MEDICAL EQUIPMENT
BY GREGGERSEN

CATALOG
SUCTION UNITS

there is no substitute

GREGGERSEN

Greggersen vacuum regulators

AWARD-WINNING PERFECTION

QUALITY AND DESIGN

Our benchmark for our products is perfection. That is why we rely on specialists in our departments who always give their best. Our latest innovation – the Pirol and Skua medical vacuum regulators – have been distinguished with the following design awards:

- iF product design award winner 2013
- reddot design award winner 2013
- German Design Award Special Mention 2014
- Good Design Award 2013

Sustained research and development, coordinated with the special needs of our customers in the healthcare market for the past four generations, combined with optimal manufacturing conditions and continuous quality control, ensure the quality and design standard we set for our products: Perfection.

A NEW GENERATOR OF VACUUM REGULATORS

Besides the multiple award-winning design, the Greggersen vacuum regulators also fulfil extremely exacting demands in terms of intuitive operation and innovative equipment. The features of the new Greggersen vacuum regulator product families – Skua, Pirol and Thoraflow – are described as follows.

MADE IN GERMANY

The development, design and production of all Greggersen products is exclusively in Hamburg – Made in Germany. The use of high quality materials means that all products are designed for longevity.

INDIVIDUAL SOLUTIONS

Upon customer request, we offer high flexibility for even the most unconventional solutions.

EASY TO READ ANALOG MANOMETER
Clear numbering, high contrast and a diameter of 50 mm (Thoraflow 60 mm) ensure clarity for the user at all times. The yellow indicator needle is clear and the current aspiration throughput unmistakeable

360° ROTATABLE MANOMETER
This allows you to read the manometer from any perspective required.

SPRING-LOADED RAIL CLAMP
For convenient mounting and demounting in a standard rail in one-handed operation.
(only for devices in rail design)

LARGE ERGONOMIC HAND WHEEL
For continuously variable regulation of aspiration throughput and OFF marking for simple, complete shutdown of the device.

MAXIMUM SAFETY ALSO WITH THE SKUA COMPRESSED AIR VERSION
The silicone ball falls from the device if an overpressure is set on the device. This can happen e.g. due to oversuction and subsequent blockage of the nozzle outlet. The ball always reacts to the development of overpressure towards the patient. The ball dropping out prevents the transfer of overpressure to the patient.

EXCEPTIONALLY USER-FRIENDLY VALVE OPERATION
Quick-closing valve and control valve have been consolidated into a single unit. So you can switch off the device ("OFF" position) with one handgrip and also deliver full throughput with less than one turn.

EASY TO CLEAN MATT METALLIC SURFACE
Large areas, few transitions and edges ensure a high quality impression and easy cleaning of the device.

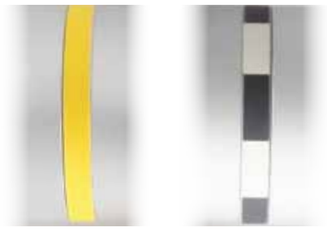
MULTIPLE AWARD-WINNING DESIGN:

German Design Award SPECIAL MENTION 2014

product design award 2013

reddot design award winner 2013

GOOD DESIGN



GAS TYPE SPECIFIC COLOUR CODING ACCORDING TO ISO 32
It is therefore immediately apparent whether the device is operated with vacuum or compressed air.

MED SUCTION UNITS

Pirol vacuum regulator – plug-in unit

VACUUM OPERATED

APPLICATIONS

Medical vacuum regulator for dosing vacuum; with 360° rotatable manometer; large, ergonomic setting hand wheel; plug-in unit for direct coupling to a DIN tapping point.

The setting mechanism allows continuous, accurate and intuitive vacuum regulation. The rotatable manometer allows the user to read the set value from the ideal viewing angle. The Skua vacuum regulator is equipped with an overpressure protection device. The Pirol regulators meet EN ISO 10079-3 specifications.

TECHNICAL DATA

Gas type:	Vacuum / VAC
Primary pressure:	-40 ... -99 kPa
Inlet:	Plug connector in accordance with DIN 13260 Part 2:2013*
Design:	spring-loaded membrane regulator
Material:	Housing: aluminium, anodised; Hand wheel: PA plastic; Membrane: silicone; Plug connector: stainless steel
Regulation range / throughput:	depends on the version – see table below.
Outlet:	9/16"-18 UNF with barbed vacuum connector
Label:	CE 0482
Weight:	490 g
Dimensions (HxDxW):	150x140x50mm (incl. barbed connector)

*other country-specific connections on request (e.g. British Standard BS 5682:1998 or Scandinavian Standard SS 87 524 30:2004, etc.)

