



Debem's CUBIC diaphragm pumps are fitted with a centrally-positioned coaxial pneumatic motor.

The ATEX - IECEx certified air-operated double diaphragm pumps, with their unique design and limited size, are ideally suited to be installed directly on industrial equipment for the chemical sector, to pump ink and paint, on printing machines, in oil circulation and in applications where moderate quantities of fluid must be pumped in small spaces. The CUBIC range includes the MIDGETBOX pump which is currently the smallest and highest performing pump on the market for the chemical sector.

- Product designed and constructed in Italy
- PATENTED stall-prevention pneumatic circuit
- Operates with non-lubricated air
- Self-priming
- Dry operation
- ATEX certification for ZONE 1 - ZONE 2
- IECEx certification
- Adjustable operating speed
- Extremely versatile
- Suitable for pumping fluids in demanding applications
- Suitable for continuous use

## CUBIC PUMPS CODES ENCODING

ex. ICU15P-NTTPV- - Internal distributor, Cubic 15, PP casing, NBR air side diaphragm, PTFE product side diaphragm, PTFE balls, PP ball seats, Viton® o-ring.

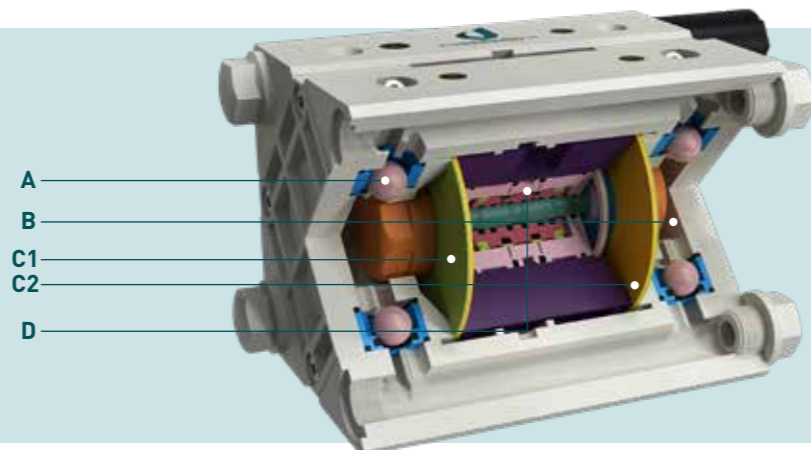
I	CU15	P	N	T	T	P	V	-	-
INTERNAL DISTRIBUTOR	PUMP MODEL	PUMP CASING	AIR-SIDE DIAPHRAGM	FLUID-SIDE DIAPHRAGM	BALLS	BALL SEATS	O-RING*	SPLIT MANIFOLD	CONDUCT VERSION
I	MID - Midgetbox (available only in PP/PP+CF) CU15 - Cubic 15	P - Polypropylene EC - ECTFE (Halar) PC - PP+CF	N - NBR	T - PTFE	G - Pyrex® A - AISI 316 T - PTFE	R - PPS-V K - PEEK' P - PP EC - ECTFE A - AISI 316 I - PE-UHMW	D - EPDM V - Viton® N - NBR T - PTFE	X Split manifold Y NPT thread J Spacer on shaft	C*

1) Only for MIDGETBOX

\*C version CONDUCT for standard ATEX ZONE 1Ex II 2/2GD c IIB T135°C



A = ball valves  
B = pumping chamber  
C1 = product-side diaphragm  
C2 = air-side diaphragm  
D = pneumatic exchanger



## Specifications and types



Suction / delivery connections	G 1/4" f (*)
Air fitting	G 1/8" f
Max flow rate*	6 l/min
Max supply air pressure	8 bar
Max head*	80 m
Max negative suction head - dry-running**	3 m
Max negative suction head - pump primed	9.5 m
Max diameter of suspended solids	0 mm
Noise level	60 dB
Volume per stroke	3.2 cc

STANDARD: II 3G Ex h IIB T4 Gc - II 3D Ex h IIB T135°C Dc X  
CONDUCT: II 2G Ex h IIB T4 Gb - II 2D Ex h IIB T135°C Db X

(\*) Available with NPT connections (on request)

\*The curves and performance are referred to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.  
\*\* The value depends on the configuration of the pump.



PP

Midgetbox



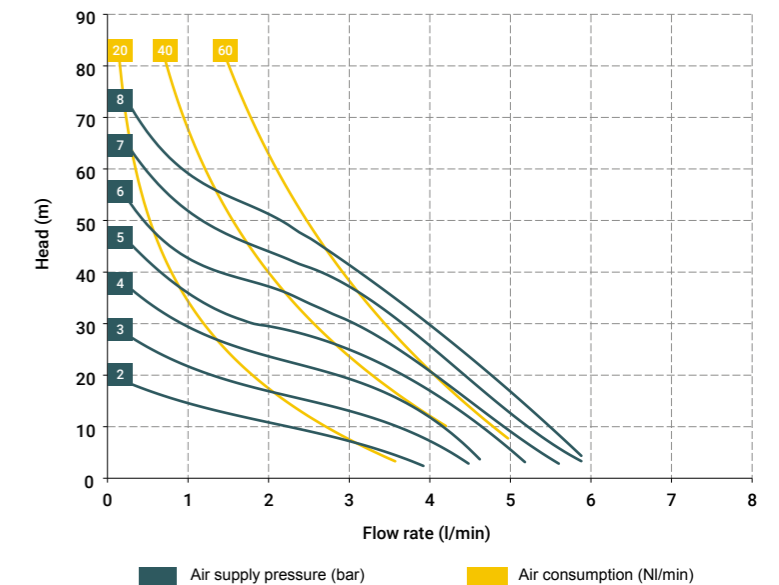
### Maximum Dimensions

Height	75 mm
Width	121 mm
Depth	60 mm



### Construction materials (casing and manifolds) and net weight

Polypropylene (with glass additive)	0.52 Kg Temp. 3°C min. 65°C max
Conductive polypropylene (with carbon additive)	0.52 Kg Temp. 3°C min. 65°C max



