



## Chem Master SG600 Series 6.0 Stainless Steel Barstock Regulator

**Chem Master SG600 Series** regulators are intended for primary pressure gas control of:

- ▶ **Corrosive**
- ▶ **Toxic**
- ▶ **High Purity gases** (up to 6.0 Grade)

The **Chem Master SG600** series regulators are intended for primary pressure gas control of corrosive, toxic, high purity gases, up to 6.0 purity grade.

### **SGS600 Series** –

Stainless Steel Single Stage Regulator for applications where slight pressure variance in delivery pressure is acceptable (as cylinder pressure decreases)

### **SGT600 Series** –

Stainless Steel Two Stage Regulator for applications where constant pressure is required (as cylinder pressure decreases)

### **SGL600 Series** –

Stainless Steel Line Regulator for gas applications, for distribution systems (pipelines)



**SGS600 SERIES**



**SGT600 SERIES**



**SGL600 SERIES**



## Chem Master SG600 Series 6.0 Stainless Steel Barstock Regulator

### SGL600 SERIES

#### TYPICAL APPLICATIONS

Gas chromatography  
High purity carrier gases  
Zero, span and calibration gases  
Toxic and corrosive gases  
High purity chamber pressurization

#### MATERIALS

Body 316L Stainless Steel Barstock  
Bonnet Nickel Plated Brass Barstock  
Seat PCTFE  
Diaphragm (regulator) 316L Stainless Steel  
Piston (regulator) 316L Stainless Steel  
Seals PTFE  
Filter 10 Micron sintered 316L Stainless Steel

#### FEATURES

Six port configuration  
Front and rear panel mounting capabilities  
Encapsulated seat design  
Low wetted surface area  
Full range of inlet and outlet fittings  
Fitted pressure relief valve (Single and Two stage regulators)  
Optional captured bonnet vent kit

#### SPECIFICATION

Maximum Inlet Pressure 60 bar (870 psig), 207 bar (3000 psig), 300 bar (4350 psig)\*  
Delivery Pressure Range psig 0-22 psig, 0-50 psig, 0-90 psig, 0-150 psig, 0-300 psig, 0-725 psig  
Delivery Pressure Range bar 0-1.5 bar, 0-3.5 bar, 0-6 bar, 0-10 bar, 0-20 bar, 0-50 bar  
Gauges 50mm (2") diameter stainless steel, snap-on tamper proof lens  
Ports 1/4" NPT Female  
Temperature Range -40° C to +60° C (-40 F to 140° F)  
Helium Leak Integrity 1 X 10<sup>-8</sup> scc/sec  
Flow Coefficient

SGS / SGL	SGT	
C <sub>v</sub> =0.094	C <sub>v</sub> =0.078	(diaphragm regulator)
C <sub>v</sub> =0.088	C <sub>v</sub> =0.072	(piston regulator)

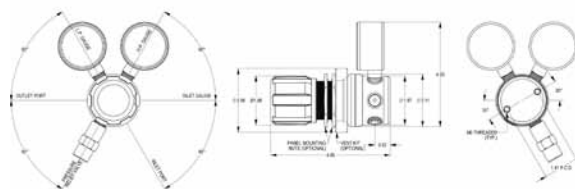
Ports 1/4" NPT Female  
Weight SGL600 1.0kg (2.2lb) / SGS600 1.1kg (2.5lb) / SGT600 1.5kg (3.5lb)  
SGL620 1.2kg (2.7lb) / SGS620 1.3kg (2.8lb) / SGT620 1.8kg (4.0lb)