PERFORMANCE (The maximum throughput depends on the mains system pressure! Accuracy of the specifications: ± 10 %)

	Regulation range [kPa]	Display range [kPa]	Aspiration throughput [approx. litres free flow / min]
Pirol -90	0 to -90	0 to -100	50 (at -90 kPa)
Pirol -30	0 to -30	0 to -40	45 (at -30 kPa)
Pirol -15	0 to -15	0 to -25	43 (at -15 kPa)

Pirol -90

Pirol -30

Pirol -15

PIROL VACUUM REGULATOR, VAC, PLUG-IN UNIT

Pirol -90 vacuum regulator, plug-in unit DIN	904.500
Pirol -30 vacuum regulator, plug-in unit DIN	904.510
Pirol -15 vacuum regulator, plug-in unit DIN	904.520

Pirol vacuum regulator – rail-mounted unit

VACUUM OPERATED

APPLICATIONS

Medical vacuum regulator for dosing vacuum; the vacuum is generated by means of medical air according to the Venturi principle. With 360° rotatable manometer; large, ergonomic setting hand wheel; rail-mounted unit incl. spring-loaded rail clamp for attaching to a standard 25x10mm rail. The gas inlet is integrated into the rail clamp (NIST). The setting mechanism allows continuous, accurate and intuitive vacuum regulation. The rotatable manometer allows the user to read the set value from the ideal viewing angle. The Pirol regulators meet EN ISO 10079-3 specifications.

TECHNICAL DATA

Gas type:	Vacuum / VAC
Primary pressure:	-40 ... -99 kPa
Inlet:	NIST housing according to DIN EN ISO 5359:2012
Design:	spring-loaded membrane regulator
Material:	Housing: aluminium, anodised; Hand wheel: PA plastic; Membrane: silicone; spring-loaded rail clamp: aluminium, anodised
Regulation range / throughput:	depends on the version – see table below.
Outlet:	9/16"-18 UNF with barbed vacuum connector
Label:	CE 0482
Weight:	630 g
Dimensions (HxDxW):	150x140x50mm (incl. barbed connector)

PERFORMANCE (The maximum throughput depends on the mains system pressure! Accuracy of the specifications: ± 10 %)

	Regulation range [kPa]	Display range [kPa]	Aspiration throughput [approx. litres free flow / min]
Pirol -90	0 to -90	0 to -100	50 (at -90 kPa)
Pirol -30	0 to -30	0 to -40	45 (at -30 kPa)
Pirol -15	0 to -15	0 to -25	43 (at -15 kPa)

Pirol -90

Pirol -30

Pirol -15

PIROL VACUUM REGULATOR, VAC, RAIL-MOUNTED UNIT NIST, WITHOUT CONNECTING HOSE

Connecting hose, see product group accessories

Pirol -90 vacuum regulator, rail-mounted unit NIST	904.501
Pirol -30 vacuum regulator, rail-mounted unit NIST	904.511
Pirol -15 vacuum regulator, rail-mounted unit NIST	904.521

Skua vacuum regulator – plug-in unit

COMPRESSED AIR OPERATED

APPLICATIONS

Medical vacuum regulator for dosing vacuum; the vacuum is generated by means of medical air according to the Venturi principle. With a 360° rotatable manometer; large, ergonomic setting hand wheel; plug-in unit for direct coupling to a DIN tapping point. The setting mechanism allows continuous, accurate and intuitive vacuum regulation. The rotatable manometer allows the user to read the set value from the ideal viewing angle. The Skua vacuum regulator is equipped with an overpressure protection device. The Skua regulators meet EN ISO 10079-3 specifications.

TECHNICAL DATA

Gas type:	med. compressed air / AIR
Primary pressure:	450 kPa ± 50 kPa
Inlet:	Plug connector in accordance with DIN 13260 Part 2:2013*
Design:	Vacuum generation according to the Venturi principle
Material:	Housing: aluminium, anodised; Hand wheel: PA plastic; Plug connector: stainless steel
Regulation range / throughput / consumption:	depends on the version – see table below.
Outlet:	9/16"-18 UNF with barbed vacuum connector
Label:	CE 0482
Weight / Dimensions (HxDxW):	550 g / 150x160x50 mm (incl. barbed connector)

*other country-specific connections on request (e.g. British Standard BS 5682:1998 or Scandinavian Standard SS 87 524 30:2004, etc.)

