

ANTICO

non metallic pumps



KNS Series - Lined Chemical Process Pumps

KNS SERIES



Decades of experience in development & manufacturing moulded non metallic pumps have paved way for PFA/FEP lined pumps designed as per ISO 2858 standard.

Linings made of PFA / FEP are an excellent alternative to high alloy, expensive metal pumps thus justifies ANTICO design philosophy to design pumps that are simple rugged and reliable using the most appropriate materials.

PFA is a copolymer of Tetrafluoroethylene and Perfluoroalkoxyethylene. PFA stands for Perfluoroalkoxy and has temperature resistance upto 200° Celcius.

FEP is a copolymer of Tetrafluoroethylene and Hexafluoroethylene. FEP stands for Fluorinated Ethylene Propylene and has temperature resistance up to 180° Celcius.

PFA / FEP is justifiably material of choice as compared to PTFE due to several advantages.

PFA / FEP is processed in a transfer moulding operation as a result, the lining wall thickness can be accurately defined and reproduced.

PFA / FEP is almost transparent and therefore permits much more reliable quality control.

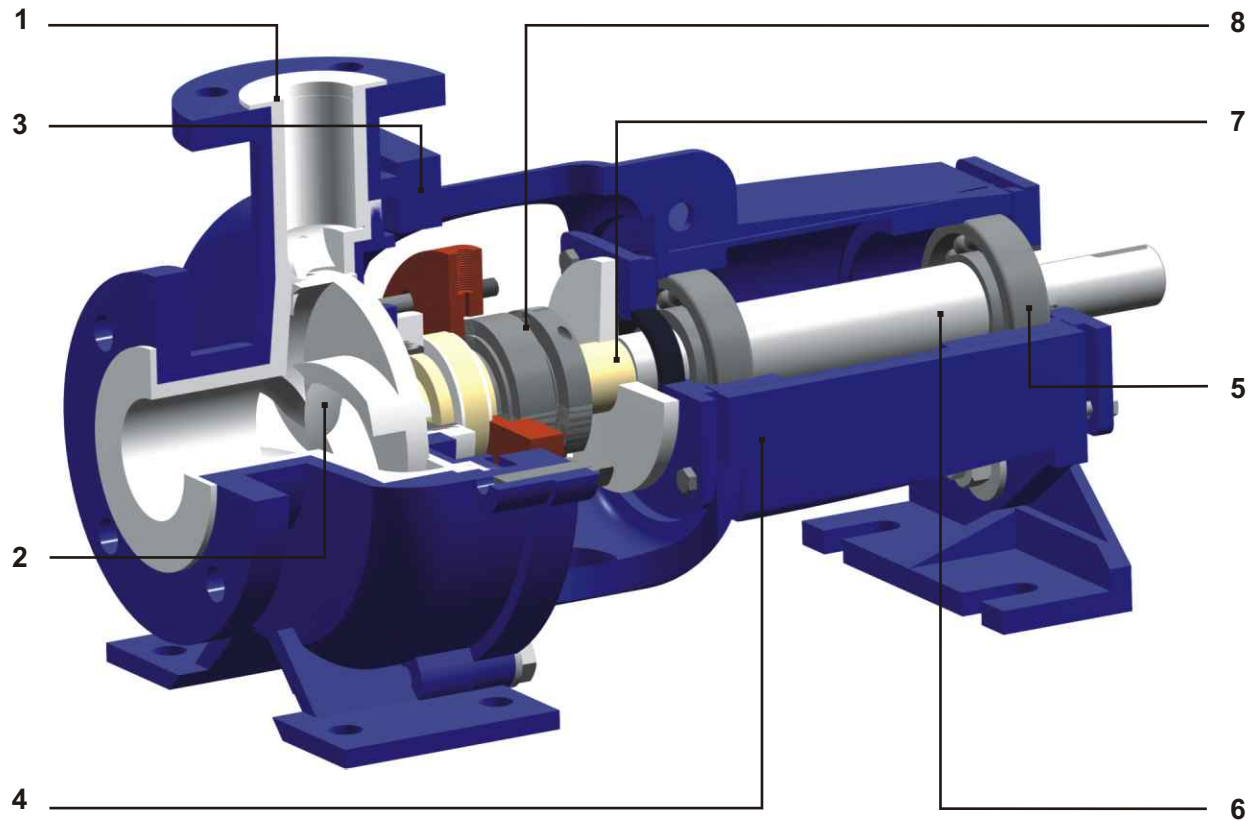
PFA / FEP has dense molecular structure hence has much lower permeation rates than PTFE with the same wall thickness but it has the same chemical resistance properties.



