

Fields of Application

Handling of clean to slightly contaminated corrosive liquids up to discharge pressures of 120 bar

Design

Horizontal, radial split, ring section multistage pump with radial impellers and single flow entry

Pump Size

DN 50 to DN 250 (2.5" to 10")

Operating Conditions

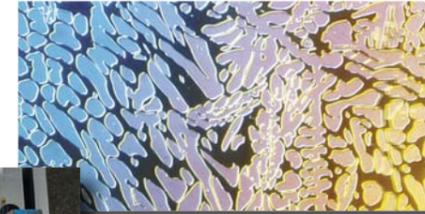
Capacity: up to 1,500 m³/h (6,600 USgpm)
 Pressure: up to 120 bar (1,750 psi)
 Rotating Speed: up to 3,800 rpm
 Temperature: up to 120 °C

Connections

Pump with one or two connective shaft ends
 Flange dimensions according to DIN or ASME standards
 Pump nozzle location rotatable in 90° steps



Materials of Construction



Seawater desalination requires corrosion and abrasion resistant materials. This is why we are using DUPLEX stainless steel as our standard material for all wetted pump parts



DÜCHTING PUMPEN offers improved corrosion resistant materials like SUPER DUPLEX stainless steel with Pitting Resistance Equivalent numbers of more than 40

Precision Casting



Impellers and diffusers are cast by using ceramic patterns to get smooth surfaces for outstanding hydraulic performance

Manufacturing



Machining and balancing using latest multiple axis machines to achieve superior precision and performance

Quality Assurance



To ensure highest quality, every pump is tested and certified on the test bed according to international standards

Positive Experiences



Impeller in DUPLEX stainless steel after 12 years of operation in a Mediterranean Seawater Desalination plant



