

Air Operated Double Diaphragm Pumps

Line Introduction

Ruby Air Double Diahragms Pumps are available in various designs, from miniature ¼-inch to 3-inch and can handle a wide range of fluids.

They can work with low to highly viscous liquids even if they contain suspended particles.

They are applicable in many industries such as: Chemical, Marine, Food and Beverage, Cosmetic, Paint, Galvanic, Textile, Water and Sludge, Oil and Gas and many more.

Available in both plastic (PP or PVDF) and metal (Aluminum or SS 316) versions these “small giants” may be simple in design but that doesn't stop them from operating across challenging environments.

Their wetted parts are available in various materials which makes them compatible with any type of fluid.

Main Advantages

Available in PP, PP+CF, PVDF+CF, ALUMINUM and STAINLESS STEEL 316 versions.

- Certified for use in potentially explosive atmospheres (ATEX certification zone 1-2)
- Advanced diaphragms of new technology
- New generation PTFE compound diaphragms for long life operation
- Advanced quality PTFE-A Full capacity diaphragms for high chemical and mechanical applications
- Dry running without risk of damage
- Self-priming capacity
- No need for air lubrication
- Innovative oil free Air Valve
- Adjustable flow rate and head
- Designed for varying flow, and head conditions
- Able to operate while fully submerged in the pumping liquid (On request)
- Twin suction and discharge of separate fluids
- Automatic suction
- Easy manifold reverse
- Long service life
- Reliable, optimal performance at the lowest possible cost
- Ideal for handling abrasive, viscous and shear sensitive or corrosive fluids
- Operating temperatures:
 - PP/PP+CF → -5°C / + 60°C
 - PVDF + CF → -10°C / +120°C
 - Aluminum → -10°C / +130°C
 - Stainless steel → -10°C / 130°C

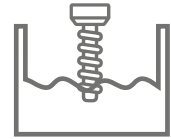
Main application sectors



CHEMICAL INDUSTRY



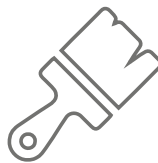
SHIPPING



GALVANIC AND
ELECTRONIC INDUSTRY



GRAPHIC INDUSTRY



PAINT INDUSTRY



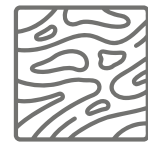
PRODUCTION AND
STORAGE OF BIODIESEL



AUTOMOTIVE



PACKING, GLUE, PAPER
AND PAPER MILLS



CERAMIC,
STONE, MARBLE, GLASS
AND MINING INDUSTRY



WATER AND SLUDGE
TREATMENT



TEXTILE AND
LEATHER INDUSTRY



OIL & GAS



METAL PROCESSING
INDUSTRY



MECHANICAL AND
METALLURGIC INDUSTRY

Ruby Diaphragms

Introducing the Advanced Composite Diaphragms of Ruby pumps

Diaphragms play a crucial role in the operation of a diaphragm pump. No matter what the pumping liquid is, from water to aggressive acids, diaphragms must meet the needs of very specific handling characteristics as they relate to product compatibility.

Diaphragms of Ruby pumps are constructed of high-quality materials and their design, enables them to produce reliable and optimal performance. Available in a full range of options, PTFE, PTFE-A, NBR, EPDM, VITON, they meet the specific needs of every pumping application.

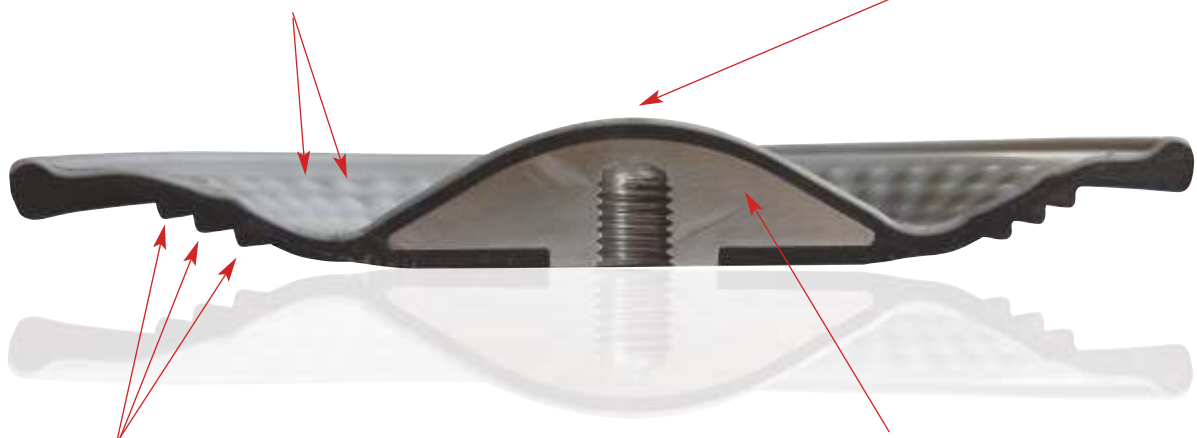


- Excellent, extended service life
- Greater performance
- Higher displacement per cycle
- Easy to install and maintain
- Eliminated leak paths due to absence of central hole
- They can be installed and removed without the use of tools
- Our diaphragms last longer and are considerably stronger than other diaphragms.
- They can be used with most chemicals and are ideal for a wide range of pumping tasks.
- Longer diaphragm life in more abrasive applications that still require PTFE

Advanced Composite Diaphragms Offer:

The prominences decrease
the stretching of the PTFE during the regression and prevent it from cracking.

