



ARBO
THERMOPLASTIC
PUMPS
FILTERS

LLER half open impeller **SILENT** spacer coupling **ATEX** **BORN TO RESIST CORROSION** compact
O 2858 BACK PULL-OUT bare shaft **HiEff 3D impeller** solid liquid end materials **SE**
netic drive **Viton** PEEK flexible diaphragm **HMPE** **labyrinth** DRY RUN PROTE
NPSH STRAINER PTC CORROSION RESISTANT IEC **close-coupled** BASEPLATE in-line MACHINED TENS
ded suction pipe independent of direction of rotation **PP** **FOOT VALVE** **DIN-EN 22585** diaphragm ga

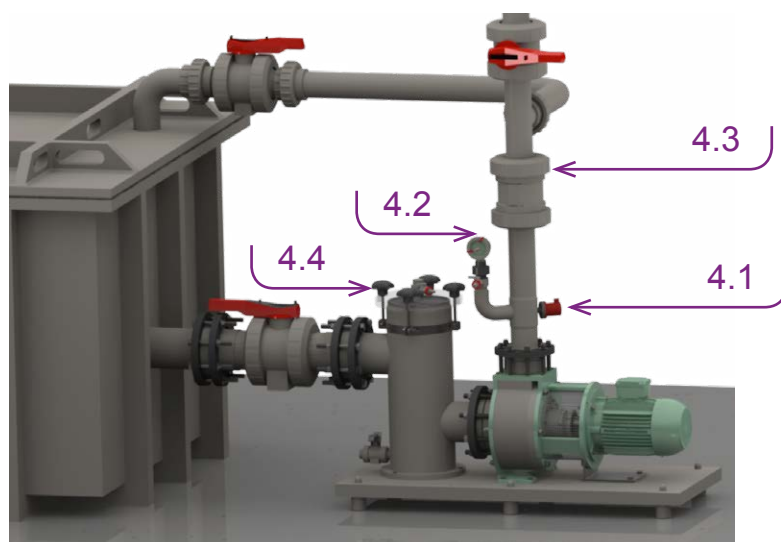


PROTECT YOUR ARBO PRODUCT

In order to minimise maintenance cost and process losses, we strongly recommend to install some monitoring and protecting systems that we offer optional to your ARBO product:

- 4.1 Dry running protection
- 4.2 Pressure gauges
- 4.3 Priming units/ Non-return valves
- 4.4 Suction strainers

Each of these systems is explained further in separate leaflets.



GENERAL INFORMATION

All products are machined of massive PP that covers a very wide range of duties – there is no metal to liquid contact. All reinforcement parts are made of SS-316.

For highly abrasive liquids (high % of solids) parts of High modulus HMPE may be ordered.

For highly corrosive mixtures at higher temperatures virgin PVDF is available.

CONSTRUCTION			
MATERIALS	ABBREVIATION	T MIN. °C	T MAX. °C
Polypropylene	PP	0	80
High Modulus Polyethylene	HMPE	-50	80
Polyvinylidenfluoride	PVDF	-30	120
Polytetrafluorethene	PTFE	-30	120

ELASTOMERS			
MATERIALS	ABBREVIATION	T MIN. °C	T MAX. °C
EPDM	E	-40	150
Viton	V	-25	220
Polytetrafluorethene	T	-190	260

CONNECTIONS	
CONNECTIONS	ABBREVIATION
Male straight pipe thread	R
DIN2501 PN10 Flanges	F
3-D Unions +GF+	U

The system pressures mentioned, apply to the basic material only; the max. system pressure for your application can differentiate from this value. On doubt please contact our sales department.

4.1 DRY RUNNING PROTECTOR / PRESSURE SWITCH



Installation tees for mounting the pressure switch in the pipeline can be supplied in several sizes in plastics materials.

HIGH AND LOW PRESSURE SAFETY CUT-OUT

This compact, easily fitted pressure switch can be wired into control circuits or contactors to provide high or low pressure safety cut-out.

