

PNEUMATICALLY DRIVEN

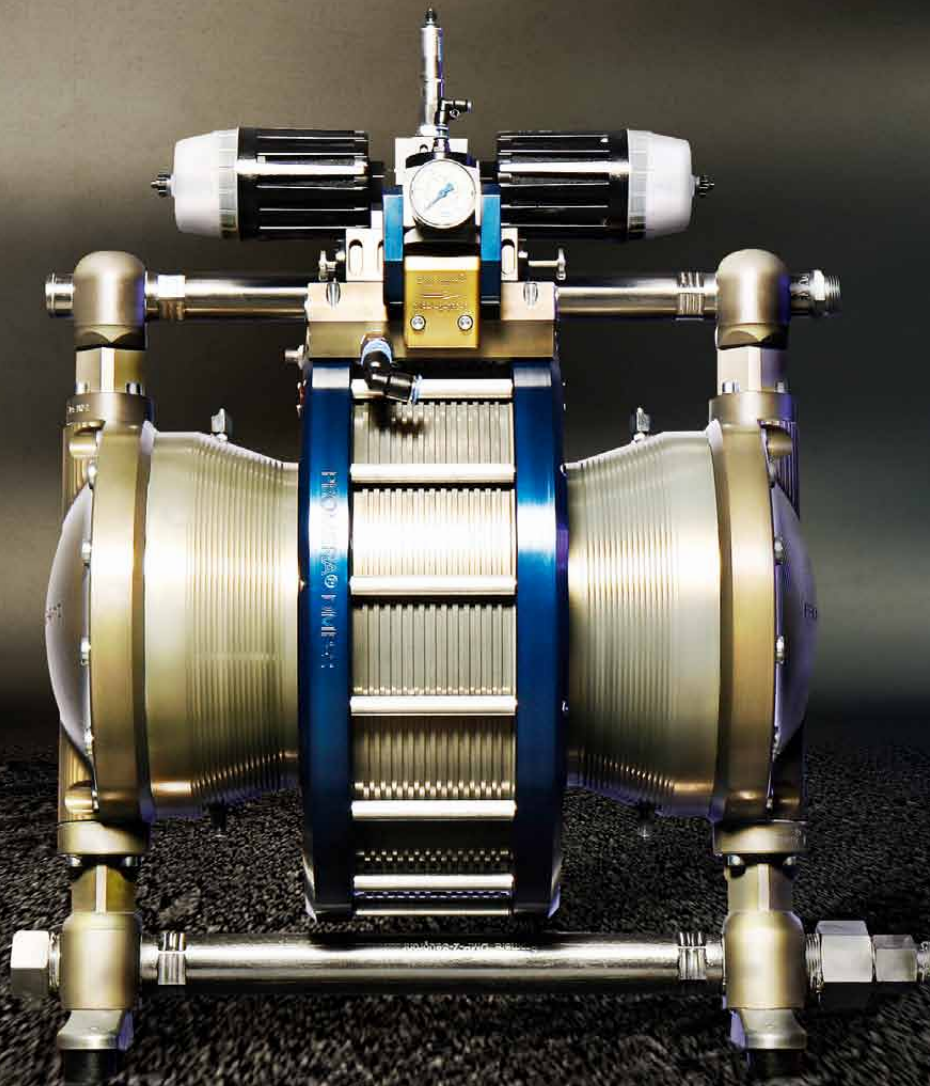
## DOUBLE MEMBRANE PUMPS

» 7:1 – 2.60 ltr / double stroke – 45 bar

» 16:1 – 1.25 ltr / double stroke – 100 bar



**PROMERA®**  
TECHNOLOGIEN FÜR FLUIDE



## DOUBLE MEMBRANE TECHNOLOGY

SHEAR-FREE PUMPING FROM  
LIQUID TO VISCOUS AND ABRASIVE FLUIDS

PNEUMATICALLY DRIVEN  
**DOUBLE MEMBRANE PUMPS**

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# MEMBRANE PUMPS TECHNOLOGY

## SUCCESS THROUGH INNOVATIVE TECHNOLOGY

PROMERA BUILDS MEMBRANE PUMP SYSTEMS FOR INDUSTRIAL COMPANIES AND THEIR APPLICATIONS. OUR SUPERB QUALITY DOUBLE MEMBRANE TECHNOLOGY PUMPS YOUR FLUIDS NON-DESTRUCTIVELY AND EFFICIENTLY.

