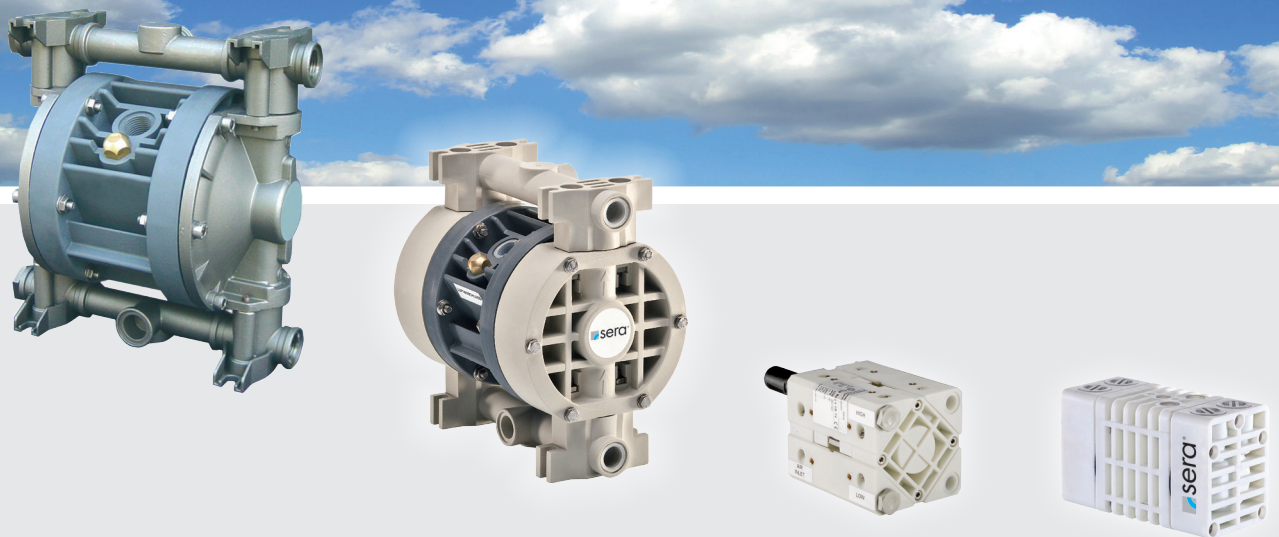


Air driven diaphragm pumps



leakage free

safe against overpressure

continuous control

safe to run dry

robust

high quality materials

Food + FDA

Air driven diaphragm pumps in industrial design

Air driven diaphragm pumps consist of double casings, which contain two diaphragms that aligned with a connection rod.

An air control valve supplies the air chambers behind the diaphragms alternately with compressed air. One diaphragm is pressed to the front (= pressure stroke) while the other one is pulled backwards (= suction stroke).

The special design of the air control valves ensures that the pumps can always be approached safely, i.e. that there are no undesirable standstills. The valve balls open and close in the stroke rhythm of the diaphragms.

Wherever media must be transferred, the air driven diaphragm pumps can be used. For example:

- Beverage industry
- Food industry
- Dye industry
- Nuclear Power Plants
- Chemical induction systems
- Shipbuilding
- Electroplating
- Textile industry

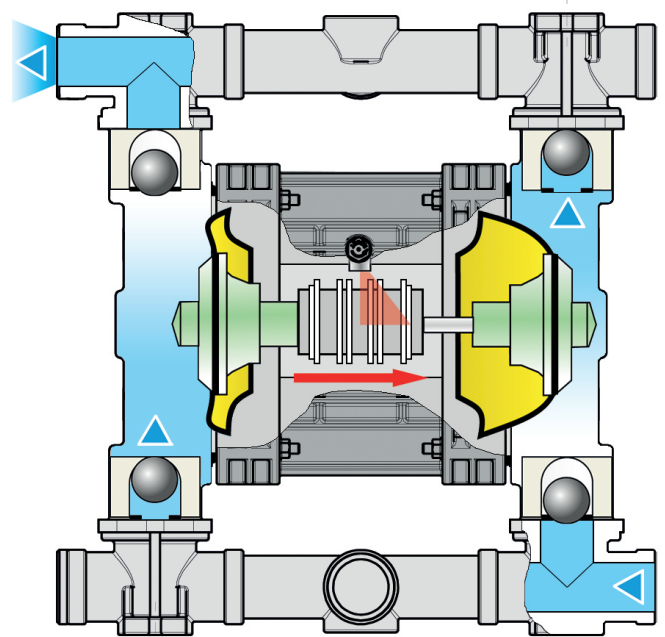
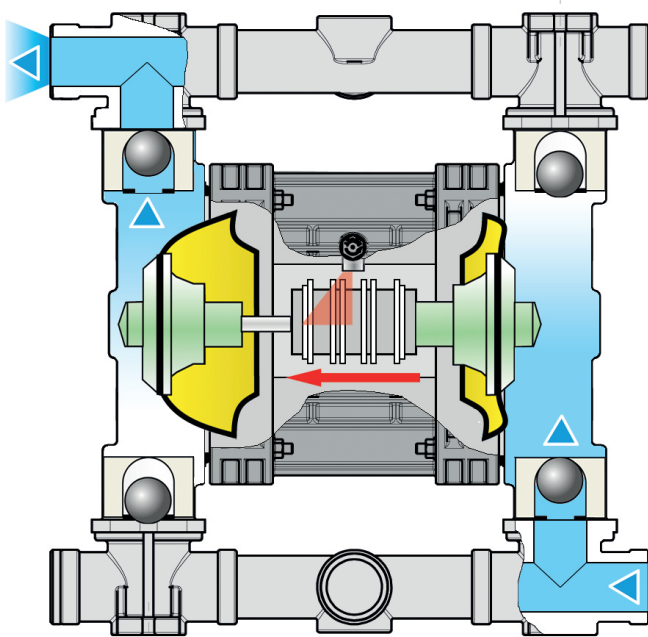
Advantages in an overview:

- available from stock
- long life expectancy
- cost-effective
- leakage-free
- safe against overpressure
- design according to ATEX available (not on stock)
- safe to run dry

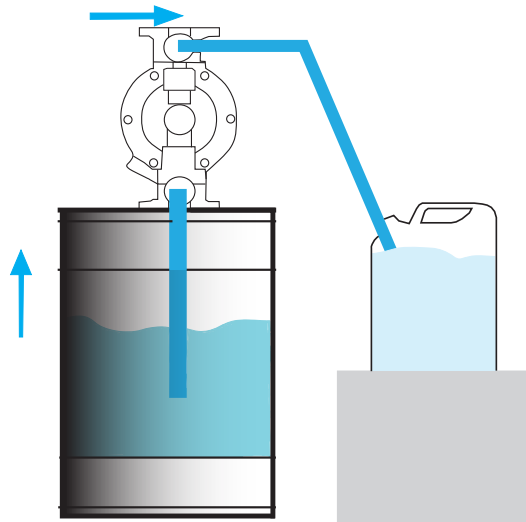
Optional accessories:

- Pulsation damper of series MPD
- Compressed air supply units
- Stroke transmitting devices

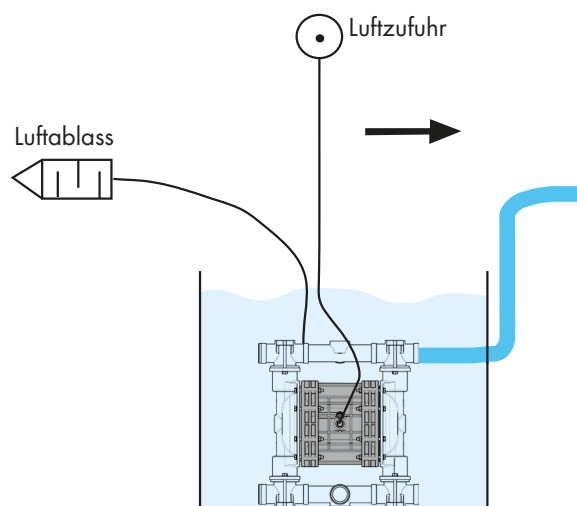
Further accessories on request.



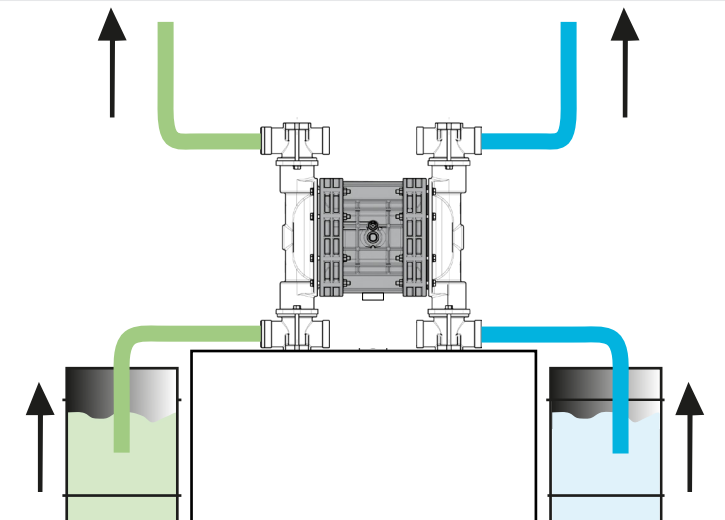
Drum transfer



Immersed

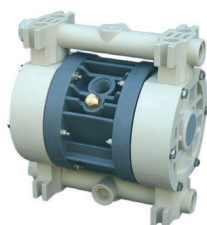


Twin suction and delivery manifold



Technichal data

Air driven diaphragm pumps



PP



PVDF



ALU



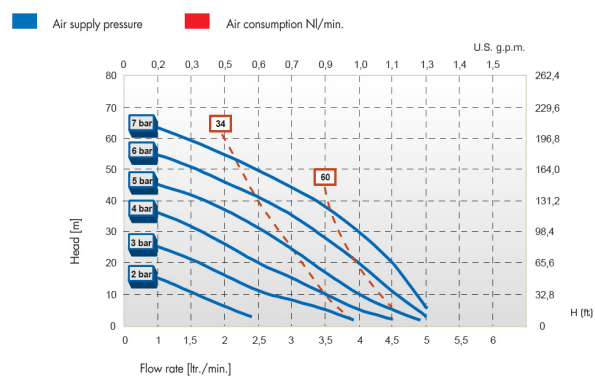
Aisi316

Type	Material	max. Flow rate	max. Air supply pressure	Air connection	Intake/delivery connections	max. Head	max. diameter of passing solids	Dimensions approx. B x H x T	Weight approx.	max. Temperature
AP...-5*	PP	5 l/min	7 bar	G 1/8" f	G 1/4" f	70 m	0 mm	121 x 60 x 75	0,5 kg	60° C
AP...-15*	PP	17 l/min	7 bar	G 3/8" f	G 3/8" f	70 m	0,5 mm	194 x 105 x 105	1,0 kg	60° C
	ECTFE								1,5 kg	95° C
AP...-30*	PP	30 l/min	7 bar	G 1/4" f	G 1/2" f o DN 15	70 m	2 mm	165 x 168 x 80	1,6 kg	60° C
	PVDF								1,9 kg	95° C
	Aisi316								3,8 kg	95° C
AP...-45*	PP	50 l/min	7 bar	G 3/8" f	G 1/2" f	70 m	4 mm	247 x 241 x 153	3,6 kg	60° C
	PVDF							230 x 232 x 153	4,2 kg	95° C
	Aisi316								6,5 kg	95° C
AP...-100*	PP	100 l/min	7 bar	G 3/8" f	G 1" f o DN 25	70 m	4 mm	308 x 274 x 170	5 kg	60° C
	PVDF								6,5 kg	95° C
AP...-150*	PP	150 l/min	7 bar	G 3/8" f	G 1" f o DN 25	70 m	4 mm	329 x 325 x 202	7,5 kg	60° C
	PVDF								8,5 kg	95° C
	Aisi316								11 kg	95° C
AP...-340*	PP	340 l/min	7 bar	G 1/2" f	G 1 1/2" f o DN 40	70 m	6 mm	493 x 493 x 254	16 kg	60° C
	PVDF								20 kg	95° C
	Aisi316								32 kg	95° C
AP...-650*	PP	650 l/min	7 bar	G 1/2" f	G 2" f o DN 50	70 m	8 mm	590 x 650 x 400	45 kg	60° C
	PVDF							590 x 650 x 400	52 kg	95° C
	Aisi316							470 x 705 x 404	54 kg	95° C
AP...-850*	PP	900 l/min	7 bar	G 3/4" f	G 3" f o DN 80	70 m	10 mm	585 x 726 x 404	50 kg	60° C
	PVDF								67 kg	95° C
	Aisi316							580 x 806 x 350	71 kg	95° C