Ibiza, Spain

1992

Q = 313 m³/h
p = 70 bar

Laayoune, Morocco



Q = 165 m³/h
p = 71 bar



South Sinai, Egypt

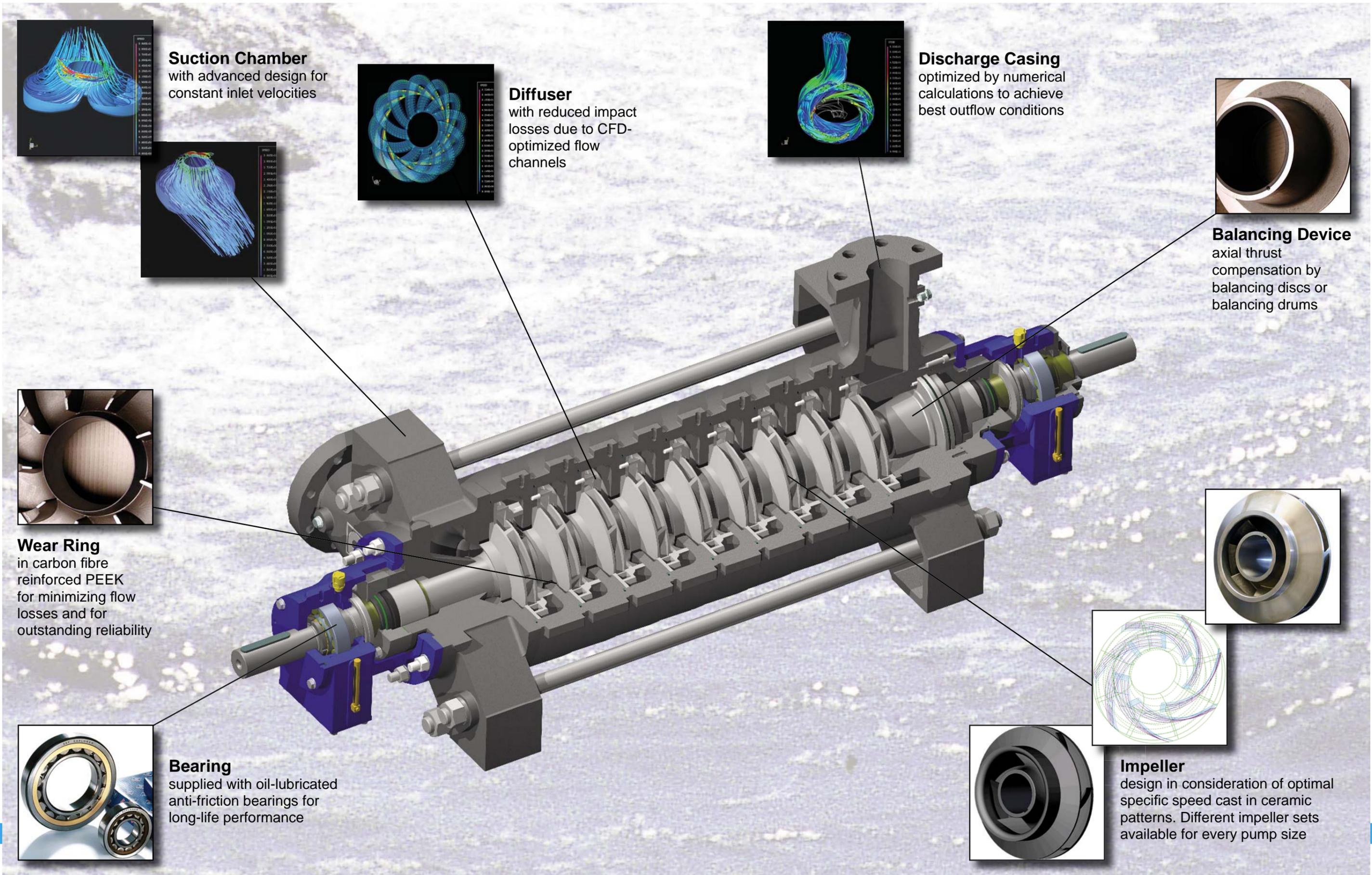
Q = 135 m³/h
p = 67 bar

Saint Martin, Caribbean



1998

Q = 210 m³/h
p = 65 bar



Suction Chamber
with advanced design for
constant inlet velocities

Diffuser
with reduced impact
losses due to CFD-
optimized flow
channels

Discharge Casing
optimized by numerical
calculations to achieve
best outflow conditions