Alternatively, it can be wired to give an audible or visual high or low pressure alarm. It is ideal for the protection of pumping equipment, which can be damaged by cavitation, dry running or pressure build-up.

The unit, which contains a diaphragm operated pressure switch, is mounted in the discharge pipe close to the pump by means of a tee fitting with a female threaded branch.

It must be wired to an electro-magnetic relay which can either be incorporated in or linked to the switchbox controlling the power supply to the pump motor. It can be used with any single or 3 phase motor.

MATERIALS

- Lower housing
 - PP max. 70 °C
 - PVC max. 60 °C
 - PTFE max. 120 °C
- Diaphragm EPDM, Viton or Viton/PTFE

PRESSURE RATING

- Max. line pressure: 3.3 Bar
- Operating pressure: 0,1-2,0 Bar

CAVITATION OR DRY RUNNING

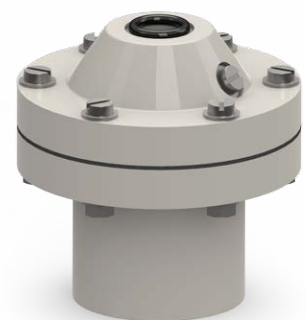
If cavitation occurs or the pump runs dry, the discharge pressure will drop; this actuates the pressure switch and, through the electro-magnetic relay, cuts the power supply to the pump.

An adjustment screw, accessible beneath a cover on the head of the unit, enables the pressure switch to be set to operate at a given pressure drop. A minimum discharge pressure of 2m head is required.

The pressure switch is designed for use with clean, non-crystallizing liquids.

For liquids containing particles in suspension or which are liable to crystallization, the unit can be supplied with an intermediate chamber containing a diaphragm through which line pressure changes are transmitted to the switch.

The advantage of the intermediate chamber is that it has larger and less restricted surface areas open to the line fluid, thus significantly reducing the likelihood of blockage.



ORDERING CODE (P.I.C.) DRY RUN PROTECTOR

MODEL	MATERIAAL WETTED PARTS	GASKETS
1	PP	E
	PTFE	V
	PVC*	T

4.2 DIAPHRAGM (SWITCH) GAUGES

VISUAL MONITORING SYSTEM WITH OPTIONAL SAFETY CUT-OUT

The ARBO diaphragm gauge can be used for neutral or corrosive media.

All wetted parts are made of highly corrosion resistant plastics.

There is no contact between gauge and liquid.

The gauge is separated from the chemical by a diaphragm. Pressure transmission takes place by means of a buffer solution.



The large diaphragm area in combination with the tiny compressibility of the buffer solution provides a very accurate indication.

The unit, is mounted in the discharge pipe close to the pump by means of a tee fitting with a threaded branch.

Thanks to the special design, the gauge can be rotated 360° in order to put it in the best reading position.

TECHNICAL DETAILS

AVAILABLE MATERIALS:

Diaphragm housing : PP, PVDF
 Diaphragm/other gaskets : PTFE covered

MAX. OPERATING TEMPERATURE:

PP : 0 to +80°C
 PVDF : -40 to +120°C

Max. operating pressure : PN 4
 Connections : R ½" inner
 R 1" outer
 R 1¼" outer
 Ranges : 0-4 Bar

- Practically maintenance free.
- Easy to install.
- Also available with air release valve (code MMO).

Installation tees for mounting the pressure switch in the pipeline can be supplied in several sizes in plastics materials.



FLOW CONTROL OR DRY RUNNING

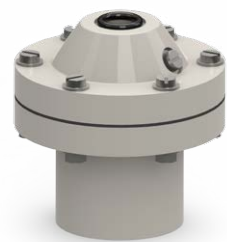
Also available with contact switches (code MKM) for dry running protection of pumps or excess pressure control f.i. for filter systems.

If the discharge pressure is increasing or dropping, this actuates the pressure switch and, through the electro-magnetic relay, cuts the power supply to the pump.

The pressure switch is designed for use with clean, non-crystallizing liquids.

