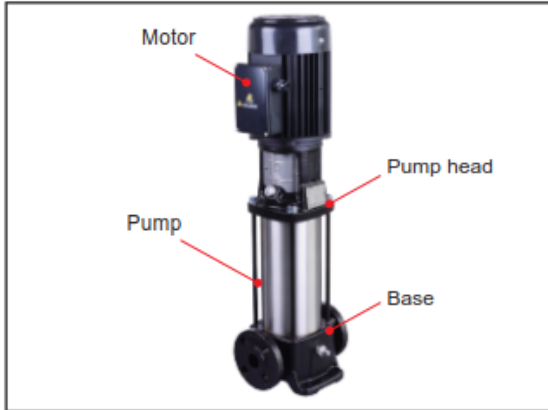


Pump

TPR(S) is a non self-priming, vertical multistage centrifugal pump, consisting of a base, pump head, pump body and an outer sleeve. The base has in-line suction and discharge ports, and all seals are maintenance-free.



Motor

The motor is a totally enclosed, fan cooled, 2-pole standard motor.

Installation specifications: 0.37-4.0kW, V18; over 5.5kW, v1
Insulation class: F

Enclosure class: IP55 , IP54

Standard voltages: 3x 220 / 380 V

Stops and Restarts: 0.37-less than 4kw, 30 times / hour
Over 4.0kw, 20 times / hour

Operating conditions:

Delivery liquids : non-viscous, non-flammable/explosive, without neither solid nor fiber particles, and should not cause physical nor chemical damage to the pump. For viscosity larger than water, use pumps with a higher output if necessary.

Whether a pump is suitable for a certain liquid depends factors such as the liquid's chlorine content, PH value, temperature and composition, among other factors.

Liquids temperature: -20°C to 120°C

Environmental Temperature: Maximum 40°

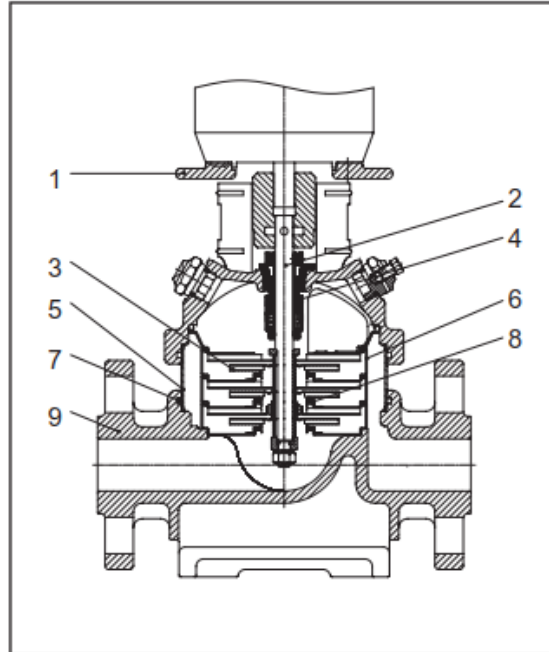
At environmental temperatures over 40°C or altitudes over 1000m above sea level, motor heat dissipation will be reduced due to reduced air density thus reducing heat dissipation, and cause a decrease in power output. In those situations, higher rated pump is necessary.

Minimum suction pipe pressure: the suction pressure should be calculated and checked if any of these conditions exist:

- High liquid temperature
- Flow significantly larger than rated maximum
- Liquid requires long suction distance
- The suction pipe is long
- Liquid entry conditions are bad

For calculations, please see page 8.