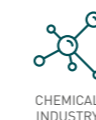
## MAIN APPLICATION SECTORS



GRAPHIC INDUSTRY



WATER AND SLUDGE TREATMENT



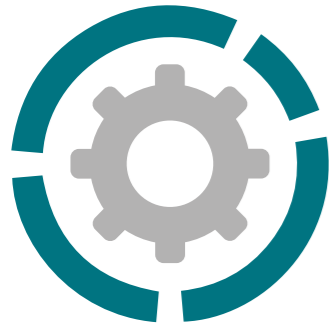
CHEMICAL INDUSTRY



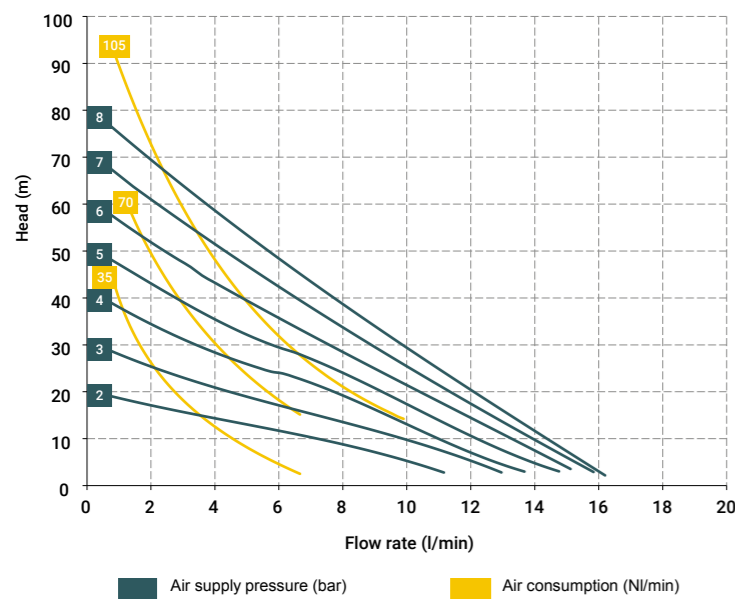
GALVANIC AND ELECTRONIC INDUSTRY

## Specifications and types

STANDARD: II 3G Ex h IIB T4 Gc - II 3D Ex h IIB T135°C Dc X  
 CONDUCT: II 2G Ex h IIB T4 Gb - II 2D Ex h IIB T135°C Db X



Suction / delivery connections	G 3/8" f (*)
Air fitting	G 3/8" f
Max flow rate*	17 l/min
Max supply air pressure	8 bar
Max head*	80 m
Max negative suction head - dry-running**	3 m
Max negative suction head - pump primed	9.5 m
Max diameter of suspended solids	0.5 mm
Noise level	65 dB
Volume per stroke	10.3 cc

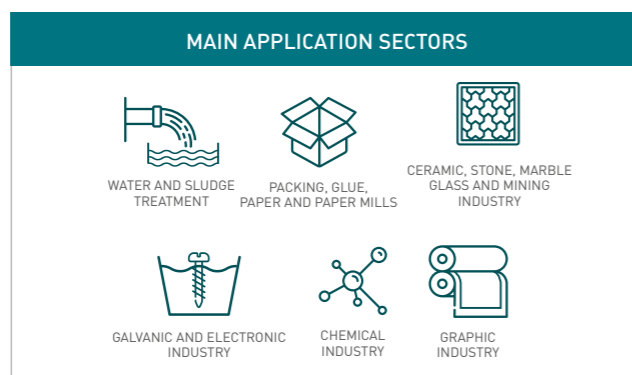


**Cubic diaphragm pumps:** high performance levels, excellent power and sturdiness, ideal for pumping liquids with high apparent viscosity, even if containing suspended solids. Particularly suited for small spaces.

[\*] Available with NPT connections (on request)

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

\*\* The value depends on the configuration of the pump.



### PP Cubic 15

Maximum Dimensions	
Height	105 mm
Width	201 mm
Depth	105 mm
Construction materials (casing and manifolds) and net weight	
<b>Polypropylene</b> (with glass additive)	1.35 Kg Temp. 3°C min. 65°C max
<b>Conductive polypropylene</b> (with carbon additive)	1.35 Kg Temp. 3°C min. 65°C max
Construction materials (casing and manifolds) available on request	
POMc	
UHMWPE	



### ECTFE Cubic 15

Maximum Dimensions	
Height	105 mm
Width	201 mm
Depth	105 mm
Construction materials (casing and manifolds) and net weight	
<b>ECTFE</b>	1. Kg Temp. 3°C min. 95°C max
Construction materials (casing and manifolds) available on request	
POMc	
UHMWPE	