

# Data Sheet (EN)

Translation of the german original

**WELCH**  
by Gardner Denver


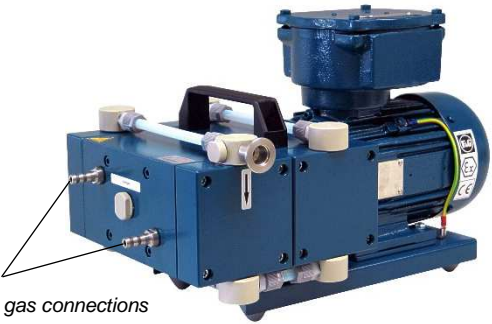


Designation, Model	Order no.
<b>Diaphragm pump chemical resistant in an explosion-proof Design</b> Model:  <b>MPC 601 Tp Ex</b> <b>II 2G c IIB T4 X</b> <b>(10°C ≤ Ta ≤ 40°C)</b>	<b>4000511-04</b>

Figure	Description
 <p>Inert gas connections</p>	<p>The three-phase diaphragm pump consists of the pump casing, the drive unit and the drive motor.</p> <p>The pump casing contains the drive unit and four pump heads. Each pump head contains a diaphragm and the work valves.</p> <p>The pump heads are arranged in a horizontally-opposed pattern.</p> <p>The pump heads are driven via an eccentric shaft with a connecting rod.</p>

Technical Data		
Parameter	Unit	MPC 601 Tp Ex
<b>Ex-Marking</b>	-	 II 2G c IIB T4 X (10°C ≤ Ta ≤ 40°C)
<b>Type Examination Certificate no.</b>	more information	IBExU04ATEXB018 X
<b>Pumping speed</b>	m <sup>3</sup> / h	4.5
DIN 28432 (at speed of 1500 rpm)	l / min	75
<b>Ultimate pressure</b> (at speed of 1500 rpm)	mbar	< 2
<b>Max. Inlet pressure</b>	bar	1
<b>Max. Outlet pressure</b> (absolute pressure)	bar	1.5 *)
<b>Inert flushing of the drive</b>	l / h	20 ±10 % **)
<b>Intake-/ Exhaust pressure</b>	-	Small flange DN 16 KF
<b>Operating temperature</b>	°C	+ 10 to + 40
<b>Max. Operating gas temperature</b> (measured on the inlet of the vacuum pump)	°C	+ 60 *)
<b>Bearing</b>		maintenance-free
<b>Reference surface sound pressure level</b> DIN EN ISO 2151	dB (A)	< 44
<b>Voltage / Frequency</b>	V, Hz	400, 50
<b>Three-phase a.c. motor – model</b> (without motor protection switch, switch and cable)	-	 CD 71 L – 4 II 2G EEx de IIC T4 PTB 99 ATEX 1051
<b>Power</b>	W	370
<b>Operating mode</b>	-	S 1
<b>Type of protection</b> DIN EN 60529	-	IP 55
<b>Weight</b>	kg	29.7
<b>Dimensions (W/D/H)</b> (without connections)	mm	240 / 425 / 272

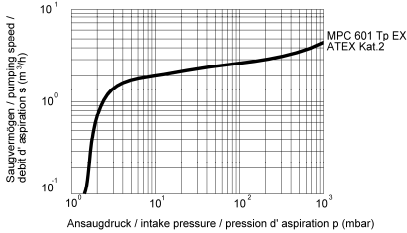
\*) If this value is exceeded, the information about the temperature class inside and outside is no longer applicable.

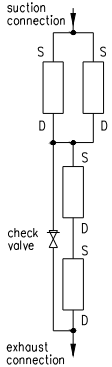
\*\*) The inert gas flushing must be monitored. When exceeding or falling below the tolerances, the pump must be switched off.

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Intake pressure- / Pumping speed - Diagram		Materials of the medium-affecting Pump parts	
		Connection heads / Pump heads with Insert	PTFE carbon-fibre reinforced
		O-Rings	EPDM
		Screw fittings	PVDF
		Valves	PEEK
		Diaphragms	Elastomer + PTFE-Layer
		Manifolds	PP

Circuitry of the Pump heads		Particularities
		<p>The two pump heads are connected in parallel, two further pumps in series.</p> <p>The three-stage model of the diaphragm pump is fitted with a bypass and a non-return valve parallel to the second and third stages. These serve to relieve any intermediate compression which may occur at the start or while working in the upper pressure range.</p> <p>During maintenance or repair, ensure that they are fitted in the correct position and that they function correctly according to the wiring.</p>

Application
<p><b>The Diaphragm pump in an explosion-proof Design is intended to:</b></p> <ul style="list-style-type: none"><li>• Aspirating, pumping and compressing neutral and aggressive gases and vapors.</li><li>• Generating a vacuum down to an ultimate pressure &lt; 2 mbar.</li><li>• Aspirating, pumping and compressing an explosive atmosphere – comprising air and combustible gases, vapors and mists in any mix ratio – from zone 1 areas at risk of explosion (device category 2 according to ATEX).</li><li>• Installation and operation of the diaphragm pumps in zone 1 areas at risk of explosion (device category 2 according to ATEX).</li><li>• The permissible temperature classes and explosion groups of the atmospheres – comprising air and combustible gases, vapors and mists in any mix ratio – that are to be pumped or which are ambient are determined according to the specifications of standard EN 13 463-1. The diaphragm pumps mentioned here have been assigned to T4 IIB.</li></ul> <p><b>Substances that tend to decompose spontaneously, such as acetylene C<sub>2</sub>H<sub>2</sub>, carbon disulfide CS<sub>2</sub> and explosives, lie outside the scope of the application of Atex-Directive 2014/34/EU.</b></p>



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