

Application Focus

# TEG DEHYDRATION



## THE PROCESS

Gas Dehydration is an essential component in the Natural Gas production process. When the gas reaches the surface it contains large amounts of water vapour that can cause significant problems later in production. Dehydrating the gas through glycol stripping is an established and efficient way of producing a dry product. At the core of the process is a pressurised contactor tower where rising gas is brought into intimate contact with a downward flow of lean (dry) glycol. The glycol absorbs the water from the gas as they pass.

## RDP PUMP RANGE

Reciprocating pumps are used to generate the flow and high pressures required to circulate the wet glycol through a reprocessing circuit and return dry Glycol to the tower. Traditionally these have been gas driven or gas assisted pumps, unfortunately these are inefficient, carry a high burden of servicing and cause significant emissions.



## SWITCH TO RDP

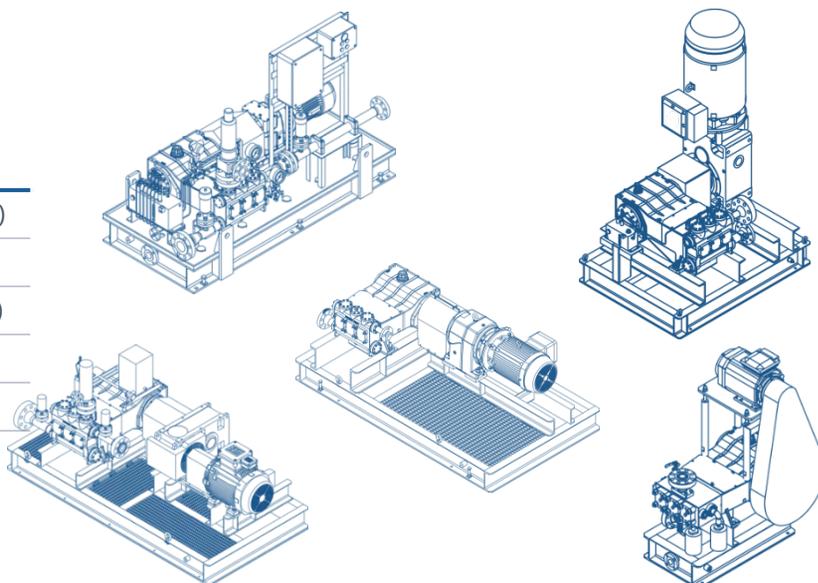
<b>Efficiency</b>	Cross contamination of lean to rich Glycol eliminated Less gas loss
<b>Emissions</b>	28-30% reduction of methane and other volatiles
<b>HAPs</b>	Hazardous Air Pollutants reduced VOCs reduced Less regulatory requirements
<b>Servicing</b>	Piston ring and seals less critical Seal life extended Valves in cartridge, easy removal and replacement
<b>API 674</b>	Full compliance with API 674 3 <sup>rd</sup> edition and ISO 13710
<b>Built to fit</b>	Every pump built for your application
<b>Materials</b>	Large range of material options
<b>Drive</b>	Electric motor, Hydraulic, Engine VSD Vertical/Horizontal gearbox, V-belt

## PERFORMANCE DATA

<b>Max. Capacity</b>	366.5 m <sup>3</sup> /hr (1611.0 US gpm)
<b>Max. Discharge Pressure</b>	1000 bar (14500 psi)
<b>Temperature</b>	-40 to 200 °C (-104 to 392 °F)
<b>Max Pump Speed</b>	450 rpm (see note 3)
<b>Pipe Size</b>	25 - 200 mm (1" - 8")

Note:

1. For applications outside this range, please contact Ruhrpumpen
2. Max. Flow and Max. Pressure cannot be met at same time
3. Maximum speed allowed by API 674



## DESCRIPTION

The RDP series of Reciprocating Plunger Pumps is suitable for handling most liquids for Oil & Gas and Industrial applications.

- Range of Triplex and Quintuplex formats
- Excellent noise and vibration characteristics < 85dB(A)
- 95% volumetric and 90% mechanical efficiency, exceeding API standards
- Braided compression and chevron packings with Spring loaded auto adjustment, minimises leakage
- Extensive range capability
- Design life 20 years