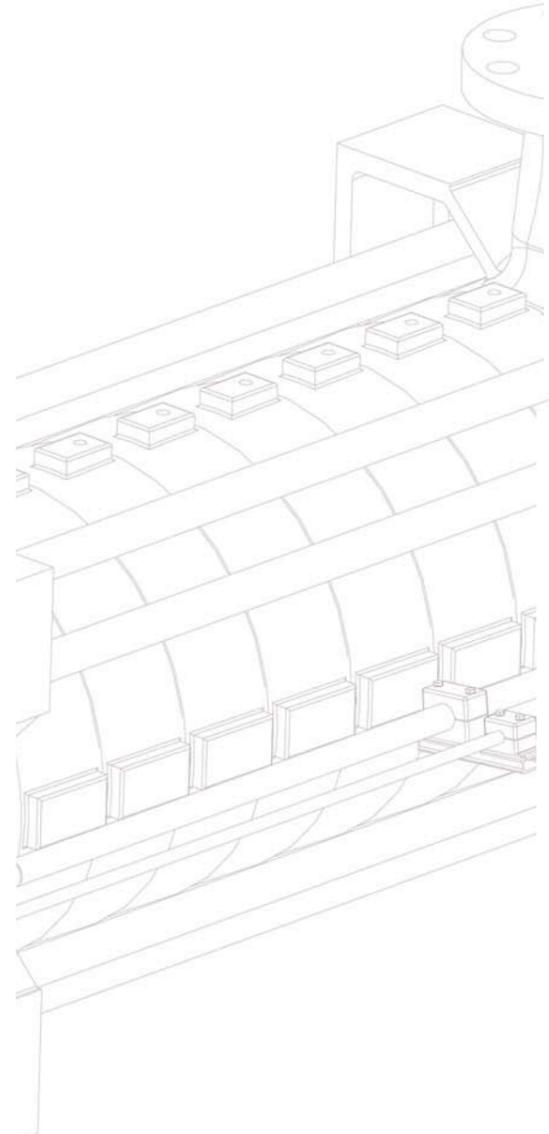
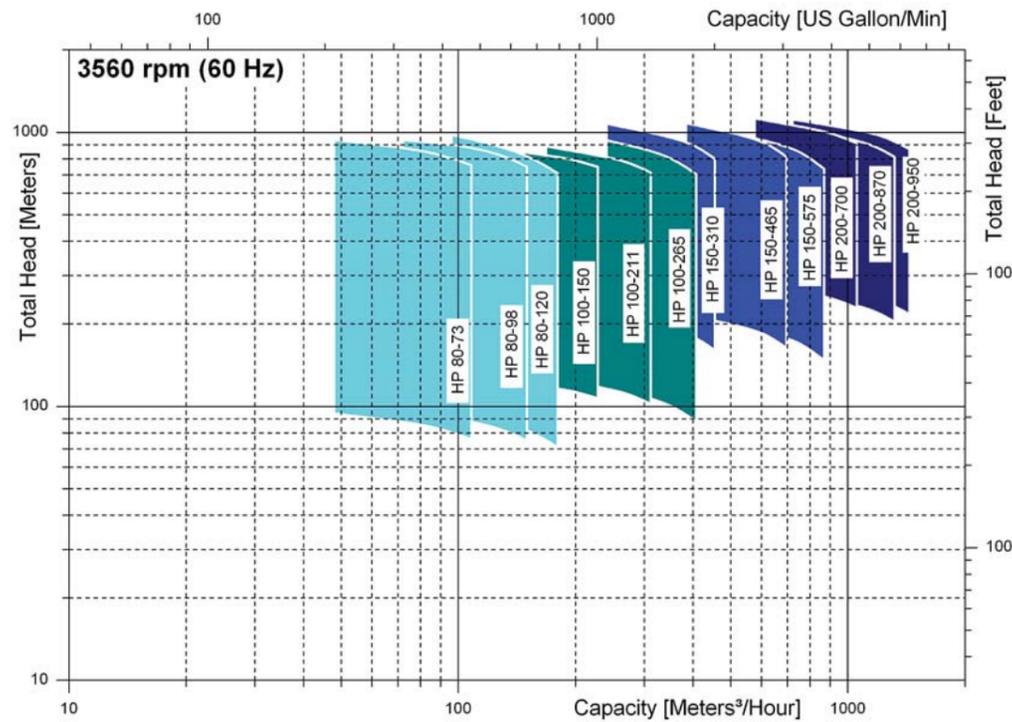
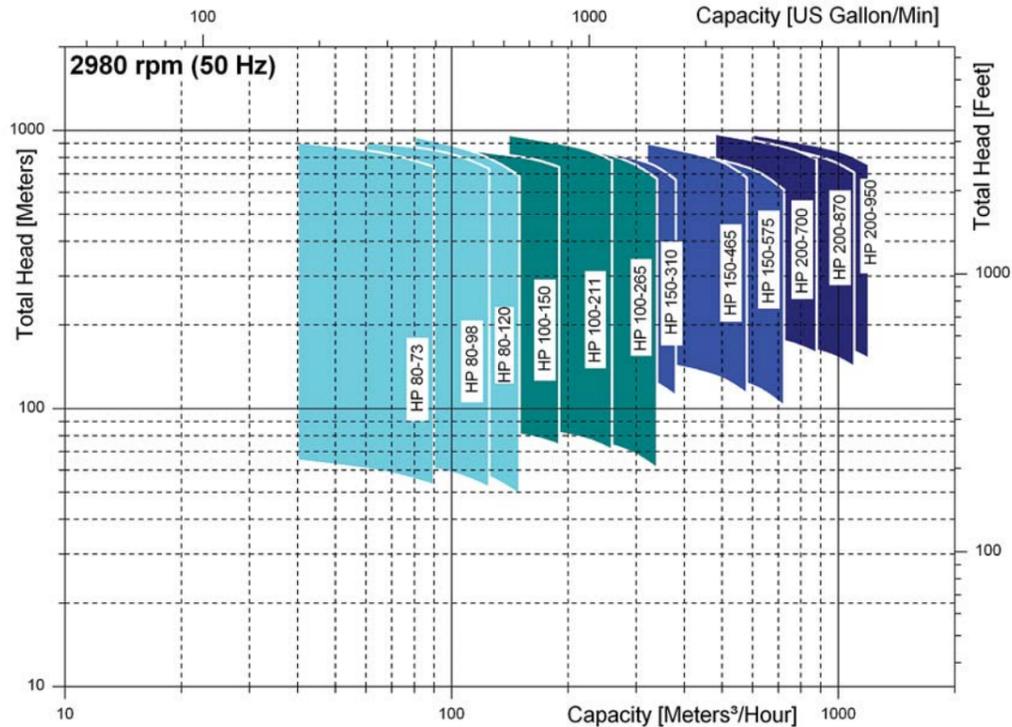
Balancing Device
axial thrust
compensation by
balancing discs or
balancing drums