For liquids containing particles in suspension or which are liable to crystallization, the unit can be supplied with an intermediate chamber containing a diaphragm through which line pressure changes are transmitted to the switch.

The advantage of the intermediate chamber is that it has larger and less restricted surface areas open to the line fluid, thus significantly



ORDERING CODE (P.I.C.)				
MODEL	PRESSURE RANGE BAR	MATERIAL WETTED PARTS	GASKETS	THREADED CONNECTION "R"
MM	0-4	PP	E	1/2
MMO		PVDF	V	1
MKM			T	1 1/4
MKMO				

4.3 PRIMING UNITS

SELF PRIMING EXECUTIONS

Centrifugal pumps are normal priming. This means that they should be positioned with a flooded suction. Self-priming abilities can be created by means of special priming units which need to be mounted in the suction piping to the pump. More information available on request.

APPLICATIONS

ARBO Priming units create self-priming capabilities for centrifugal pumps. By means of a specific calculation, the necessary volume for every typical priming application may be calculated. We offer a wide range of standard priming units but produce custom build units as well, even as big as 500 litre.

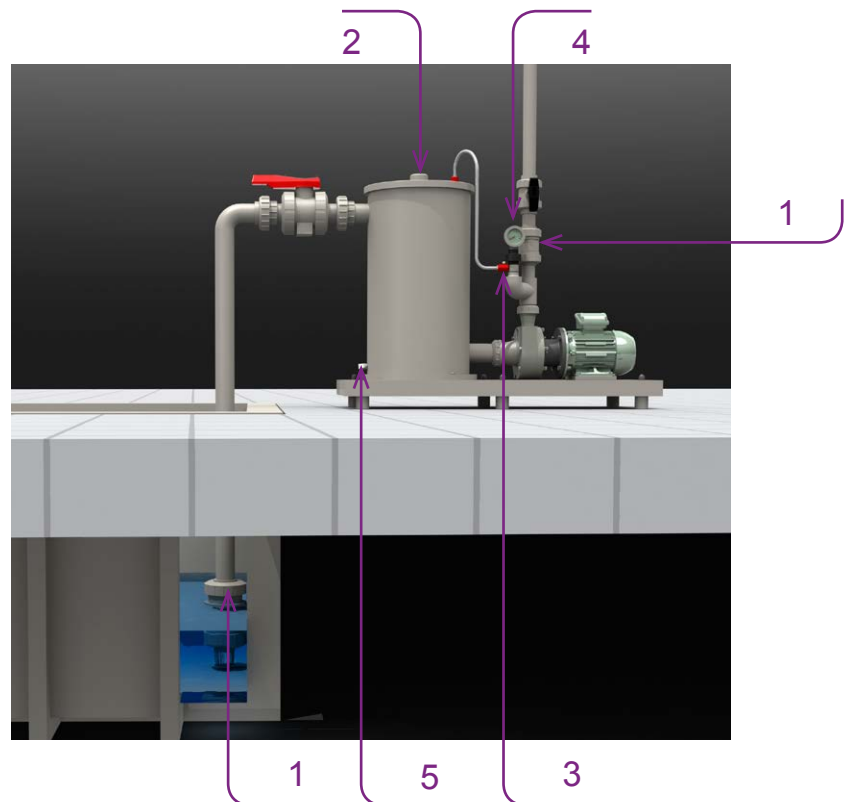
Once filled, the pump will be capable of priming the suction line and releasing the air through the discharge line.

In order to prime automatically every charge, it is necessary that the pump is switched off before it empties the priming unit. To ensure this and to protect your pump, we can advise on optional devices.

MATERIALS

Standard is the material PPH that covers a very wide range of duties. For highly corrosive mixtures at higher temperatures even a reservoir entirely made of PVDF may be offered.

The standard priming unit has EPDM gaskets.



