

AIMagnon CP Magnetdrive-Processpump

PFA lined ISO 5199 Processpump with Magnetic Drive

Applications

The **AIMagnon CP** is a magnet driven, PFA lined processpump acc. ISO 5199 **Made in Germany** for the transfer of highly corrosive, ultra-pure or environmentally critical fluid in the chemical, fine-chemical, pharmaceutical and petro-chemical processindustry, but also in the food industry, semi-conductor, fragrance and flavour, pulp & paper, metall and mining processing, general industry, waste disposal and recycling industry.

Technical Data

Performance Data:	Up to 80m ³ /h, Up to 60m
Temperature:	-10°C up to +150°C
Design Pressure:	Vacuum up to 16bar
Hydraulics:	6
Dimensions:	ISO 2258/EN 22858
Design:	ISO 5199
Flanges:	Drilled to DIN, BS, ANSI, JIS
Casing:	Close coupled or spacer type

Plain Bearing made of SSiC

The plain bearing is the heart of any mag drive pump. We have therefore carefully designed the flush circuit to assure lubrication of the plain bearings. CFD (computational fluid dynamics) methods blended with our vast experience of over 40 years of developing magnetic drive pumps were applied to design the flushing circuit to assure a reliable pumping even under most demanding operating conditions.

The shaft, the plain bearing and the wearing of the **AIMagnon CP** are made of SSiC, that is known to be a highly corrosion and abrasion resistant material with decades of proven reliability.

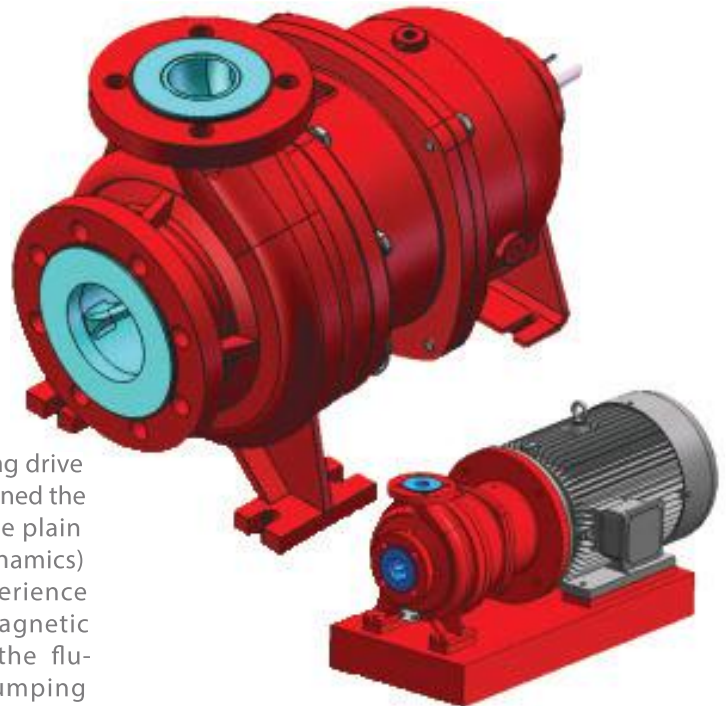
Metalfree Double Can System

The inside material of the can in contact with the fluid is thick-walled virgin PFA. The outer can, which is bearing the pressure, is made of carbon fibre that provides significant safety reserves. This vacuum-proof double can system is metall-free, does not generate eddy currents and thus is highly energy efficient and not introducing any heat into the fluid the same time.

Since decades maintenance free hermetic sealed pumps have proven to be safe without compromise when it comes to pumping highly corrosive, ultrapure or toxic fluids.

Besides the emission free magnetic drive technology of the **AIMagnon CP** anti-adhesive PFA and other high tech linings play a vital role in applications that can be ultrapure, highly corrosive, strongly permeating and need high temperature and vacuum resistant lining.

With this safety critical applications the quality of our products is safeguarded by our own transfer molding and tool manufacturing with more than 40 years of experience.



Compared to pumps made of special alloys like Hastelloy, Titanium etc. **AIMagnon CP** offers shorter lead times and lower initial costs of investment.