PERFORMANCE (The maximum throughput depends on the mains system pressure! Accuracy of the specifications: ± 10 %)

	Regulation range [kPa]	Display range [kPa]	Aspiration throughput [approx. litres free flow / min]	Compressed air [approx. litre/min]
Skua -90	0 to -85	0 to -100	22 (at -85 kPa)	30 (at -85 kPa)
Skua -30	0 to -30	0 to -40	28 (at -30 kPa)	25 (at -30 kPa)
Skua -15	0 to -15	0 to -25	20 (at -15 kPa)	22 (at -15 kPa)

Skua -90

Skua -30

Skua -15

SKUA VACUUM REGULATOR, AIR, PLUG-IN UNIT DIN

Skua -90 vacuum regulator, AIR, plug-in unit DIN	904.540
Skua -90 vacuum regulator, AIR/O2 combined, plug-in unit DIN	904.542
Skua -30 vacuum regulator, AIR, plug-in unit DIN	904.550
Skua -15 vacuum regulator, AIR, plug-in unit DIN	904.560

Skua vacuum regulator – rail-mounted unit

COMPRESSED AIR OPERATED

APPLICATIONS

Medical vacuum regulator for dosing vacuum; the vacuum is generated by means of medical air according to the Venturi principle. With 360° rotatable manometer; large, ergonomic setting hand wheel; rail-mounted unit incl. spring-loaded rail clamp for attaching to a standard 25x10mm rail. The gas inlet is integrated into the rail clamp (NIST). The setting mechanism allows continuous, accurate and intuitive vacuum regulation. The rotatable manometer allows the user to read the set value from the ideal viewing angle. The Skua vacuum regulator is equipped with an overpressure protection device. The Skua vacuum regulator is equipped with an overpressure protection device.

The Skua regulators meet EN ISO 10079-3 specifications.

TECHNICAL DATA

Gas type:	med. compressed air / AIR
Primary pressure:	450 kPa ± 50 kPa
Inlet:	NIST housing according to DIN EN ISO 5359
Design:	Vacuum generation according to the Venturi principle
Material:	Housing: aluminium, anodised; Hand wheel: PA plastic; Spring-loaded rail clamp: aluminium, anodised
Regulation range / throughput / consumption:	depends on the version – see table below.
Outlet:	9/16"-18 UNF with barbed vacuum connector
Label:	CE 0482
Weight / Dimensions (HxDxW):	680 g / 150x160x50 mm (incl. barbed connector)

PERFORMANCE (The maximum throughput depends on the mains system pressure! Accuracy of the specifications: ± 10 %)

	Regulation range [kPa]	Display range [kPa]	Aspiration throughput [approx. litres free flow / min]	Compressed air [approx. litre/min]
Skua -90	0 to -85	0 to -100	22 (at -85 kPa)	30 (at -85 kPa)
Skua -30	0 to -30	0 to -40	28 (at -30 kPa)	25 (at -30 kPa)
Skua -15	0 to -15	0 to -25	20 (at -15 kPa)	22 (at -15 kPa)

Skua -90

Skua -30

Skua -15

SKUA VACUUM REGULATORS, AIR, RAIL-MOUNTED UNIT NIST, WITHOUT CONNECTING HOSE

Connecting hose, see product group accessories

Skua -90 vacuum regulator, AIR, rail-mounted unit NIST	904.541
Skua -90 vacuum regulator, AIR/O2 combined, rail-mounted unit NIST	904.543
Skua -30 vacuum regulator, AIR, rail-mounted unit NIST	904.551
Skua -15 vacuum regulator, AIR, rail-mounted unit NIST	904.561

MED SUCTION UNITS

Thoraflow vacuum regulator

VAKUUM OPERATED

Thoraflow is a special development for use in thorax drainage. The regulator combines precise and intuitive regulation with very high aspiration throughput. Based on the regulation range 0 to -50 cm H2O, Thoraflow allows aspiration throughputs up to 25 l/min. The regulator thus compensates leakages and fistulations without a drop in pressure. The 360° rotatable manometer allows the user to read the set value from the ideal viewing angle.