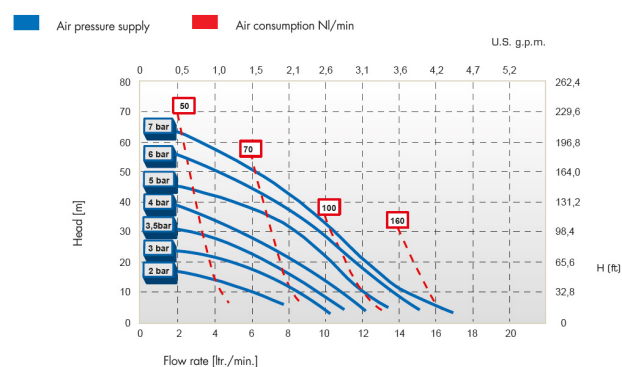
* APB ATEX 95: II 3G EEx c IIB T4/ APE ATEX 95: II 2G EEx c IIB T4

Characteristic curves

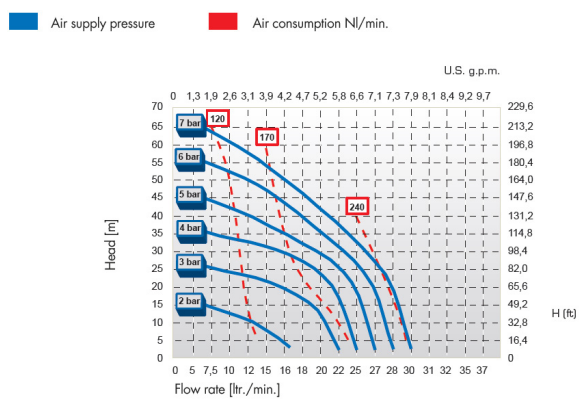
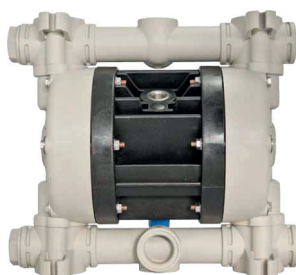
AP...-5



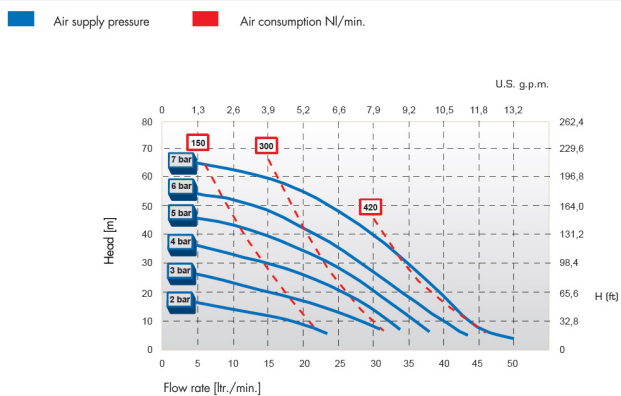
AP...-15



AP...-30

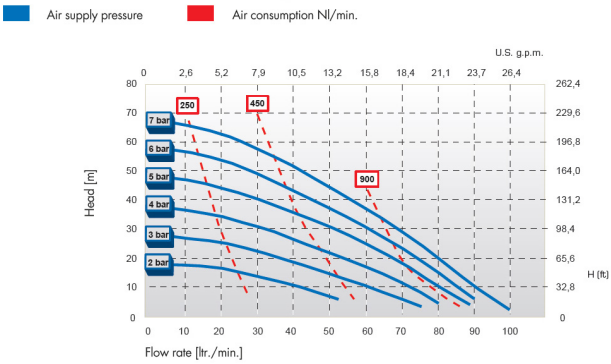


AP...-45

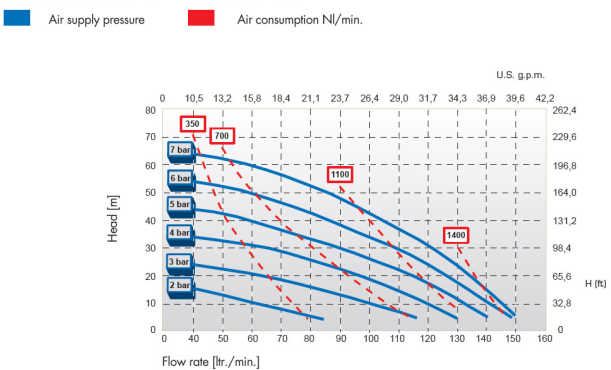
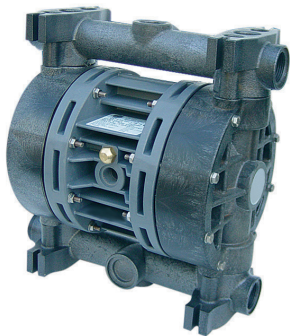


