

nash\_elmo

### Description:

2BL series central vacuum systems are designed with our revolutionary self-contained liquid ring vacuum pumps at the heart of the system. Ideal for medical, laboratory and waste anesthesia gas disposal (WAGD) applications. The fully automated system can be either tank mounted or base mounted; vertical or horizontal configurations.

All systems are completely factory assembled, tested, pre-wired & pre-piped in a lead-lag configuration. Standard systems consist of:

- 2BL vacuum pumps
- ASME coded receivers
- Isolation valves
- Check valves
- Flexible connectors
- Vibration isolators
- Inlet filters
- Vacuum gauge
- Receiver by-pass
- UL approved control panel with thru-the-door disconnects.

*\*Control panels are also available with programmable controller with plug-in EEPROM module.*



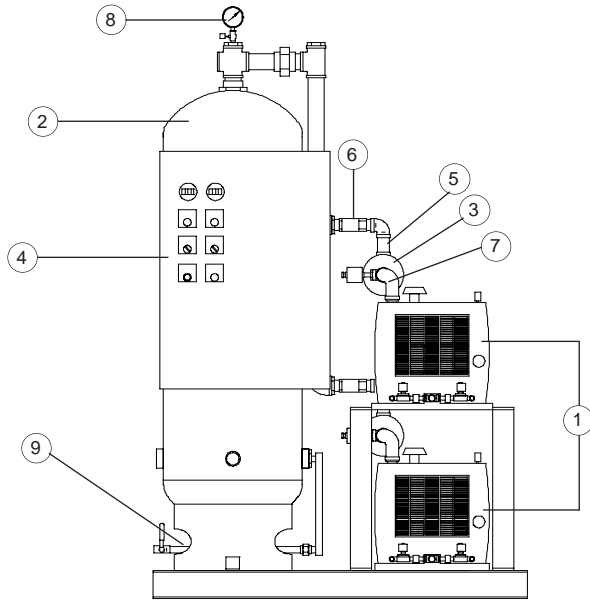
SCS-2BL1341-2BAE

### Features:

- Ideal for Waste Anesthesia Gas Disposal - no hydrocarbons, low operating temperature
- 100% recirculating water circuit
- Environmentally friendly-oil free
- Customized configurations to meet space restrictions
- Maintenance free
- Air cooled
- NFPA 99 compliant (optional)
- System capacities from 20 CFM to 720 CFM
- Redundancy will eliminate downtime
- Automatic alternation
- Capable of handling liquid slugs in the process stream

System Layout:

Legend:



- ① 2BL Vacuum Pump
- ② Receiver
- ③ Inlet Filter
- ④ Control Panel
- ⑤ Check Valve
- ⑥ Pump Isolation Valve
- ⑦ Flexible Connector
- ⑧ Vacuum Gauge
- Receiver Drain



**SEMEL - United Suppliers For Israel Ltd.**  
3 Hevron St. P.O.B 7355 Ramat-Gan 52172, Israel  
Tel: 972-3-6764586, Fax: 972-3-6771280



## 2BL Series Vacuum Pumps Oil - Free Patented Technology

VACUUM

### 100% Fully Recirculating Liquid Ring Vacuum Pump

The 2BL series vacuum pump is an ideal alternative to rotary vane vacuum pumps as well as older liquid ring technology.

This revolutionary product requires no external water supply or oil, and it is remarkably easy to use... just plug it in and let it run. Take a close look at the 2BL's features and you'll agree... vacuum technology has taken a giant leap forward.

### The Totally Cool Pump. An Ingenious Principle.

With an operating temperature that stays below 110°F, the patented 2BL cools exhausted air below the intake temperature, and dries it at the same time. Cool, clean air is the only thing discharged. Condensed water returns to the internal water system, so there's no need for an external water supply.