TECHNICAL DATA

Gas type:	Vacuum / VAC
Primary pressure:	0...-99 kPa
Inlet:	Plug-in unit: In accordance with DIN 13260 Part 2: 2013*
	Rail-mounted unit: NIST housing in accordance with
	DIN EN ISO 5339:2012
Design:	spring-loaded membrane regulator
Material:	Housing: aluminium, anodised
	Hand wheel: PA plastic; Membrane: silicone;
	Plug connector: stainless steel
Regulation range	0...-50 hPa
Outlet:	9/16"-18 UNF with barbed vacuum connector
Dimensions (WxHxD) / Weight:	154 x 64 x 182 mm / 634 g (plug-in unit)
	155 x 64 x 182 mm / 762 g (rail-mounted unit)

*other country-specific connections on request (e.g. British Standard BS 5682:1998 or Scandinavian Standard SS 87 524 30:2004, etc.)

PERFORMANCE (The maximum throughput depends on the mains system pressure! Accuracy of the specifications: ± 10 %)

	Regulation range [hPa*]	Display range [hPa*]	Aspiration throughput [approx. litres free flow / min]
Thoraflow	0 to -50	0 to -60	25 (at -50 hPa)

*1 hPa ≈ 1 cm H_2O ≈ 0.1 kPa)

THORAFLOW VACUUM REGULATOR

Thoraflow vacuum regulator, VAC, plug-in unit DIN	904.570
Thoraflow vacuum regulator, VAC, rail-mounted unit NIST	904.571

Swan water vacuum regulator

VAKUUM OPERATED

Application example

APPLICATIONS

Used in continuous drainage for fine adjustment of the vacuum by means of the water column's height. With an integrated control valve. Available as a plug-in unit for direct connection to a vacuum tapping point or as a rail-mounted unit, NIST housing inlet. The vacuum is enabled via the integrated control valve and the suction needed for aspiration is generated. As soon as air bubbles become visible at the lower end of the immersion tube, the low pressure set via the immersion tube has been reached. If no vacuum is available, it can be generated via an ejector from medical air.

TECHNICAL DATA

Gas type:	Vacuum / VAC
Primary pressure:	-40...-99 kPa (vacuum operation)
Inlet:	Plug-in unit: In accordance with DIN 13 260 Part 2: 2013
	Rail-mounted unit: NIST housing in accordance with
	DIN EN ISO 5339:2012
Design:	Water vacuum gauge with immersion tube
Material:	polycarbonate water pipe;
	Regulator unit and caps: brass, chrome-plated
	Dipstick: stainless steel
Regulation range	continuously controllable between 0 and -30/-50 cm H_2O*
Outlet:	9/16-18 UNF with barbed vacuum connector

PERFORMANCE (The maximum throughput depends on the mains system pressure! Accuracy of the specifications: ± 10 %)

	Regulation range and display range [cm H_2O*]	Aspiration throughput [approx. litres free flow / min]
Swan 30	0 to 35	10 (at -30 cm H_2O*)
Swan 50	0 to 50	10 (at -50 cm H_2O*).

*1 hPa ≈ 1 cm H_2O ≈ 0.1 kPa)

rail mounted unit

plug-in unit

WATER VACUUM REGULATOR SWAN, VAC

Connecting hose, see product group accessories

Swan 30 water vacuum regulator, plug-in unit DIN	904.908
Swan 30 vacuum regulator, rail-mounted unit NIST	902.694
Swan 50 water vacuum regulator, plug-in unit DIN	904.909
Swan 50 vacuum regulator, rail-mounted unit NIST	904.905

ACCESSORIES NECESSARY FOR OPERATION WITH COMPRESSED AIR EJECTOR

Vacuum connecting hose, complete with screw connector, L: 0.5m	900.359

Varioport aspiration unit

VACUUM OPERATED / COMPRESSED AIR OPERATED

APPLICATIONS

Medical, portable vacuum aspiration unit for 2 drainage containers.

Universal fittings for all container types. Commercially available containers between 0.5 and 3.0 litres from various manufacturers can be accommodated (e.g. Serres, Abbott, Medela, Ardo, Cardinal and many other makes).

The carrying frame has a stable handgrip and a fitting for 25x10 mm and 30x10 mm standard wall-mounted rails. The vacuum regulator is located at the front, which affords the user rapid and direct access. The NIST gas inlet is located at the back of the unit, such that the supply hose is outside the working area.

All Pirol and Skua regulators meet DIN EN ISO 10079-3 specifications.