Innovative conical shape
ideal for optimal performance and life, low pressure requirements for start-up, ideal suction



Innovative diaphragm support side,
offers flexibility, long life and protects from cavitation

Special internal plate
supports diaphragm in every movement

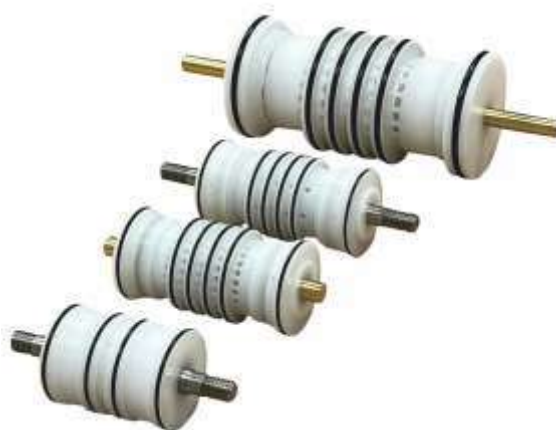
New Air Valve Design

Designed and made using the most innovative technology, the **Air Valve** is the “heart” of the Ruby pump. It functions without the need for lubricants or oils, hence:

- Eliminates the risk of seizing due to lubrication issues
- Protects the environment
- Saves money spent for lubrication

The innovative Air Valve of Ruby pumps also provides:

- Great saving energy due to fully managed airflow
- Low-maintenance
- Non- Internal freeze
- Non-dead-Centre asymmetric operation
- Long service life
- Low cost of spare parts
- Easy installation
- Reliability
- Does not contain metal parts (excluding shaft)



ATEX Certificate

Both plastic and metallic conductive series of Ruby Air Diaphragm Pumps comply with the demands of EU Directive 2014/34/EU and are certified by ATEX II 2/2 G/D so they can operate safely in potentially explosive atmospheres where flammable gases, mists or dust particles may be present.

Plastic Conductive and AISI 316 pumps are also certified by ATEX I M2 for use in underground parts of mines.

ATEX Certificate has been issued by the European notified body TÜV NORD. Certificate number : C 004-2

Ruby Pumps composition codes:

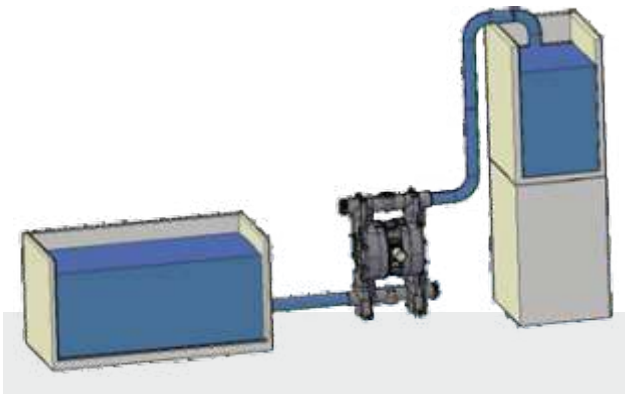
example: model Ruby 126P-P-TPT-F

Pump Model Ruby 126, PP Pump Body, PP Center Section, PTFE Diaphragms, PP Ball Seats, PTFE Ball Valve, VITON O-ring

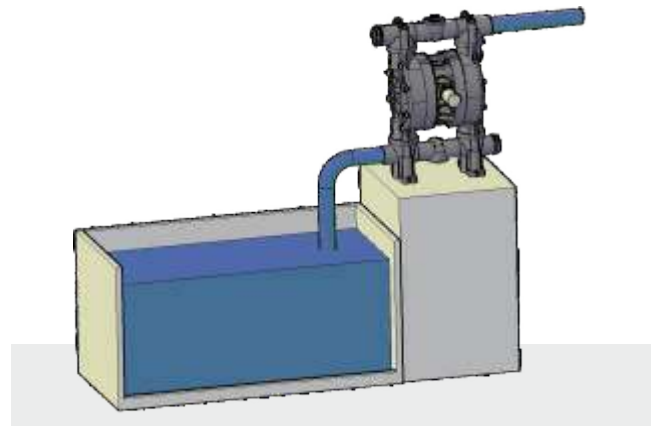
R 126	P	P	T	P	T	F	-
Pump Model	Pump Body	Center Section	Diaphragms	Ball Seats	Ball Valve	O-ring	Other Options
MINI 005	P : PP	P : PP	N : NBR Conductive	V: PVDF	T: PTFE	T: PTFE	F: Flange PN10/ANSI 150
Ruby 008	V : PVDF+CF	A : Aluminum	E : EPDM Conductive	S: AISI 316	S: AISI 316	F: VITON	D: Twin Manifold
Ruby 010	A : Aluminum	PC: PP+CF	F : VITON Conductive	A: Aluminum	N: NBR	E: EPDM	
Ruby 115	S : Stainless Steel 316		T : PTFE+back up (EPDM Conductive)	P: PP	E: EPDM	N: NBR	
Ruby 120	PC: PP+CF		Z : PTFE A+back up (EPDM Conductive)	N: NBR			
Ruby 025			ST: PTFE+back up (SANTOPRENE)	E: EPDM			
Ruby 125			HY: PTFE+ back up (HYTREL)	O: POM-C			
Ruby 126			NT: PTFE+Back up (NBR)				
Ruby 140							
Ruby 141							
Ruby 150							
Ruby 151							
Ruby 081							
Ruby 180							