**Features:**

- Oil free
- Maintenance free
- Self-contained internal water circuit
- Compact, quiet and cool running
- Capacity of 20 to 180 cfm; generates 28.5 inches of HgV
- Insensitive to dust and water vapor
- Discharges totally clean air

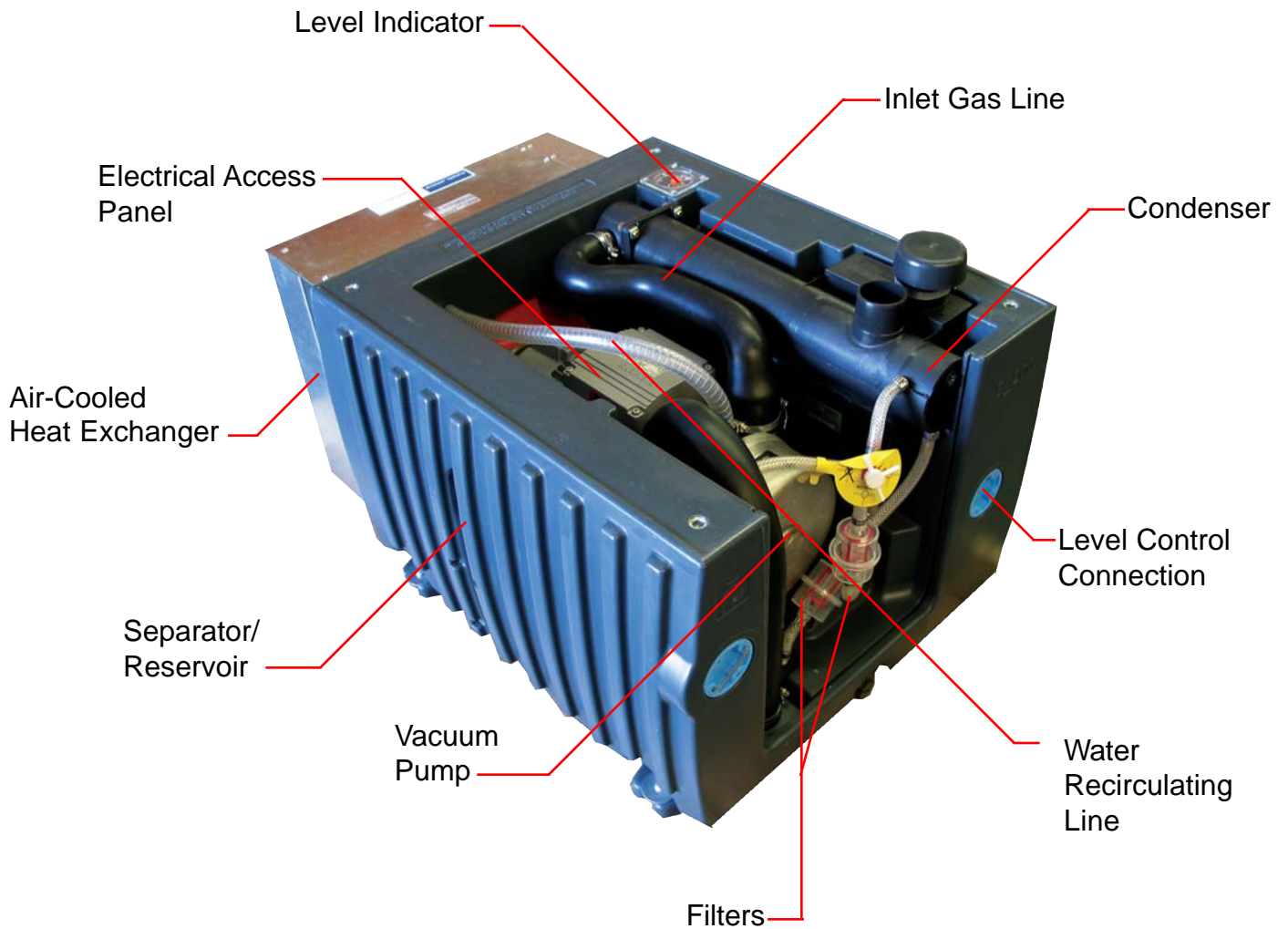
**Typical Applications:**

• Ground Water Extraction	• Soil Vapor Extraction
• Food and Pharmaceutical Packaging	• De-aeration/ De-gassing
• Thermoforming	• Filtration
• Rubber Molding	• Drying
• Medical and Anesthesia Evacuation	• Paper Converting
• Pick and Place	• Impregnation
• Vacuum Routing	• Holding, Lifting, Chucking
• Pneumatic Vacuum Conveying	• Distillation
• Central Vacuum Systems	• Filling
	• Liquid Transfer

