

1, 3, 5 HM..S - HM..N SERIES

ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS

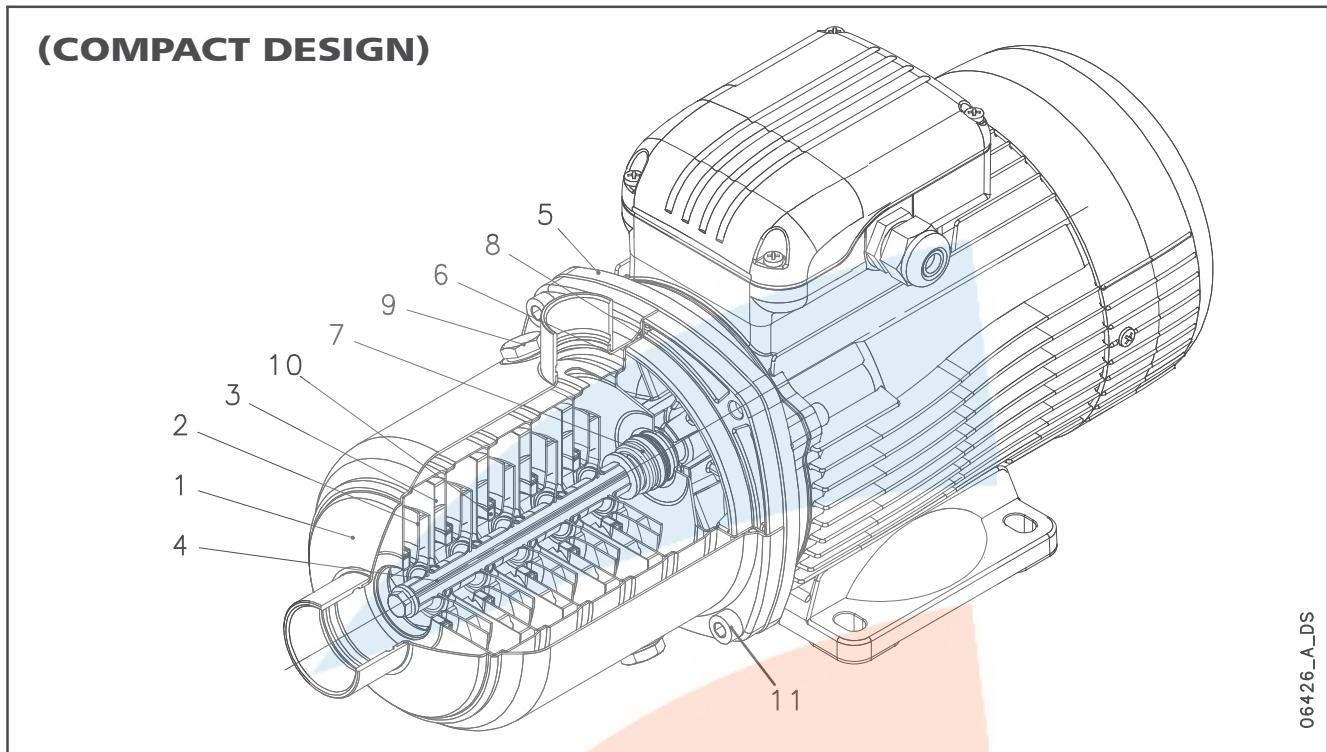


TABLE OF MATERIALS HM..S SERIES

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
2	Impeller	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
3	Diffuser	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Shaft	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
5	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
6	Seal housing	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
7	Mechanical seal	Ceramic / Carbon / EPDM		
8	Elastomers	EPDM		
9	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
10	Wear ring	Technopolymer (PPS)		
11	Bolts and screws	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304

1-3-5hm-cp-s-en_a_tm

TABLE OF MATERIALS HM..N SERIES

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Diffuser	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Shaft	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
5	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
6	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
7	Mechanical seal	Ceramic / Carbon / EPDM		
8	Elastomers	EPDM		
9	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
10	Wear ring	Technopolymer (PPS)		
11	Bolts and screws	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304

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1, 3, 5, 10, 15, 22 HM..S - HM..N SERIES ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS

