	I1	BT	N14F (1/4" NPT female)	N14F (1/4" NPT female)
	Porting	**Options**	**Inlet pressure**	**Outlet pressure**	**Inlet gauge**	**Outlet gauge**	**Cylinder connection**	**Process outlet connection**
	R Inlet right	00 No option	EX 50 bar	AX 2 bar ***	00 Without 1/4" NPT female	00 Without gauge 1/4" NPT female	possible connections see technical drawing	possible connections see technical drawing
		0S LP* Shut-off valve	F4 60 bar	BX 3 bar	01 Without (plugged)	01 Without (plugged)		
		0R LP* Regulating valve	FX 200 bar ****	CX 6 bar	BT Bourdon Tube	BT Bourdon Tube		
		P0 HP** Purge valve	GX 300 bar	D2 10 bar	I1 Inductiv contact gauge I1	I2 Inductiv contact gauge I2		
		PS HP** Purge- and LP* Shut-off valve		DX 14 bar	R5 Reed contact gauge R5	I1 Inductiv contact gauge I1		
		PR HP** Purge- and LP* Regulating valve		EY 28 bar				
		30 HP** Triple purge block		EX 50 bar				
		3S HP** Triple purge block & LP shut-off valve		F2 100 bar				
		3R HP** Triple purge block & LP* regulating valve		FX 200 bar ****				

Order code (as described above) without special characters or spaces! Complete Order Code CSLH0SJR00EXAXI1BTN14FN14F

* *LP = Low pressure*

** *HP = High pressure*

*** *only for inlet pressure 50 bar*

**** *in & out pressure FX=200 bar – no pressure relief valve (PRV) available*

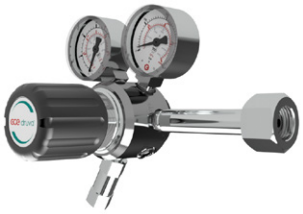
Link to online product configurator

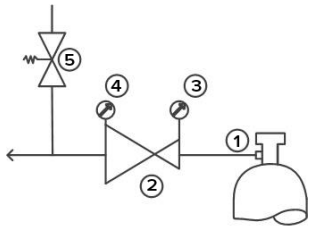
CSLH0SJ | CSLHESJ – DRUVA®PUR FLASCHENDRUCKREGLER

FLASCHENDRUCKREGLER | PURE LINIE (EDELSTAHL) | 20 m³ SERIE | HOCHDRUCKVERSION EINSTUFIG | 6-PORT VERSION

Dieser einstufige Flaschendruckregler kommt zum Einsatz in Gasversorgungssystemen für reine, inerte, entzündbare, brandfördernde, ätzende und/ oder giftige Gase und deren Mischungen bis Gasereinheit 6.0.

Option-**00**:





1 – Flaschenanschluss
2 – Druckregler
3 – Eingangsmanometer
4 – Ausgangsmanometer
5 – Abblaseventil

Maße der Standardversion finden Sie in der technischen Zeichnung

TECHNISCHE SPEZIFIKATIONEN:

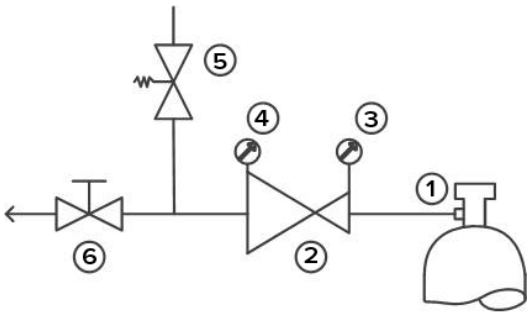
- Abdichtung der Druckregler nach Außen durch Hastelloy Membranen
- Erhältlich mit unterschiedlichen Optionen (Absperr,- Regulier- oder Spülventil (siehe Zeichnung)
- Erhältlich mit unterschiedlichen Anschlüssen gemäß nationaler Standards (siehe Zeichnung)
- Kompaktes Design
- Sehr gute Regelbarkeit
- Entwickelt, hergestellt und geprüft gemäß ISO7291
- Abblaseventil auf der Hinterdruckseite
- Prüfung zur Elektrostatischen Aufladung
  - Erfüllt die Anforderungen gemäß ISO 80079-36, IEC TS 60079-32-1 und der deutschen TRGS 727
  - Einsetzbar in EX-Zone 1 and 2 für Gase mit Explosionsrisiko der Gruppen I, IIA, IIB, IIC