VACUUM

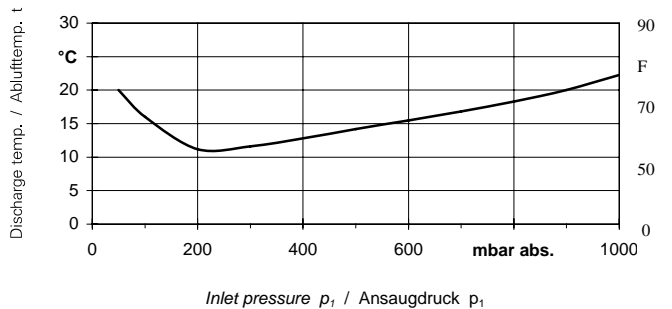
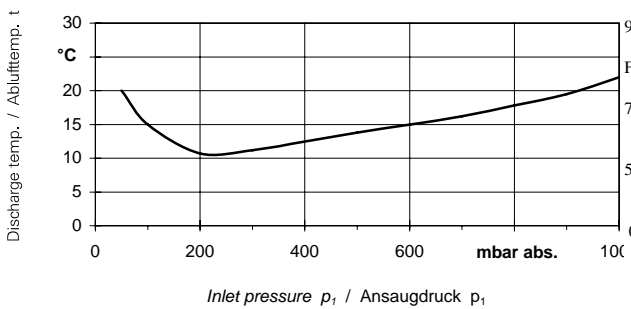
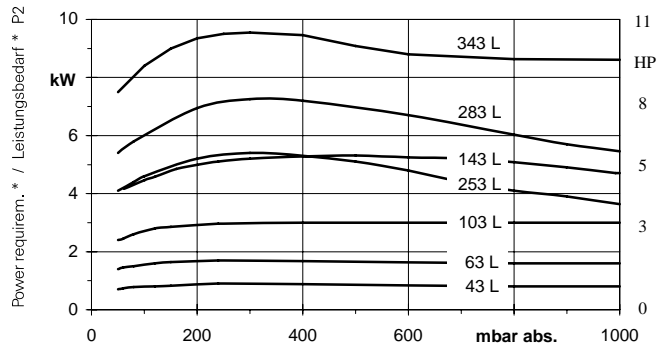
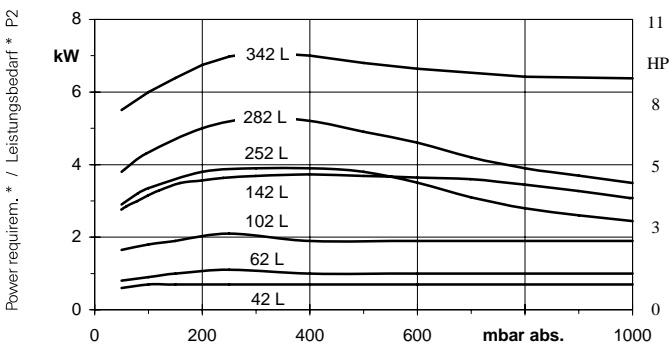
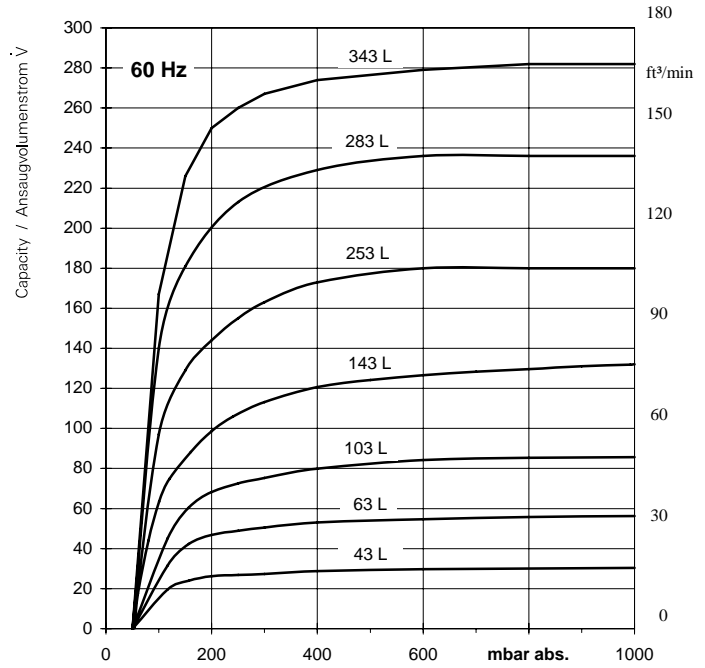
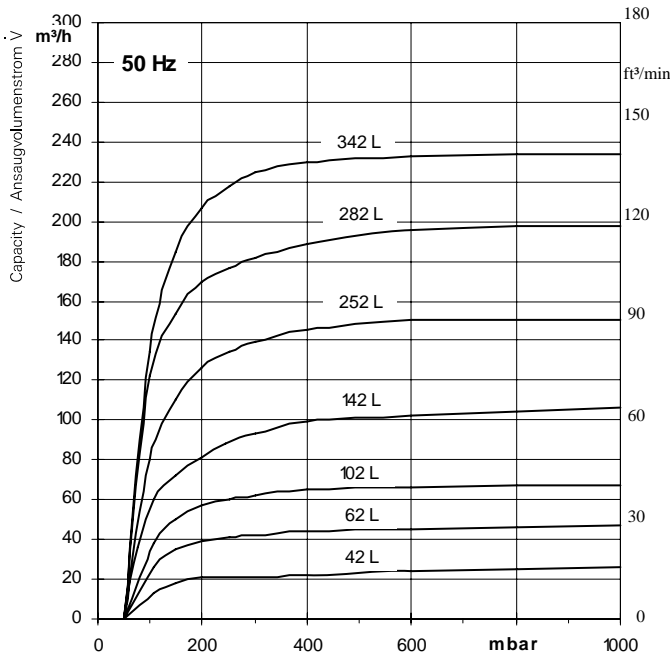
Principle of Operation

