



FAGGIOLATI

LCS/LCA SERIES MULTISTAGE CENTRIFUGAL PUMP



LCS/LCA series multi-stage
centrifugal pumps

FAGGIOLATI®



Fagiolatti National Service Hotline: 400-822-5278

Fagiolatti National Service Hotline: www.faggiolatiump.com

Email: hotline@faggiolatiump.com

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17/ 50Hz LCS/LCA 1	39/ 50Hz LCS/LCA 32
19/ 50Hz LCS/LCA 2	41/ 50Hz LCS/LCA 45
21/ 50Hz LCS/LCA 3	43/ 50Hz LCS/LCA 64
23/ 50Hz LCS/LCA 4	45/ 50Hz LCS/LCA 90
25/ 50Hz LCS/LCA 5	47/ 50Hz LCS/LCA 100
27/ 50Hz LCS/LCA 8	49/ 50Hz LCS/LCA 130
29/ 50Hz LCS/LCA 10	51/ 50Hz LCS/LCA 160
31/ 50Hz LCS/LCA 12	53/ 50Hz LCS/LCA 190
33/ 50Hz LCS/LCA 15	55/ 50Hz LCS/LCA 220
35/ 50Hz LCS/LCA 16	57/ 50Hz LCS/LCA 260
37/ 50Hz LCS/LCA 20	

Pump Material

- Cast Iron
- Stainless steel(AISI304 ,AISI316)
- Duplex Stainless Steel(2205)

Pump operating conditions

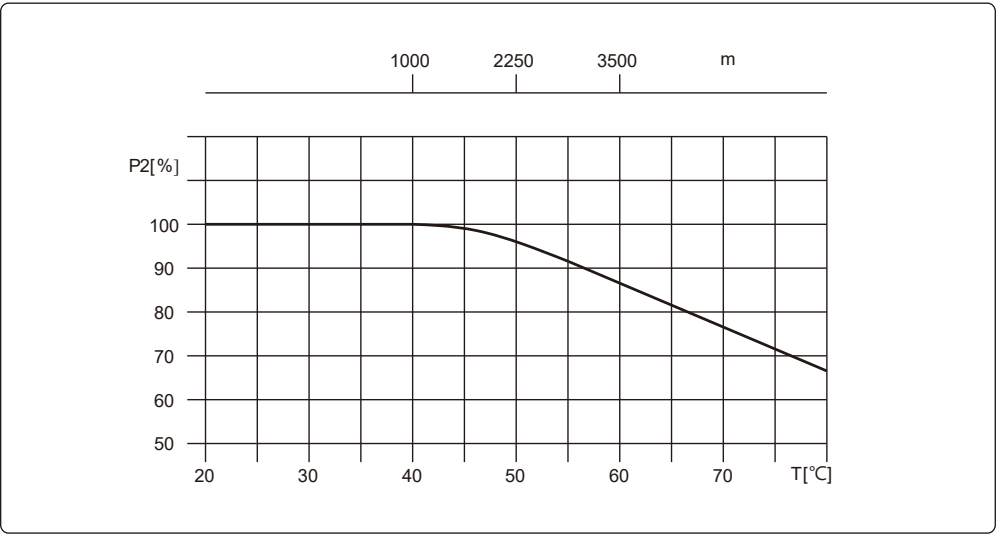
Thin, clean, non-flammable, non-explosive liquids that do not contain particles or fibers (see the end of the catalog for details of the liquids to be conveyed).