Characteristic curves

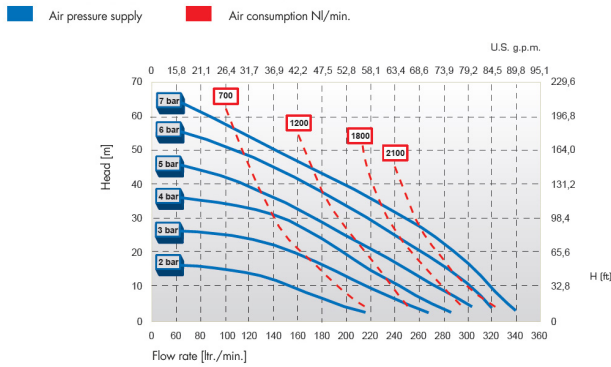
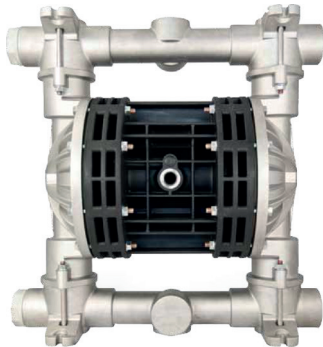
AP...-100



AP...-150

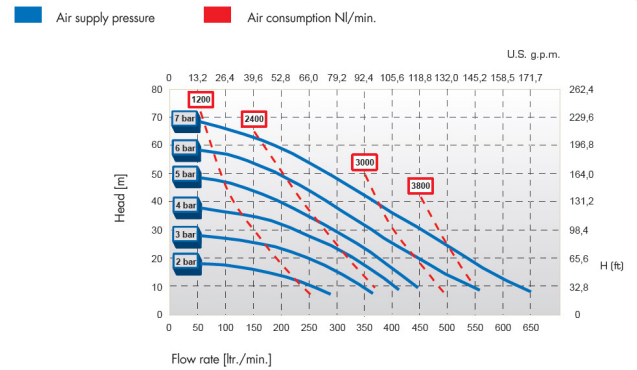


AP...-340

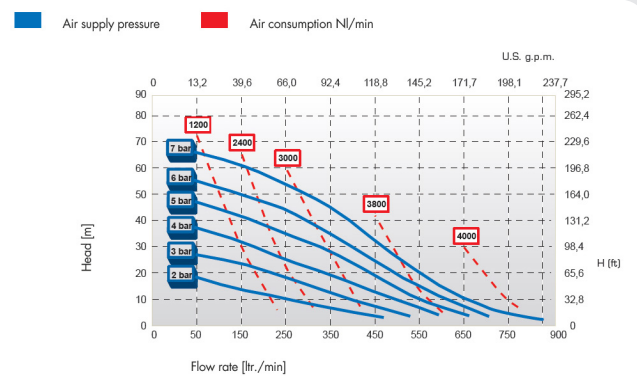
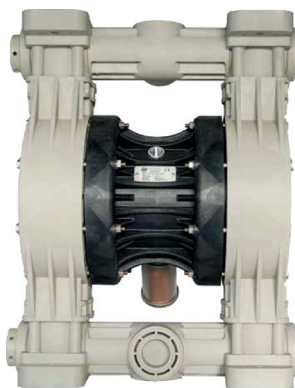


Characteristic curves

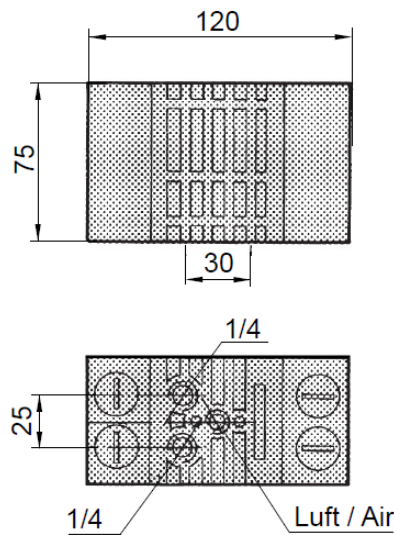
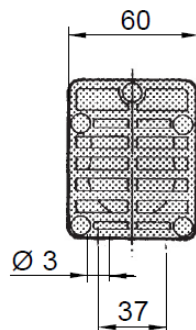
AP...-650