Heat is removed from the closed loop water circuit by an air-cooled heat exchanger. A small amount of water from the closed loop water circuit is injected at the inlet of the '2BL' vacuum pump. Under vacuum, this stream is vaporized and, as a result, the inlet air to the pump is cooled. Utilizing a shell and tube heat exchanger, the cooled inlet air in turn cools the exhaust air stream. Water vapor in the exhaust air is condensed and returned to the separator tank.





# S\_200 Types 2BL2 041 ... 2BL2 341



<sup>1)</sup> Power requirement  $P_2$  at pump shaft.

<sup>1)</sup> Leistungsbedarf  $P_2$  an der Pumpenwelle.

Performance data are based on handling atmospheric air with 50 % rel. humidity. Ambient temperature 20 °C (69 °F). Ambient pressure 1013 mbar (30 inches Hg). Tolerance: ± 10 %.

Die Kennlinien gelten für atmosphärische Luft mit 50 % relativer Feuchte. Umgebungstemperatur 20 °C. Umgebungsdruck 1013 mbar. Toleranz: ± 10 %.

Technical data • Technische Daten							
Curve	Fre- quency	Motor			Sound pressure level <sup>1)</sup>	Order-No.	Weight (empty) approx.
		Rated output	Rated voltage	Rated current			
Kenn- linie	Fre- quenz	Motor			Schall- druck- pegel <sup>1)</sup>	Bestell-Nr.	Leer- Gewicht etwa
No./Nr		Bemessungs- leistung	Bemessungsspannung	Bemessungs- strom			
		kW / hp	V	A	dB(A)	cast iron / Grauguss	kg / lbs
<b>50 / 60 Hz, IP 55</b>							
<b>42 L</b>	<b>50 Hz</b>	0,83 / 1.1	200 ... 240 Δ / 345 ... 415 Y	5,0 Δ / 2,9 Y	63	<b>2BL2 041-2AH50-4A ●</b>	38 / 83.8
<b>43 L</b>	<b>60 Hz</b>	1,04 / 1.4	200 ... 275 Δ / 345 ... 480 Y	5,0 Δ / 2,9 Y	66		
<b>62 L</b>	<b>50 Hz</b>	1,2 / 1.6	200 ... 240 Δ / 345 ... 415 Y	9,5 Δ / 5,5 Y	67	<b>2BL2 061-1AH50-4A ●</b>	55 / 121
<b>63 L</b>	<b>60 Hz</b>	1,6 / 2.2	200 ... 275 Δ / 345 ... 480 Y	9,5 Δ / 5,5 Y	70		
<b>102 L</b>	<b>50 Hz</b>	2,4 / 3.2	200 ... 240 Δ / 345 ... 415 Y	16,6 Δ / 9,6 Y	70	<b>2BL2 101-2AH50-4A ●</b>	68 / 150
<b>103 L</b>	<b>60 Hz</b>	3,5 / 4.7	200 ... 275 Δ / 345 ... 480 Y	16,6 Δ / 9,6 Y	74		
<b>142 L</b>	<b>50 Hz</b>	3,85 / 5.2	200 ... 240 Δ / 345 ... 415 Y	20,8 Δ / 12,0 Y	73	<b>2BL2 141-2AH50-4A ●</b>	105 / 232