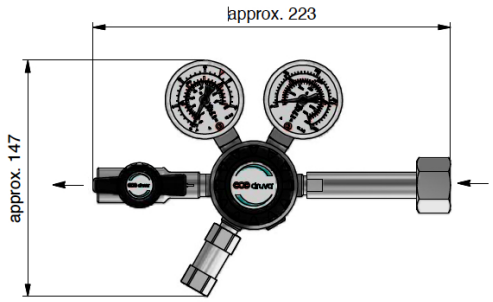
TECHNISCHE DATEN	
Betriebstemperatur:	-20 °C to +60 °C
Eingangs- und Ausgangsanschlüsse:	siehe technische Zeichnung
Leckrate Sitz:	<5x10^{-6} mbar l/s (Helium)
Leckrate nach außen:	<1x10^{-9} mbar l/s (Helium)
Filter:	1x Eingang 1x pro Ausgang
Gewicht:	4,04 kg
Nominaler Durchfluss:	20 m³/h (N_2) gemäß ISO 7291 bei 20 bar Ausgangs- und 41 bar Eingangsdruck
Material gasberührte Teile:	
Druckreglerkörper:	Edelstahl
Druckreglermembran:	Hastelloy
Druckreglersitz:	PCTFE (P in > 50 bar) PTFE (P in ≤ 50 bar)
Abblaseventil Sitz: CSLH0SJ-Version CSLHESJ-Version	 FKM EPDM
Druckreglerschieber:	Edelstahl
Druckbereiche Leitungsdruckregler	
Max. Eingangsdruck:	300 bar
Mögliche Ausgangsdrücke:	2/ 3/ 6/ 10/ 14/ 28/ 50/ 100/ 200 bar
Manometerdruckanzeige (in Klammern – Ausgangsdruckstufe):	2,5 (2)/ 5 (3)/ 10 (6)/ 25 (10, 14)/ 40 (28)/ 65 (50)/ 160 (100)/ 200 (315) bar
Auf Anfrage Kontaktmanometer erhältlich	
Ansprechdruck Abblaseventil (in Klammern – Ausgangsdruckstufe):	3,1 (2)/ 4,6 (3)/ 9,2 (6)/ 15,4 (10)/ 21,6 (14)/ 15,4 (10)/ 21,6 (14)/ 43,1 (28)/ 77 (50)/ 154 (100) bar
Produktionstest:	Drucktest mit Helium für jeden Druckregler
	Helium- Lecktest zur Prüfung der Dichtheit über den Druckreglersitz
	Helium- Lecktest für jeden Druckregler zur Prüfung der Dichtheit nach außen
	Funktionstest für jeden Druckregler
Tests während der Entwicklung:	Typtest gemäß ISO 7291
	Zusätzlicher Lebensdauertest
	Prüfung zur Elektrostatischen Aufladung • Erfüllt die Anforderungen gemäß ISO 80079-36, IEC TS 60079-32-1 und der deutschen TRGS 727 • Einsetzbar in Ex-Zone 1 und 2 für Gase mit Explosionsrisiko der Gruppen I, IIA, IIB, IIC

OPTIONEN DES FLASCHENDRUCKREGLER CSLH0SJ | CSLHESJ:

Option-**0S**: mit Niederdruck Absperrventil

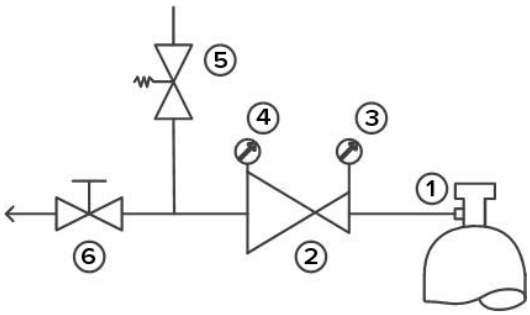
1 – Flaschenanschluss
2 – Druckregler
3 – Eingangsmanometer
4 – Ausgangsmanometer
5 – Abblaseventil
6 – Ausgangsabsperrventil

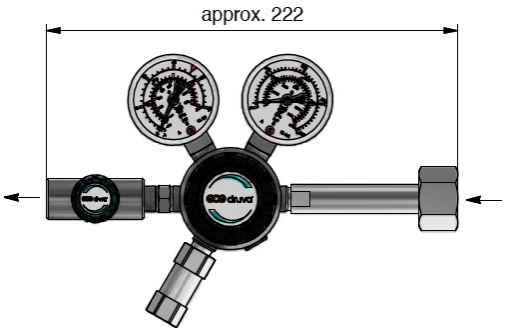




Option-**0R**: mit Niederdruck Regulierventil

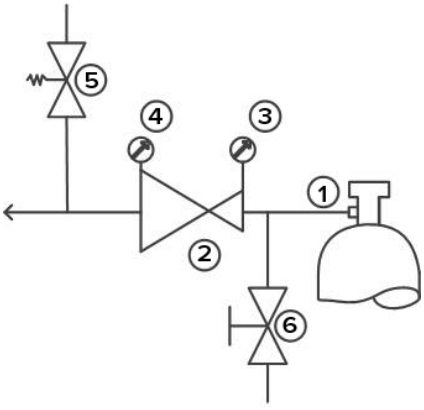
1 – Flaschenanschluss
2 – Druckregler
3 – Eingangsmanometer
4 – Ausgangsmanometer
5 – Abblaseventil
6 – Ausgangsregulierventil

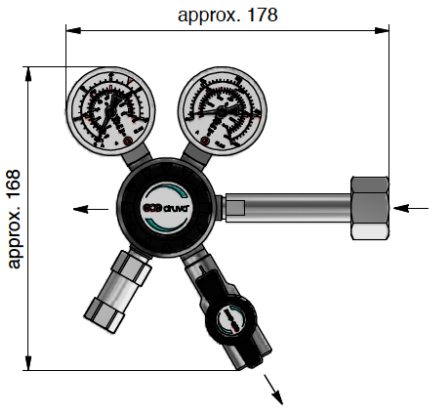




Option-**P0**: mit Hochdruck Spülventil

1 – Flaschenanschluss
2 – Druckregler
3 – Eingangsmanometer
4 – Ausgangsmanometer
5 – Abblaseventil
6 – Spülventil