Installations

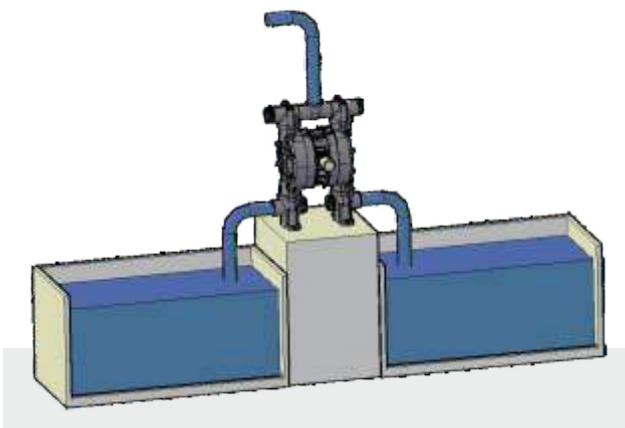
Under Head (Positive suction) _____



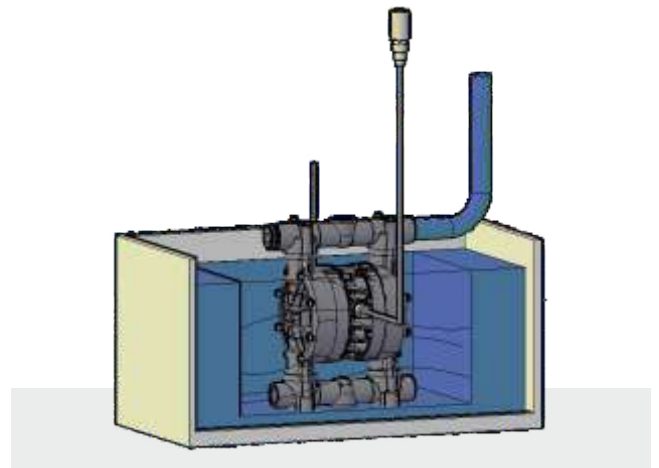
Self Priming _____



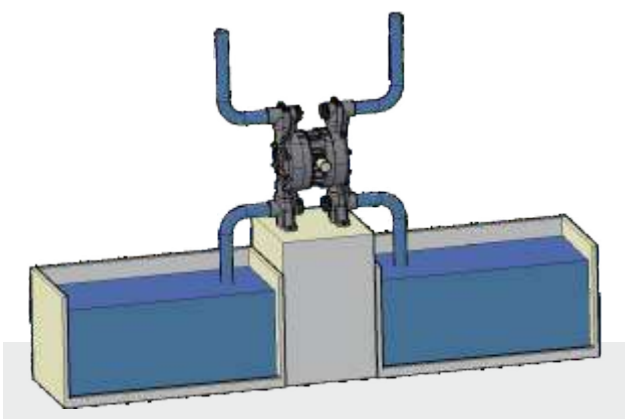
Split Suction _____



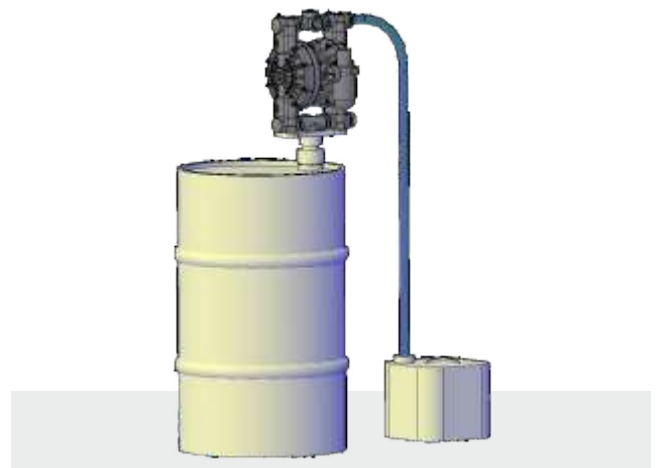
Immersed Transfer _____



Split Suction and Discharge _____



Drum Transfer _____



Minipump 005

Construction materials: **PP, PP+CF, PVDF+CF**



Zone 2 - Zone 22
Zone 1 - Zone 21
Zone M2

II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
I M2 Ex h I Mb

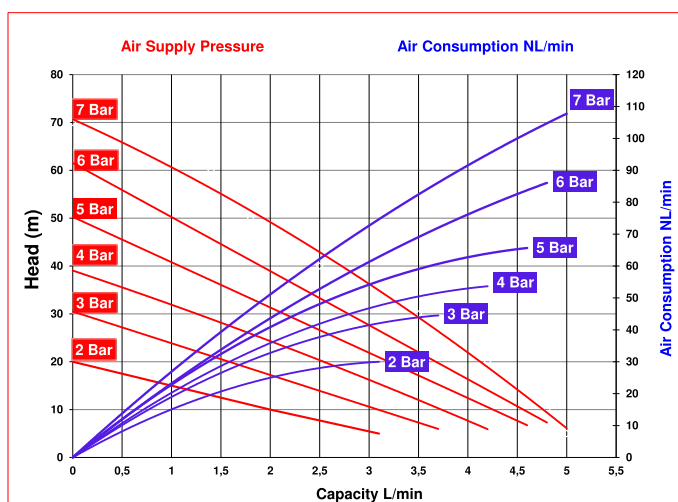
Ruby 008

Technical data

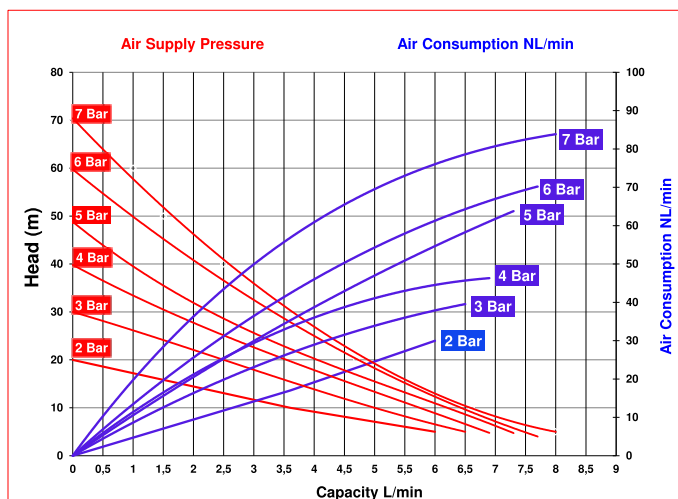
	Minipump 005	Ruby 008
Suction / Discharge connections	1/4" BSP F	1/4" BSP F
Air connection	1/8" BSP F	1/8" BSP F
*Max. flow rate	5 L/min	8 L/min
*Max. self-priming capacity - dry running	3 m	3 m
*Max. negative suction head - with pump primed	9.5 m	9.5 m
Max. head	70 m	70 m
Max. operating pressure	Min. 2 bar - Max. 7 bar	Min. 2 bar - Max. 7 bar
Max. size of solids	0.5 mm	0.5 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C	PP: 60°C , PVDF: 95°C
Weight PP	0.7 Kg	0.7 Kg
Weight PVDF+CF	1.3 Kg	1.3 Kg



Performances Minipump 005



Performances Ruby 008



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 010

Construction materials: **PP, PP+CF, PVDF+CF, AISI 316**



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
 Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
 Zone M2 I M2 Ex h I Mb