In demanding applications compared with double mechanical sealed pumps the **AIMagnon CP** assures trouble free operation and lowest possible life-cycle cost.

The **AIMagnon CP** is an attractive alternative compared to pumps made of full plastic, Stainless Steel or conventional plastic materials like ETFE (TEFZEL®), PVDF, PP and PE, that may not be sufficiently corrosion or temperature resistant.

Hermetic tight & environmental safe: Contact free Magnetic Drive instead of mechanical seal subject to wear

Extremely low life-cycle costs

Solids up to 5% and 0,3mm particlesize gas contents up to 2%

Replaceable SSiC wearings

Eddy current free double can PFA/carbon fibre

Molded in vortexbreaker in can to improve circulation of flushing fluid in plain bearing

Double back-pull-out bearing bracket

Replaceable thanks to ISO 2858 dimensions

Large gap between can and inner magnet-rotor for increased safety

Drive rotor with wearing

PFA and SSiC for parts in contact with fluid

GFT own transfermolding and tool manufacturing

Option: Leakage detector for can

Option: Temperature- and vibration-monitoring of bearing

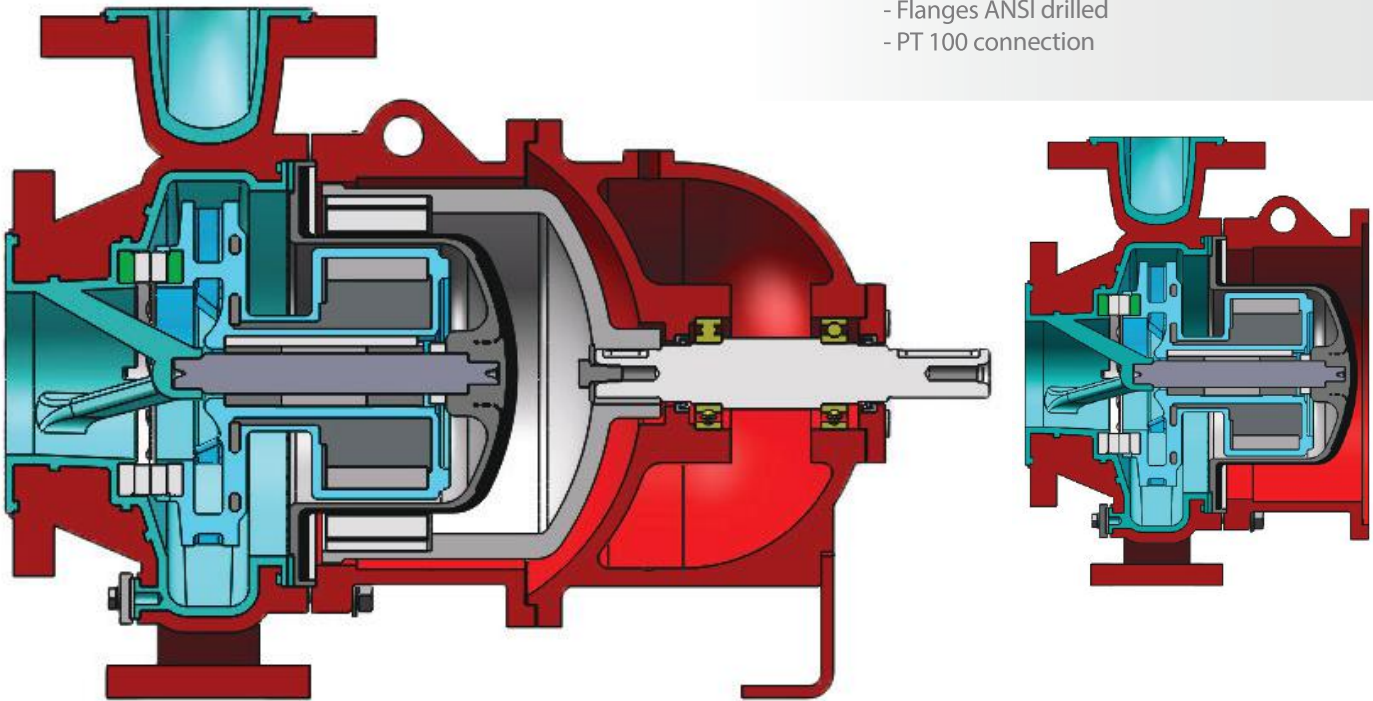
Option: Dry-run safe for up to 5 minutes