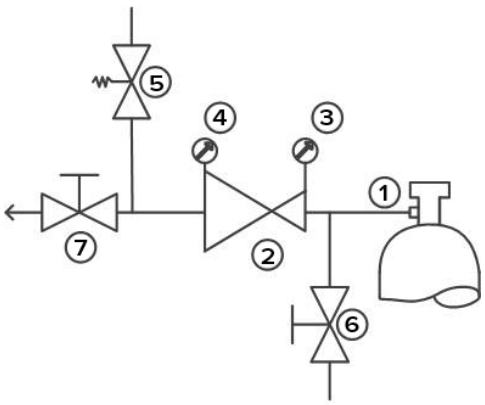


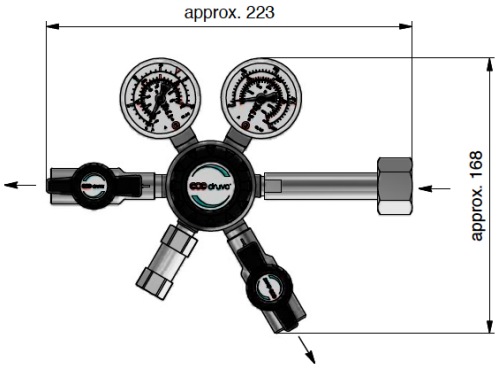


OPTIONEN DES FLASCHENDRUCKREGLER CSLH0DJ | CSLHEDJ:

Option-**PS**: mit Hochdruck Spülventil & Niederdruck Absperrventil

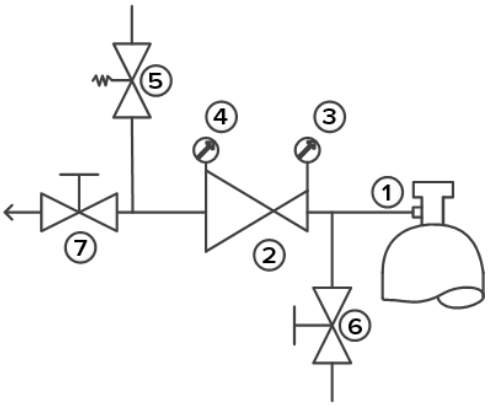
1 – Flaschenanschluss
2 – Druckregler
3 – Eingangsmanometer
4 – Ausgangsmanometer
5 – Abblaseventil
6 – Spülventil
7 – Ausgangsabsperrventil

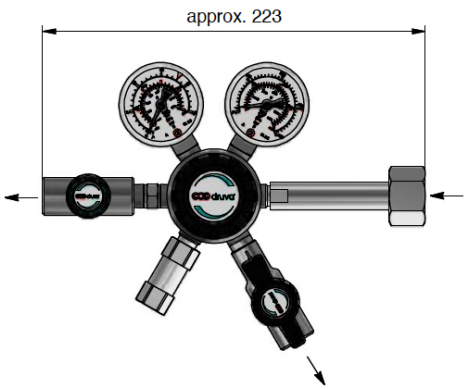




Option-**PR**: mit Hochdruck Spülventil & Niederdruck Regulierventil

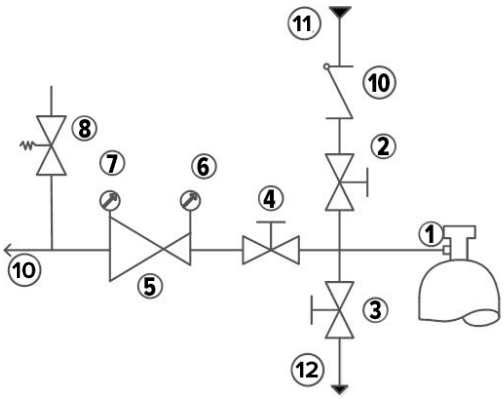
1 – Flaschenanschluss
2 – Druckregler
3 – Eingangsmanometer
4 – Ausgangsmanometer
5 – Abblaseventil
6 – Spülventil
7 – Ausgangsregulierventil

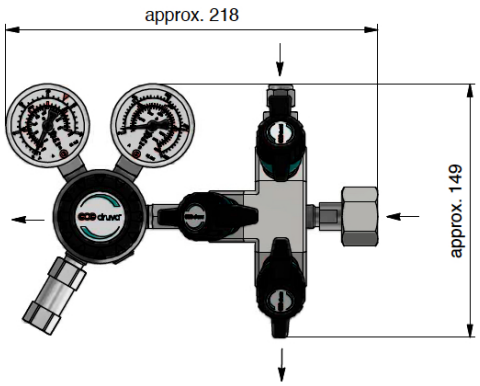




Option-**30**: mit Hochdruck 3-fach Spülblock

1 – Flaschenanschluss
2 – Eingangsspülventil
3 – Ausgangsspülventil
4 – Eingangsabsperrventil
5 – Druckregler
6 – Eingangsmanometer
7 – Ausgangsmanometer
8 – Abblaseventil
9 – Rückschlagventil
10 – Prozessgas Ausgang
11 – Spülen Eingang
12 – Spülen Eingang

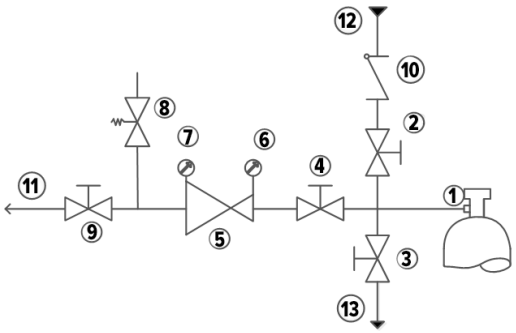


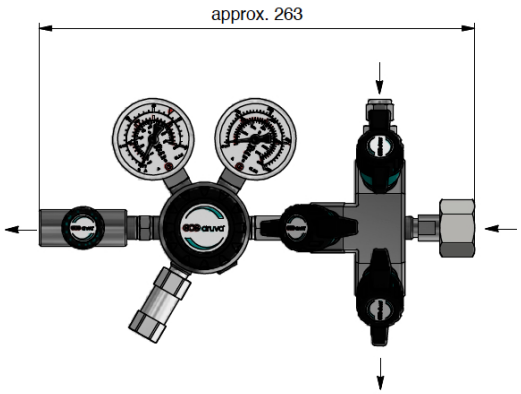


OPTIONEN DES FLASCHENDRUCKREGLER CSLH0DJ | CSLHEDJ:

Option-**3R**: mit Hochdruck 3-fach Spülblock & Niederdruck Regulierventil

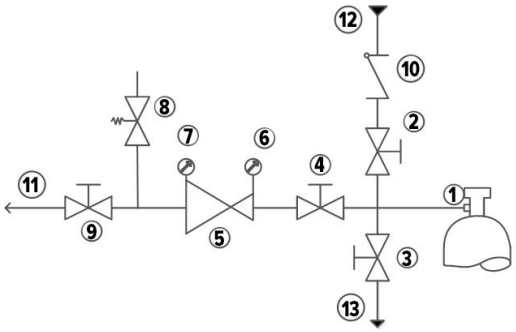
1 – Flaschenanschluss
2 – Eingangsspülventil
3 – Ausgangsspülventil
4 – Eingangsabsperrventil
5 – Druckregler
6 – Eingangsmanometer
7 – Ausgangsmanometer
8 – Abblaseventil
9 – Ausgangsregulierventil
10 – Rückschlagventil
11 – Prozessgas Ausgang
12 – Spülen Eingang
13 – Spülen Ausgang

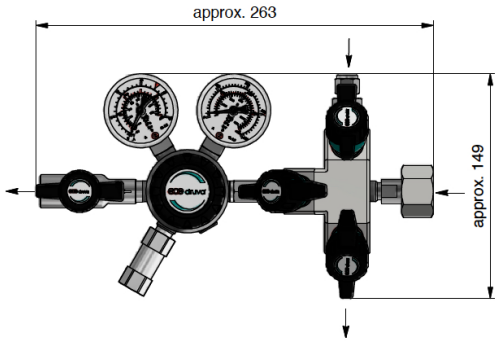




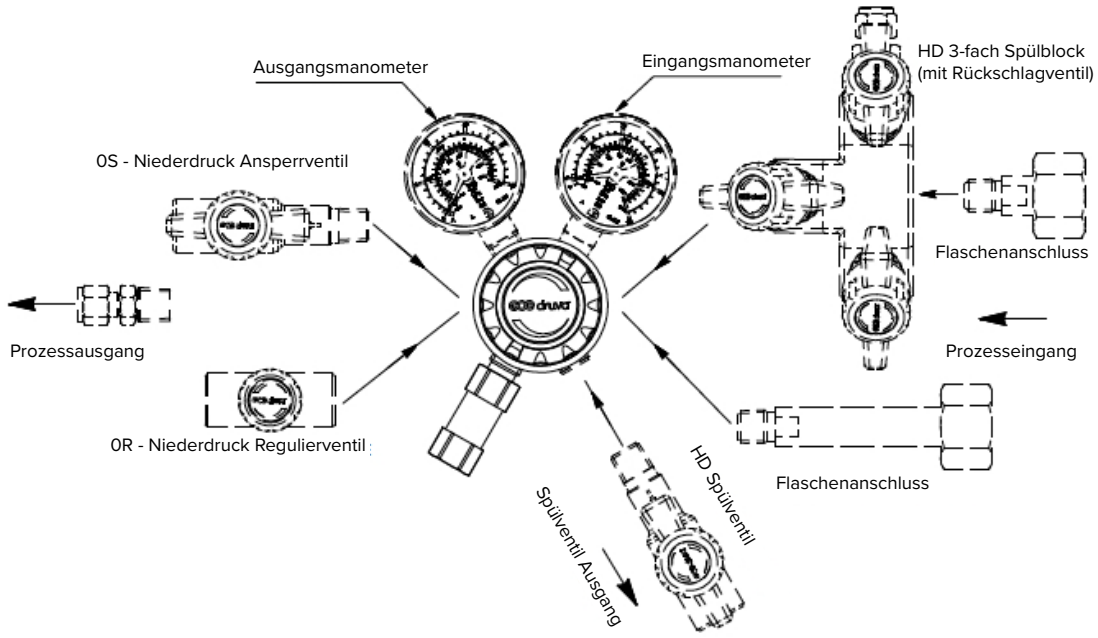
Option-**3S**: mit Hochdruck 3-fach Spülblock & Niederdruck Absperrventil

1 – Flaschenanschluss
2 – Eingangsspülventil
3 – Ausgangsspülventil
4 – Eingangsabsperrventil
5 – Druckregler
6 – Eingangsmanometer
7 – Ausgangsmanometer
8 – Abblaseventil
9 – Ausgangsabsperrventil
10 – Rückschlagventil
11 – Prozessgas Ausgang
12 – Spülen Eingang
13 – Spülen Ausgang