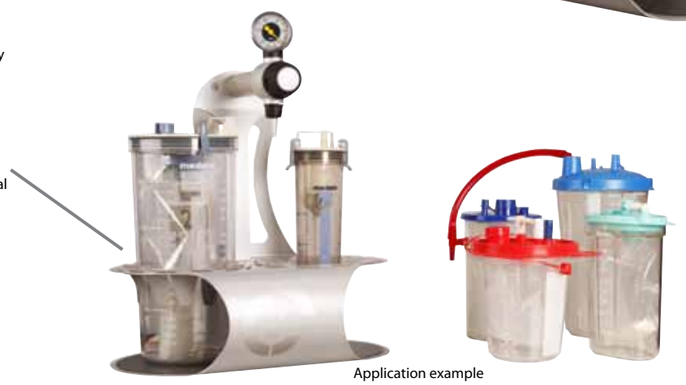
SCOPE OF DELIVERY
- Pirol or Skua vacuum regulators
- Manometer 360° rotatable
- Carrying frame, coated
- 2 x highly flexible holding cuffs

TECHNICAL DATA

Gas type:	Vacuum / VAC
	medical air / AIR
Inlet:	NIST housing according to DIN EN ISO 5359: 2012
Outlet:	9/16"-18 UNF with barbed vacuum connector
Weight:	approx. 3 kg (without container)

Please find the technical data for the respective regulator on page 05 or 07.

Universal fittings for all container types. Commercially available containers between 0.5 and 3.0 litres from various manufacturers can be accommodated (e.g. Serres, Abbott, Medela, Ardo, Cardinal and many other makes).



Application example

PIROL VARIOPORT ASPIRATION UNIT Connecting hose, see product group accessories

Pirol -90 Varioport aspiration unit, VAC, NIST	904.580

SKUA VARIOPORT ASPIRATION UNIT Connecting hose, see product group accessories

Skua -90 Varioport aspiration unit, AIR, NIST	904.581
Skua -90 Varioport aspiration unit, AIR/O2, NIST	904.582

VARIOPORT ASPIRATION UNIT

Varioport cuff, sales unit = 2	902.125

Wheeled aspiration unit

VACUUM OPERATED / COMPRESSED AIR OPERATED

APPLICATIONS

Medical, wheeled surgical aspiration unit for vacuum (Pirol -90) or compressed air operation (Skua -90), including regulator for suction dosing, wheeled frame to accommodate 2 x 5 litre bottles (drainage bottles with integrated overflow protection). A rail clamp is integrated into the drainage bottle's top, making it possible to attach it to a standard wall-mounted rail. The manometer is 360° rotatable. The complete unit is mounted on a wheeled frame.

All Pirol and Skua regulators meet DIN EN ISO 10079-3 specifications.

Compressed air connection hose (not included in the scope of delivery!)

Vacuum connection hose (not included in the scope of delivery!)

TECHNICAL DATA

Design:	Wheeled frame (4 rollers, 2 with brakes) stainless steel, regulator brass, anodised
Drainage bottle:	2 x 5 l volume
Material:	PVC sterilisable up to 134 °C
Outlet:	barbed hose connector for silicone hose ND 6
Dimensions (WxHxD) / weight:	500 x 850 x 400 mm / 7kg Empty container 1.2 kg

Please find the technical data for the respective regulator on page 05 or 07.

ASPIRATION UNIT, WHEELED WITHOUT CONNECTING HOSE Connecting hose, see product group accessories

Pirol aspiration unit, wheeled with 2 bottles each 5 l, VAC, NIST	902.635
Skua aspiration unit, wheeled with 2 bottles each 5 l, AIR, NIST	902.634

Accessories

FOR GREGGERSEN VACUUM REGULATORS

PIROL AND SKUA VACUUM REGULATOR ACCESSORIES

Hose connector for vacuum unit with 9/16" union nut	900.634
Pirol/Skua VAC manometer , d=50mm, 0 to -100 kPa	902.750
Pirol/Skua VAC manometer , d=50mm, 0 to -40 kPa	902.751
Pirol/Skua VAC manometer , d=50mm, 0 to -25 kPa	902.752
Thoraflow VAC manometer , d=63mm, 0 to -60 hPa	902.753
Viewing plate f. Skua and Pirol manometers, all versions, sales unit = 10 pcs.	900.317
Viewing plate f. Thoraflow manometer, sales unit = 10 pcs.	900.318

DRAINAGE OVERFLOW BOTTLE

Drainage overflow bottle (250 ml) to protect the vacuum regulator against oversuction with secretion or body fluids.

TECHNICAL DATA

Inlet:	9/16"-18 UNF union nut
Material:	Head: brass, chrome-plated / Union nut: plastic Bottle: APEC plastic, 0.25 l (sterilisable up to 134 °C)
Outlet:	Barbed vacuum connector

DRAINAGE OVERFLOW BOTTLE

Overflow bottle	900.913

MED SUCTION UNITS

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GREGGERSEN