

# SPECIAL FLUIDS COMBUSTIBLE GAS AND OIL

## Product Index



Quick Selection  
Chart  
page: II

Function	Δ P		Temperature		Pipe connections	Series	Page
	min. (bar)	max. (bar)	min. (°C)	max. (°C)			
<b>BRASS BODY</b>							
NC-NO	0	45	-20	+125	Fuel oil	3/8 .. 3/4	<a href="#">266</a> <b>1</b>
NC	0	2,76	0	+60	Combustible gas, EN 161	1/8 - 1/4	<a href="#">262</a> <b>3</b>
NC	0	0,48	0	+60	Combustible gas, EN 161	3/8 - 1/2	<a href="#">030</a> <b>11</b>
<b>ALUMINIUM BODY</b>							
NC	0	1	-40	+90	Combustible gas (air)	1/8 .. 3/4	<a href="#">040</a> <b>7</b>
NC	0	0,14	0	+60	Combustible gas, EN 161	3/8 .. 1	<a href="#">040</a> <b>9</b>
NC	0	2	-15	+60	Combustible gas, EN 161	3/8 - 1/2	<a href="#">215</a> <b>13</b>
NC-NO	0	9	-20	+85	Combustible gas (air , inert gas)	3/8 - 3	<a href="#">215</a> <b>(3)</b>
<b>BRONZE BODY</b>							
NC	0	10	-10	+60	Combustible gas, EN 161	1/2 - 2	<a href="#">290</a> <b>15</b>
<b>STAINLESS STEEL BODY</b>							
NC <sup>(1)</sup>	0	9/10	-10	+60	Combustible gas, EN 161-CERTIGAZ	1/2 - 2	<a href="#">290</a> <b>15</b>
NC <sup>(2)</sup>	0	1	-10	+60	Combustible gas, EN 161-CERTIGAZ	3/8 - 2	<a href="#">290</a> <b>17</b>
<b>STAINLESS STEEL BODY - PROPORTIONAL VALVES</b>							
NC <sup>(2)</sup>	0	1	0	+50	Combustible gas, EN 161-CERTIGAZ	1/2 - 2	<a href="#">290</a> <b>19</b>

<sup>(1)</sup> Fluid entry above the disc.

<sup>(2)</sup> Fluid entry under the disc.

<sup>(3)</sup> See section: [Solenoid Valves \(2/2\)](#) ([www.asco.com](http://www.asco.com))

(Potentially explosive atmospheres, see page: II)

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pipe connections ☒ - internal thread				body material				max. operating pressure differential (bar)				fluid temperature range		power coil		series	page																			
M5	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	brass	stainless steel	aluminium	bronze			office size (mm)	DN	min. operating pressure differential (bar)	air	combustible gas	combustible gas EN 161	fuel oil grade 2 & 4	fuel oil grade 5 & 6	AC (∩)	DC (⊥)	min. (°C)	max. (°C)	AC (∩) (W)	DC (⊥) (W)					
<b>NORMALLY CLOSED (NC)</b>																																				
												☒					3,2	-	0	-	-	-	28	25	-	-	-	-	-	-	-20	+125	15,4	-		
												☒					6,4	-	0	-	-	-	8	7	-	-	-	-	-	-	-20	+125	15,4	-		
												☒					3,2	-	0	-	-	-	45	42	-	-	-	-	-	-	-20	+125	20	-		266
												☒					9	-	0	-	-	-	6	5	-	-	-	-	-	-	-20	+125	15,4	-		
												☒					6,4	-	0	-	-	-	12	11	-	-	-	-	-	-	-20	+125	20	-		
												☒					9	-	0	-	-	-	5	5	-	-	-	-	-	-	-20	+125	20	-		
												☒					3,2	-	0	-	-	-	2,76	-	-	-	-	-	-	-	0	+60	8,1	-		262
												☒					7,1	-	0	-	-	-	2,1	-	-	-	-	-	-	-	0	+60	8,1	-		3
												☒					9	-	0	1	-	1	-	-	-	-	-	-	-	-40	+90	6	-		040	
												☒					19	-	0	0,15	-	0,15	-	-	-	-	-	-	-	-40	+90	10,5	-		7	
												☒					19	-	0	-	-	-	0,086	-	-	-	-	-	-	0	+60	16,7	-		040	
												☒					30,1	-	0	-	-	-	0,14	-	-	-	-	-	0	+60	39,2	-		9		
												☒					9,5	-	0	-	-	-	0,48	-	-	-	-	-	0	+60	6	-		030		
												☒					11	-	0	-	-	-	0,14	-	-	-	-	0	+60	6	-		11			
												☒					19	-	0	-	-	-	2	-	-	-	-	-	-15	+60	10,5	-		215		
												☒					15	-	0	-	-	-	10	-	-	-	-	-	-10	+60	-	-		290		
												☒					50	-	0	-	-	-	9	-	-	-	-	-	-	+60	-	-		15		
												☒					10	-	0	-	-	-	1	-	-	-	-	-	-10	+60	-	-		290		
												☒					50	-	0	-	-	-	-	-	-	-	-	-	+60	-	-		17			
												☒					15	-	0	-	-	-	1	-	-	-	-	-	0	+50	-	-		290		
												☒					50	-	0	-	-	-	-	-	-	-	-	-	+50	-	-		19			