Wear Ring
in carbon fibre
reinforced PEEK
for minimizing flow
losses and for
outstanding reliability

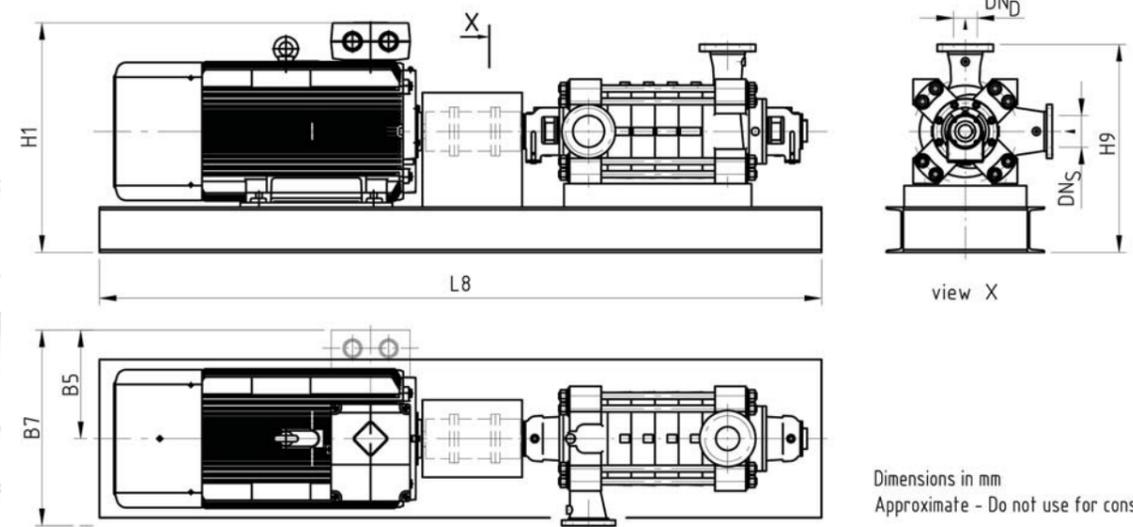
Bearing
supplied with oil-lubricated
anti-friction bearings for
long-life performance

Impeller
design in consideration of optimal
specific speed cast in ceramic
patterns. Different impeller sets
available for every pump size