Application:

KNS series are best suited for pumping corrosive & toxic air pollutants; typically used in chemical and pharmaceutical industries.

Design Features



1 Volute Casing

Top centreline discharge, self venting volute casing lined with PFA/FEP. Minimum lining thickness of 6 mm, lining locked by multiple locking grooves. Outer body graded cast iron as per ASTM standard, other materials like cast steel / stainless steel available on request.

2 Impeller

All impellers are precision moulded in PFA/FEP, light in weight, semi open construction, with large contoured flow passages for maximum handling of the liquid.

3 Backplate

Lined with thick walled PFA/FEP. Minimum lining thickness of 6 mm, lining locked by multiple locking grooves. Outer body graded cast iron as per ASTM standard, other materials like cast steel / stainless steel available on request.

4 Bearing Frame

Heavy Cast Iron construction, precision machined for no shaft deflection of more than 0.05 mm, contains large oil reservoir.

5 Ball Bearings

Inboard bearing is pressed on shaft and free to float axially in frame - carries radial load only. Outboard double row ball bearing is shouldered and locked on shaft with lock-nut and washer, in bearing housing - carries radial and any unbalanced thrust load. All bearing fits are precision bored.

6 Shaft

Designed for maximum 0.05 mm deflection at mechanical seal. Available in EN / Stainless Steel.

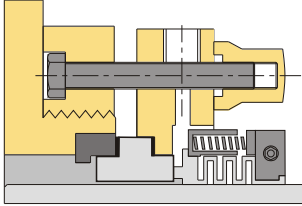
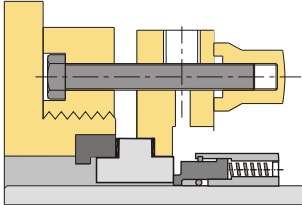
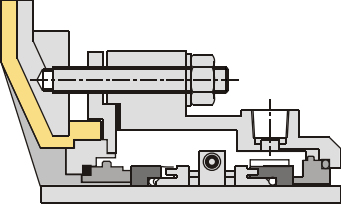
7 Sleeve

Shaft Sleeve of different material depending on the compatibility of the liquid to be handled.

