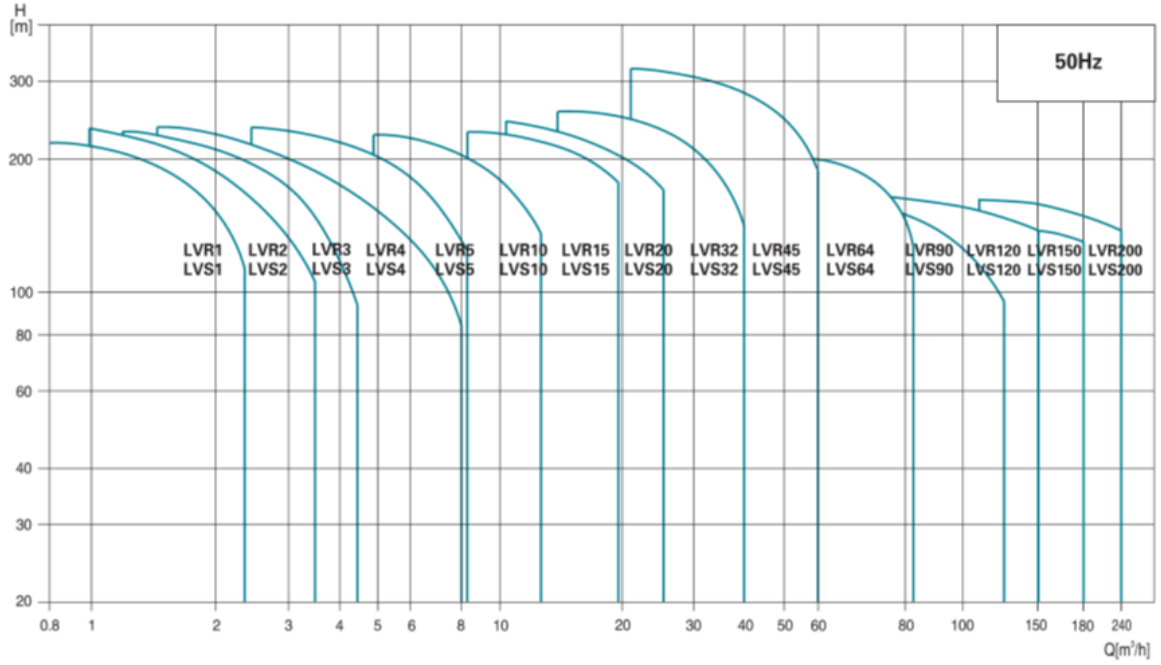
Scope of Performance LVS (R)