Hydraulic Performane



Dimensions



Model	Motor Size	Motor kW	DN _S	DN _D	H1	H9	L8	B5	B7
ROWA-HP 80									
80 x 14	315 L/355	160/500	100	80	1095/1170	960/1000	4000/4500	515/710	895/1090
80 x 13	315 L/355	160/400	100	80	1095/1170	960/1000	4000/4500	515/710	895/1090
80 x 12	315 M/355	132/400	100	80	1095/1170	960/1000	4000/4500	515/710	895/1090
80 x 11	315 M/355	132/355	100	80	1095/1170	960/1000	4000/4000	515/710	895/1090
80 x 10	315 S/315	110/315	100	80	1095/1100	960/960	3550/4000	515/680	895/1060
80 x 9	315 S/315	110/315	100	80	1095/1100	960/960	3550/4000	515/680	895/1060
80 x 8	280 M/315	90/250	100	80	1000/1100	925/960	3150/3550	455/680	835/1060
80 x 7	280 S/315	75/250	100	80	1000/1100	925/960	3150/3550	455/680	835/1060
80 x 6	280 S/315 L	75/200	100	80	1000/1095	925/960	3150/3550	455/515	835/895
80 x 5	250 M/315 L	55/160	100	80	945/1095	895/960	2800/3150	430/515	810/895
80 x 4	225 M/315 M	45/132	100	80	830/1095	875/960	2800/3150	335/515	715/895
80 x 3	200 L/315 S	37/110	100	80	800/1095	875/960	2500/3150	310/515	690/895
ROWA-HP 100									
100 x 11	315 / 450	315/800	150	100	1140/1415	1055/1190	4500/5000	680/910	1115/1345
100 x 10	315 / 450	315/800	150	100	1140/1415	1055/1190	4500/5000	680/910	1115/1345
100 x 9	315 / 400	250/710	150	100	1140/1330	1055/1140	4500/4500	680/875	1115/1310
100 x 8	315 / 400	250/630	150	100	1140/1330	1055/1140	4000/4500	680/875	1115/1310
100 x 7	315 L/400	200/560	150	100	1135/1330	1055/1140	4000/4500	515/875	950/1310
100 x 6	315 L/355	160/500	150	100	1135/1210	1055/1095	3550/4000	515/710	950/1145
100 x 5	315 M/355	132/400	150	100	1135/1210	1055/1095	3550/4000	515/710	950/1145
100 x 4	315 S/315	110/315	150	100	1135/1140	1055/1055	3150/3550	515/680	950/1115
100 x 3	280 M/315	90/250	150	100	1040/1140	1020/1055	3150/3550	455/680	890/1115
ROWA-HP 150									
150 x 7	400/710	710/1800	200	150	1490/1810	1330/1640	5000/6300	875/1050	1425/1600
150 x 6	400/710	560/1600	200	150	1490/1810	1330/1640	4500/6300	875/1050	1425/1600
150 x 5	355/710	500/1250	200	150	1285/1810	1285/1640	4500/5600	710/1050	1260/1600
150 x 4	355/450	400/1000	200	150	1285/1490	1285/1380	4000/4500	710/910	1260/1460
150 x 3	315/450	315/800	200	150	1230/1490	1245/1380	3550/4500	680/910	1230/1460
ROWA-HP 200									
200 x 5	710/900	1400/3600	250	200	1870/2260	1875/2065	6300/7100	1050/1400	1775/2125
200 x 4	630/800	1120/2800	250	200	1725/2030	1795/1965	5600/7100	990/1120	1715/1845
200 x 3	450/800	800/2240	250	200	1550/2030	1615/1965	5000/6300	910/1120	1635/1845
200 x 2	355/710	500/1600	250	200	1345/1870	1520/1875	4500/6300	710/1050	1435/1775



Netherlands Antilles, Caribbean

1999

Q = 417 m³/h
p = 63 bar

Antigua, Caribbean

Q = 210 m³/h
p = 65 bar



South Sinai, Egypt

Q = 135 m³/h
p = 67 bar

Wilayas, Algeria

2003

Q = 232 m³/h
p = 69 bar