<b>143 L</b>	<b>60 Hz</b>	5,2 / 6.9	200 ... 275 Δ / 345 ... 480 Y	20,8 Δ / 12,0 Y	77		
<b>252 L</b>	<b>50 Hz</b>	4,0 / 5.4	345 ... 415 Δ	11,0 Δ	67	<b>2BL2 251-0KH01-7A ●</b>	195 / 430
<b>253 L</b>	<b>60 Hz</b>	6,2 / 8.3	380 ... 480 Δ	11,5 Δ	71		
<b>282 L</b>	<b>50 Hz</b>	5,5 / 7.4	345 ... 415 Δ	16,0 Δ	70	<b>2BL2 281-0KH03-7A ●</b>	210 / 463
<b>283 L</b>	<b>60 Hz</b>	8,2 / 11.0	380 ... 480 Δ	16,0 Δ	73		
<b>342 L</b>	<b>50 Hz</b>	7,5 / 10.1	345 ... 415 Δ	21,0 Δ	71	<b>2BL2 341-0KH03-7A ●</b>	225 / 496
<b>343 L</b>	<b>60 Hz</b>	11,4 / 15.3	380 ... 480 Δ	21,5 Δ	76		

●) 2BL2: incl. connection parts.

●) 2BL2: einschl. Anschlussstücke.

Note: all Imperial values are only approximately.

Hinweis: alle Imperial-Werte sind gerundet.

Other voltages • Andere Spannungen		
	2BL2 041 ... 2BL2 141	2BL2 251 ... 2BL2 341
	2BL2 ... - ... -	2BL2 ... - ... -
<b>50 Hz, 3~</b>		
185 ... 220 V Δ / 320 ... 380 V Y	H .. - 0	H .. - 0
200 ... 240 V Δ / 345 ... 415 V Y	H .. - 4	---
220 ... 240 V Δ / 380 ... 415 V Y	H .. - 8	H .. - 8
345 ... 415 Δ	H .. - 7	H .. - 7
500 V Δ	C .. - 5	H .. - 5
<b>60 Hz, 3~ :</b>		
200 ... 254 V Δ / 346 ... 440 V Y	H .. - 0	H .. - 0
200 ... 275 V Δ / 345 ... 480 V Y	H .. - 4	---
220 ... 275 V Δ / 380 ... 480 V Y	H .. - 8	H .. - 8
380 ... 480 Δ	H .. - 7	H .. - 7
575 V Δ	C .. - 5	H .. - 5
<i>Rated voltage according to DIN EN 60 034 / DIN IEC 34-1 ± 10%</i> Bemessungsspannung nach DIN EN 60 034 / DIN IEC 34-1 ± 10%		
<b>other voltages</b> <b>andere Spannungen</b>	<i>on request (add. price)</i> auf Anfrage (Mehrpreis)	<i>on request (add. price)</i> auf Anfrage (Mehrpreis)

<sup>1)</sup> Measured-surface sound-pressure level according to DIN EN 21680 part 1 / ISO 1680-1, measured at a distance of 3 ft (1 m) at approx. 27 to 26 inch Hg vac. (80 to 120 mbar) inlet pressure, suction pipe connected. Tolerance ± 3 dB(A).

<sup>1)</sup> Meßflächenschalldruckpegel nach DIN EN 21680 Teil 1 / ISO 1680-1, gemessen in 1 m Abstand bei einem Ansaugdruck von 80 bis 120 mbar und angeschlossener Saugleitung. Toleranz ± 3 dB(A).