OPTIONS					
POS.	DESCRIPTION	STANDARD	ALTERNATIVES		
1	Non-return valve	PPH	PVDF	PVC	PE
2	Transparent filler opening	PPH	PVDF	PVC	PE
3	Air release valve with hose adaptor for re-circulation line	PPH	PVDF		
4	Diaphragm gauge	PPH	PVDF		
5	Drain valve instead of plug	PPH	PVDF		

Max. operating pressure at 20°C : -0.8 to 2 Bar
 Recommended flow velocity in suction line : 1 m/s.

4.3 PRIMING UNITS



DATA FOR PRIMING UNIT CALCULATION

1	Flow rate		m ³ /h
2	Suction pipe bore	Dn	mm
3	Suction lift required		m
4	Suction pipe total		m
5	Liquid density		kg/m ³
6	Height dimension*	S2	mm

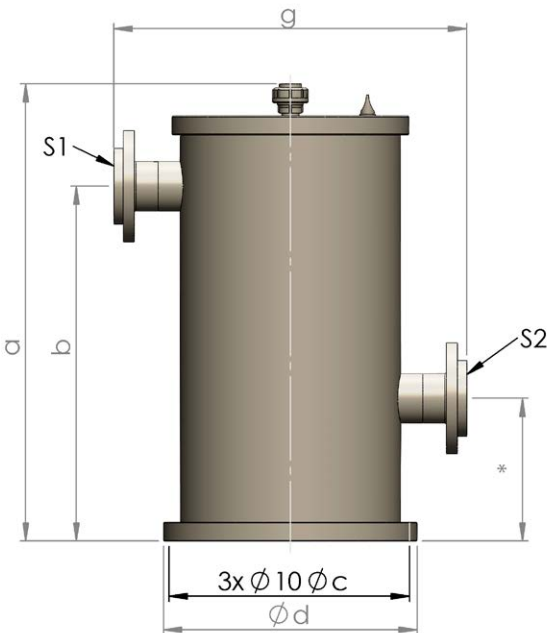


TABLE OF DIMENSIONS (L=LITER)

TYPE/ DIM.	15L	25L	30L	40L	60L	80L
a	430	630	800	530	780	1060
b	300	500	670	400	650	930
c	320	320	320	440	440	440
d	340	340	340	460	460	460
g	490	490	490	610	610	640

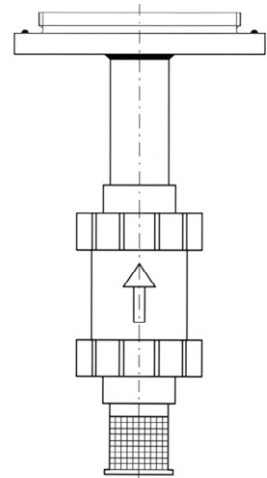
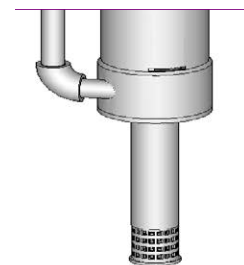
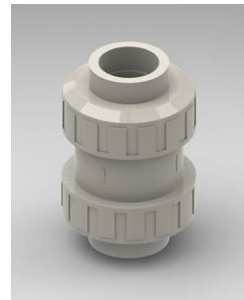
Other connections and/or capacities on request
Please advise most accurate data in order to give you the best advise!

ORDERING CODE (P.I.C.)

MODEL	VOLUME (L)	TYPE OF CONNECTION	CONNECTION S1	CONNECTION S2	MATERIAL WETTED PARTS	GASKETS
AZU	15	F	Dn25	Dn25	PP	E
	20	U	Dn32	Dn32	PVDF	V
	25		Dn40	Dn40	PVC*	T
	30		Dn50	Dn50	PE*	
	40		Dn65	Dn65		
	60		Dn80	Dn80		
	80		Dn125	Dn125		
	225		Dn150	Dn150		