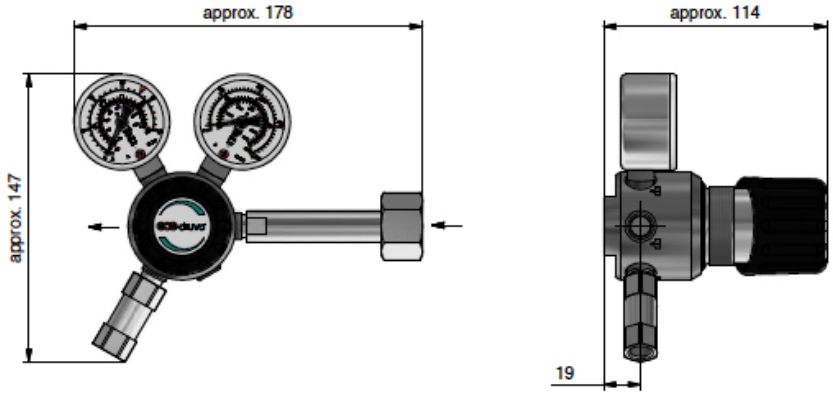




TECHNISCHE ZEICHNUNG:



STANDARD VERSION



Liste der möglichen Flaschenanschlüsse

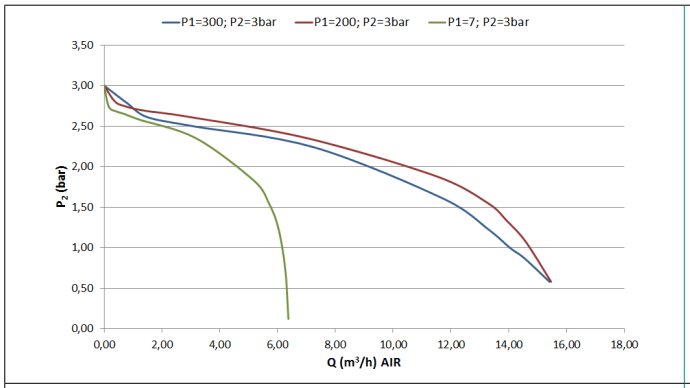
N14F00 - NPT1/4˝ female
BS003W - BSI341-3 Sechskant
BS004W - BSI341-4 Sechskant
BS008W - BSI341-8 Sechskant
BS010W - BSI341-10 Sechskant
BS014W - BSI341-14 Sechskant
CG170W - CGA No 170 Sechskant
CG330W - CGA No 330 Sechskant
CG580W - CGA No 580 Sechskant
CG590W - CGA No 590 Sechskant
DI001H - DIN477 No 1 Hand
DI001W - DIN477 No 1 Sechskant
DI005W - DIN477 No 5 Sechskant
DI006H - DIN477 No 6 Hand
DI006W - DIN477 No 6 Sechskant
DI007W - DIN477 No 7 Sechskant
DI008W - DIN477 No 8 Sechskant
DI009W - DIN477 No 9 Sechskant
DI010H - DIN477 No 10 Hand
DI010W - DIN477 No 10 Sechskant
DI011W - DIN477 No 11 Sechskant
DI013W - DIN477 No 13 Sechskant
DI014H - DIN477 No 14 Hand
DI014W - DIN477 No 14 Sechskant
DI054H - DIN477 No 54 Hand
DI054W - DIN477 No 54 Sechskant
DI057W - DIN477 No 57 Sechskant
DI059W - DIN477 No 59 Sechskant
NELU1W - NEN LU1 Sechskant
NELU4W - NEN LU4 Sechskant
NERI2W - NEN RI2 Sechskant
NERU1W - NEN RU1 Sechskant
NERU3W - NEN RU3 Sechskant
NF00CW - AFNOR Type C Sechskant
NF00FW - AFNOR Type F Sechskant
Andere Verbindungen auf Anfrage

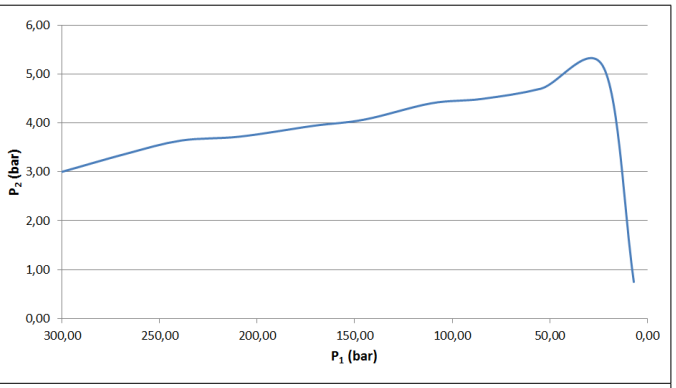
Liste der möglichen Prozessanschlüsse

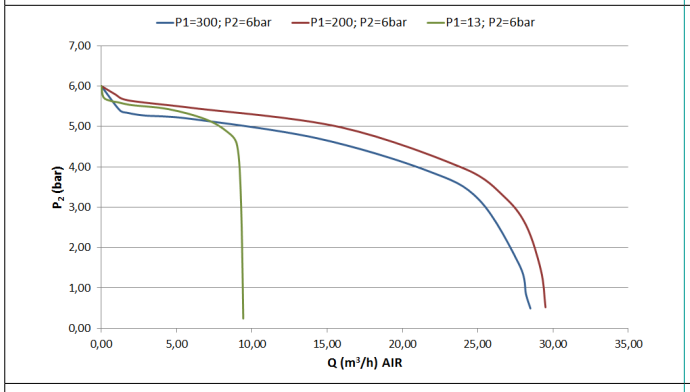
N14F - NPT1/4˝ female
M03S - Klemmring ø 3 MM Edelstahl
M06S - Klemmring ø 6 MM Edelstahl
M08S - Klemmring ø 8 MM Edelstahl
M10S - Klemmring ø 10 MM Edelstahl
M12S - Klemmring ø 12 MM Edelstahl
IX2S - Klemmring ø 1/8“ Edelstahl
IX4S - Klemmring ø 1/4“ Edelstahl
IX6S - Klemmring ø 3/8“ Edelstahl
IX8S - Klemmring ø 1/2“ Edelstahl
H04S - Schlauchtülle 4,8 mm Edelstahl
H06S - Schlauchtülle 6,4 mm Edelstahl
H08S - Schlauchtülle 8,0 mm Edelstahl
Schlauchtüllen max. 15 bar.