Ambient temperature: not more than +40 °C

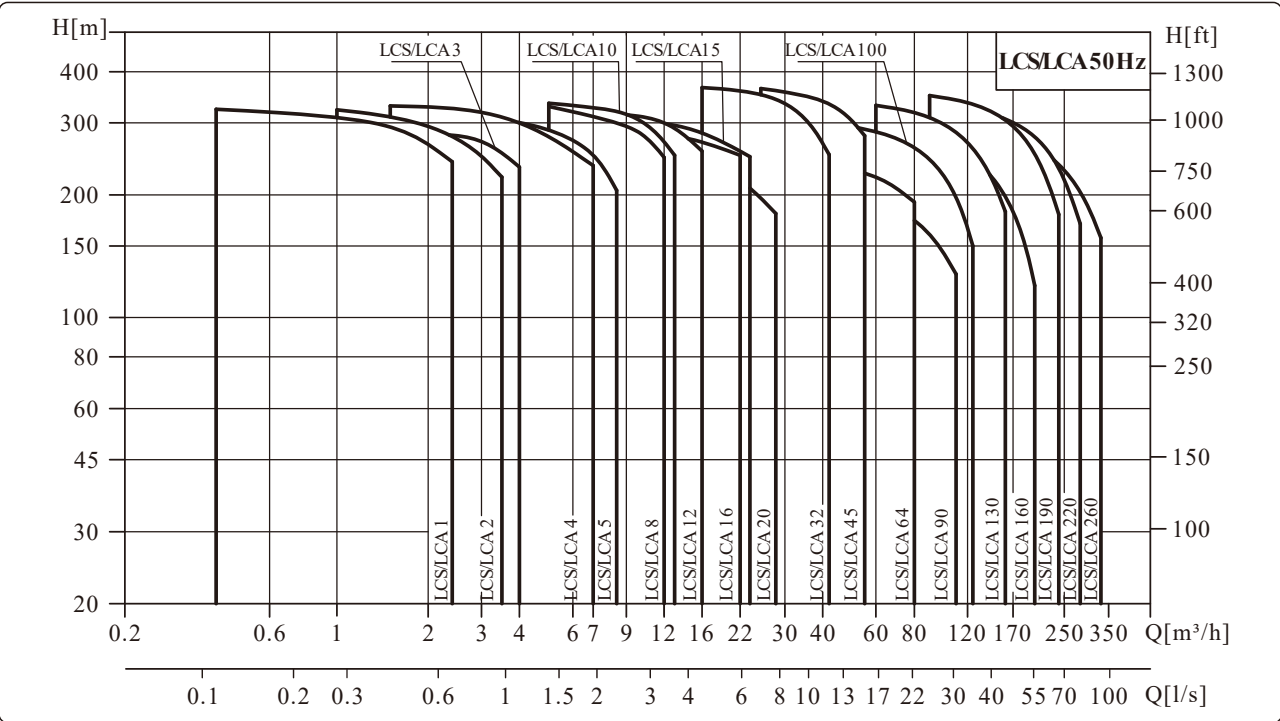
Altitude: not more than 1000m

Altitude and ambient temperature

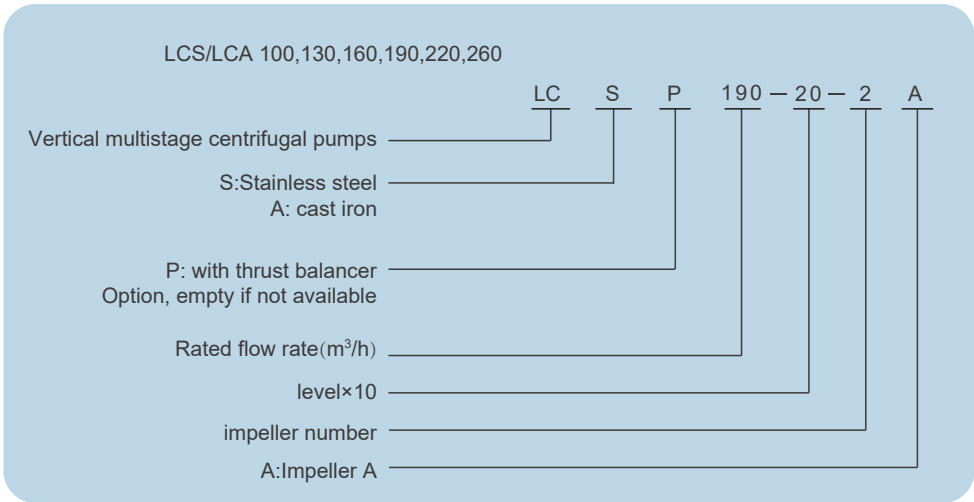
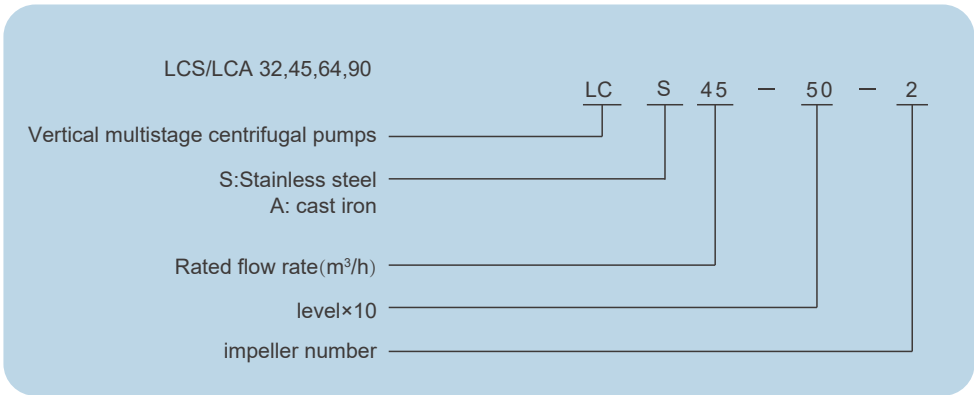
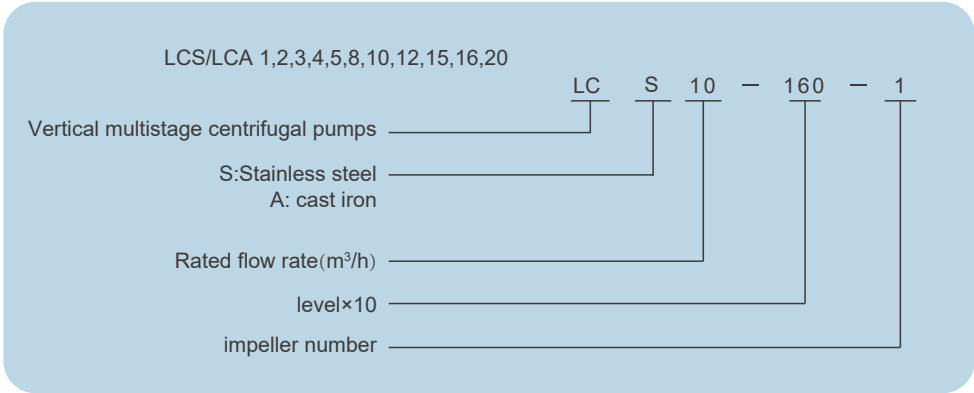
When the pump is operated at an ambient temperature of more than 40°C or at an altitude of more than 1,000 m, the motor output power P2 will be reduced, and the pump will need to be equipped with a larger motor power in the above cases.