AP...-850

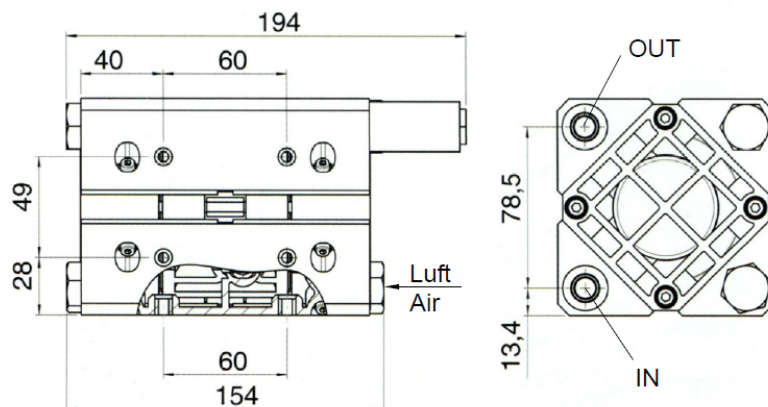


AP...-5



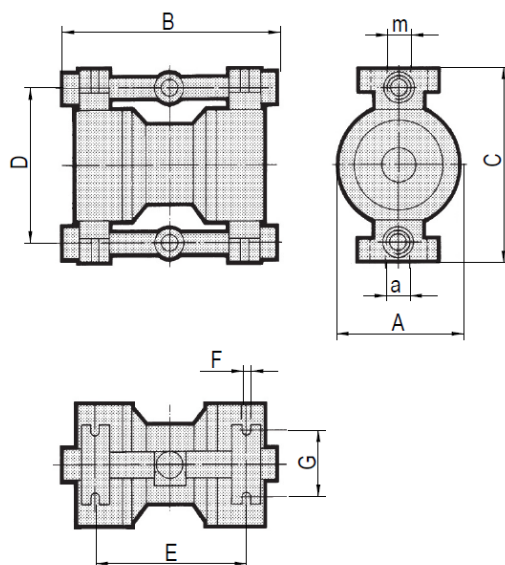
Dimensions

AP...-15



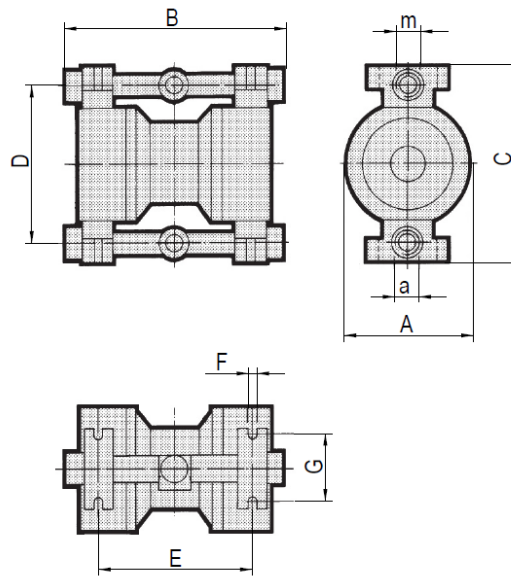
Befestigungsbohrungen = M6
Mounting holes = M6

AP...-30



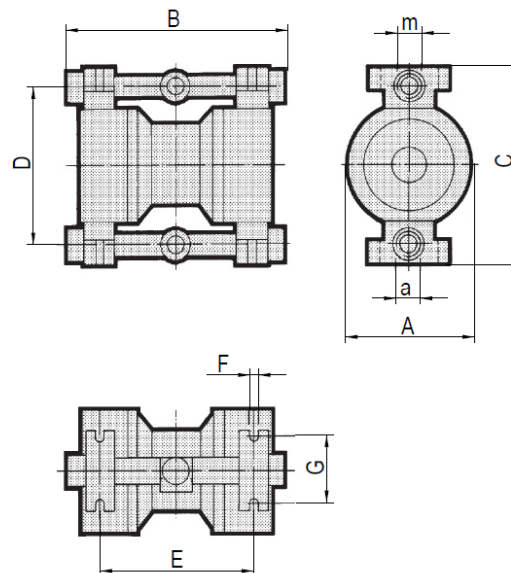
Material	m	a	A	B	C	D	E	F	G
PP ECTFE	G 1/2	G 1/2	120	165	168	136	120	6	70
AISI 316	G 1/2	G 1/2	120	164	172	140	120	6	70
Aluminium	G 1/2	G 1/2	120	177	171	139	124	6	70

AP...-45



Material	m	a	A	B	C	D	E	F	G
PP/ PP-CFK PVDF-CFK	G 1/2	G 1/2	153	247	241	198	168	6,5	85
AISI 316	G 1/2	G 1/2	153	230	232	196	164	9	79
Aluminium	G 1/2	G 1/2	153	241	234	198	168	6,5	85

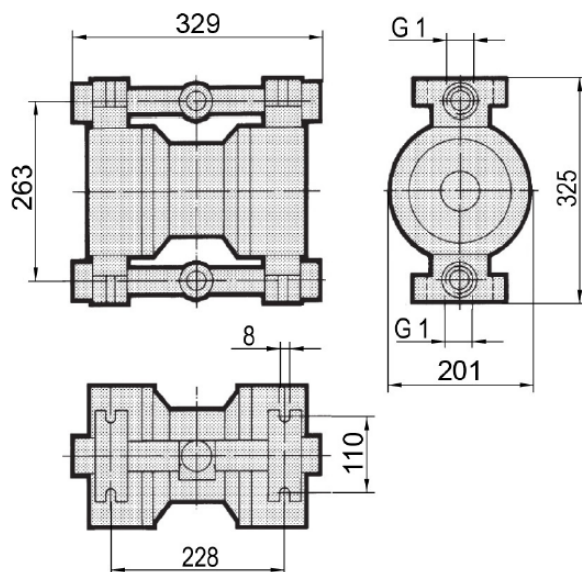
AP...-100



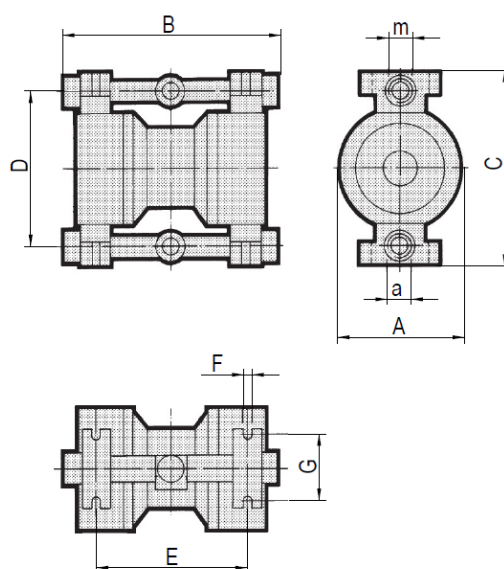
Material	m	a	A	B	C	D	E	F	G
PP/ PP-CFK PVDF-CFK	G 1	G 1	170	308	274	219	213	6,5	92
Aluminium	G 1	G 1	170	308	277	220	213	8	93