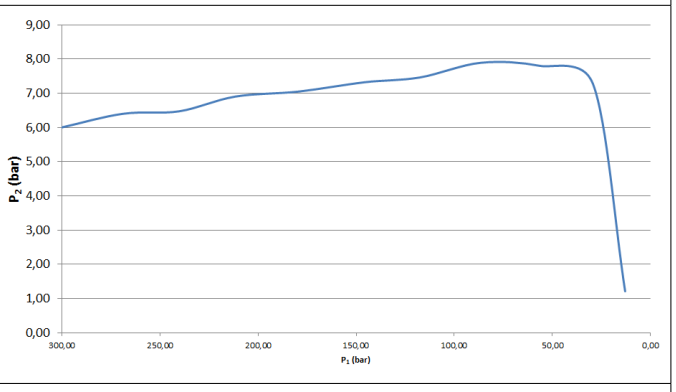
FLIESSKURVEN:

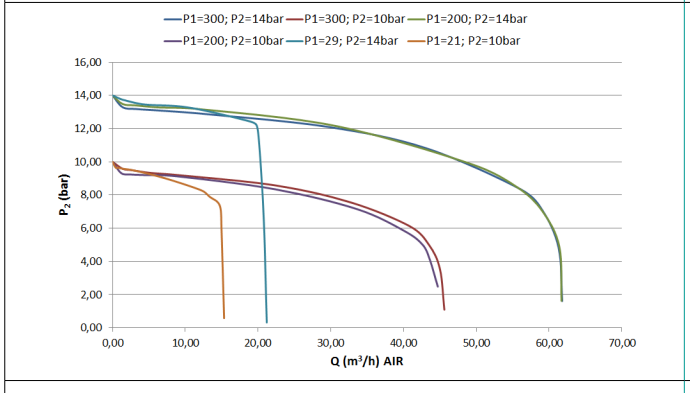
DYNAMISCHE ENTSPANNUNGSKURVEN:

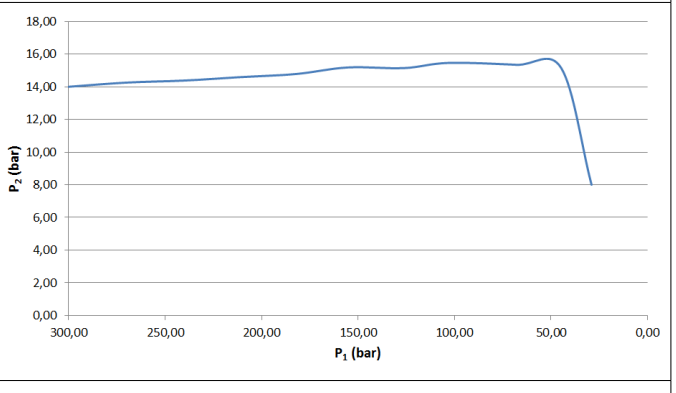


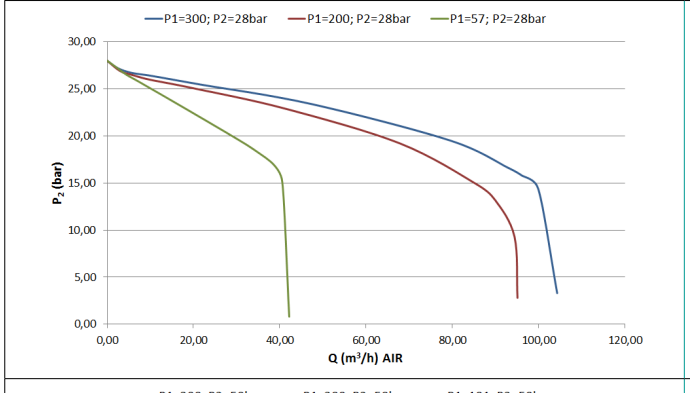


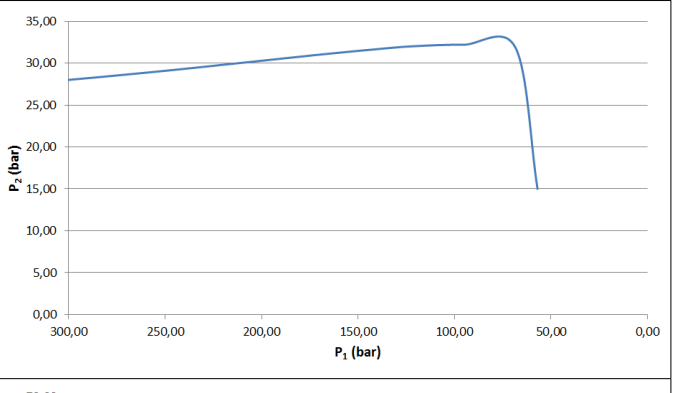


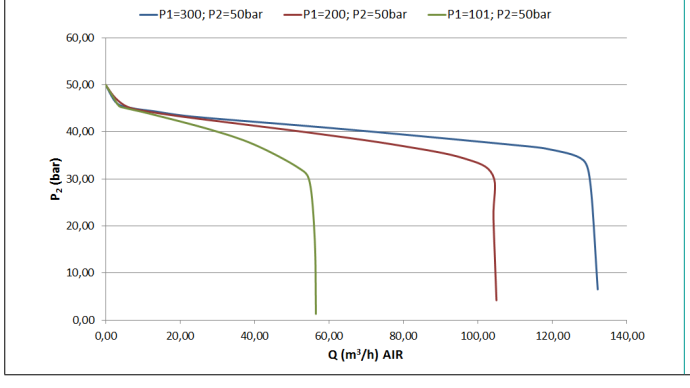


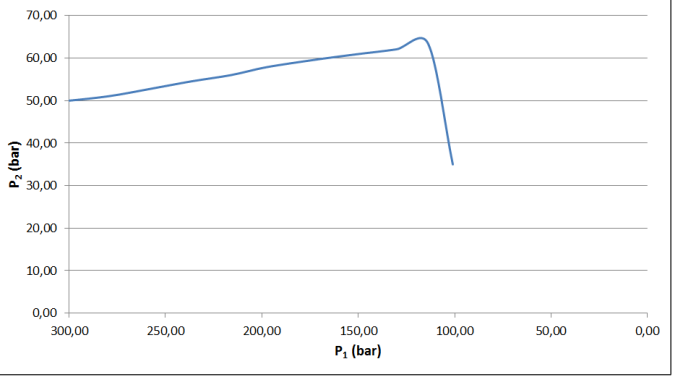




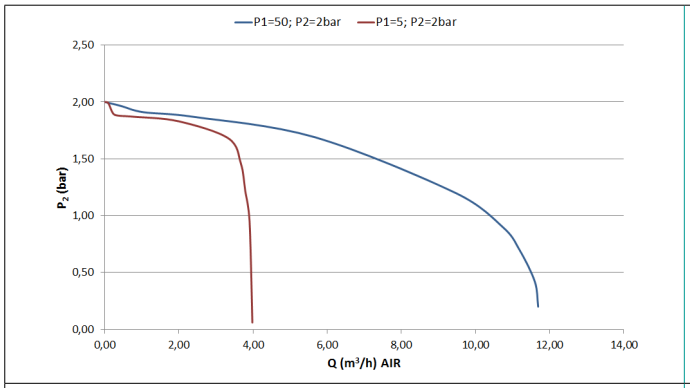


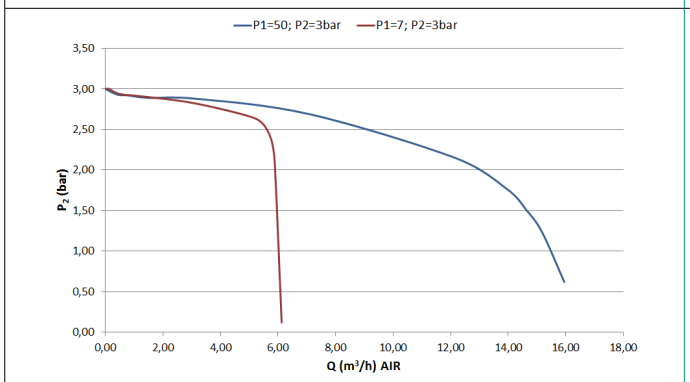


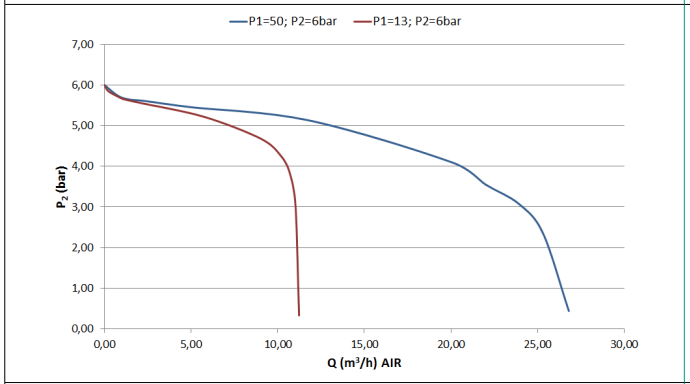


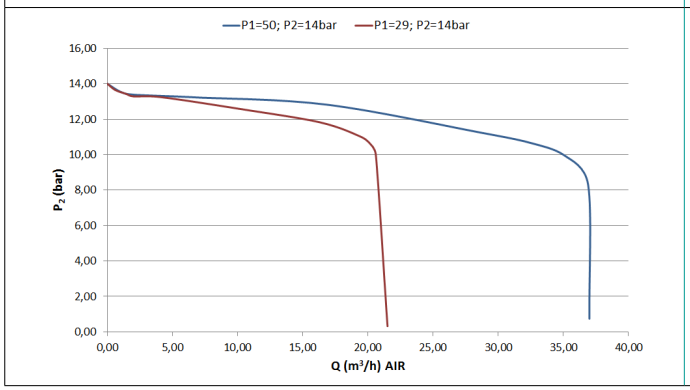


FLIESSKURVEN:

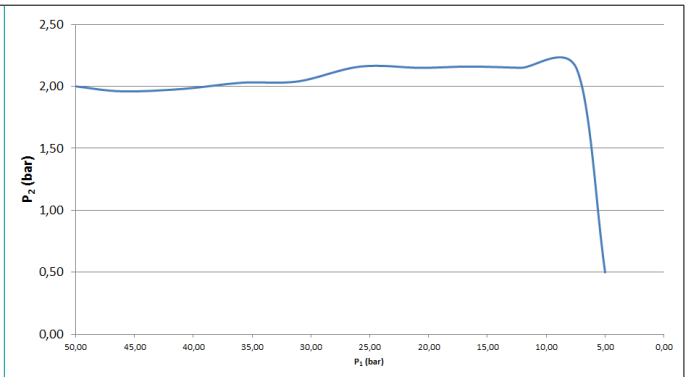


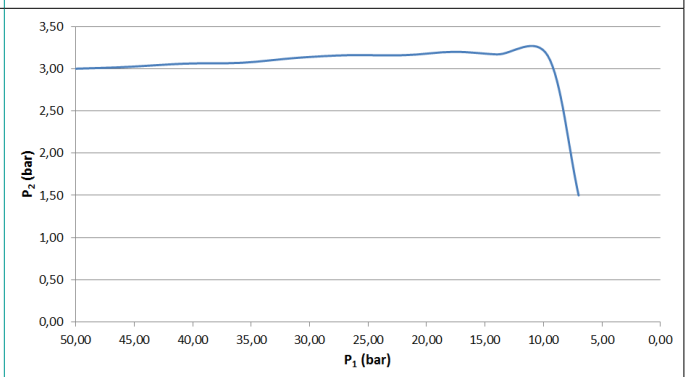


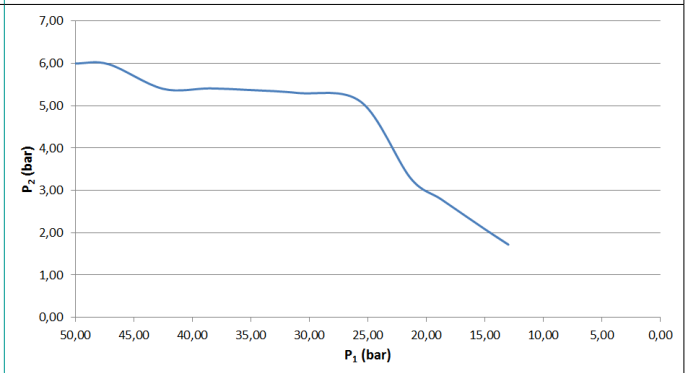


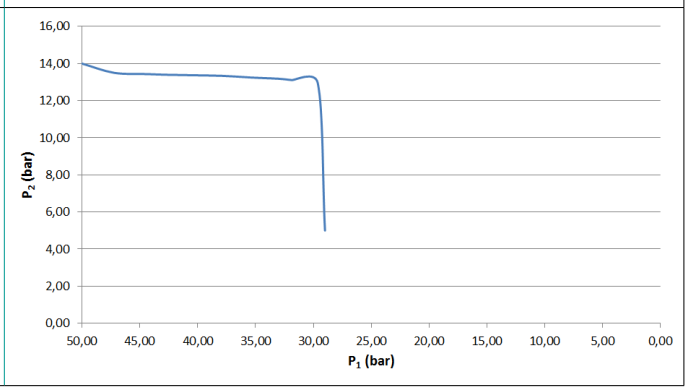


DYNAMISCHE ENTSPANNUNGSKURVEN:









BESTELLINFORMATION:

Beispiel für einen Flaschendruckregler | PUR Linie | Edelstahl | Low Flow | Hochdruck | Einstufig | 6-Port Version | Eingang rechts

CSLH0SJ CSLHESJ	R	00	EX	AX	I1	BT	N14F (1/4" NPT female)	N14F (1/4" NPT female)
	Porting	**Optionen**	**Eingangs-druck**	**Ausgangs-druck**	**Eingangs-druck Manometer**	**Ausgangs-druck Manometer**	**Flaschen-anschluss**	**Ausgangs-anschluss**
	R Eingang rechts	00 Ohne Optionen	EX 50 bar	AX 2 bar ***	00 Ohne Manometer 1/4" NPT female	00 Ohne Manometer 1/4" NPT female	**mögliche Anschlüsse** **siehe technische Zeichnung**	**mögliche Anschlüsse** **siehe technische Zeichnung**
		0S ND* Absperrventil	F4 60 bar	BX 3 bar	01 Ohne Manometer Verschluss-Stopfen	01 Ohne Manometer Verschluss-Stopfen		
		0R ND* Regulierventil	FX 200 bar ****	CX 6 bar	BT Bourdon Tube Manometer	BT Bourdon Tube Manometer		
		P0 HD** Spülventil	GX 300 bar	D2 10 bar	I1 Induktiv Kontakt Manometer I1	I2 Induktiv Kontakt-manometer I2		
		PS HD** Spül- und ND* Absperrventil		DX 14 bar	R5 Reed Kontakt Manometer R5	I1 Induktiv Kontakt-manometer I1		
		PR HD** Spül- und ND* Regulierventil		EY 28 bar				
		30 HD** 3-fach Spülblock		EX 50 bar				
		3S HD** 3-fach Spülblock und ND* Absperrventil		F2 100 bar				
		3R HD** 3-fach Spülblock und ND* Regulierventil		FX 200 bar ****				

Bestellnummern (wie im Beispiel oben) bitte ohne Sonder- oder Leerzeichen verwenden! Komplette Bestellnummer lautet CSLH0SJR00EXAXI1BTN14FN14F

* *ND = Niederdruck*

** *HD = Hochdruck*

*** *nur für Eingangsdruck 50 bar*

**** *Eingangs- und Ausgangsdruck FX=200 bar – kein Ablaseventil (PRV) erhältlich*

Link to online product configurator