**Accessories:** see separate Data Sheet.

**Zubehör:** siehe separates Datenblatt.

**Other Materials • Andere Materialien**

		2BL2 041 ... 2BL2 141	2BL2 251 ... 2BL2 341
		2BL2 ... - . . . . - . . . .	2BL2 ... - . . . . - . . . .
		↑	↑
<i>Standard version Cast iron</i>	Standardausführung Grauguss	<b>A</b>	<b>K</b>
<i>Non-cast-iron version</i>	Graugussfreie Ausführung	-	<b>R</b>
<i>Copper and brass free version</i>	Buntmetallfreie Ausführung	<b>C</b> <sup>2)</sup>	<b>C</b>
<i>Partially stainless steel version</i>	Teil-Edelstahlausführung	-	<b>B</b>
<i>Stainless steel version</i>	Edelstahlausführung	-	<b>H</b>

<b>Denomination / Benennung</b>	<b>A</b> (2BL2 041 ... 2BL2 141) <b>K</b> (2BL2 251 ... 2BL2 341)	<b>C</b> (2BL2 041 ... 2BL2 341)
<i>Monobloc pump / Blockpumpe</i> <b>2BL2 041 ... 141</b> Lantern / Casing / Port Plate / Impeller Laterne / Gehäuse / Steuerscheibe / Laufrad	GG / SS / SS / Bronze GG / Edelst. / Edelst. / Bronze	GG / SS / SS / SS GG / Edelst. / Edelst. / Edelst.
<i>Monobloc pump / Blockpumpe</i> <b>2BL2 251 ... 341</b> Cover / Casing / Port Plate / Impeller Deckel / Gehäuse / Steuerscheibe / Laufrad	GG / GG+ARC / GG / Bronze GG / GG+ARC / GG / Bronze	GG / GG+ARC / GG / SS GG / GG+ARC / GG / Edelst.
<i>Internal piping (suction- and discharge side)</i> Interne Verrohrung (saug- und druckseitig) <i>For / für</i> 2BL2 041 ... 2BL2 141	EPDM / Brass / Plastic EPDM / Messing / Kunststoff	EPDM / Plastic EPDM / Kunststoff
<i>For / für</i> 2BL2 251 ... 2BL2 341	Cast iron / EPDM / Brass / Plastic Temperguss / EPDM / Messing / Kunststoff	SS / EPDM / Plastic Edelstahl / EPDM / Kunststoff
<i>Water cooler / air-water cooler</i> Wasserkühler / Luft-Wasserkühler	<i>Pipes in copper</i> Rohre in Kupfer	<i>Pipes in SS</i> Rohre in Edelstahl
<i>Condensation cooler</i> Kondensationskühler	<i>Pipes in brass</i> Rohre in Messing	<i>Pipes in SS</i> Rohre in Edelstahl
<i>Throttle sleeves / injection nozzle</i> Drosselhülsen / Einspritztülle	Brass Messing	SS Edelstahl
<i>Drain of seperator</i> Abscheiderentleerung	SS / PP Edelst. / PP	SS / PP Edelst. / PP

<b>Denomination / Benennung</b>	<b>B</b> <sup>3)</sup>	<b>R</b> <sup>3)</sup>	<b>H</b> <sup>3)</sup>
<i>Monobloc pump / Blockpumpe</i> <b>2BL2 251 ... 341</b> Cover / Casing / Port Plate / Impeller Deckel / Gehäuse / Steuerscheibe / Laufrad	GG / GG+ARC / SS / Bronze GG / GG+ARC / Edelst. / Bronze	SS / SS / SS / Bronze Edelst. / Edelst. / Edelst. / Bronze	SS / SS / SS / SS Edelst. / Edelst. / Edelst. / Edelst.
<i>Internal piping (suction and discharge side)</i> Interne Verrohrung (saug- und druckseitig) <i>For / für</i> 2BL2 251 ... 2BL2 341	SS / EPDM / Brass / Plastic Edelst. / EPDM / Messing / Kunststoff	SS / EPDM / Brass / Plastic Edelst. / EPDM / Messing / Kunststoff	SS / EPDM / Plastic Edelst. / EPDM / Kunststoff
<i>Water cooler / air-water cooler</i> Wasserkühler / Luft-Wasserkühler	<i>Pipes in copper</i> Rohre in Kupfer	<i>Pipes copper</i> Rohre in Kupfer	<i>Pipes in SS</i> Rohre in Edelstahl
<i>Condensation cooler</i> Kondensationskühler	<i>Pipes in brass</i> Rohre in Messing	<i>Pipes in brass</i> Rohre in Messing	<i>Pipes in SS</i> Rohre in Edelstahl
<i>Throttle sleeves / injection nozzle</i> Drosselhülsen / Einspritztülle	Brass Messing	Brass Messing	SS Edelstahl
<i>Drain of seperator</i> Abscheiderentleerung	SS / PP Edelst. / PP	SS / PP Edelst. / PP	SS / PP Edelst. / PP