8 Mechanical Seal

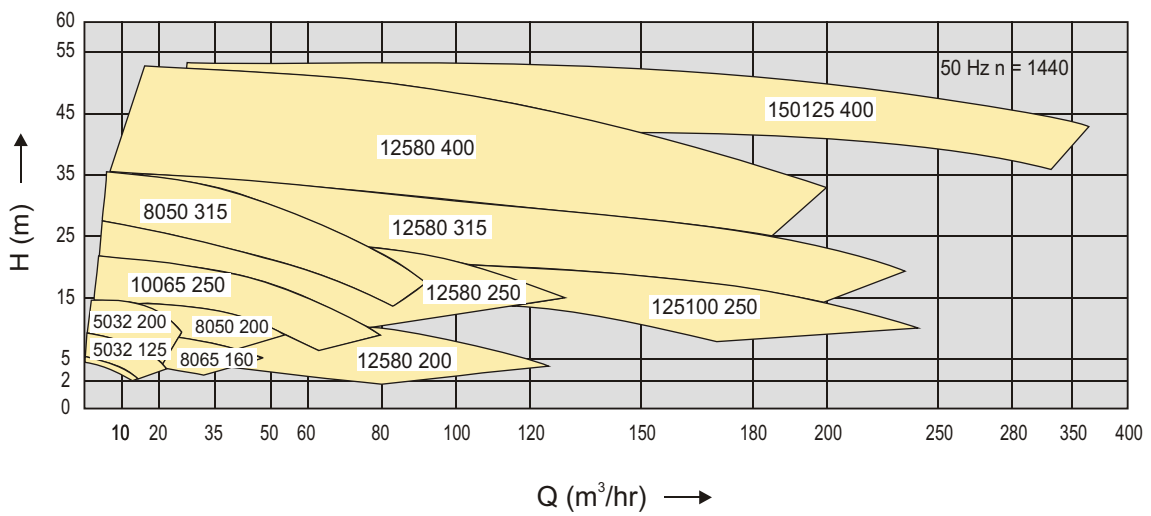
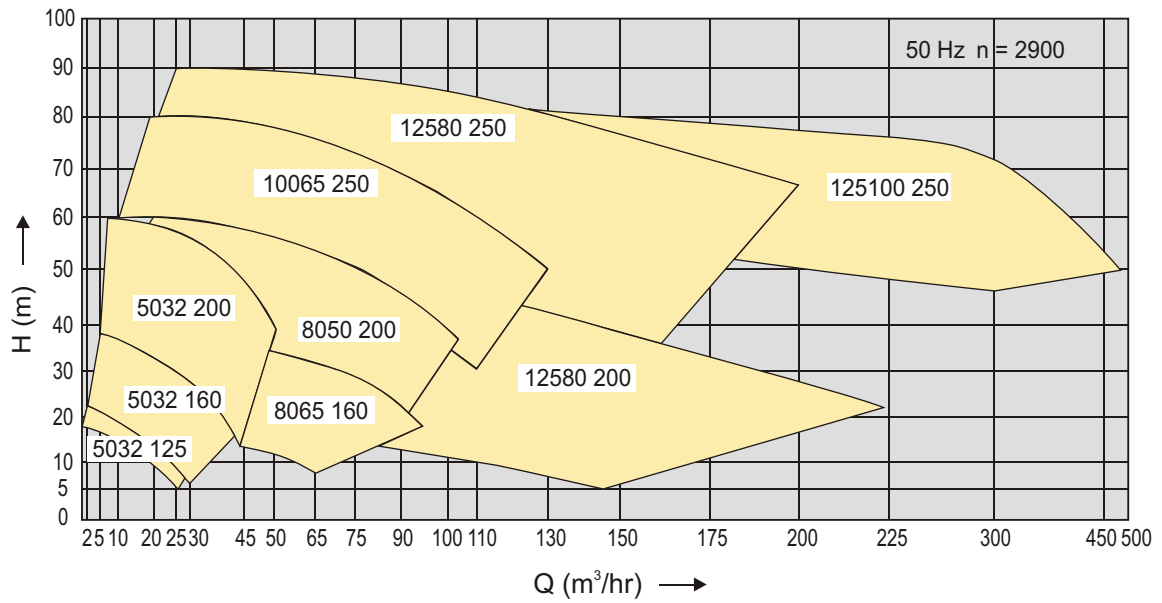
Available in single or double seal arrangements with wide variety of seal faces.