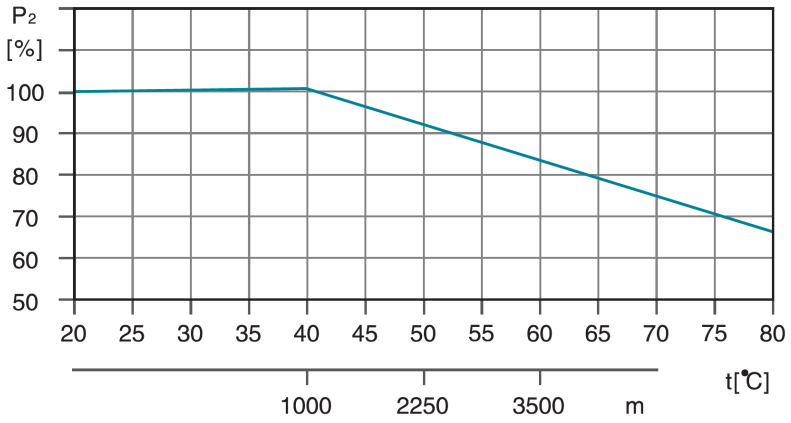


Product Range

MODEL / DESCRIPTION	LVR(S)1	LVR(S)2	LVR(S)3	LVR(S)4	LVR(S)5	LVR(S)10	LVR(S)15	LVR(S)20	LVR(S)32	LVR(S)45	LVR(S)64	LVR(S)90	LVR(S)120	LVR(S)150	LVR(S)200
Rated flow [m³/h]	1	2	3	4	5	10	15	20	32	45	64	90	120	150	200
Flow range [m³/h]	0.7–2.4	1.0–3.5	1.2–4.5	1.5–8	2.5–8.5	5–13	8–23	10.5–29	15–40	22–58	30–85	45–120	60–150	80–180	100–240
Max. pressure [bar]	22	23	24	21	24	22	23	25	28	33	22	20	16	16	16
Motor power [kW]	0.37–2.2	0.37–3	0.37–3	0.37–4	0.37–4	1.1–7.5	1.1–15	1.1–18.5	1.5–30	3–45	4–45	5.5–45	11–75	11–75	18.5–110
Temperature Range [°C]	–20°C~+120°C (Note: Both the Max. permissible pressure and liquid temperature range refer to the pump capacity.)														
Max. pump efficiency [%]	45	48	55	59	60	65	70	72	78	79	80	81	74	73	79
Pipe connection-LVR															
Oval flange	G1	G1	G1	G1 1/4	G1 1/4	-	-	-	-	-	-	-	-	-	-
DIN flange	DN25	DN25	DN25	DN32	DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125	DN150
Pipe connection-LVS															
Oval flange	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIN flange	DN32	DN32	DN32	DN32	DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125	DN150
Clamp connector	ϕ42	ϕ42	ϕ42	ϕ42	ϕ42	-	-	-	-	-	-	-	-	-	-
Threaded connector	R_2 1¼	R_2 1¼	R_2 1¼	R_2 1¼	R_2 1¼	-	-	-	-	-	-	-	-	-	-

Ambient Temperature

An ambient temperature of over 40 ° C or an installation at an altitude above 1000 meters above sea level requires an oversized motor. Due to low air density and poor cooling, the output power P2 decreases, as shown in the table below:



For example, when the pump is installed at an altitude of 3500 meters, P2 will decrease by 88%. And when the ambient temperature is 70 ° C, P2 will decrease by 78%.

Maximum Operation pressure (bar)

The table below shows the maximum discharge pressures of the various LVS (R) pumps. The suction pressure of the pump + the set pressure must always be lower than the maximum operating pressure of the pump. If the maximum working pressure is exceeded, it can damage the motor bearings and reduce the service life of the mechanical seal.

Model	LVR Max. Operation pressure [bar]		LVS Max. Operation pressure [bar]
	Oval Flange	DIN Flange	
LVR (S) 1	16	25	25
LVR (S) 2	16	25	25
LVR (S) 3	16	25	25
LVR (S) 4	16	25	25
LVR (S) 5	16	25	25
LVR (S) 10	25		25
LVR (S) 15	25		25
LVR (S) 20	25		25
LVR (S) 32-1-1 - 32-7	16		16
LVR (S) 32-8-2 - 32-14	30		30
LVR (S) 45-1-1 - 45-5	16		16
LVR (S) 45-6-2 - 45-11	30		30
LVR (S) 45-12-2 - 45-13-2	33		33
LVR (S) 64-1-1 - 64-5	16		16
LVR (S) 64-6-2 - 64-8-1	30		30
LVR (S) 90-1-1 - 90-4	16		16
LVR (S) 90-5-2 - 90-6	30		30
LVR (S) 120-1 - 120-7	20		20
LVR (S) 150-1-1 - 150-6	20		20
LVR (S) 200-1-D - 200-4	20		20