Dimensions

AP...-150

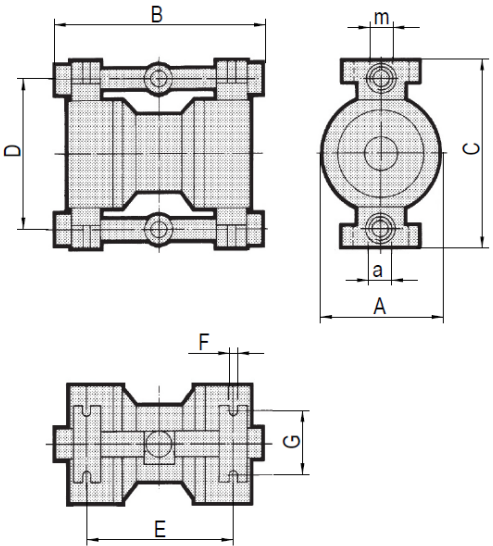


AP...-340



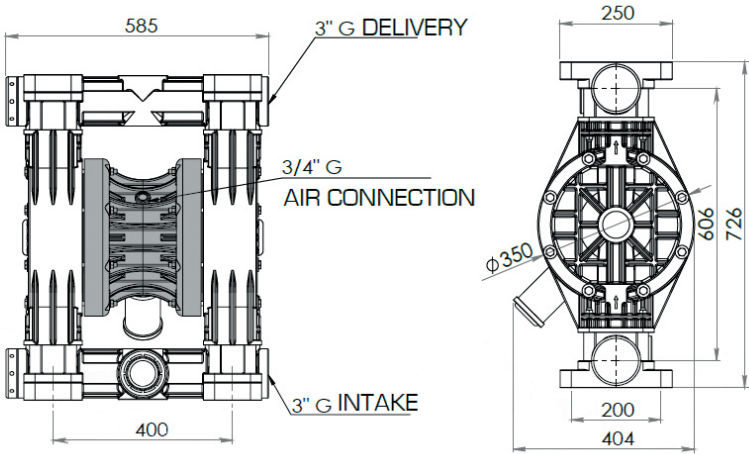
Material	m	a	A	B	C	D	E	F	G
PP/ PP-CFK PVDF-CFK	G 1 1/2	G 1 1/2	254	493	492	416	326	8,5	138
AISI 316	G 1 1/2	G 1 1/2	254	475	493	416	327	9,5	138
Aluminium	G 1 1/2	G 1 1/2	254	479	491	415	327	8	138

AP...-650



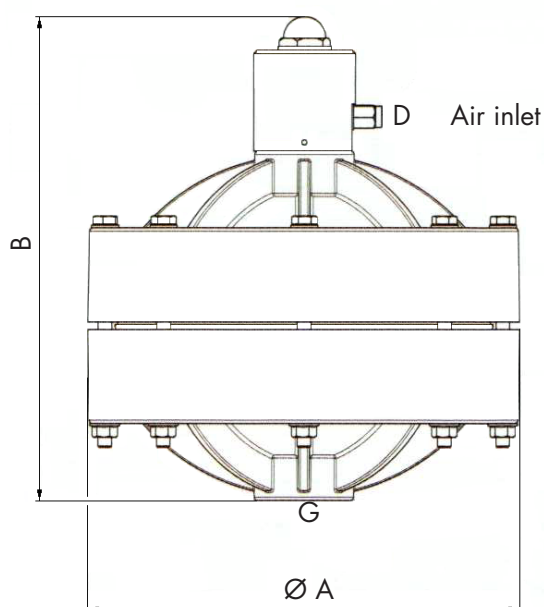
Material	m	a	A	B	C	D	E	F	G
PP/ PP-CFK PVDF-CFK	G 2	G 2	350	580	726	606	400	14	200
AISI 316	G 2	G 2	348	470	704	582	364	11	250
Aluminium	G 2	G 2	350	566	621	521	364	12,5	182,5

AP...-850



Diaphragm pulsation damper

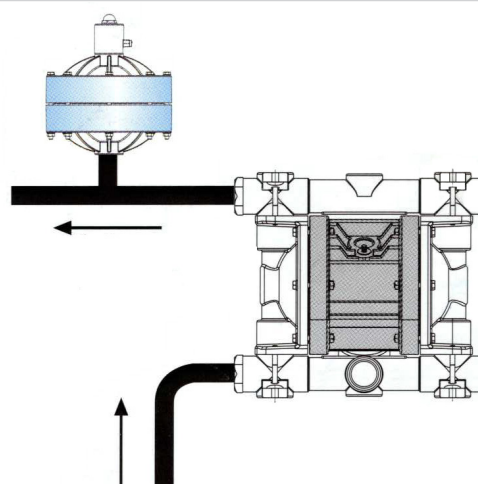
Dimensional drawing MPD - 25.1... 340



In general

Diaphragm pulsation damper with automatic diaphragm control to be used in connection with sera - air driven diaphragm pumps APB-... or APE-...

Installation MPD - 25.1 - 340



The pulsation damper can be mounted in any direction on pump's discharge side. They have to be installed close to the pump.

Dimensions

Type	A	B	D	G
	mm			
MPD - 25.1	117	120	G 1/8	G 3/4
MPD - 150	170	180	G 1/8	G 1
MPD - 340	254	290	G 1/8	G 1 1/2