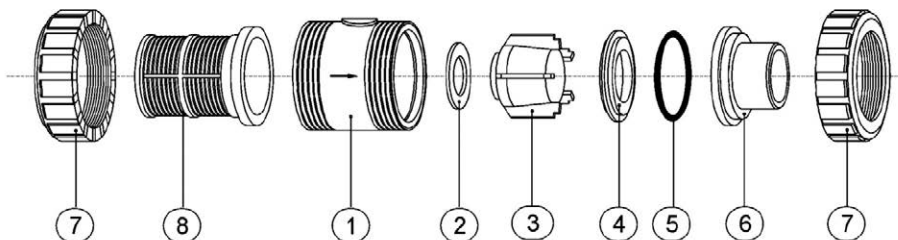
4.3 NON-RETURN VALVES

- Fully corrosion resistant PP, PVC or PVDF – no metal to liquid contact
- Gaskets of EPDM (standard) or Viton
- With PTFE-encapsulated spring for maximum security
- Absolutely leak free with clean liquids
- Can be mounted horizontally or vertically in suction or discharge pipes of centrifugal pumps.
- Valve can be radially disassembled so piping can remain in position.
- Opening pressure 0.025 Bar



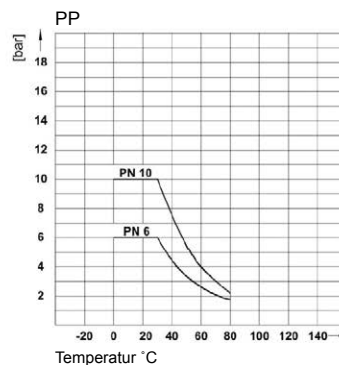
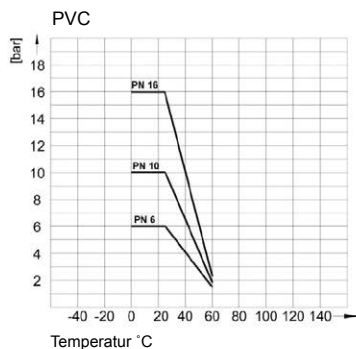
Non return valve to be installed in the suction pipe extension to be able to start at any level without foot bearing!!!!

CONNECTION SIZES		
SumPro DO-BG1-2-3	d 50	DN 40
SumPro DO-BG4-5	d 75	DN 65
DO-32/40/50-160/200/250-HD	d 75	DN 65
DO-65-200/250-HD	d 90	DN 80



DIAGRAMS

Pressure - Temperatur diagram



POS	DESCRIPTION
1	Body
2	Flat gaskets
3	Cone
4	Thrust
5	O-Ring
6	Connector types
7	Union
8	Strainer

4.4 SUCTION STRAINERS

APPLICATIONS

ARBO suction strainers are primarily used to protect pumps against foreign particles. This can prevent serious damage of your pumps and will therefore reduce maintenance cost and process down time.

All ARBO strainers are all designed under consideration of the recommended maximum flow velocity for centrifugal pumps.

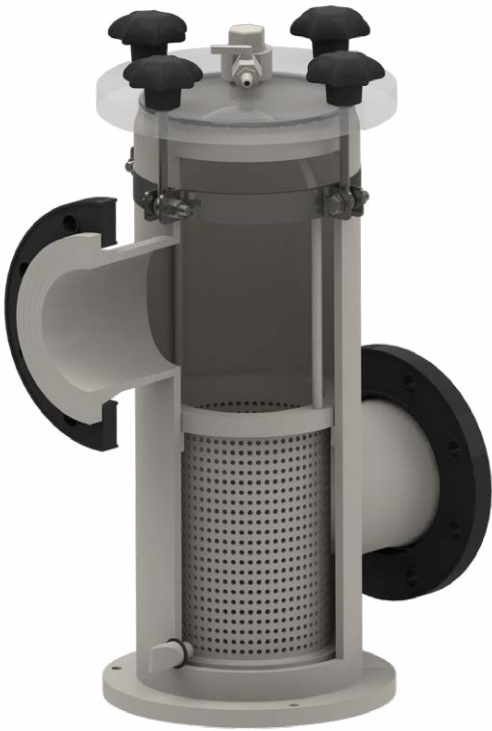
The pressure drop over the strainer basket is very low, therefore ARBO strainers are well suitable for processes with higher liquid temperatures and low NPSH situations.