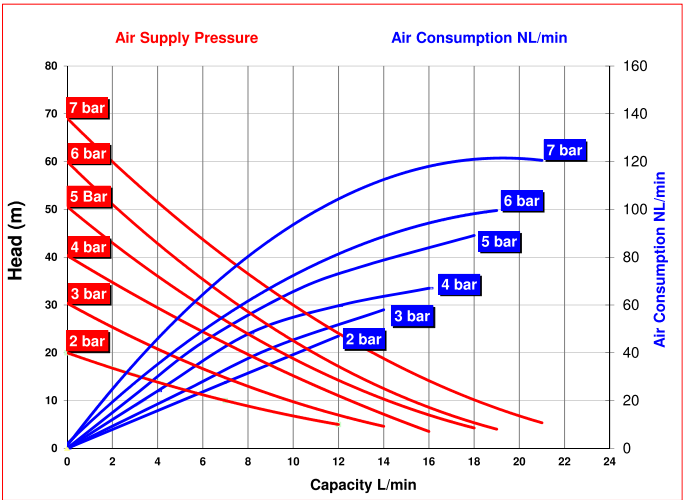
Technical data

Suction / Discharge connections	3/8" BSP F
Air connection	3/8" BSP F
*Max. flow rate	21 L/min
*Max. self-priming capacity - dry running	4 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	70 m
Max. operating pressure	Min. 2 bar - Max. 7 bar
Max. size of solids	0.5 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C , AISI 316: 95°C
Weight PP	1.2 Kg
Weight PVDF+CF	1.9 Kg
Weight AISI 316	3.0 Kg

Ruby 010



Performances Ruby 010



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 115

Construction materials: PP, PP+CF, PVDF+CF, AISI 316, ALUMINUM



Zone 2 - Zone 22
Zone 1 - Zone 21
Zone M2

II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
I M2 Ex h I Mb

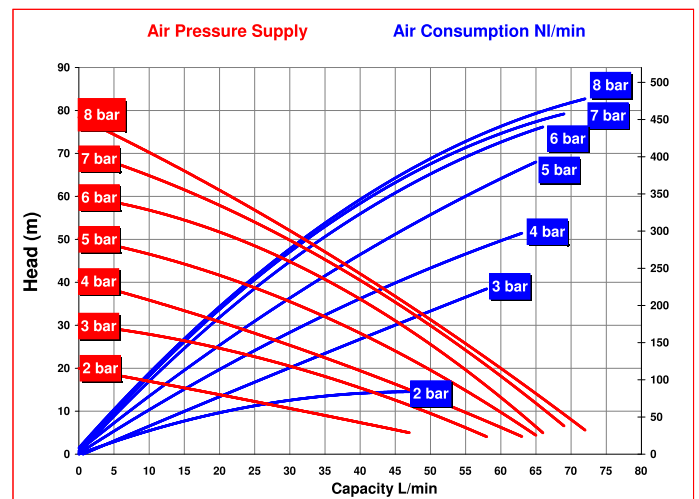
Technical data

Suction / Discharge connections	1/2" BSP F
Air connection	1/2" BSP F
*Max. flow rate	72 L/min
*Max. self-priming capacity - dry running	3 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	3 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C , AISI 316: 95°C , ALUMINUM: 95°C
Weight PP	4.0 Kg
Weight PVDF+CF	5.5 Kg
Weight AISI 316	9.0 Kg
Weight ALUMINUM	6.0 Kg

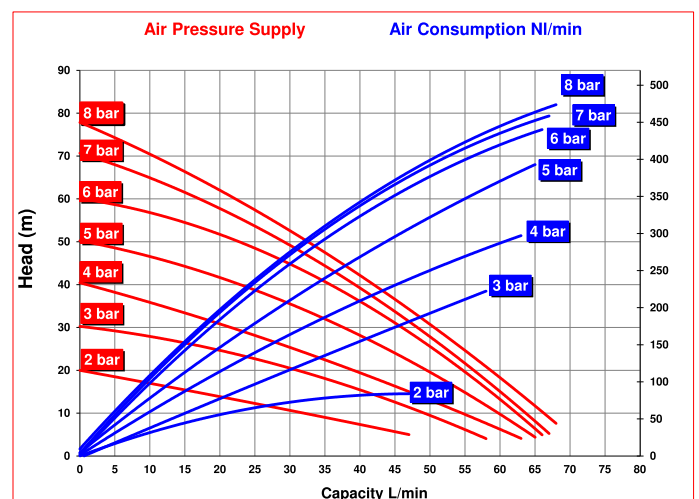
Ruby 115



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according to the construction material.

Ruby 120

Construction materials: PP, PP+CF, PVDF+CF, AISI 316, ALUMINUM



Zone 2 - Zone 22
Zone 1 - Zone 21
Zone M2

II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
I M2 Ex h I Mb

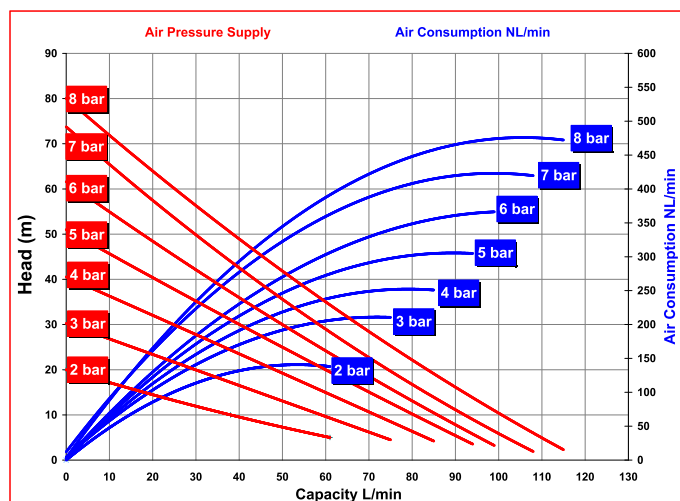
Technical data

Suction / Discharge connections	3/4" BSP F
Air connection	1/2" BSP F
*Max. flow rate	115 L/min
*Max. self-priming capacity - dry running	3 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	3 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C , AISI 316: 95°C , ALUMINUM: 95°C
Weight PP	4.0 Kg
Weight PVDF+CF	5.5 Kg
Weight AISI 316	9.0 Kg
Weight ALUMINUM	6.0 Kg

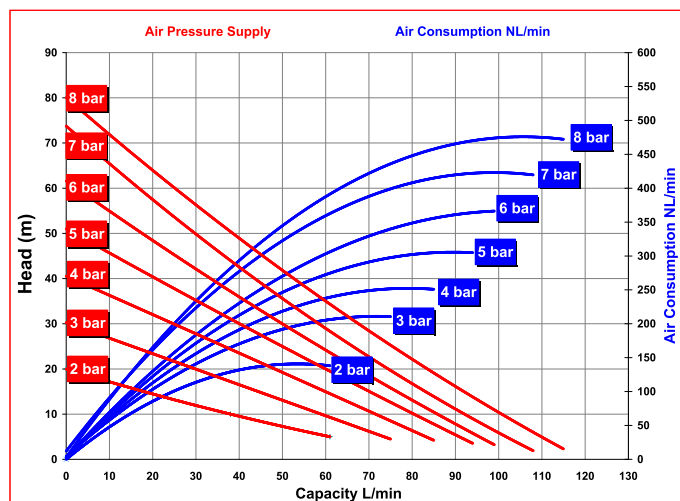
Ruby 120



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according to the construction material.