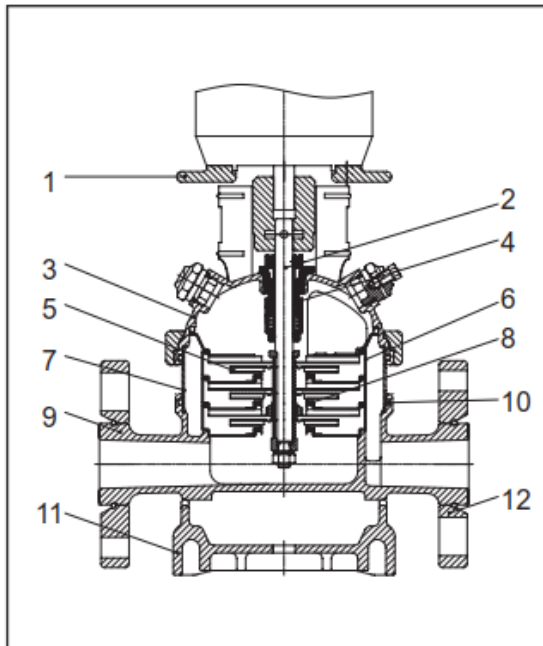
TPR 1 / 3 / 5 / 10 / 15 / 20



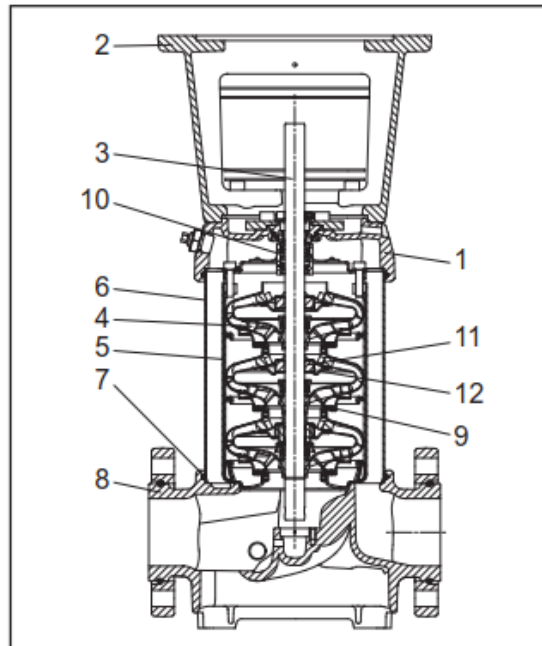
Materials TPR

No.	Description	Materials
1	Pump head	Cast iron FC200
2	Shaft	SUS304
3	Impeller	SUS304
4	Shaft seal	Cartridge type
5	Sleeve	SUS304
6	Chamber	SUS304
7	O-ring for sleeve	EPDM or HNBR
8	Neck ring	PTFE
9	Base	Cast iron FC200
	Rubber parts	EPDM or HNBR

TPR 1 / 3 / 5 / 10 (S)(N) , 15 / 20 (S)



TPR 32 / 45 / 64 / 90



Materials TPR 1 / 3 / 5 / 10 (S)(N) , 15 / 20 (S)