Material

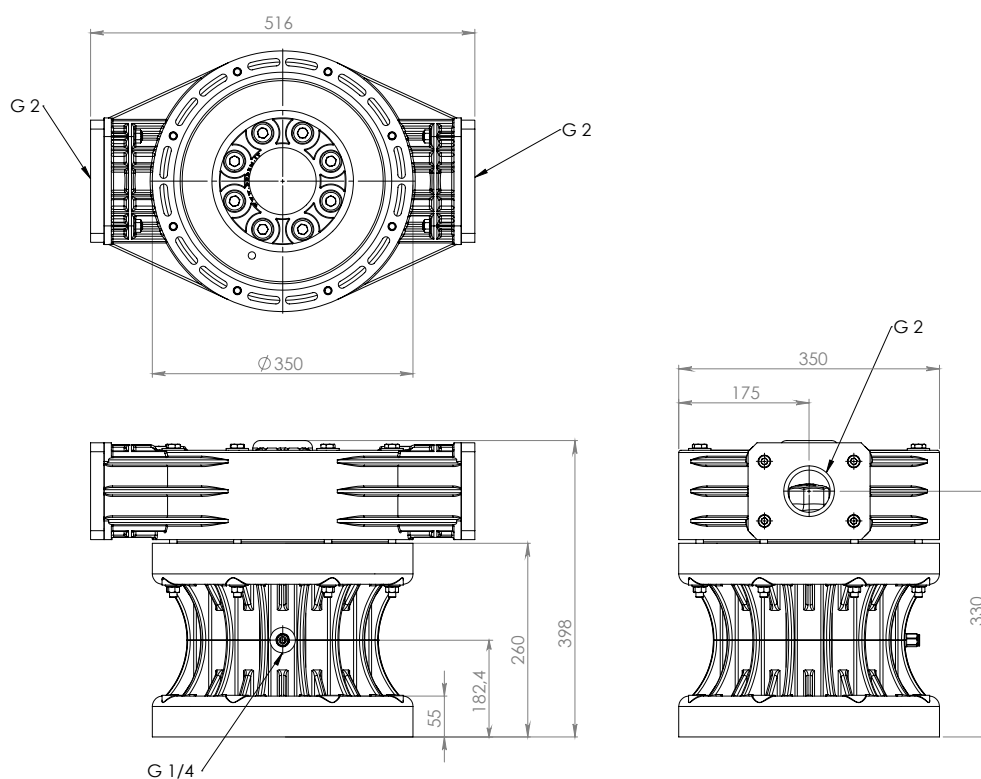
Housing*	Diaphragm	Weight kg
PP ¹⁾	Hytrel + PTFE	0,7
PP - CFK ²⁾	Hytrel + PTFE	0,7
PVDF ¹⁾	Santoprene + PTFE	0,9
PVDF - CFK ²⁾	Santoprene + PTFE	0,9
PPS - V ¹⁾	Hytrel + PTFE	0,9
PP ¹⁾	Hytrel + PTFE	1,3
PP - CFK ²⁾	Hytrel + PTFE	1,3
PVDF ¹⁾	Santoprene + PTFE	1,5
PVDF - CFK ²⁾	Santoprene + PTFE	1,5
PPS - V ¹⁾	Hytrel + PTFE	1,6
PP ¹⁾	Hytrel + PTFE	3,3
PP - CFK ²⁾	Hytrel + PTFE	3,3
PVDF ¹⁾	Santoprene + PTFE	4,0
PVDF - CFK ²⁾	Santoprene + PTFE	4,0
PPS - CFK ¹⁾	Hytrel + PTFE	4,1

* liquid contacted part of housing (air contacted part always made of PP)

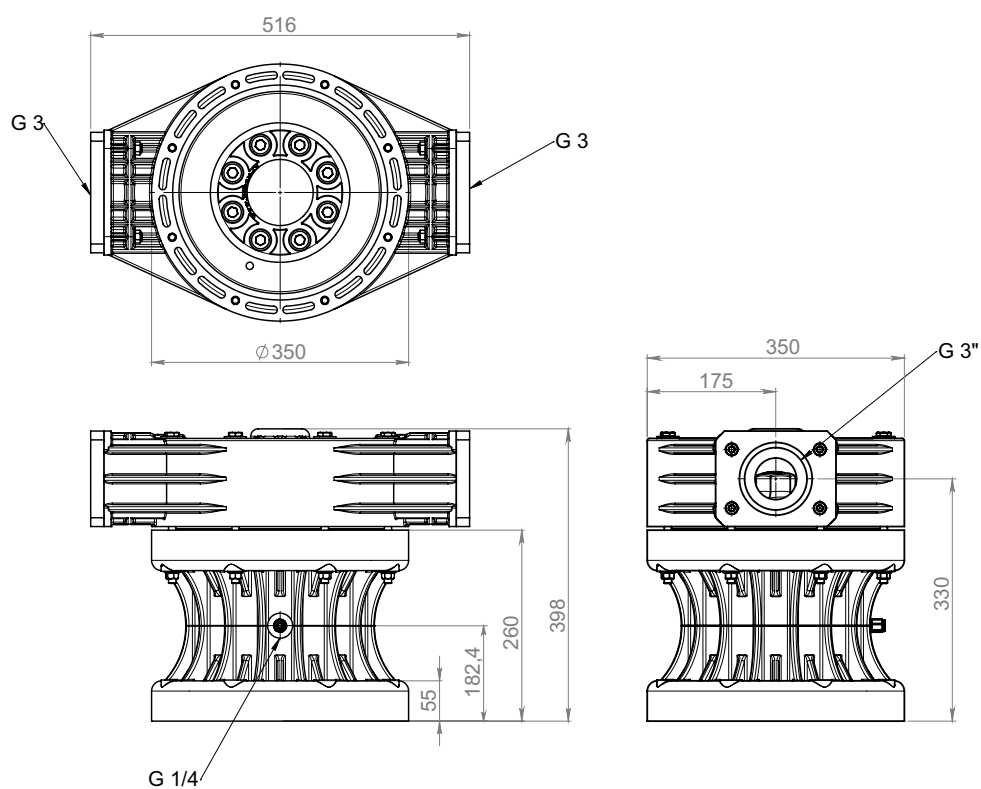
¹⁾ I13GEEclIBT4

²⁾ I12GEEclIBT4

Dimensional drawing MPD - 650.1



Dimensional drawing MPD 850.1



Diaphragm pulsation damper/ Technical Data

Allocation of types

Pulsation damper Type	available from pump type	available up to pump type	max. flow [ltr./min.]
MPD - 25.1	AP.. - 5	AP.. - 030	30
MPD - 150	AP.. - 5	AP.. - 100	150
MPD - 340	AP.. - 5	AP.. - 340	340
MPD - 650.1 ¹⁾		APB - 650.1	650
MPD - 850.1 ¹⁾		APB - 850.1	850