Ruby 025

Construction materials: **PP, PP+CF, PVDF+CF**



Zone 2 - Zone 22
Zone 1 - Zone 21
Zone M2

II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
I M2 Ex h I Mb

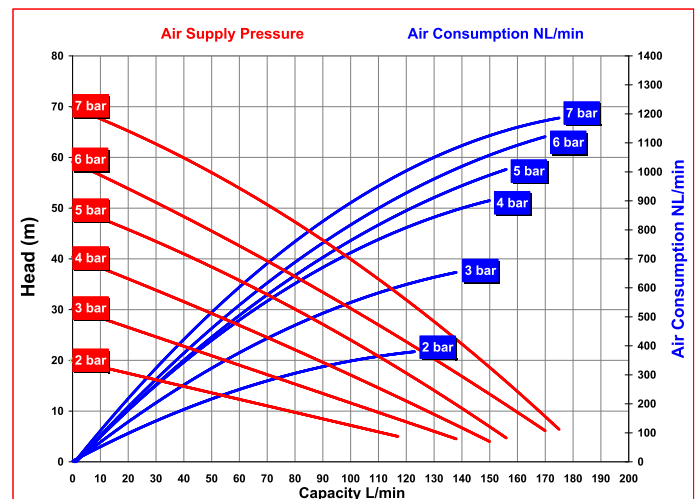
Technical data

Suction / Discharge connections	1" BSP F
Air connection	1/2" BSP F
*Max. flow rate	175 L/min
*Max. self-priming capacity - dry running	4 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 7 bar
Max. size of solids	3.5 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C
Weight PP	6.0 Kg
Weight PVDF+CF	7.0 Kg

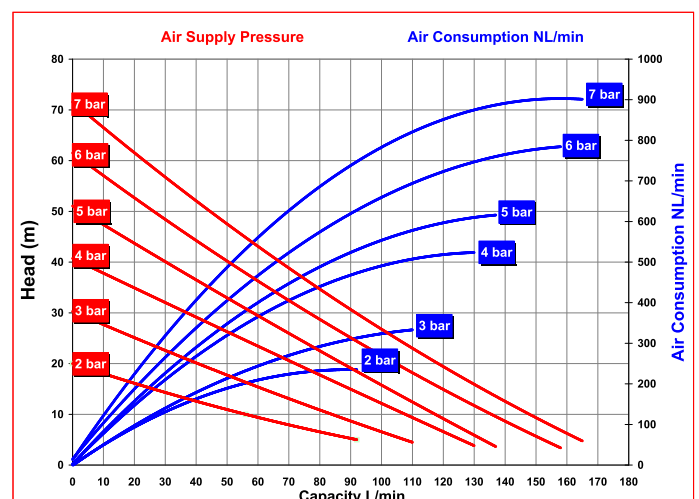
Ruby 025



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 125

Construction materials: PP, PP+CF, PVDF+CF, AISI 316, ALUMINUM



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
Zone M2 I M2 Ex h I Mb

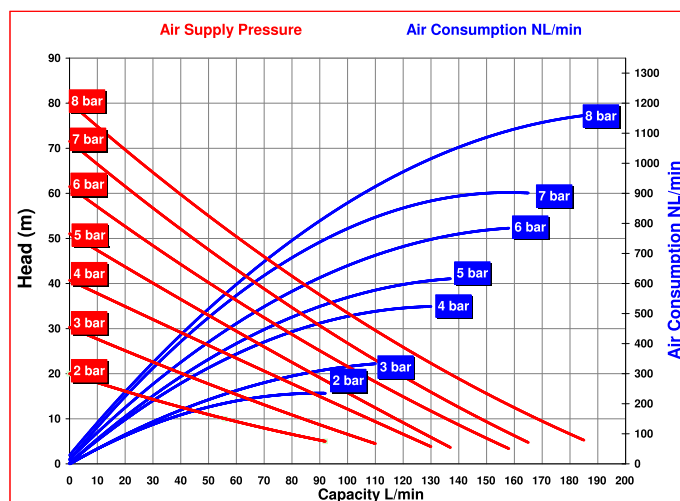
Technical data

Suction / Discharge connections	1" BSP F
Air connection	1/2" BSP F
*Max. flow rate	185 L/min
*Max. self-priming capacity - dry running	4 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	3.5 mm
Max. operating Temperature	PP: 60°C , PVDF - AISI 316 - ALUMINUM: 95°C , w/metallic center block: 130°C
Weight PP	6.0 Kg
Weight PVDF+CF	7.0 Kg
Weight AISI 316	14.0 Kg
Weight ALUMINUM	8.0 Kg

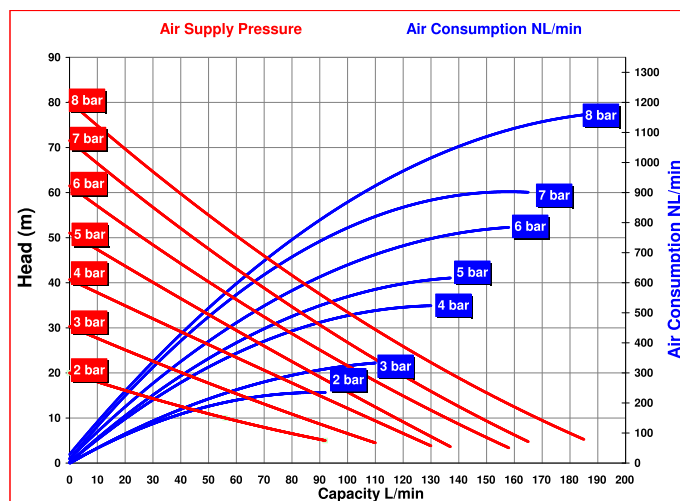
Ruby 125



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according to the construction material.