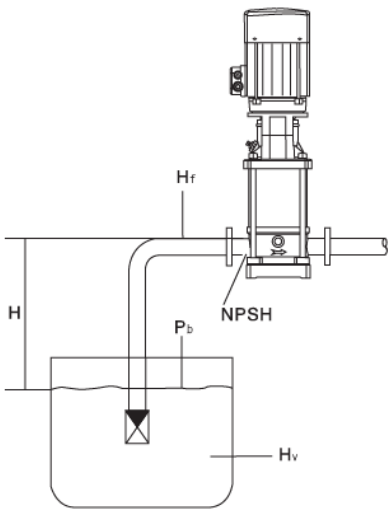
Minimum Inlet Pressure–Npsh

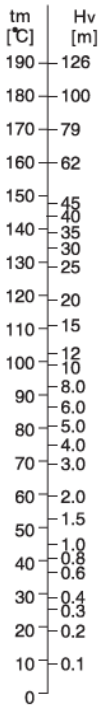
Calculation of the inlet pressure "H" is recommended in these situations:
The liquid temperature is high.
The flow is significantly higher than the rated flow.
Water is drawn from depths.
Water is drawn through long pipes.
Inlet conditions are poor.

To avoid cavitation, make sure that there is a minimum pressure on the suction side of the pump. The maximum suction lift "H" in meters head can be calculated as follows:

H	$= P_b \times 10.2 - NPSH - H_f - H_v - H_s$
P_b	= Barometric pressure in bar. (Barometric pressure can be set to 1 bar). In closed systems, P_b indicates the system pressure in bar.
NPSH	= Net Positive Suction Head in meters head. (To be read from the NPSH curve at the highest flow the pump will be delivering.)
H_f	= Friction loss in suction pipe in meters head. (At the highest flow the pump will be delivering.)
H_v	= Vapor pressure in meters head. (To be read from the vapor pressure scale. "H_v" depends on the liquid temperature "tm")
H_s	= Safety margin=minimum 0.5 meters head.

If the "H" calculated is positive, the pump can operate at a suction lift of maximum "H" meters head.
If the "H" calculated is negative, an inlet pressure of minimum "H" meters head is required.





Note: To avoid cavitation, never select a pump with a duty point too far to the right on the NPSH curve.
Always check the NPSH value of the pump at the highest possible flow.

LVS200 Vertical multicellular stainless steel in line pump

Application

- Transfer of liquids with low viscosity, non-flammable and non-explosive, not containing solid particles or fibers. These liquids must not chemically attack the materials of the pump.
- Water supply for tall buildings, pumping stations, overpressure in drinking water
- Washing stations, heating water circulation, air conditioning water circulation, water treatment systems
- Ultrafiltration, reverse osmosis, distillation systems, municipal swimming pools
- Irrigation: sprinkling, drip
- Food industry
- Fire fighting systems

Pompe

- Liquid temperature: from -20°C to +120°C
- Nominal flow: 200 m³/h
- maximum pressure: 16 bars
- pH between 4 and 10