Impeller and Magnet Drive

- Metall core and one-piece design without welding joint for high mechanical strength
- Robust plain bearing made of highly corrosion-, abrasion- and temperature resistant SSiC
- Shaft supported deflection free in can and bearing spider
- Closed impeller for high efficiency, lining in GFT own transfer-molding
- High performance magnets made of SmCo
- Integrated axial thrust compensation, safe performance even under varying operation conditions
- Dry-run protection for up to 5 minutes optional

Casing

- Metal armoring made of 1.0619 (A216 WCB) for safe handling of the pipe loads
- Vacuum proof anchored pure PFA lining without fillers, universal corrosion resistance. Other lining materials optional. Lining thickness at least 3 to mm. FDA compliant for ultra pure applications
- Lining in GFT own transfermolding process with uniform wall thickness for high permeation resistance
- Bearing support of pump shaft integrated into casing
- With integrated wear ring
- Drain connection, not drilled (Optional drilled)
- Optional:
 - Casing jacket for cooling or heating
 - Flanges ANSI drilled
 - PT 100 connection



Can

- Built-in vortex breaker for improved plain bearing flushing flow circulation
- Eddy-current free double can system. Thick-walled lining made of pure PFA on medium side for universal corrosion resistance, carbonfibre as pressure bearing material with high pressure reserves
- High energy efficiency and no heat transfer into pump fluid
- Optional: PT 1000 for temperature monitoring

Robust Bearing Carrier

- Standard greased for life bearings
- Oil lubrication with large oil volume optional

