

DANFOSS PAHT

high-quality, low-maintenance pumps



[High-pressure pumps](#) [Plunger pumps](#) [Positive displacement pumps](#)

Description

Danfoss PAHT high-pressure pumps are specially designed for working with clean water. Danfoss PAHT pumps are positive displacement pumps, with axial pistons that move a fixed amount of water in each cycle. Flow is proportional to the number of input shaft revolutions (RPM). Unlike centrifugal pumps, they produce the same flow at a given speed, no matter what the discharge pressure is. The principle of axial located pistons is very efficient, compact in construction and offers long-lasting maintenance free operation. PAHT pumps are suitable for RO permeate and drinking surface and ultrapure water.

Advantages

- o compact construction form
- o maintenance free due to water lubrication
- o no belt drive
- o high yield
- o negligible pressure pulses, no pulse dampers required
- o internal circulation without overheating (up to 90% at 20 °C)
- o large range in revolutions
- o completely from stainless steel
- o meets the requirements for the food industry (HACCP)

Pre-filtering

The water must be filtered through a filter of 10 µm with a β10- value >5000.

Service

Danfoss PAHT pumps are designed for long periods of service-free operation to provide customers with low maintenance and life cycle costs. Provided that the pump is installed and operated according to Danfoss specifications, Danfoss PAHT pumps typically run 8,000 hours between service routines. However, the service schedule for your Danfoss PAHT pump may vary according to the application and other factors. The life of a pump may be greatly shortened if Danfoss recommendations concerning system design and operation are not followed. Poor filtration is the number one cause of pump damage, appears from our experience.

We recommend inspecting your pump after 8,000 hours of operation even if it is running without any noticeable problems. Replace any worn parts as necessary, including pistons and shaft seals, to keep your pump running efficiently and to prevent break-down. If worn parts are not replaced, then our guidelines recommend more frequent inspection.



Models

Different models of this pump, with custom made capacities and pressure, are available on request.

PAHT pumps

PUMP TYPE		PAHT 2	PAHT 3.2	PAHT 4	PAHT 6.3	PAHT 10	PAHT 12.5	PAHT 20	PAHT 25
PUMP HOUSING		AISI 304	AISI 304	AISI 304	AISI 304	AISI 304	AISI 304	AISI 316 or higher	AISI 316 or higher
GEOMETRIC DISPLACEMENT	cm ³ /rpm	2	3.2	4	6.3	10	12.5	20	25
	in ³ /rpm	0.12	0.20	0.24	0.38	0.61	0.76	1.22	1.53
PRESSURE									
MIN. PRESSURE	barg	30	30	30	30	30	30	30	30
MAX. OUTLET PRESSURE	barg	100	100	100	100	140	140	100	160
INLET PRESSURE, CONTINUOUS	barg	0-4	0-4	0-4	0-4	0-4	0-4	0-6	0-6
MAX. INLET PRESSURE, PEAK	barg	4	4	4	4	4	4	20	20
SPEED									
MIN. SPEED, CONTINUOUS	rpm	1000	1000	1000	1000	1000	1000	700	700
MAX. SPEED, CONTINUOUS	rpm	3000	3000	3000	3000	2400	2400	2400	2400
CAPACITY									
1000 RPM AT MAX. PRESSURE	l/min	0.7	2	3	5.5	7.6	10.2	16.9	20.6
1500 RPM AT MAX. PRESSURE	l/min	1.7	3.6	5	8.6	12.6	16.5	27	33.2
RATED POWER									
1500 RPM AT MAX. PRESSURE	kW	0.75	1.1	1.5	2.2	4.0	5.5	5.5	11.0
MEDIA TEMPERATURE	°C	2-50	2-50	2-50	2-50	2-50	2-50	2-50	2-50
AMBIENT TEMPERATURE	°C	0-50	0-50	0-50	0-50	0-50	0-50	0-50	0-50
SOUND LEVEL	dB(A)	76	76	76	76	75	75	79	79
WEIGHT	kg	4.4	4.4	4.4	4.4	7.7	7.7	19	19
PUMP TYPE		PAHT 32	PAHT 50	PAHT 63	PAHT 70	PAHT 80	PAHT 90	PAHT 256	PAHT 308
PUMP HOUSING		AISI 316 or higher	AISI 316 or higher	AISI 316 or higher	AISI 316 or higher	AISI 316 or higher	AISI 316 or higher	AISI 316 or higher	AISI 316 or higher
GEOMETRIC DISPLACEMENT	cm ³ /rpm	32	50	63	70	80	90	256	308
	in ³ /rpm	1.95	3.05	3.84	4.27	4.88	5.49	15.6	18.8
PRESSURE									
MIN. PRESSURE	barg	30	30	30	30	30	30	30	30
MAX. OUTLET PRESSURE	barg	160	80	160	160	160	160	120	120
INLET PRESSURE, CONTINUOUS	barg	0-6	0-6	0-6	0-6	0-6	0-6	2-6	2-6
MAX. INLET PRESSURE, PEAK	barg	20	20	20	20	20	20	15	15
SPEED									
MIN. SPEED, CONTINUOUS	rpm	700	700	700	700	700	700	450	450
MAX. SPEED, CONTINUOUS	rpm	2400	1800	1800	1800	1800	1800	1250	1250
CAPACITY									
1000 RPM AT MAX. PRESSURE	l/min	28	43.7	50.5	57.7	68.3	77.6	89.6*	107.8*
1500 RPM AT MAX. PRESSURE	l/min	44.2	68.7	82.1	92.9	108.5	122.6	294.4**	354.2**
RATED POWER									
1500 RPM AT MAX. PRESSURE	kW	15.0	11	30	30	37	45	55	75
MEDIA TEMPERATURE	°C	2-50	2-50	2-50	2-50	2-50	2-50	2-50	2-50
AMBIENT TEMPERATURE	°C	0-50	0-50	0-50	0-50	0-50	0-50	0-50	0-50
SOUND LEVEL	dB(A)	79	80	80	80	80	81	82	87
WEIGHT	kg	19	34	34	34	34	34	105	105

** at 450 rpm

** at 1250 rpm