Moteur

- IE3 motor
- Protection class: IP55
- Maximum ambient temperature: +40°

Identification codes

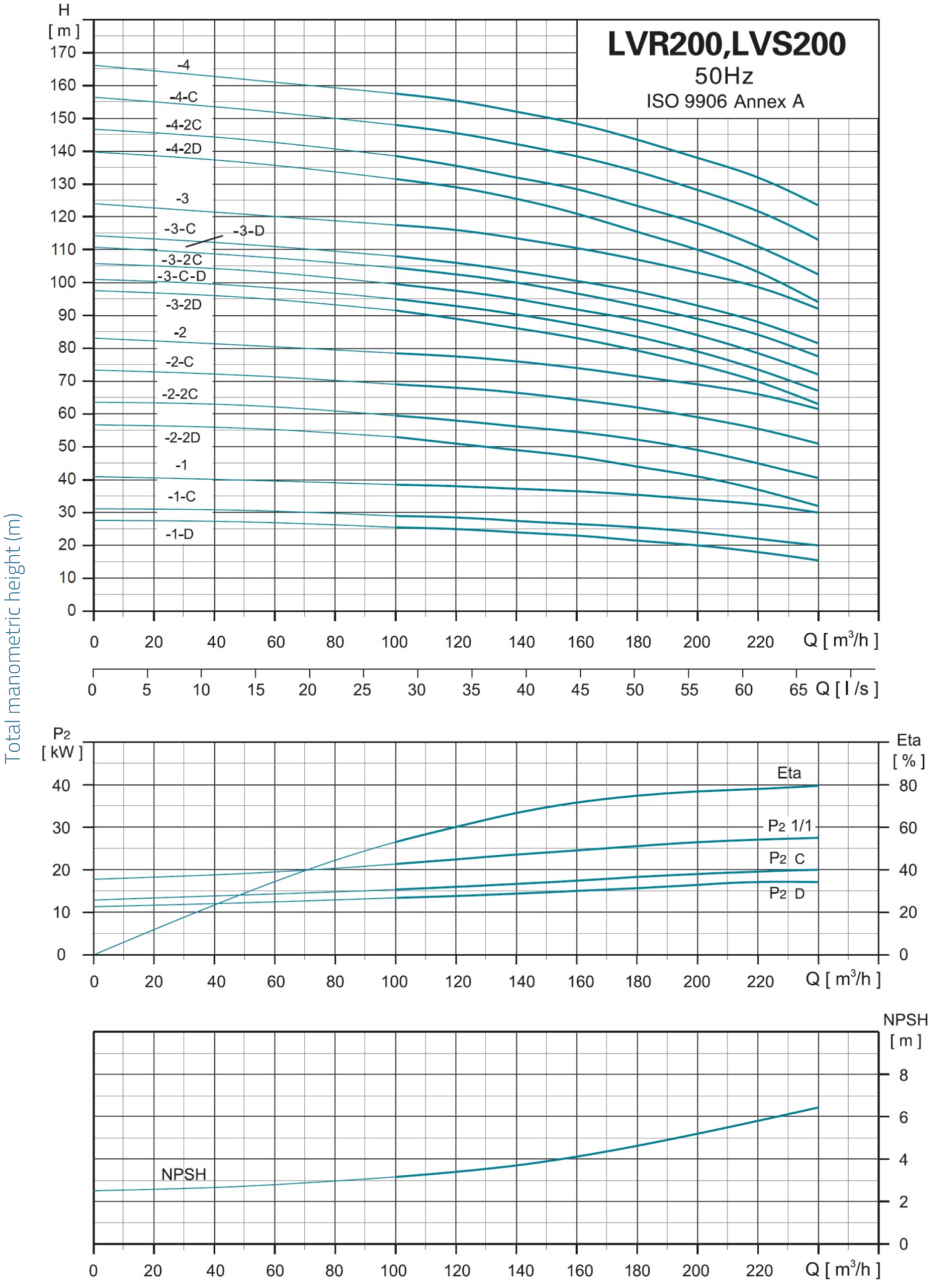
LVS 200 -3 -C -D -B /F

- /F — DIN flange
- -B — inox 316 (by default, inox 304)
- -D — Reduced turbine type D
- -C — Reduced turbine type C
- -3 — number of impellers
- 200 — Nominal flow (m³/h)
- LVS — Vertical multistage stainless steel in line pump