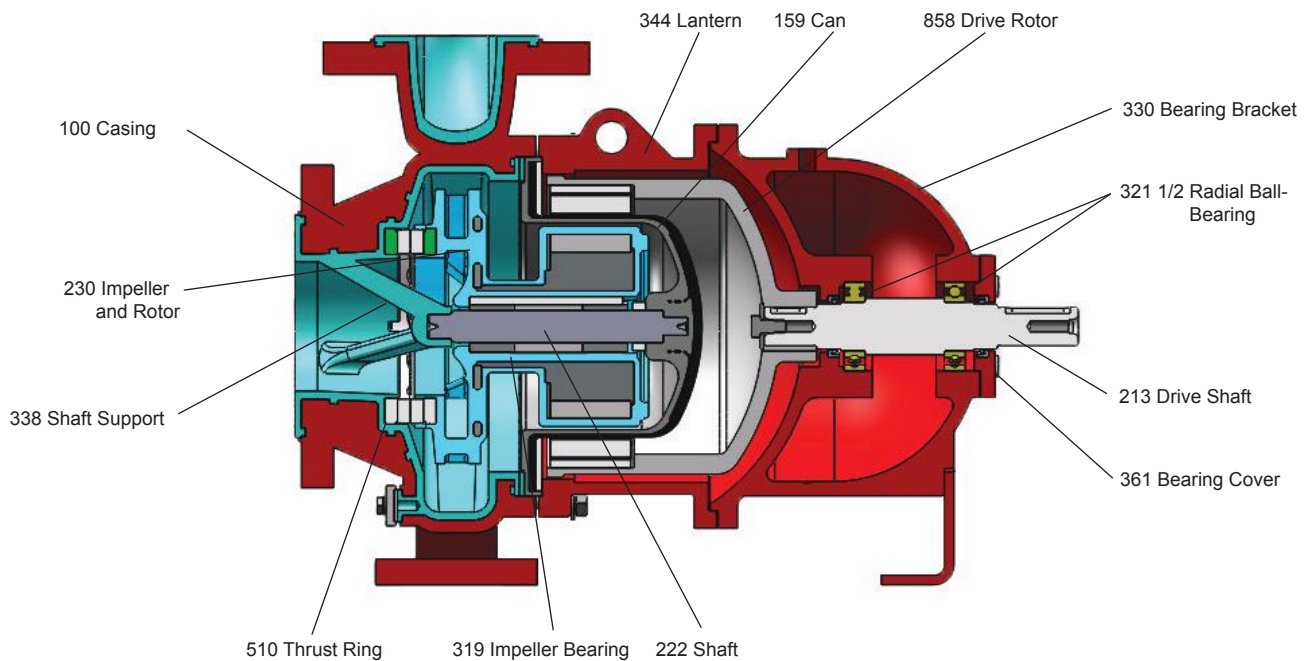
Drive Rotor

- High performance magnets for safe transmission of the torque
- Integrated bumper ring as safety in case of bearing failure

Simple Pump Assembly and Disassembly

- Reduced components thanks to modular system
- Minimal Life-Cycle Costs, simple maintenance, high efficiency thanks to eddy current free design
- Double back pull-out design with separate lantern and bearing carrier, allows maintenance of drive rotor with liquid filled casing
- Close coupled or frame mounted version