**YOU PROFIT FROM** » MINIMAL SHEAR STRESS » CONSISTENT MATERIAL QUALITY  
» TROUBLE-FREE OPERATION » LONG LIFE » INCREASED PRODUCTIVITY  
» LOWER PRODUCTION AND MAINTENANCE COSTS



Patented PROMERA double membrane



### FUNCTIONAL PRINCIPLE:

- » An air driven cylinder unit drives a piston system
- » The area ratio between the air pistons and hydraulic pistons produce the pressure ratio
- » The two double membranes (medium side made of PTFE) are coupled by means of a piston rod and moved by a hydraulic fluid with a minimal pressure differential load on the membranes of < 1 bar

### APPLICATION SECTORS:

- » Automotive industry » Automotive supplier industry
- » Plastics industry » Chemical industry
- » Rubber industry

### APPLICATION RAW MATERIALS:

- » Solid and metallic coatings » UV-cured coatings
- » Liquid isocyanate » Silica sand filled polyurethane
- » Solvent-free and solvent-based adhesives
- » Deionized water

### EASY MAINTENANCE:



Simple changing of main and pilot valve **without** completely disassembling the pump from the delivery cycle

- » The overflowing of hydraulic fluid into the conveyor medium is prevented by the use of double membranes with leakage control. A membrane burst is displayed

### APPLICATION AREAS:

- » Paint supply systems » Material supply systems
- » Supply pumps for closed circuits
- » Supply pumps for batch operation

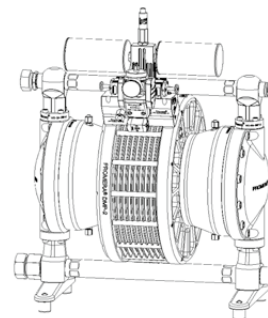
### PROPERTIES:

- » Sparing, shear-free and non-destructive pumping of fluids
- » Up to 30% energy saved compared to comparable piston pumps thanks to optimized drive control unit
- » Stepless control possible by electrically operated pressure control valve
- » Revolutionary technical data  
7:1 – 2.60 ltr / double stroke at max. 45 bar  
16:1 – 1.25 ltr / double stroke at max. 100 bar
- » No dynamically loaded seals in the fluid
- » Leak-free and low-pulsation pumping of fluids
- » In- and outlet valves with ceramic balls in ceramic design, all media-pumping parts are hard-coated and PTFE laminated, thereby enabling the pumping of abrasive and filled media
- » Reduced spare parts and inventory costs by using the same parts for the DMP 7:1 and 16:1
- » No destruction, e.g. of metallic paints, due to membrane technology
- » Patented double membrane guarantees maximum operational reliability

# PNEUMATICALLY DRIVEN DOUBLE MEMBRANE PUMPS

## SPECIFICATIONS

- » 2 DIFFERENT PRESSURE RATIOS AVAILABLE
- » PUMPING LOW VISCOUS TO VISCOUS MEDIA
- » VISCOSITY RANGE UP TO 10,000 mPas
- » PUMPING FLUIDS WITH CRITICAL EXTENDERS SUCH AS SILICA SAND, METALLIC PARTICLES, ETC.
- » EXTREMELY LOW SHEAR STRESSES ON THE FLUIDS
- » PUMPING ISOCYANATES AND UV-COATINGS



MODEL	DMP2-7:1 (ratio 7:1)	DMP2-16:1 (ratio 16:1)
<b>1. FLUID PUMPING SPECIFICATIONS</b>		
Maximum fluid outlet pressure at 6 bar air pressure	45 bar	100 bar
Pumping capacity at 10 double strokes / min	26 ltr / min	12.5 ltr / min
Volume per double stroke	2.6 ltr	1.25 ltr
Recommended continuous double stroke rate	10 double strokes / min	10 double strokes / min
Min. / max. material temperature	10 to 80° C	10 to 80° C
Viscosity of pumped media	1 - 10,000 mPas, particle size up to 5 mm	1 - 10,000 mPas, particle size up to 5 mm
<b>2. AIR SUPPLY</b>		
Max. air inlet pressure	6.5 bar	6.5 bar
Air consumption at 6 bar air pressure at 10 double strokes / min	approx. 1200 ltr / min, approx. 1.2 cm <sup>3</sup> / min	approx. 1200 ltr / min, approx. 1.2 cm <sup>3</sup> / min
Air connection	D12 pneum. plug connection (R 3/8" i)	D12 pneum. plug connection (R 3/8" i)
<b>3. NOISE EMISSIONS</b>		
Acoustic pressure	< 70 dBA	< 70 dBA
<b>4. CONNECTIONS</b>		
Material inlet opening	G 1 1/2" a	G 1 1/2" a
Material outlet opening	G 1" i	G 1" i
<b>5. WEIGHT AND MASS</b>		
Weight without fluids	110 kg	110 kg
Dimensions in mm (W x D x H)	660 x 470 x 760	660 x 470 x 760

**PROMERA**  
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