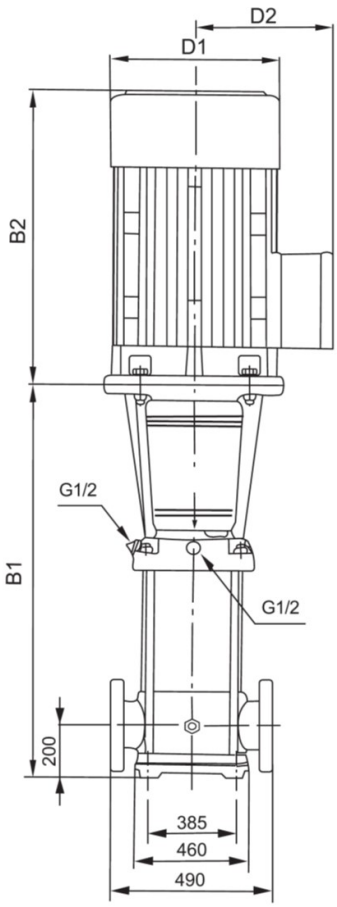
Technical data

MODEL	kW	Q (m³/h) / Q (l/min)	100 / 1667	120 / 2000	140 / 2333	160 / 2667	180 / 3000	200 / 3333	220 / 3667	240 / 4000
LVS200-1-C/F	22		29	28.5	27.5	26.5	25.5	24	22	20
LVS200-1-D/F	18.5		25.5	25	24	23	21.5	20	18	15.5
LVS200-1/F	30		38.5	38	37.5	36.5	35	34	32.5	30
LVS200-2-2-C/F	45		59.5	58	56	54	52.5	49	44.5	40.5
LVS200-2-2-D/F	37		53	51	49	47	44	41	37	32
LVS200-2-C/F	55		69	68	66	64	62	59	55.5	51
LVS200-2/F	55		78.5	77.5	76	74	71.5	69	66	61.5
LVS200-3-2-C/F	75		99.5	97.5	94.5	91.5	89	84	78.5	72
LVS200-3-2-D/F	75		91.5	89	86.5	83.5	79	75	70	63
LVS200-3-C-D/F	75		95	93	90	87	83.5	79	73.5	67
LVS200-3-C/F	75		108	106	103.5	100.5	97.5	93	88	81.5
LVS200-3-D/F	75		104.5	102.5	100	97	93	89	84.5	77.5
LVS200-3/F	90		117.5	116	113.5	110.5	107	103	99	92
LVS200-4-2-C/F	110		138.5	136	132	128	124	118	111	102.5
LVS200-4-2-D/F	90		131.5	129	125.5	121	115.5	110	103.5	94
LVS200-4-C/F	110		148	145.5	142.5	138	134	128	122	113
LVS200-4/F	110		157.5	155.5	152.5	148	143.5	138	132.5	123.5

Hydraulic performance



Dimensions



MODEL	B1	B1+B2	D1	D2	poids
LVS200-1-C/F	907	1507	380	280	347
LVS200-1-D/F	907	1467	330	250	311
LVS200-1/F	907	1587	420	305	403
LVS200-2-2-C/F	1101	1816	470	335	504
LVS200-2-2-D/F	1101	1781	420	305	447
LVS200-2-C/F	1131	1916	510	370	595
LVS200-2/F	1131	1916	510	370	595
LVS200-3-2-C/F	1325	2170	580	410	748
LVS200-3-2-D/F	1325	2170	580	410	748
LVS200-3-C-D/F	1325	2170	580	410	748
LVS200-3-C/F	1325	2170	580	410	748
LVS200-3-D/F	1325	2170	580	410	748
LVS200-3/F	1325	2220	580	410	817
LVS200-4-2-C/F	1519	2619	645	530	1180
LVS200-4-2-D/F	1519	2414	580	410	830
LVS200-4-C/F	1519	2619	645	530	1180
LVS200-4/F	1519	2619	645	530	1180

Exploded view

No.	Type	Materials
1	Base	cast iron HT200
2	Flange	ZG35 cast steel
3	Lower water box	ZG304
4	Diffuser	AISI 304 stainless steel
5	Intermediate diffuser	AISI 304 stainless steel
6	Diffuser with bearing	AISI 304 stainless steel
7	Impeller	AISI 304 stainless steel
8	Diffuser	AISI 304 stainless steel
9	Pump bottom	ZG304
10	Lantern	QT400 cast iron
11	Engine	
12	Coupling	QT400 cast iron
13	Protection shield	AISI 304 stainless steel
14	Cartridge mechanical seal	
15	Filling plug	AISI 304 stainless steel
16	Jacket	AISI 304 stainless steel
17	Clamping plate	AISI 304 stainless steel
18	Pump shaft	AISI 304 stainless steel