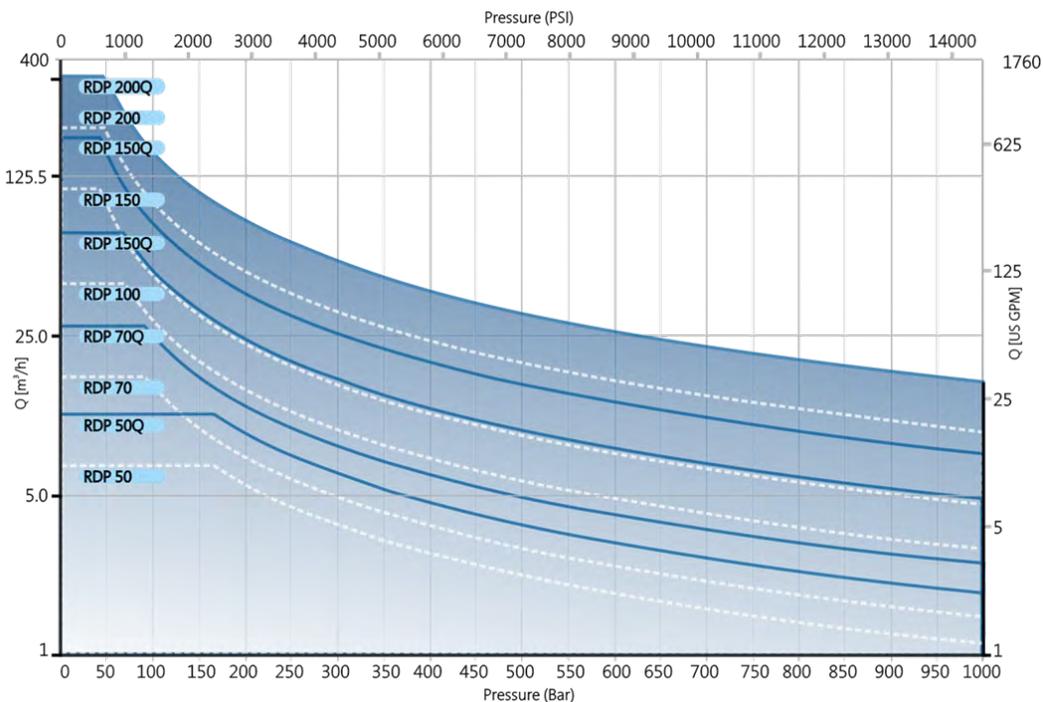
## OPTIONS

- Can be manufactured to NORSOK, ASME, NACE, SHELL ES 135, GOSTK, GOSTR, GGTN specifications and many more
- Dampeners, PSV's and instrumentation can mount direct to Pump Head
- Motor can mount direct to top of crankcase for compact offshore footprint
- ATEX compliance
- Package condition monitoring
- Zero Emission Seal Systems with condition monitoring
- Various seal and power end lubrication options

## BROAD APPLICATION RANGE

- Methanol injection
- Glycol circulation
- Sea water injection
- Produced water disposal
- Reverse osmosis (seawater desalination)
- Water treatment, production and jetting
- Hydrocarbon – Condensate
- Closed drain pumps
- Slops injection
- Boiler feed
- Fertiliser – Carbamate & Ammonia
- Steel plants – high pressure descaling
- Blow Out Preventer ( BOPV ) actuation
- Flowline circulation & Pipeline pigging

## PERFORMANCE RANGE



## CASE STUDY

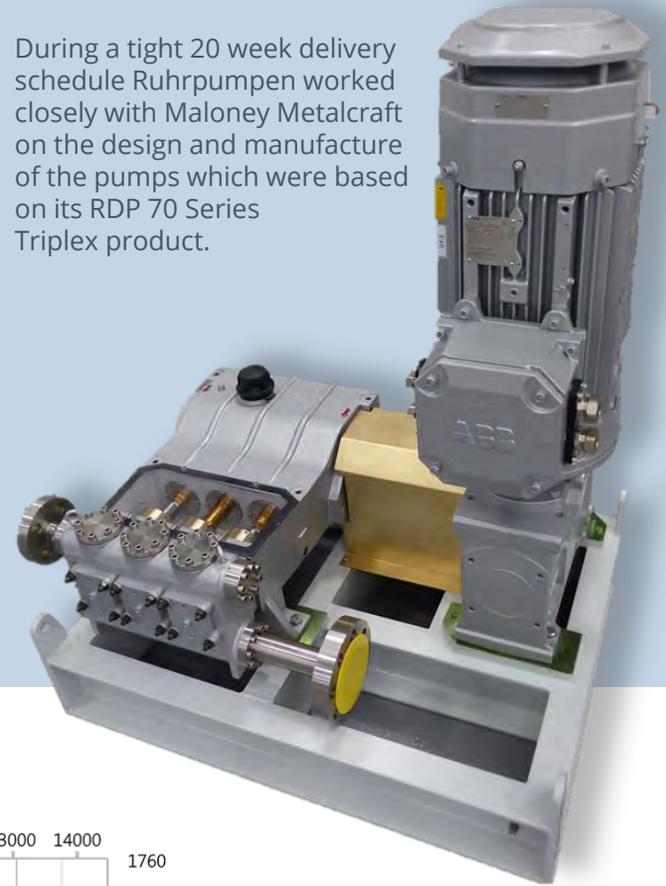
Ruhrpumpen delivers API 674 3<sup>rd</sup> edition reciprocating Plunger Pumps to Maloney Metalcraft for a Gas Dehydration Package in Algeria.

Maloney Metalcraft, under contract to Samsung, designed and manufactured the Gas Dehydration Package for the Timimoun Field Development Project which is expected to produce 1.6 billion cubic meters of natural gas per year over eight years.

Ruhrpumpen was selected for:

- Reliable and proven reciprocating plunger pumps
- Excellent knowledge of gas dehydration applications
- Strong technical support and responsiveness
- Packaging of the skid for a compact footprint
- Bespoke vertical gearbox to fit space constraints
- Competitive cost

During a tight 20 week delivery schedule Ruhrpumpen worked closely with Maloney Metalcraft on the design and manufacture of the pumps which were based on its RDP 70 Series Triplex product.



### More Information:

**Ruhrpumpen UK Ltd**  
 22 Commerce Way,  
 Lancing Business Park,  
 West Sussex. BN15 8TA.  
 T:+44 (0)1273 956410  
 E: salesuk@ruhrpumpen.com