\*Single and Two Stage regulators with no fitting fitted in to the regulator

### DIMENSIONS

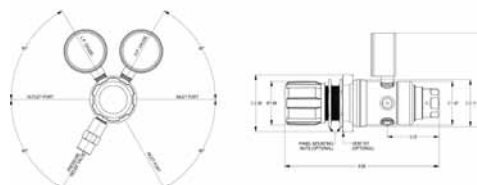
#### SINGLE STAGE REGULATOR

**SG600 Series** – Single Stage diaphragm regulator with relief valve



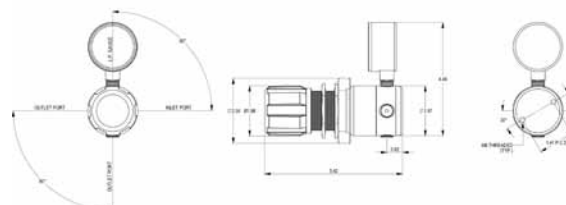
#### TWO STAGE REGULATOR

**SG600 Series** – Two Stage diaphragm regulator with relief valve



#### LINE REGULATOR

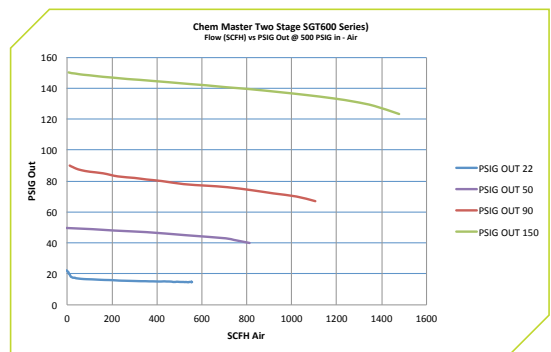
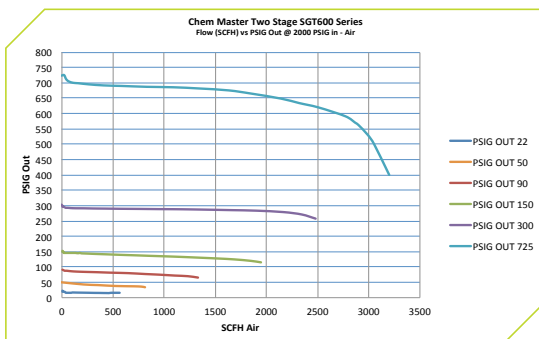
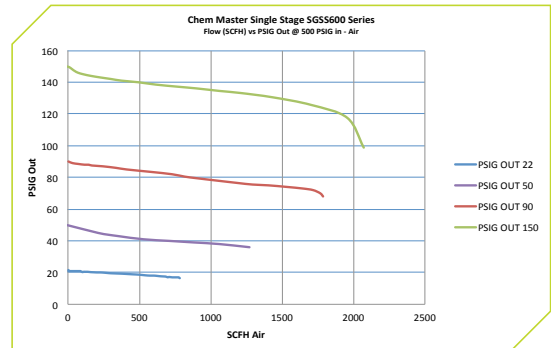
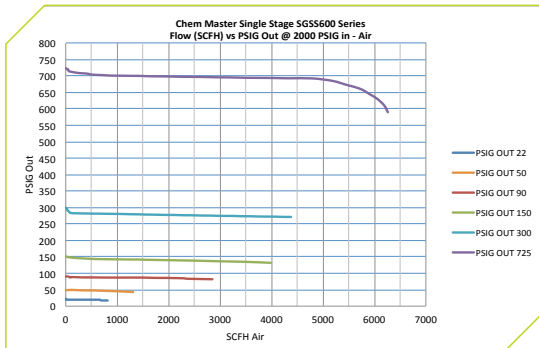
**SG600 Series** – Line regulator with no relief valve