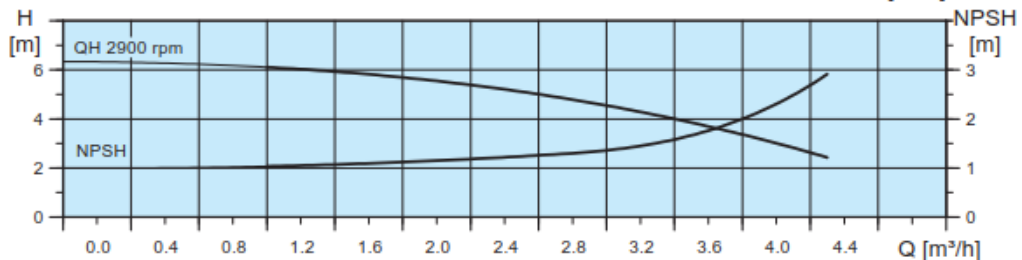
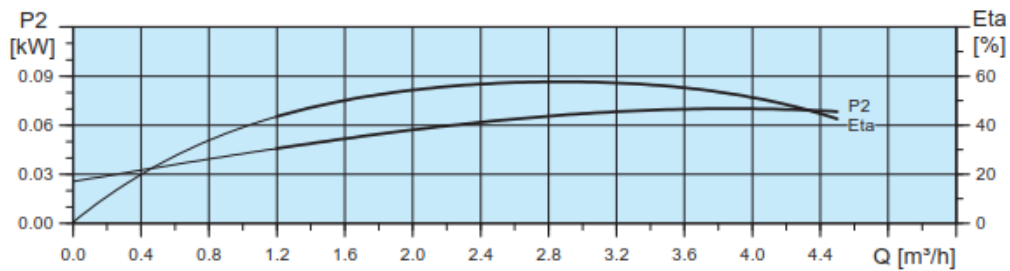
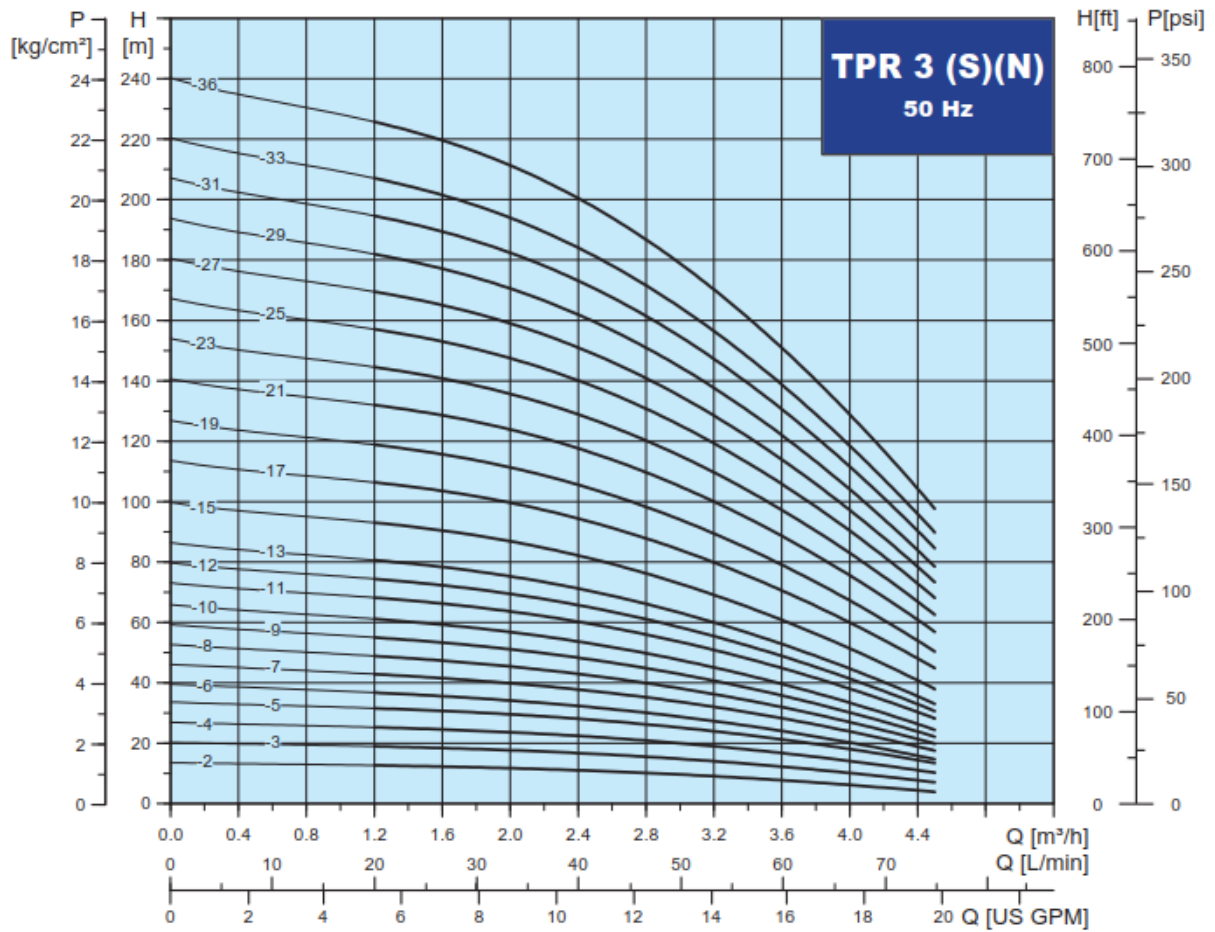
No.	Description	Materials	
		TPR(S)	TPR(N)
1	Pump head	Cast iron FC200	
2	Shaft	SUS304	SUS316
3	Pump head cover	SUS304 / SUS316	
4	Shaft seal	Cartridge type	
5	Impeller	SUS304	SUS316
6	Chamber	SUS304	SUS316
7	Sleeve	SUS304	SUS316
8	Neck ring	PTFE	
9	Base	SUS304 / SUS316	
10	O-ring for sleeve	EPDM or HNBR	
11	Base plate	Cast iron FC200	
12	Flange	Cast iron FC200	
	Rubber parts	EPDM or HNBR	

SUS304 may be replaced by SUS316 depended on stock availability.