X-Sectional Drawing and Material List

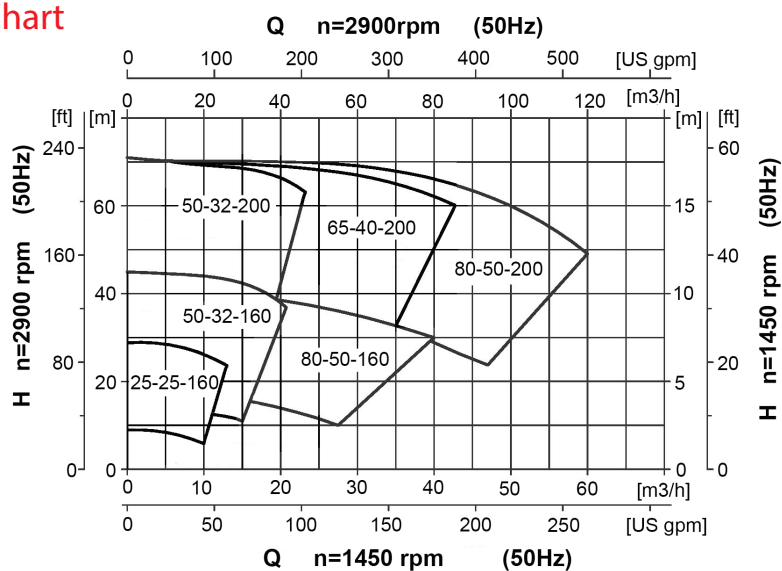


Materials

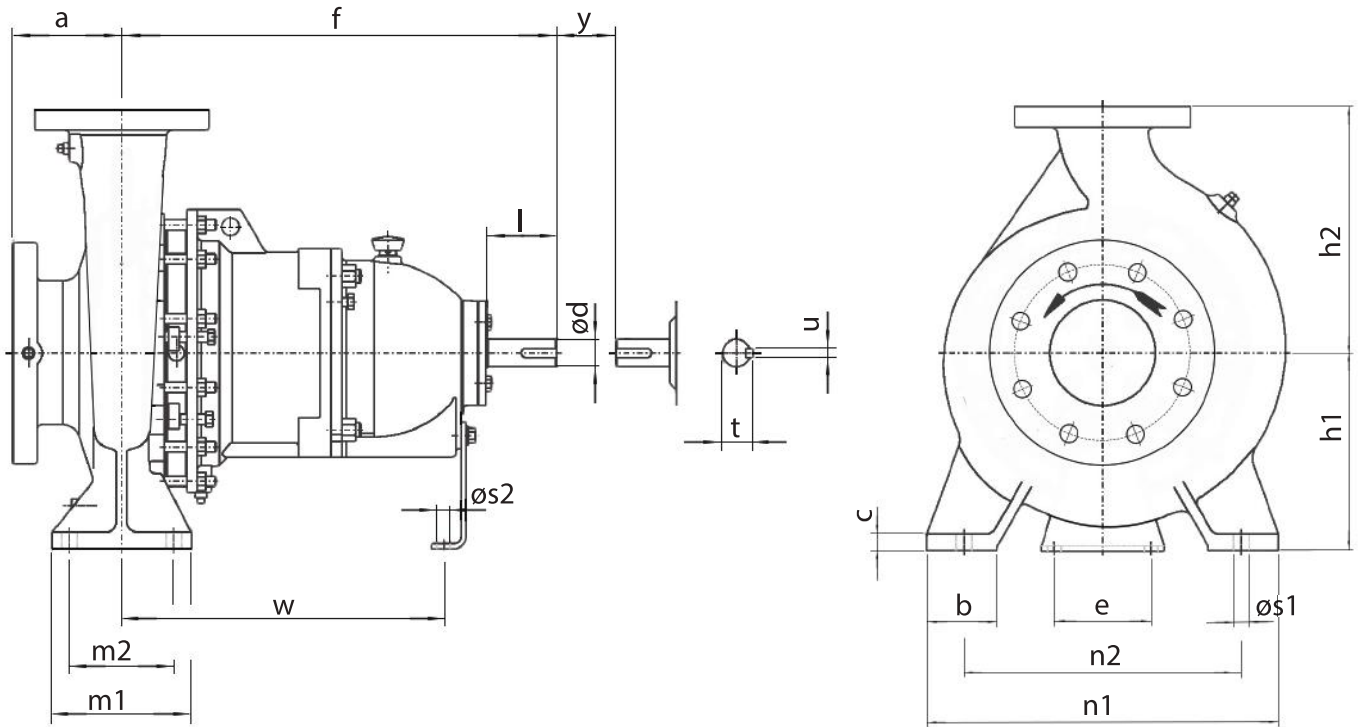
No.	Description	Materials *
100	Casing	1.0619 (A216 WCB)/PFA
159	Can	PFA/Carbon Fibre
213	Drive Shaft	Steel
222	Shaft	SSiC
230	Impeller and Rotor	PFA with Steel Core, Permanent Magnets
319	Impeller Bearing	SSiC
321	Radial Ball Bearing	Bearing
330	Bearing Bracket	1.0619 (A216WCB)
338	Shaft Support	PFA
344	Lantern	0.6025/A40 CI.40
361	Bearing Cover	Steel
510	Thrust Ring	SSiC
858	Drive Rotor	Permanent Magnets

* Other Materials on request

Performance Chart



Dimensional Drawing



PUMP SIZE	BEARG	PUMP DIMENSIONS				FOOT DIMENSIONS										SHAFT END				WEIGHT kg	
		a	f	h1	h2	b	c	m1	m2	n1	n2	w	$\varnothing s1$	$\varnothing s2$	e	$\varnothing d$	l	t	u		v
25-25-160	5.2	80	385	132	160	50	14	100	70	240	190	285	14	15	110	24	50	27	8	100	42
50-32-160	5.2	80	385	132	160	50	14	100	70	240	190	285	14	15	110	24	50	27	8	100	69
50-32-200	5.3	80	385	160	180	50	14	100	70	240	190	285	14	15	110	24	50	27	8	100	70
65-40-200	5.3	100	385	160	180	50	14	100	70	265	212	285	14	15	110	24	50	27	8	100	95
80-50-160	5.2	100	385	160	180	50	14	100	70	265	212	285	14	15	110	24	50	27	8	100	70
80-50-200	5.3	100	385	160	200	50	14	100	70	265	212	285	14	15	110	24	50	27	8	100	98

All dimensions in mm. Dimensions of the closed-coupled version and other sizes on request. Dimensions are preliminary. Final dimensions will be submitted with order documentation.

Competence Tool Manufacturing and Transfermolding

One of our key competences is the widely renowned, over 40 years of know-how of our group companies in the customer specific development, construction and production of highly precise and wear-resistant tools. This know-how is fundamental for producing tools for our own Transfermolding. Paired with decades of GFT experience in optimization of linings with Fluoropolymers for highly corrosion resistant pumps, valves and components.