page		series	power coil (W)		group II											
			AC (∩)	DC (=)	gas / dusts zones 1 - 21											
					2 G Ex db 2 D Ex tb				2 G Ex eb mb 2 D Ex tb				2 G Ex mb 2 D Ex mb			
					IIC T6..T4 Gb /IIC Db IP66/67				IIC T6..T3 Gb /Ex tb IIC Db IP66/67				IIC T5..T3 Gb /IIC Db IIP67			
					NF (MXX)	NF (M12)	WSNF (MXX)	WSNF (M12)	EM (M6)	EM (MXX)	EM (M12)	WSEM (M6)	WSEM (MXX)	WSEM (M12)	PV (EM5)	PV (EMXX)
1	266	15,4 20	-	-												
7	040	6,0 10,5	-	-												

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### What is combustible gas?

Combustible gases are gases or gaseous mixtures which burn in the presence of air or oxygen and are used mainly for heat generation. Combustible gases belong to families of gases whose combustion characteristics are in a large measure similar and which make them interchangeable.

- The first family of gases comprises town gas (made from coal) and coke-oven gas (gaseous fuel rich in carbon monoxide and hydrogen);
- the second family comprises natural gases, gases associated with petroleum and gases interchangeable with these;
- the third family of gases comprises liquefied petroleum gases.

### Pressure operated valves/Solenoid valves to EN 161: What is this standard and what does it apply to?

This standard applies to electrically actuated shut-off valves with an operating pressure below or equal to 4 bar [for burners or appliances that can be fuelled with one or several types of 1st family gases (town gas etc.), 2nd family gases (natural gas etc), or 3rd family gases (liquefied petroleum gases)].

It defines the safety, design and operating specifications for shut-off valve.

The purpose of these valves is to automatically shut off the source of gas on loss of power.

They must operate:

- within their full operating pressure range;
- within ambient temperature ranges: 0° to +60°C;
- within voltage ranges from: 85% to 100% (of their nominal voltage).

Pressure operated valves/Solenoid valves to EN 161 must likewise meet these requirements.

The valves can be mounted in any position without affecting operation.

Closing time: The closing time (the valve's response time) must not exceed 1 s.

Gas compatible elastomer materials must be homogeneous and free of pores, inclusions, grains, blisters and surface imperfections visible to the naked eye.

Valve marking: EU (in accordance with the Regulation (EU) 2016/426 on gas appliances).

The 2/2 NF shut-off valves from the 290 series comply with the European Pressure Equipment Directive 2014/68/EU and the Regulation (EU) 2016/426 on gas appliances.

In the context of the Regulation on gas appliances, these valves meet the specifications of the standard EN 161 for combustible gas applications and have achieved certification:

**EU type examination certificate no.: CERTIGAZ 1312CN5765**

**EU type examination certificate no.: CERTIGAZ 1312CP5992**

**EU type examination certificate no.: CERTIGAZ 1312CQ6072**

### I do not need products to EN 161 standard, so which ones apply to me?

You can use non-EN 161 products such as: (**See sections**)

**Combustible Gas & Oil** ([www.asco.com](http://www.asco.com)) [**040 Series**]

**Solenoid Valves (2/2)** ([www.asco.com](http://www.asco.com)) [**030 Series**] et ([www.asco.com](http://www.asco.com)) [**215 Series**]

**Pressure Operated Valves (2/2)** ([www.asco.com](http://www.asco.com)) [**290 Series**]

Before use, make sure that the compatibility of the fluids in contact with the materials is verified.

To check for compatibility, see the "Chemical Resistance Guide" in section:

«**General & Engineering Information**» ([www.asco.com](http://www.asco.com))

The information in the Guide is given for reference only. ASCO declines all responsibility for any use of its products with fluids not specified in the table. Please contact us for any specific uses.