We offer a wide range of standard units but produce custom build units as well.

For situations where a limited suction lift is required, this unit may be suitable as well. Please consult our sales department for a specific calculation and quote.

MATERIALS

Standard is the material PPH that covers a very wide range of duties. For highly corrosive mixtures at higher temperatures even a reservoir entirely made of PVDF may be offered. The standard priming unit has EPDM gaskets.

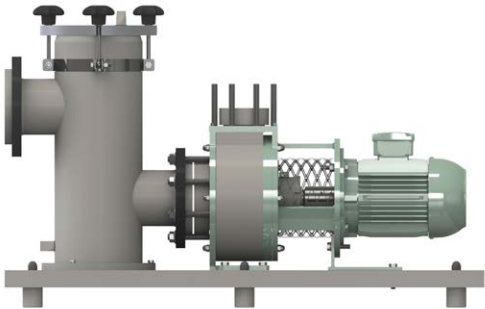


*Max. operating pressure at 20°C: -0.8 to 2 Bar;
Recommended flow velocity in suction line: 1 m/s.*

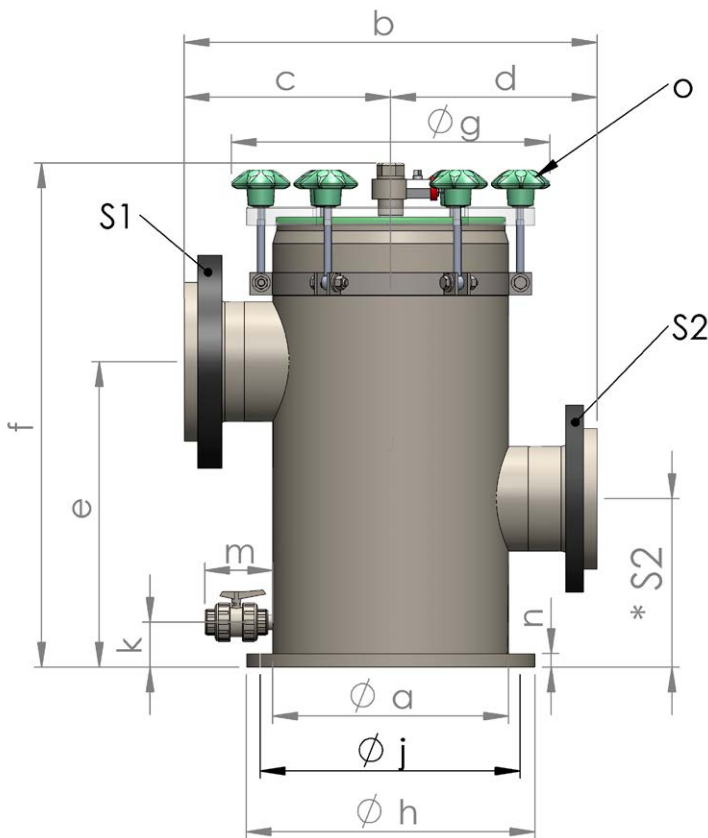
CONSTRUCTION			
MATERIALS	ABBREVIATION	T MIN. °C	T MAX. °C
Polypropylene	PP	0	80
Polyvinylidenfluoride	PVDF	-30	120

MATERIALS			
ELASTOMERS	ABBREVIATION	T MIN. °C	T MAX. °C
EPDM	E	-40	150
Viton	V	-25	220
Polytetrafluorethene	T	-190	260
CONNECTIONS		ABBREVIATION	
DIN2501 PN10 Flanges		F	

The system pressures mentioned, apply to the basic material only; the max. system pressure for your application can differentiate from this value. On doubt please contact our sales department.