# Chem Master SG600 Series

## 6.0 Stainless Steel Barstock Regulator

### FLOW PERFORMANCE



### MODEL NO. SELECTOR GUIDE

## SGS600-03-05-05-05-150-48-FG

PRODUCT MODEL	INLET PRESSURE	DELIVERY PRESSURE	INLET PRESSURE GAUGE UNIT	DELIVERY PRESSURE GAUGE UNIT	INLET FITTINGS	OUTLET FITTINGS	OPTIONS
SGS600	02 870 psi	02 0-22 psi	00 No Gauge	00 No Gauge	000 No Inlet Fittings	00 No Outlet Fittings	A No Options
SGS620	03 3000 psi	03 0-50 psi	05 Bar/PSI	05 Bar/PSI	002 1/8" Compression Tube Stainless Steel	002 1/8" Compression Tube Stainless Steel	F Bonnet Captured Vent Kit
	04 4350 psi	04 0-90 psi	Stainless Steel	Stainless Steel	004 1/4" Compression Tube Stainless Steel	004 1/4" Compression Tube Stainless Steel	G Helium Leak Test Certification
		05 0-150 psi			009 1/4" NPT Male Stainless Steel	009 1/4" NPT Male Stainless Steel	L Compliance Certificate
	07 0-300 psi	013 0-300 psi	013 CGA 170 Stainless Steel	048 DRK Diffusion resistant Shut-Off Valve 1/4" NPT Female Stainless Steel	048 DRK Diffusion resistant Shut-Off Valve 1/4" NPT Female Stainless Steel	M Panel Mount Locking Nuts (2 units)	
	10 0-725 psi	013 0-300 psi	013 CGA 240 Stainless Steel	049 DRK Diffusion resistant Shut-Off Valve 1/8" Tube Stainless Steel	049 DRK Diffusion resistant Shut-Off Valve 1/8" Tube Stainless Steel	N With Out Relief Valve	
		014 0-725 psi	014 CGA 296 Stainless Steel	050 DRK Diffusion resistant Shut-Off Valve 1/4" Tube Stainless Steel	050 DRK Diffusion resistant Shut-Off Valve 1/4" Tube Stainless Steel	* 300 & 725 psi delivery ranges are not fitted with Relief Valve	
			014 CGA 320 Stainless Steel	052 DRK Diffusion resistant Shut-Off Valve 1/4" NPT Male Stainless Steel	052 DRK Diffusion resistant Shut-Off Valve 1/4" NPT Male Stainless Steel		
			014 CGA 326 Stainless Steel	053 Control Valve 1/4" NPT Male Stainless Steel	053 Control Valve 1/4" NPT Male Stainless Steel		
			015 CGA 330 Stainless Steel				
			016 CGA 346 Stainless Steel				
		017 CGA 350 Stainless Steel					
		015 CGA 540 Stainless Steel					
		015 CGA 580 Stainless Steel					
		015 CGA 590 Stainless Steel					
		015 CGA 660 Stainless Steel					
		015 CGA 705 Stainless Steel					
		015 CGA 992 Stainless Steel					

Rules: **SGL600** 1) Model number for delivery pressures up to 150 psi  
**SGL620** 1) Model number for 300 and 725 psi delivery pressure  
**SGS600 & SGS620** 1) Inlet Pressure of 4350 psi (option 4) only available with no inlet fitting (option 00 - inlet fittings) and option N (with out relief valve - options) not available

# Chem Master SG600 Series

## 6.0 Stainless Steel Barstock Regulator

### MODEL NO. SELECTOR GUIDE

**SGT600-03-05-05-05-150-48-FG**

PRODUCT MODEL	INLET PRESSURE	DELIVERY PRESSURE	INLET PRESSURE GAUGE UNIT	DELIVERY PRESSURE GAUGE UNIT	INLET FITTINGS	OUTLET FITTINGS	OPTIONS
<b>SGT500</b>	<b>02</b> 870 psi	<b>02</b> 0-22 psi	<b>00</b> No Gauge	<b>00</b> No Gauge	<b>000</b> No Inlet Fittings	<b>00</b> No Outlet Fittings	<b>A</b> No Options
<b>SGT620</b>	<b>03</b> 3000 psi	<b>03</b> 0-50 psi	<b>05</b> Bar/PSI	<b>05</b> Bar/PSI	<b>002</b> 1/8" Compression Tube Stainless Steel	<b>02</b> 1/8" Compression Tube Stainless Steel	<b>F</b> Bonnet Captured Vent Kit
	<b>04</b> 4350 psi	<b>04</b> 0-90 psi			<b>004</b> 1/4" Compression Tube Stainless Steel	<b>04</b> 1/4" Compression Tube Stainless Steel	<b>G</b> Helium Leak Test Certification
		<b>05</b> 0-150 psi	Stainless Steel	Stainless Steel	<b>009</b> 1/4" NPT Male Stainless Steel	<b>09</b> 1/4" NPT Male Stainless Steel	<b>L</b> Compliance Certificate
		<b>07</b> 0-300 psi			<b>139</b> CGA 240 Stainless Steel	<b>48</b> DRK Diffusion Resistant Shut-Off Valve 1/4" NPT Female Stainless Steel	<b>M</b> Panel Mount Locking Nuts (2 units)
		<b>10</b> 0-725 psi			<b>141</b> CGA 296 Stainless Steel	<b>49</b> DRK Diffusion resistant Shut-Off Valve 1/8" Tube Stainless Steel	<b>N</b> With Out Relief Valve
				<b>143</b> CGA 320 Stainless Steel	<b>50</b> DRK Diffusion resistant Shut-Off Valve 1/4" Tube Stainless Steel	<b>*</b> 300 & 725 psi delivery ranges are not fitted with Relief Valve	
				<b>144</b> CGA 326 Stainless Steel	<b>52</b> DRK Diffusion resistant Shut-Off Valve 1/4"NPT Male Stainless Steel		
				<b>145</b> CGA 330 Stainless Steel	<b>53</b> Control Valve 1/4"NPT Male Stainless Steel		
				<b>146</b> CGA 346 Stainless Steel			
				<b>147</b> CGA 350 Stainless Steel			
				<b>150</b> CGA 540 Stainless Steel			
				<b>152</b> CGA 580 Stainless Steel			
				<b>153</b> CGA 590 Stainless Steel			
				<b>154</b> CGA 660 Stainless Steel			
				<b>157</b> CGA 705 Stainless Steel			
				<b>158</b> CGA 992 Stainless Steel			