Ruby 126

Construction materials: **PP, PP+CF, PVDF+CF**



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIB T135°C Dc
Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIC T135°C Db
Zone M2 I M2 Ex h I Mb

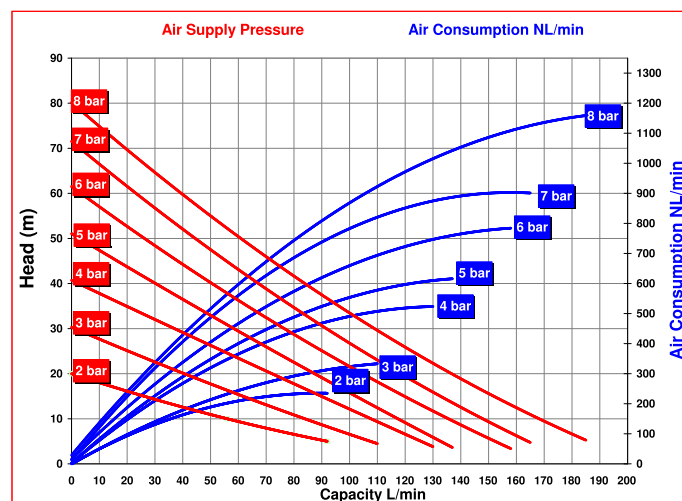
Technical data

Suction / Discharge connections	1" Flange DN 25 / ANSI 25
Air connection	1/2" BSP F
*Max. flow rate	185 L/min
*Max. self-priming capacity - dry running	4 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	3.5 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C
Weight PP	7.0 Kg
Weight PVDF+CF	8.0 Kg

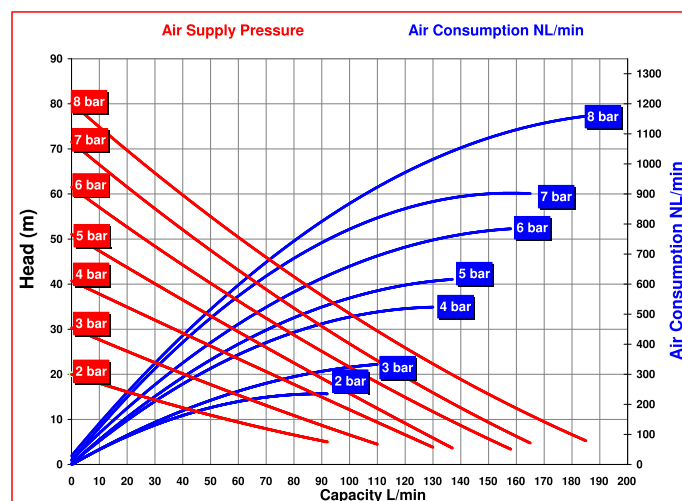
Ruby 126



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according to the construction material.

Ruby 140

Construction materials: PP, PP+CF, PVDF+CF, AISI 316, ALUMINUM



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
Zone M2 I M2 Ex h I Mb

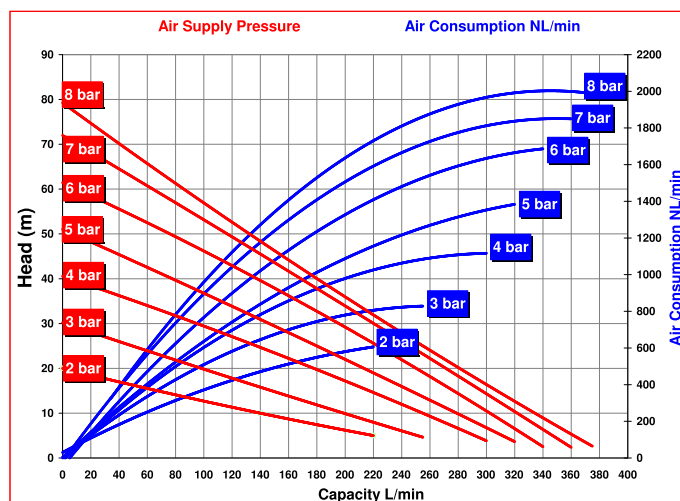
Technical data

Suction / Discharge connections	1 1/2" BSP F
Air connection	1/2" BSP F
*Max. flow rate	380 L/min
*Max. self-priming capacity - dry running	5 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	5 mm
Max. operating Temperature	PP: 60°C , PVDF - AISI 316 - ALUMINUM: 95°C , w/metallic center block: 130°C
Weight PP	14.0 Kg
Weight PVDF+CF	22.0 Kg
Weight AISI 316	26.0 Kg
Weight ALUMINUM	14.0 Kg

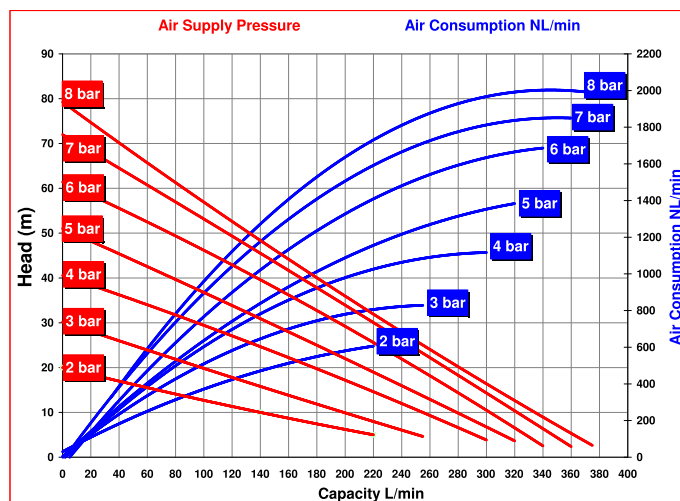
Ruby 140



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 141

Construction materials: **PP, PP+CF, PVDF+CF**



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIB T135°C Dc
Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIC T135°C Db
Zone M2 I M2 Ex h I Mb