Sealing Options

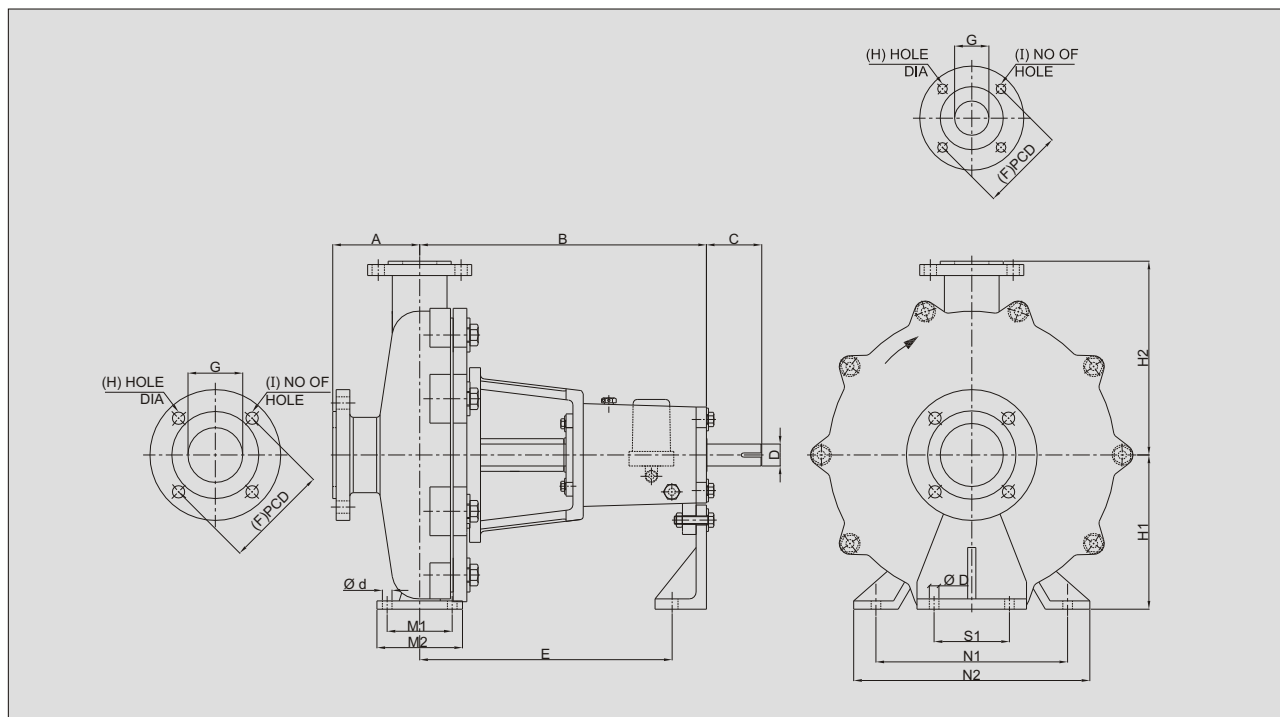
PTFE Bellows		PTFE Bellows <p>PTFE bellows provide universal chemical resistance for a wide range of services & non-wetted metal parts eliminate the need for expensive metallurgies. TB/TBR seal is inherently hydraulically balanced to ensure proper face loading. Installs easily on outside of stuffing box; eliminates the use of elastomers.</p>
Metallic Seal		Metallic Seal <p>Metallic seal is a multi spring outside mounted balanced seal with 'O' Ring as secondary seal. Excellent for crystalline media since clogging of rotary unit does not occur as is the case in PTFE bellows seal. Wide range of seal face materials available for various applications.</p>
Double Seals		Double Seals <p>Double seal pumps come with double ROTT seals used exclusively for volatile organic hazardous air pollutants. Inboard seal faces are SiC vs SiC with PTFE packing & outboard seal faces are SiC vs Carbon with Viton 'O' ring. Seal hardware & stuffing box are SS316. Seal cooling will have to be as per API plan 53 with a pressurized thermosyphon system.</p>



Performance Range Chart



Pump Dimensions & Connections



150 X 125 X 400	140	530	110	42	370	315	400	150	200	400	500	110	M-12	M-20	241	150	22	08	219	125	18	08			
125 X 100 X 250	140	530	110	42	370	225	280	120	160	315	400	110	M-12	M-20	219	125	18	08	190	100	18	08			
125 X 80 X 400	125	530	110	42	370	280	355	120	160	355 435		110	M-12	M-16	219	125	18	08	152	80	18	04			
125 X 80 X 315						250	315			315	400				219	125	18	08	152	80	18	04			
125 X 80 X 250						225	280			219 125 18 08 152 80 18 04					219	125	18	08	152	80	18	04			
125 X 80 X 200						200	250			280	360				219	125	18	08	152	80	18	04			
100 X 65 X 250	125	500	80	32	370	160	180	70	100	212	265	110	M-12	M-16	190	100	18	08	140	65	18	04			
80 X 65 X 160	100	385	50	24	285	160	180	70	100	212	265	110	M-12	M-12	152	80	18	04	140	65	18	04			
80 X 50 X 315	125	500	80	32	370	225	280	95	125	280	345				152	80	18	04	120	50	18	04			
80 X 50 X 200	100	385	50	24	285	160	200	70	100	212	265				152	80	18	04	120	50	18	04			
50 X 32 X 200	80	385	50	24	285	160	180	70	100	190	240	110	M-12	M-12	89	32	14	04	79	25	14	04			
50 X 32 X 160						132	160			140	190														
50 X 32 X 125						112	140																		
MODEL	A	B	C	D	E	H1	H2	M1	M2	N1	N2	S1	Ø D	Ø d	F				G			H	I	F	G
															SUCTION FLANGE				DISCHARGE FLANGE						

NOTE :-

- 1) ALL DIMENSIONS IN mm
- 2) DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE
- 3) FLANGES AS PER ANSI B 16.5 # 150 RF



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