Rules: **SGT600** 1) Model number for delivery pressures up to 150 psi  
**SGT620** 1) Model number for 300 and 725 psi delivery pressure  
**SGT600 & SGT620** 1) Inlet Pressure of 4350 psi (option 4) only available with no inlet fitting (option 00 - inlet fittings) and option N (with out relief valve - options) not available

### MODEL NO. SELECTOR GUIDE

**SGL600-03-05-00-05-000-02-FG**

PRODUCT MODEL	INLET PRESSURE	DELIVERY PRESSURE	INLET PRESSURE GAUGE UNIT	DELIVERY PRESSURE GAUGE UNIT	INLET FITTINGS	OUTLET FITTINGS	OPTIONS
<b>SGL600</b>	<b>03</b> 3000 psi	<b>02</b> 0-22 psi	<b>00</b> No Gauge	<b>00</b> No Gauge	<b>000</b> No Inlet Fittings	<b>00</b> No Outlet Fittings	<b>A</b> No Options
<b>SGL620</b>	<b>03</b> 3000 psi	<b>03</b> 0-50 psi		<b>05</b> Bar/PSI	<b>002</b> 1/8" Compression Tube Stainless Steel	<b>02</b> 1/8" Compression Tube Stainless Steel	<b>F</b> Bonnet Captured Vent Kit
		<b>04</b> 0-90 psi		Stainless Steel	<b>004</b> 1/4" Compression Tube Stainless Steel	<b>04</b> 1/4" Compression Tube Stainless Steel	<b>G</b> Helium Leak Test Certification
		<b>05</b> 0-150 psi			<b>009</b> 1/4" NPT Male Stainless Steel	<b>09</b> 1/4" NPT Male Stainless Steel	<b>L</b> Compliance Certificate
		<b>07</b> 0-300 psi			<b>139</b> CGA 240 Stainless Steel	<b>48</b> DRK Diffusion Resistant Shut-Off Valve 1/4" NPT Female Stainless Steel	<b>M</b> Panel Mount Locking Nuts (2 units)
		<b>10</b> 0-725 psi			<b>141</b> CGA 296 Stainless Steel	<b>49</b> DRK Diffusion resistant Shut-Off Valve 1/8" Tube Stainless Steel	<b>*</b> All line regulators are supplied with no relief valve fitted
				<b>143</b> CGA 320 Stainless Steel	<b>50</b> DRK Diffusion resistant Shut-Off Valve 1/4" Tube Stainless Steel		
				<b>144</b> CGA 326 Stainless Steel	<b>52</b> DRK Diffusion resistant Shut-Off Valve 1/4"NPT Male Stainless Steel		
				<b>145</b> CGA 330 Stainless Steel	<b>53</b> Control Valve 1/4"NPT Male Stainless Steel		
				<b>146</b> CGA 346 Stainless Steel			
				<b>147</b> CGA 350 Stainless Steel			
				<b>150</b> CGA 540 Stainless Steel			
				<b>152</b> CGA 580 Stainless Steel			
				<b>153</b> CGA 590 Stainless Steel			
				<b>154</b> CGA 660 Stainless Steel			
				<b>157</b> CGA 705 Stainless Steel			
				<b>158</b> CGA 992 Stainless Steel			

Rules: **SGL600** 1) Model number for delivery pressures up to 150 psi  
**SGL620** 1) Model number for 300 and 725 psi delivery pressure