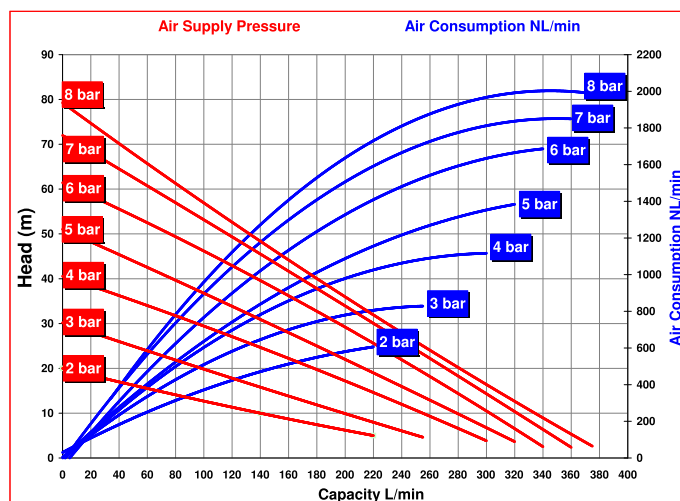
Technical data

Suction / Discharge connections	1 1/2" Flange DN 40 / ANSI 40
Air connection	1/2" BSP F
*Max. flow rate	380 L/min
*Max. self-priming capacity - dry running	5 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	5 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C
Weight PP	14.0 Kg
Weight PVDF+CF	22.0 Kg

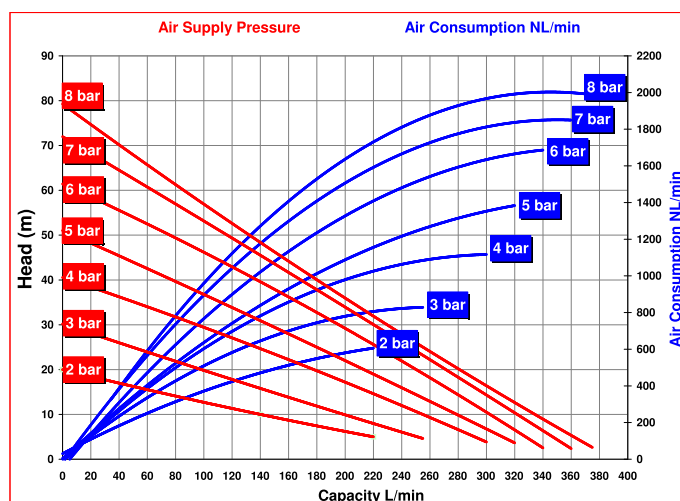
Ruby 141



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 150

Construction materials: **AISI 316, ALUMINUM**



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
Zone M2 I M2 Ex h I Mb

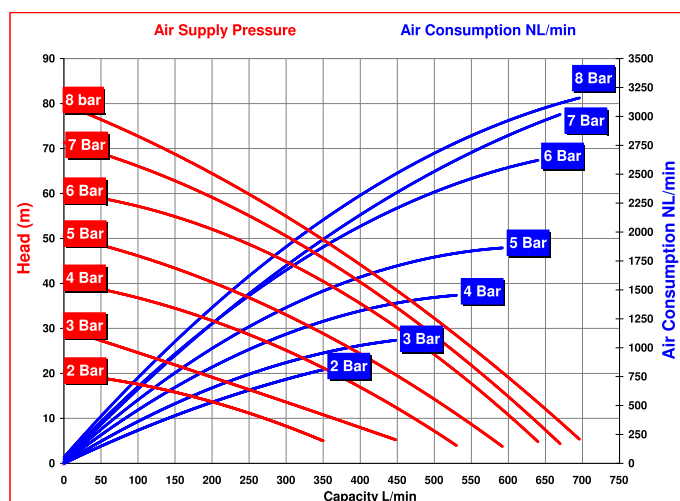
Technical data

Suction / Discharge connections	2" BSP F
Air connection	3/4" BSP F
*Max. flow rate	696 L/min
*Max. self-priming capacity - dry running	5 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	8 mm
Max. operating Temperature	AISI 316 - ALUMINUM: 95°C , w/metallic center block: 130°C
Weight AISI 316	64.0 Kg
Weight ALUMINUM	35.0 Kg

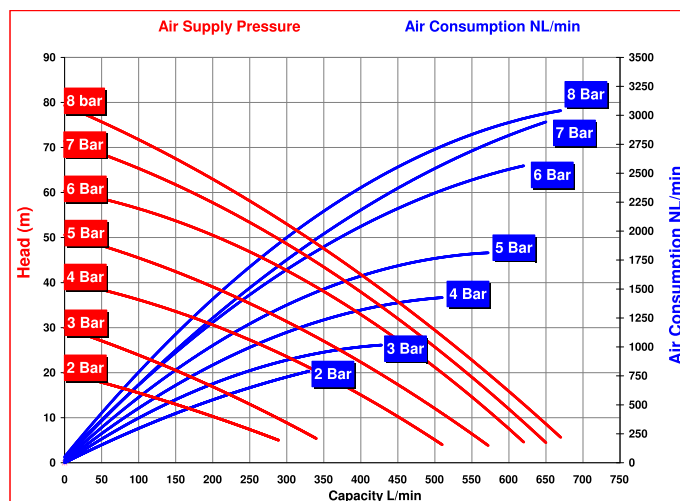
Ruby 150



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 151

Construction materials: **PP, PP+CF, PVDF+CF**



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc
Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIIC T135°C Db
Zone M2 I M2 Ex h I Mb

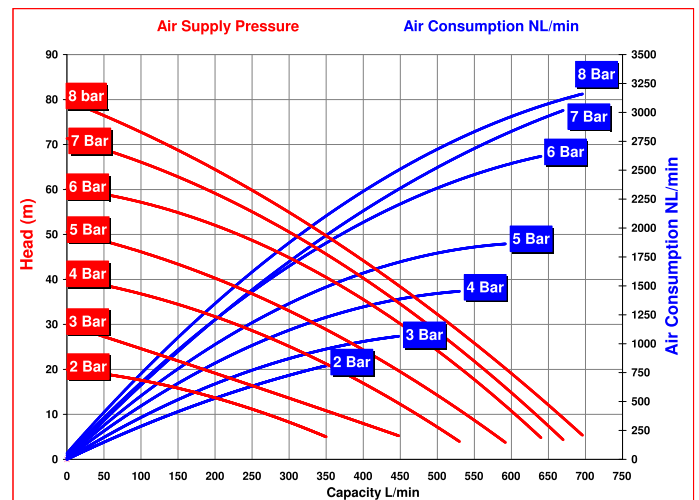
Technical data

Suction / Discharge connections	2" BSP F
Air connection	3/4" BSP F
*Max. flow rate	696 L/min
*Max. self-priming capacity - dry running	5 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	8 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C
Weight PP	40.0 Kg
Weight PVDF+CF	48.0 Kg

