



## VACUUM CUPS BASED ON BERNOULLI'S THEOREM

Bernoulli's theorem explains many phenomena, such as the lifting of a plane's wing or of a light disc in front of a tube end from which air flows out quickly.

This apparently paradoxical phenomenon is exploited for manufacturing vacuum gripping systems (vacuum cups) and handling, with no contact, fragile objects, such as semiconductor plates, silica discs, solar cells, precious metal foils, films and whatever needs to be handled with the greatest care.

Our cups based on Bernoulli's principle are made with anodised aluminium, with stainless steel centre thrust disc.

The antistatic silicone spacers, located on the cup gripping plane, prevent transverse movements of the gripped object.

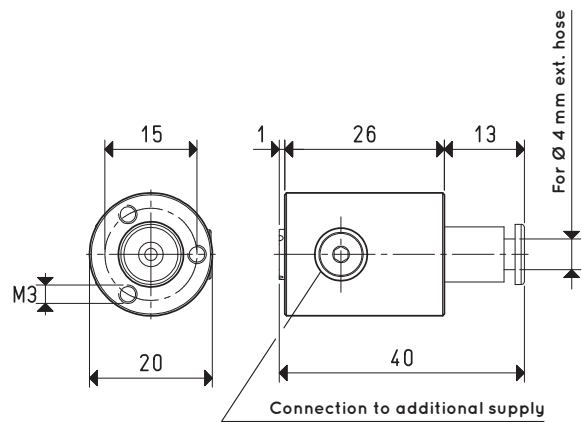
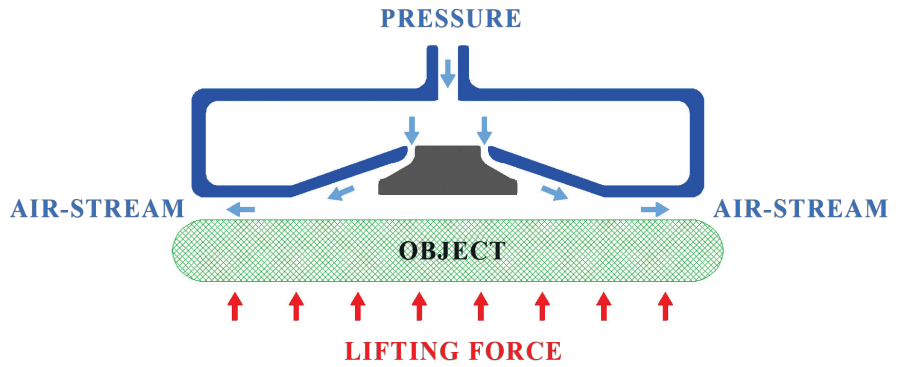
The compressed air supply connections can be axial and radial and the quick coupler for the flexible pipe is included in the package.

The unused holes are closed with brass threaded caps.

On the rear part of the cup there are 3 or 4 threaded holes for fitting it to the automation.

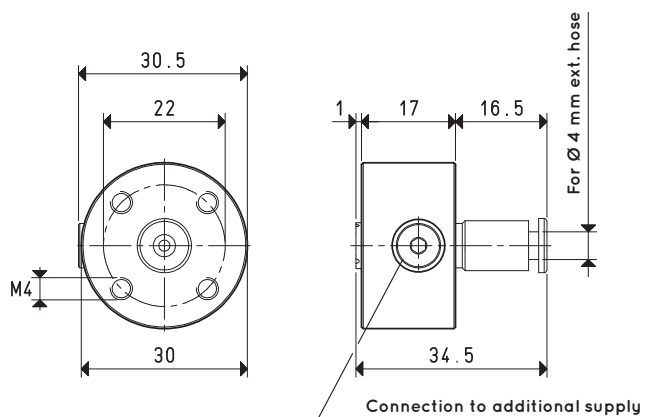


# VACUUM CUPS BASED ON BERNOULLI'S THEOREM



Item	Max force g	Transverse force g	Operating pressure bar	Consumption of air NI/s	Level of noise dB(A)	Weight g	Fitting included item	Spare rubber pad spacer item
<b>BEC 20</b>	220	145	5	2.3	66	21	00 BEC 13	00 BEC 10

Note: BEC vacuum cups must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.



Item	Max force g	Transverse force g	Operating pressure bar	Consumption of air NI/s	Level of noise dB(A)	Weight g	Fitting included item	Spare rubber pad spacer item
<b>BEC 30</b>	380	250	5	2.5	72	31	00 BEC 13	00 BEC 10

Note: BEC vacuum cups must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.

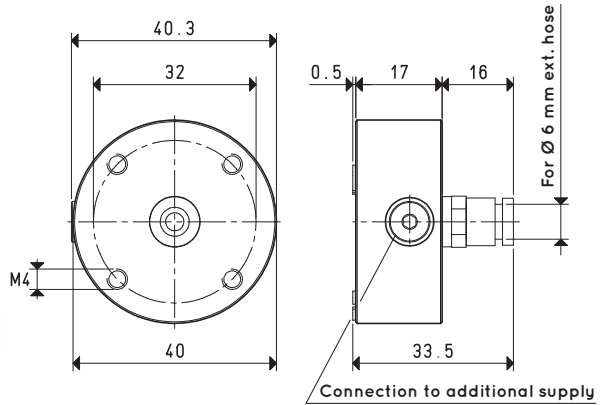
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)      inch =  $\frac{\text{mm}}{25.4}$  ; pounds =  $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



# VACUUM CUPS BASED ON BERNOULLI'S THEOREM

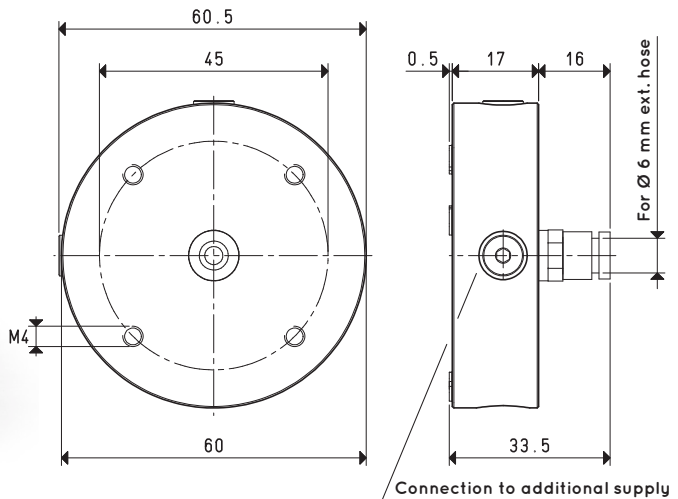
3D drawings are available on [vuotecnica.net](http://vuotecnica.net)

1



Item	Max force g	Transverse force g	Operating pressure bar	Consumption of air NI/s	Level of noise dB(A)	Weight g	Fitting included item	Spare rubber pad spacer item
<b>BEC 40</b>	680	450	5	3.0	74	51	00 BEC 14	00 BEC 09

Note: BEC vacuum cups must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.



Item	Max force g	Transverse force g	Operating pressure bar	Consumption of air NI/s	Level of noise dB(A)	Weight g	Fitting included item	Spare rubber pad spacer item
<b>BEC 60</b>	900	600	5	4.4	75	121	00 BEC 14	00 BEC 09

Note: BEC vacuum cups must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

inch =  $\frac{\text{mm}}{25.4}$ ; pounds =  $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$