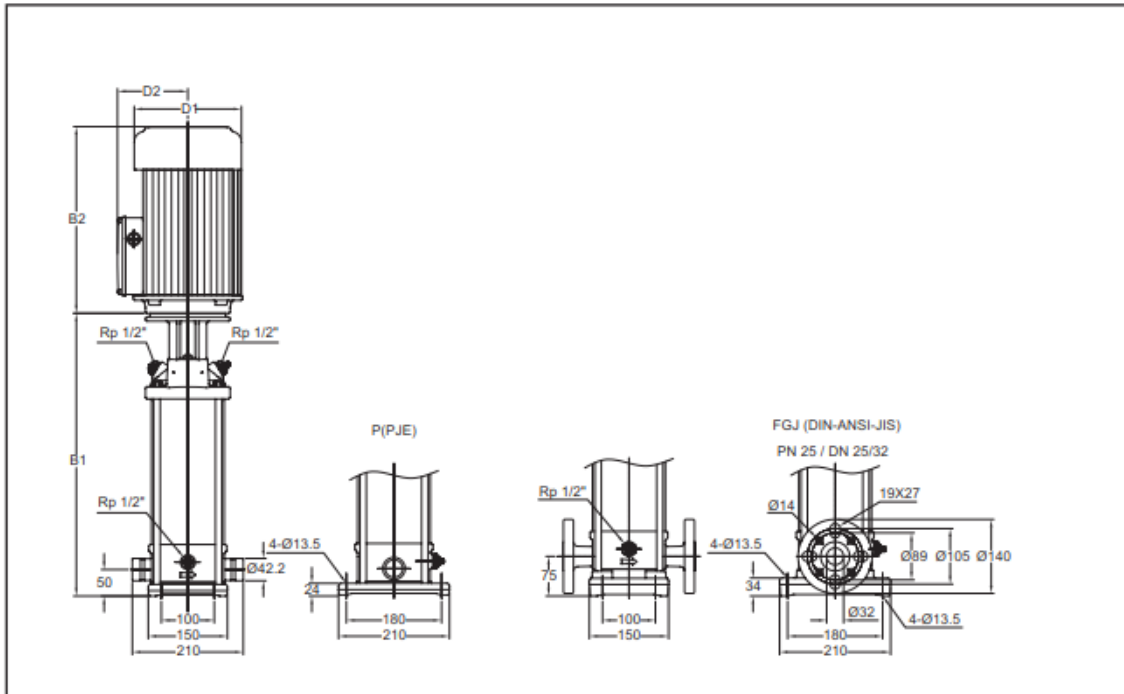
Materials TPR 32 / 45 / 64 / 90

No.	Description	Materials
1	Pump head	FC200
2	Motor stool	FC200
3	Shaft	SUS431
4	Impeller	SUS304
5	Chamber	SUS304
6	Sleeve	SUS304
7	O-ring for sleeve	EPDM or FKM
8	Base	FCD500
9	Neck ring	Carbon-graphite-filled PTFE
10	Shaft seal	Cartridge type
11	Bearing ring	Tungsten
12	Bottom bearing ring	Carbon-graphite-filled PTFE
	Rubber parts	EPDM or FKM

Performance curves



Dimensional Sketches



Dimensions and Weights

Pump type	Motor [kW]	TPRS/TPRN							
		Dimension [mm]						N.W. [kg]	
		PJE		DIN flange		D1	D2	PJE	DIN
B1	B1+B2	B1	B1+B2						
TPR 3-2 (S)(N)	0.37	262	456	277	471	144.5	110	16	20
TPR 3-3 (S)(N)	0.37	262	456	277	471	144.5	110	16	21
TPR 3-4 (S)(N)	0.37	280	474	295	489	144.5	110	17	21
TPR 3-5 (S)(N)	0.37	298	492	313	507	144.5	110	17	21
TPR 3-6 (S)(N)	0.55	316	550	331	565	144.5	110	18	23
TPR 3-7 (S)(N)	0.55	334	568	349	583	144.5	110	19	23
TPR 3-8 (S)(N)	0.75	358	592	373	607	144.5	110	21	26
TPR 3-9 (S)(N)	0.75	376	610	391	625	144.5	110	22	26
TPR 3-10 (S)(N)	0.75	394	628	409	643	144.5	110	22	26
TPR 3-11 (S)(N)	1.10	412	676	427	691	144.5	110	25	29
TPR 3-12 (S)(N)	1.10	430	694	445	709	144.5	110	25	29
TPR 3-13 (S)(N)	1.10	448	712	463	727	144.5	110	26	30
TPR 3-15 (S)(N)	1.10	484	748	499	763	144.5	110	26	31
TPR 3-17 (S)(N)	1.50	537	816	552	831	181	122	34	38
TPR 3-19 (S)(N)	1.50	573	852	588	867	181	122	34	39
TPR 3-21 (S)(N)	2.20	609	918	624	933	181	122	36	40
TPR 3-23 (S)(N)	2.20	645	954	660	969	181	122	37	41
TPR 3-25 (S)(N)	2.20	681	990	696	1005	181	122	37	42
TPR 3-27 (S)(N)	2.20	717	1026	732	1041	181	122	38	42
TPR 3-29 (S)(N)	2.20	753	1062	768	1077	181	122	39	43
TPR 3-31 (S)(N)	3.00	793	1117	808	1132	208	133	46	50
TPR 3-33 (S)(N)	3.00	829	1153	844	1168	208	133	47	51
TPR 3-36 (S)(N)	3.00	883	1207	898	1222	208	133	48	52