STANDARD STRAINERS



TYPE	M3/H	S1	S2	*S2	ALL DIMENSIONS IN MM														PRIMING
DN	MAX.	DN	DN	MIN.	MAX.	a	b	c	d	e	f	g	h	j	k	m	n	o	VOLUME L
40	6	40	40	80	230	225	470	235	235	343	569	337	285	3x09 PDC.262	60	145	18	4 x	9,3
50	10	50	50	90	220	225	470	235	235	343	569	337	285	3x09 PDC.262	60	145	18	4 x	9,1
65	20	65	65	100	215	225	470	235	235	343	569	337	285	3x09 PDC.262	60	145	18	4 x	8,9
80	30	80	80	105	210	225	470	235	235	353	589	337	285	3x09 PDC.262	60	145	18	4 x	8,9
100	40	100	100	115	200	225	470	235	235	353	589	337	285	3x09 PDC.262	60	145	18	4 x	8,6
125	60	125	125	115	200	225	470	235	235	408	668	337	285	3x09 PDC.262	60	145	18	4 x	8,6
150	90	150	150	150	200	315	551	258	258	408	668	427	385	6x09 PDC.355	60	145	18	6 x	18,8
200	160	200	200	200	600	400	760	380	380	784	1082	511	460	6x09 PDC.437	100	145	49	8 x	70,0

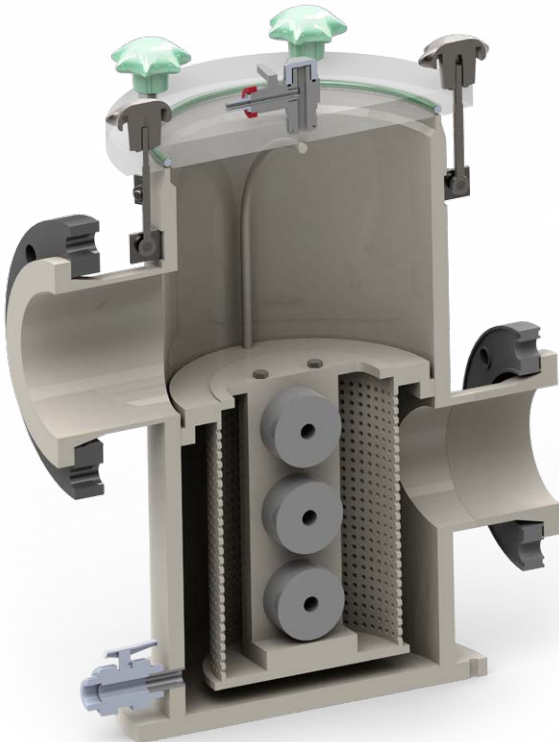
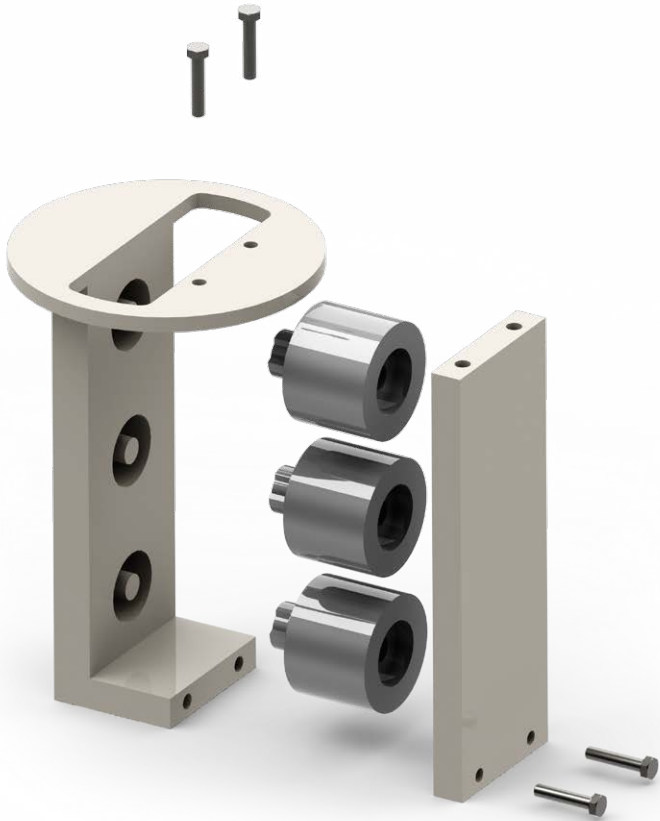
ORDERING CODE (P.I.C.)				
PRODUCT	S1 INLET	S2 OUTLET	MATERIAL WETTED PARTS	GASKETS
Strainer	Dn40	Dn40	PP	E
	Dn50	Dn50	PVDF	V
	Dn65	Dn65		T
	Dn80	Dn80		
	Dn100	Dn100		
	Dn125	Dn125		
	Dn150	Dn150		
	Dn200	Dn200		