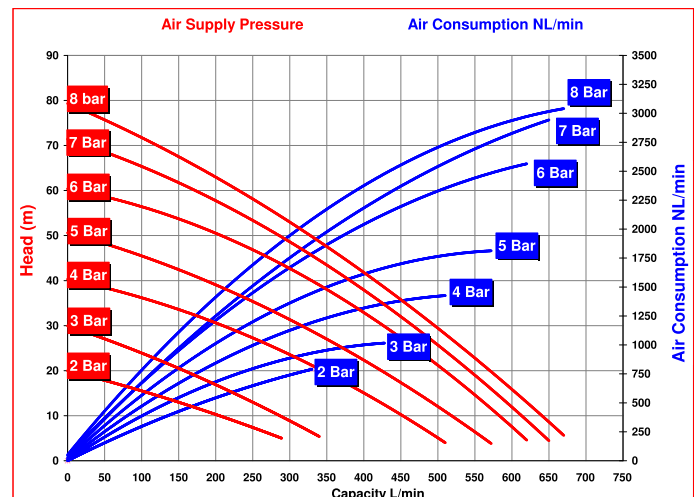
Ruby 151



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 081

Construction materials: **PP, PP+CF, PVDF+CF**



Zone 2 - Zone 22 II 3G Ex h IIB T4 Gc - II 3D Ex h IIB T135°C Dc
Zone 1 - Zone 21 II 2G Ex h IIC T4 Gb - II 2D Ex h IIC T135°C Db
Zone M2 I M2 Ex h I Mb

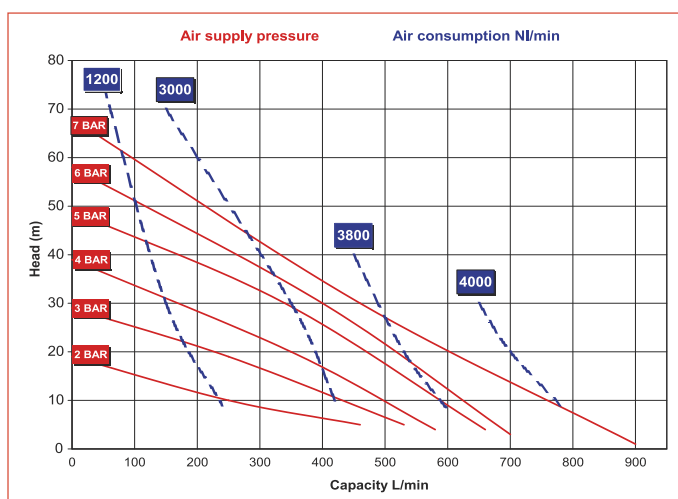
Technical data

Suction / Discharge connections	3" BSP F
Air connection	3/4" BSP F
*Max. flow rate	900 L/min
*Max. self-priming capacity - dry running	4 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	70 m
Max. operating pressure	Min. 2 bar - Max. 7 bar
Max. size of solids	10 mm
Max. operating Temperature	PP: 60°C , PVDF: 95°C
Weight PP	50.0 Kg
Weight PVDF+CF	67.0 Kg

Ruby 081



Performances Ruby 081



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according the construction material.

Ruby 180

Construction materials: **AISI 316, ALUMINUM**



Zone 2 - Zone 22
Zone 1 - Zone 21
Zone M2

II 3G Ex h IIB T4 Gc - II 3D Ex h IIB T135°C Dc
II 2G Ex h IIC T4 Gb - II 2D Ex h IIC T135°C Db
I M2 Ex h I Mb

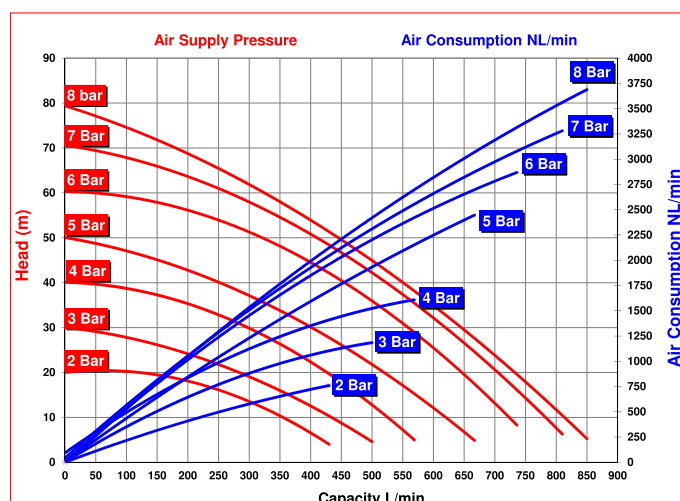
Technical data

Suction / Discharge connections	3" BSP F
Air connection	3/4" BSP F
*Max. flow rate	850 L/min
*Max. self-priming capacity - dry running	5 m
*Max. negative suction head - with pump primed	9.5 m
Max. head	80 m
Max. operating pressure	Min. 2 bar - Max. 8 bar
Max. size of solids	8 mm
Max. operating Temperature	AISI 316 - ALUMINUM: 95°C , w/metallic center block: 130°C
Weight AISI 316	88.0 Kg
Weight ALUMINUM	50.0 Kg

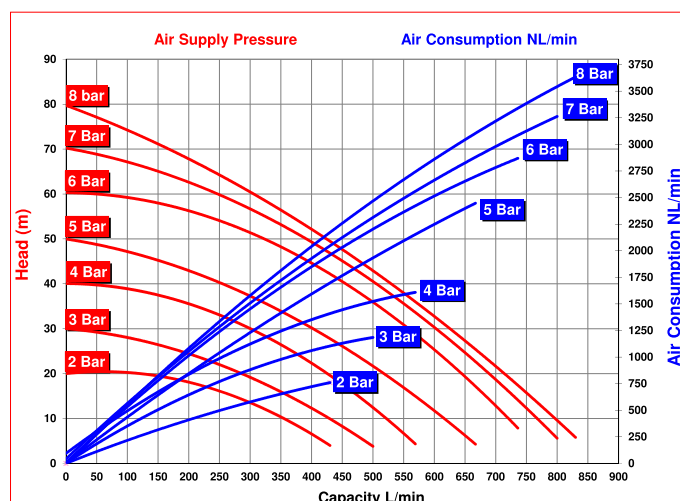
Ruby 180



Performances Rubber Fitted



Performances PTFE+A Fitted



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C and vary according to the construction material.



We Make The Difference

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