1) II3GEEclIBT4

Technical Data

Pulsation damper Type	max. Operating pressure bar	max. Temperature range °C
MPD-25.1 MPD-150 MPD-340 MPD-650.1 MPD-850.1	7	0 ... +30

Material

Type	Housing	Diaphragm
MPD - 650.1	PP, PVDF, Aluminium, ALSI316	Santropene Hytrel / PTFE
MPD - 850.1	PP, PVDF, Aluminium	Santropene Hytrel / PTFE

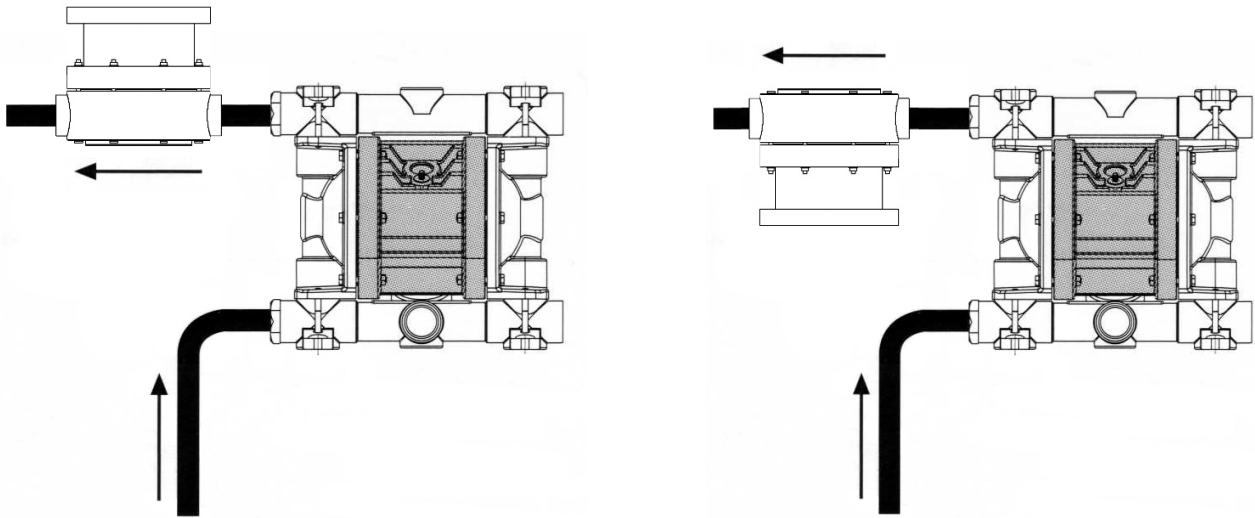
Weight

kg
22
22

Diaphragm pulsation damper

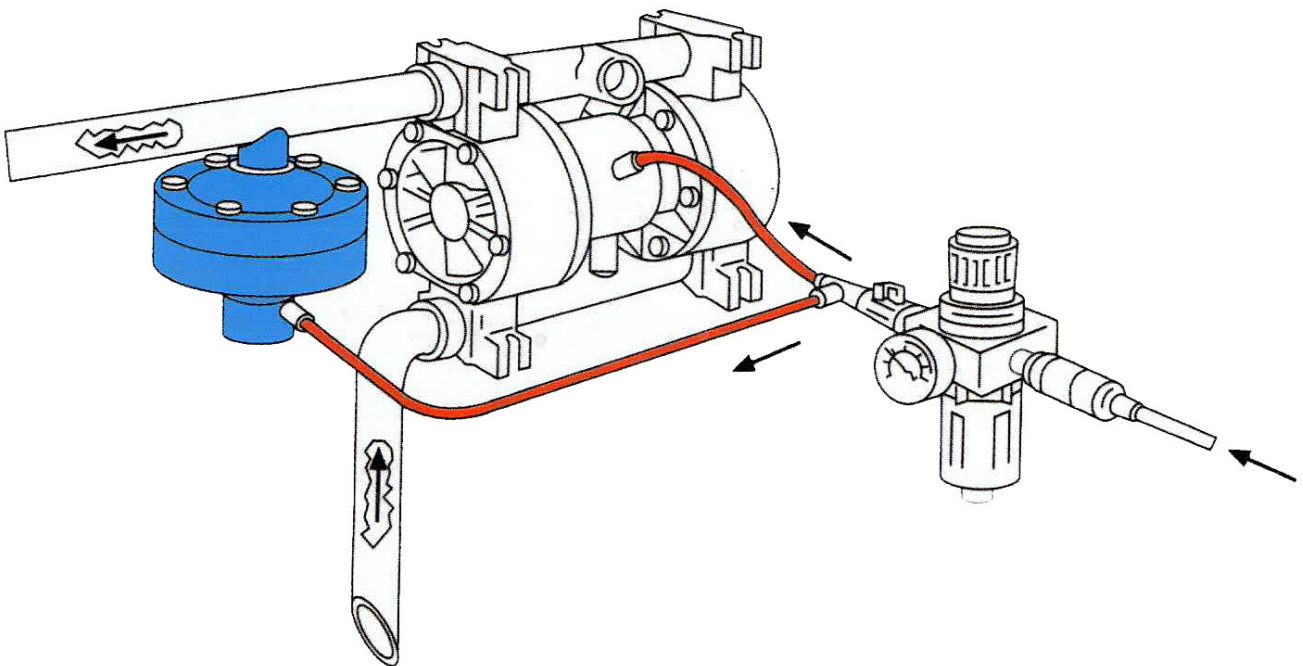
Examples of installation

Installation



The pulsation damper can be mounted in any direction on pump's discharge side. They have to be installed close to the pump.

Air supply



The pulsation dampers have to be connected to the air supply of the pumps (by pass).

Locally present for our global customers



With a headquarter in Germany and local offices in England and South Africa and a worldwide sales and service network with more than 30 foreign representatives in more than 80 countries across all continents, sera guarantees optimum support for customers locally.



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