4.4. SUCTION STRAINERS WITH MAGNETS

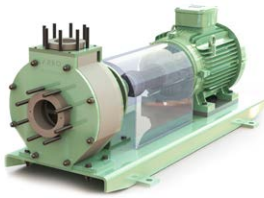
THE IRON CATCHER!

- optional available with magnetic inserts
- excellent to protect your
 - magnetic drive pump impellers and bearings
 - mechanical seal
- easy to dismantle and clean
- absolutely corrosion resistant!

Please advise most accurate data in order to give you the best advise! Order strainer basket separately and specify perforation 5mm or 2mm and with or without magnetic insert.



DATA FOR PRIMING UNIT CALCULATION		
1	Flow rate	m3/h
2	Suction pipe bore	Dn mm
3	Suction lift required	m
4	Suction pipe total	m
5	Liquid density	kg/m3
6	Height dimension*	S2 mm



**CENTRIFUGAL PUMPS
WITH MECHANICAL SEAL**
SealPro and HD series
KR (Close) and TK (Long) coupled versions
Single, double and bellow seals
Max. 600 m³/h, max. 90 m



**MAGNETIC DRIVE
CENTRIFUGAL PUMPS**
MagPro series
Max. 60 m³/h, max. 90 m.



**SEALLESS IMMERSIBLE
CENTRIFUGAL PUMPS**
SumPro and HD series
Max. 300 m³/h, max. 90 m



**PUMP PROTECTION
DRY RUNNING PROTECTOR**
Pressure gauges
Priming units
Suction strainers



FILTER CHAMBERS
For cartridges, discs or bag filters.
Capacity to 40 m³/h
Can be combined with any ARBO pump
Filter rates of 0,2 to 1200 micron



OIL SKIMMERS
Capacity 0 - 4 l/h
Length 400 - 3000 mm
Max. 70°C



ARBO PUMPS | FILTERS

Since the foundation in 1954, **ARBO** Pumps | Filters specialized on the design and production of sustainable, highly reliable and corrosion resistant thermoplastic pumps and filters.

ARBO Pumps offer a remarkably longer life span and lower maintenance cost thanks to its ridged construction and solid material design.

With a team of experienced engineers, production- and sales staff, **ARBO** Pumps | Filters services a wide customer base and a wide range of duties through a worldwide distribution network of pump specialists.

We also deliver products corresponding to ATEX regulations.



ARBO

THERMOPLASTIC
PUMPS
FILTERS



WHY ARBO PUMPS | FILTERS?

ARBO Pumps | Filters can be characterized by reliability, flexibility, quality and sustainability. Thanks to the smart design, the lower energy consumption and maintenance costs, your investment turn back time is very short time!

MARKETS

- Hot tub galvanising
- Anodising
- Plating
- Production of micro-electronic and semi-conductors
- Waste water treatment
- Fish farms
- Sea water aquaria
- Desalination plants
- Industrial and agricultural scrubbers
- etc.



ARBO
POMPEN EN FILTERS B.V.

Leemdijk 2
9422 CL SMILDE
THE NETHERLANDS

T : +31 (0) 592 430 310

E : info@arbo-pumps.com
I : www.arbo-pumps.com

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