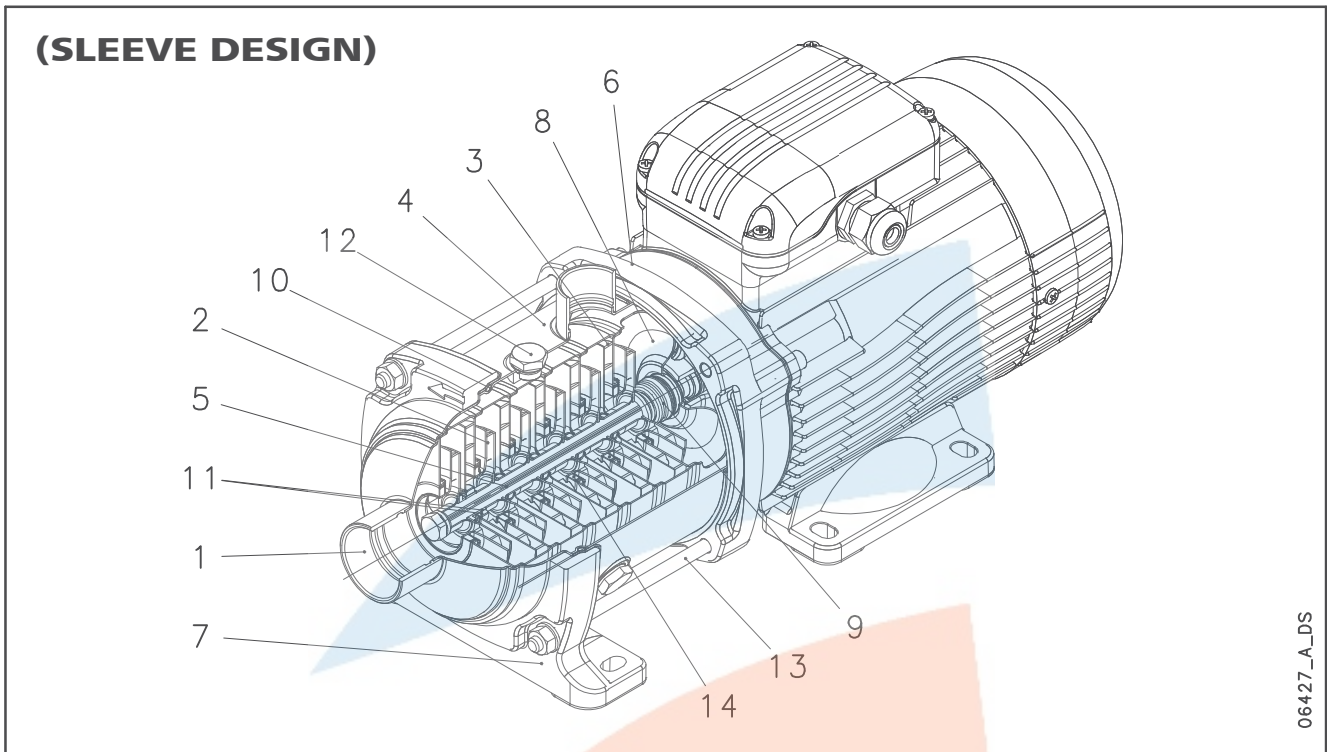


TABLE OF MATERIALS HM..S SERIES

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Head	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
2	Impeller	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
3	Diffuser	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Outer sleeve	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Shaft	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
6	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
7	Ring with foot	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
8	Seal housing	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
9	Mechanical seal	Ceramic / Carbon / EPDM (PN10) - Silicon Carbide/Carbon/EPDM (PN16)		
10	Elastomers	EPDM		
11	Shaft sleeve and bushing	Tungsten carbide		
12	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
13	Tie rods	Stainless steel	EN 10088-1-X17CrNi16-2 (1.4057)	AISI 431
14	Wear ring	Technopolymer (PPS)		

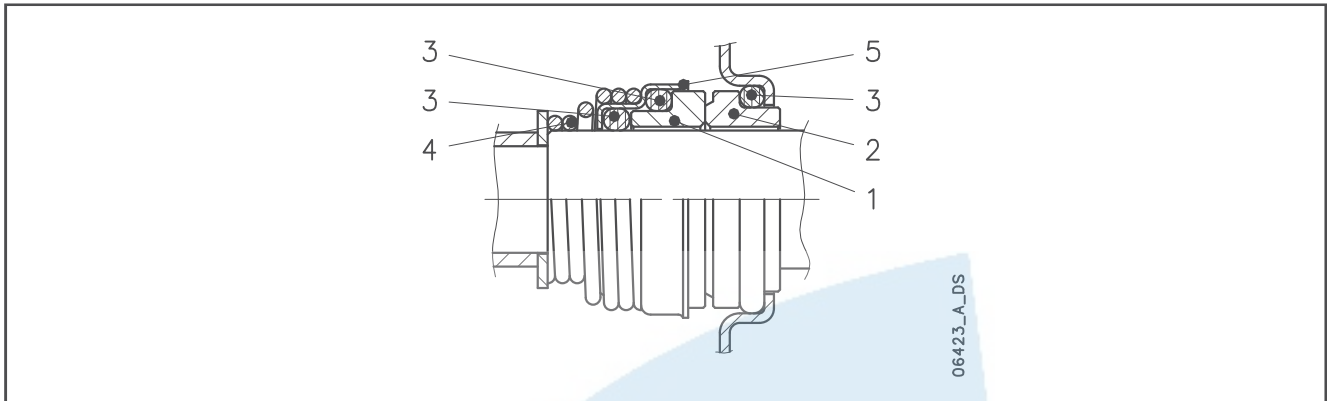
TABLE OF MATERIALS HM..N SERIES

1-22hm-cm-s_a_tm

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Head	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Diffuser	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Outer sleeve	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Shaft	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
6	Adapter	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
7	Ring with foot	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
8	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
9	Mechanical seal	Ceramic / Carbon / EPDM (PN10) - Silicon Carbide/Carbon/EPDM (PN16)		
10	Elastomers	EPDM		
11	Shaft sleeve and bushing	Tungsten carbide		
12	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
13	Tie rods	Stainless steel	EN 10088-1-X17CrNi16-2 (1.4057)	AISI 431
14	Wear ring	Technopolymer (PPS)		