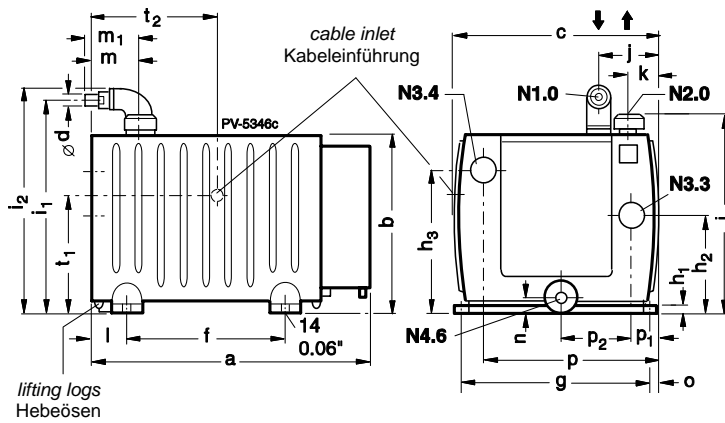
2) Available end of 2005

2) Lieferbar ab Ende 2005

3) Not available for 2BL2 041 ... 2BL2 141

3) Nicht lieferbar für 2BL2 041... 2BL2 141

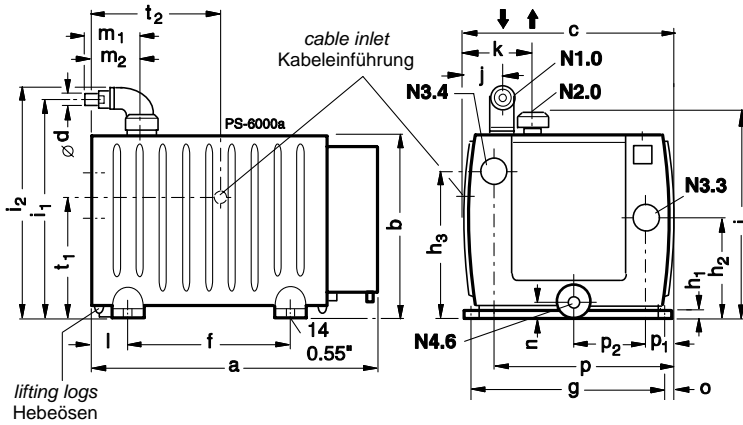
mm  
inches



- N1.0 Suction connection
- N2.0 Discharge connection
- N3.3 Connection for intake or overflow regulator
- N3.4 Fill opening
- N4.6 Drainage opening

- N1.0 Saugstutzen
- N2.0 Abluftstutzen
- N3.3 Anschluß Zu- oder Ablaufregler
- N3.4 Einfüllöffnung
- N4.6 Entleerungsöffnung

2BL2 041 ... 2BL2 101



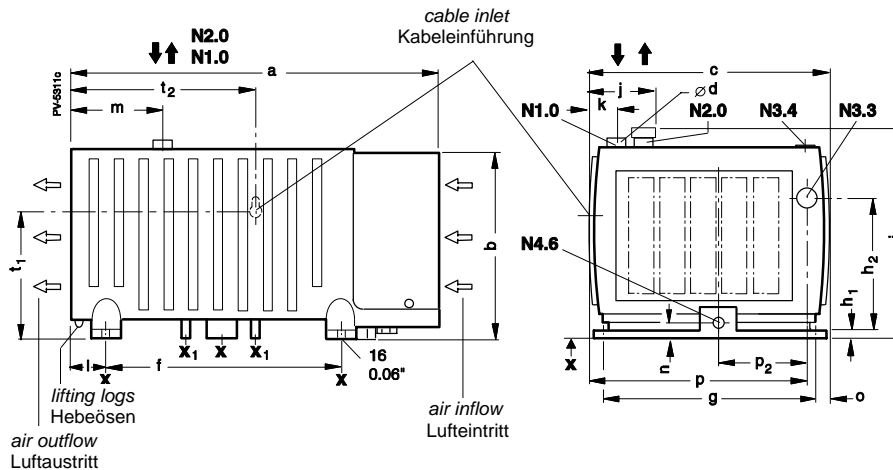
2BL2 141

Type / Typ	a	b	c	f	g	h1	h2	h3	i1	i2	j	k	l	m1	m2	n	o	p	p1
2BL2 041	602 23.7	390 15.3	432 17	345 13.6	370 14.6	25 1	210 8.3	272 10.7	463 18.2	486 19.9	121 4.8	70 2.6	80 3.1	122 4.8	116 4.6	40 1.6	36 1.4	380 15	63 2.5
2BL2 061	743 29.2	436 17.2	572 22.5	450 17.7	495 19.5	25 1	218 8.6	278 10.9	522 21.3	553 22.6	178 7	108 4.3	85 3.3	162 4.7	120 6.1	35 1.4	39 1.5	514 20.2	108 4.3
2BL2 101	761 30																		
2BL2 141	920 36.3	511 20.1	682 26.9	570 22.5	585 23.0	25 1	179 7.0	239 9.4	605 23.9	636 25.0	104 4.1	174 6.9	90 3.5	225 8.9	162 6.4	35 1.4	49 1.9	559 22.0	81 3.2

Type / Typ	p2	t1	t2	N1.0 (∅ d)	N3.3	N3.4	N4.6
2BL2 041	148 5.8	255 10	274 10.8	R 3/4" (30) R 3/4" (1.2)	S56 x 4 S2.2 x 0.16	S56 x 4 S2.2 x 0.16	G 1" G 1"
2BL2 061/101	180 7.1	314 12.4	342 13.5	R 1 1/4" (50) R 1 1/4" (2)			
2BL2 141	341 13.4	367 14.5	419 16.5	R 1 1/4" (50) R 1 1/4" (2)			



mm  
inches



N1.0 Suction connection  
N2.0 Discharge connection  
N3.3 Connection for intake or overflow regulator  
N3.4 Fill opening  
N4.6 Drainage opening

N1.0 Saugstutzen  
N2.0 Abluftstutzen  
N3.3 Anschluß Zu- oder Ablaufregler  
N3.4 Einfüllöffnung  
N4.6 Entleerungsöffnung

2BL2 251 ... 2BL2 341

Type / Typ	a	b	c	f	g	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	i	j	k	n	o	p	p <sub>2</sub>	t <sub>1</sub>	t <sub>2</sub>
2BL2 251 ... 281	1100	636	841	755	715	30	215	295	710	118	243	35	63	753	350	406	608
	43.3	25.0	33.1	30.5	28.1	1.2	8.5	11.6	28.0	4.6	9.6	1.4	2.5	29.7	13.8	16.0	23.9
2BL2 341																	

Type / Typ	N1.0 (∅ d)	N3.3	N3.4	N4.6
2BL2 251 ... 341	R 2" (63)	S56 x 4	S56 x 4	G 1"
	R 2" (63)	S2.2 x 0.16	S2.2 x 0.16	G 1"



**SEMEL - United Suppliers For Israel Ltd.**  
3 Hevron St. P.O.B 7355 Ramat-Gan 52172, Israel  
Tel: 972-3-6764586, Fax: 972-3-6771280

Note: all Imperial values are only approximate.

Hinweis: alle Imperial-Werte sind gerundet.

The technical data, dimensions and weights are subject to change. The illustrations are for reference only.

Änderungen, insbesondere der angegebenen Werte, Maße und Gewichte vorbehalten. Die Abbildungen sind unverbindlich.

Changes without prior notice.

Änderungen vorbehalten.