1-22hm-cam-n-en_a_tm

e-HM SERIES MECHANICAL SEALS



LIST OF MATERIALS ACCORDING TO EN 12756

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
V : Aluminium oxide (Ceramic)	E : EPDM	G : AISI 316
Q ₁ : Silicon Carbide	V : FPM	
B : Carbon, resin-impregnated	K : FFPM (Kalrez®)	

1-22hm_ten-mec-en_a_tm

TYPE OF SEAL

TYPE	POSITION					*TEMPERATURE (°C)	OPERATING PRESSURE
	1 ROTATING PART	2 STATIONARY PART	3 ELASTOMERS	4 SPRINGS	5 OTHER COMPONENTS		
STANDARD MECHANICAL SEAL - PN10							
VBEGG	V	B	E	G	G	-30 + 90	PN10
STANDARD MECHANICAL SEAL - PN16							
Q ₁ BEGG	Q ₁	B	E	G	G	-30 + 120	PN16
OTHER TYPES OF AVAILABLE MECHANICAL SEAL							
VBVGG	V	B	V	G	G	-10 + 90	PN10
Q ₁ Q ₁ VGG	Q ₁	Q ₁	V	G	G	-10 + 90 (+120)	PN16 (PN10)
Q ₁ Q ₁ KGG	Q ₁	Q ₁	K	G	G	-20 + 90 (+120)	PN16 (PN10)
Q ₁ Q ₁ EGG	Q ₁	Q ₁	E	G	G	-30 + 90 (+120)	PN16 (PN10)
Q ₁ VBVGG	Q ₁	B	V	G	G	-10 + 120	PN16
Q ₁ BKGG	Q ₁	B	K	G	G	-20 + 120	PN16

* For all single-phase versions limit the temperature to +60°C.

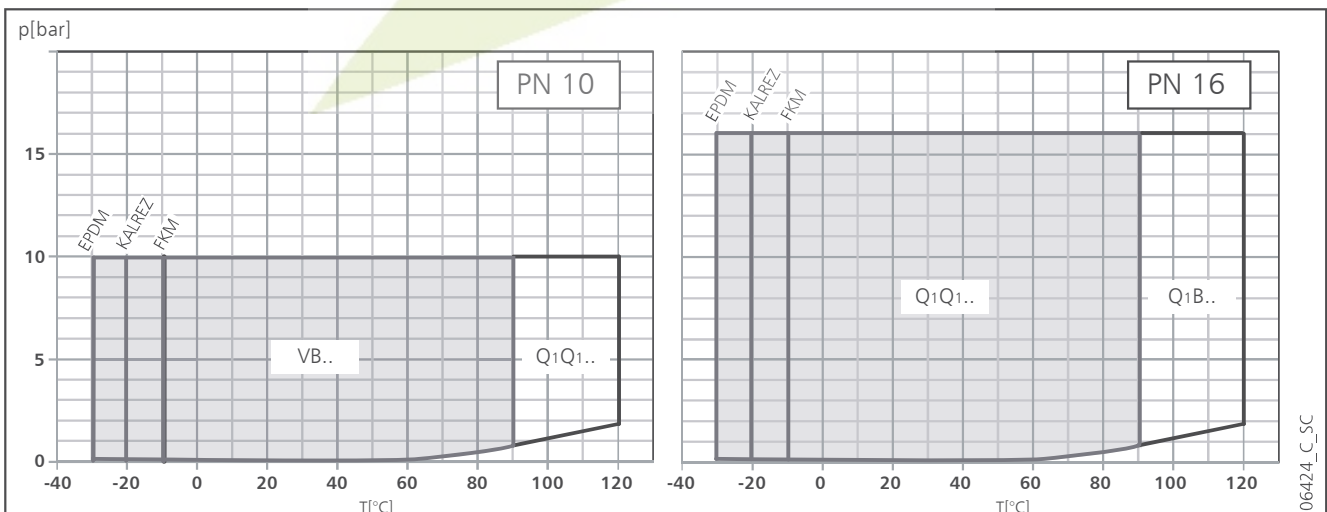
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For three-phase HM..P limit the temperature to +90°C.

PRESSURE/TEMPERATURE APPLICATION LIMITS FOR COMPLETE PUMP

The pressure limit could be different according to:

- stage number, please refer to the PN column of the DIMENSIONS AND WEIGHT tables;
- type of seal, please refer to the PN column of the TYPE OF SEAL table.



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