Performance range



Model Description



Product Overview

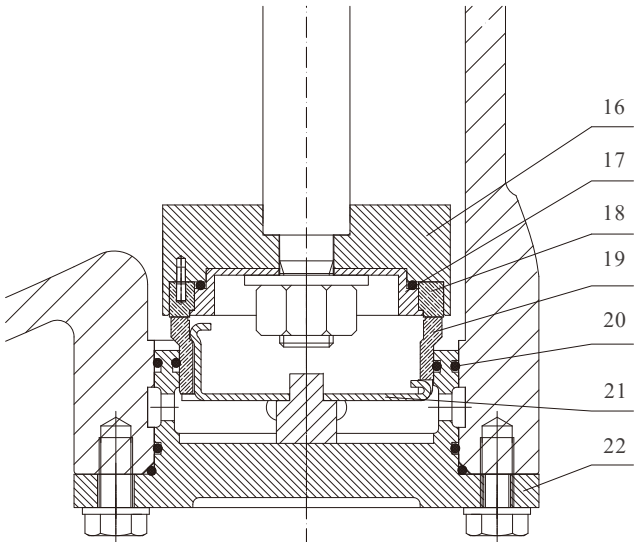
Main parameters	LCS/LCA1	LCS/LCA2	LCS/LCA3	LCS/LCA4	LCS/LCA5	LCS/LCA8	LCS/LCA10	LCS/LCA12	LCS/LCA15	LCS/LCA16	LCS/LCA20
Rated flow rate [m³/h]	1	2	3	4	5	8	10	12	15	16	20
Rated flow rate [l/s]	0.28	0.56	0.83	1.1	1.39	2.2	2.78	3.3	4.17	4.4	5.6
Flow rate range [m³/h]	0.4~2.4	1~3.5	1.2~4	1.5~6	2.5~8.5	5~12	5~13	7~16	8~23	8~22	10~28
Flow rate range [l/s]	0.11~0.66	0.28~0.97	0.33~1.1	0.42~1.63	0.69~2.36	1.39~3.3	1.39~3.61	1.9~4.4	2.22~6.39	2.2~6.1	2.8~7.8
Maximum pressure [bar]	33	33	30	33	32	33	34	32	31	29	25
Motor power [kW]	0.37~3	0.37~5.5	0.37~5.5	0.55~7.5	0.37~7.5	0.75~15	0.75~15	1.5~18.5	1.1~22	2.2~22	1.1~22
Temperature range [°C]											

Thrust balancing device

Summarize

In order to balance most of the axial forces generated by the hydraulic rotating parts and to reduce the axial loads to be borne by the motor bearings, we have configured the thrust balancing device (LCSP/LCAP) in the LCS/LCA100/130/160/190/220/260 series, and with a power of 55kW and above, in order to enhance the stability and service life of the pumps.

The LCSP/LCAP thrust balancing device is optional and consists of two parts, a non-rotating part mounted in or on the base of the pump and a rotating part mounted on the end of the shaft below the first impeller. The thrust balancing device absorbs most of the thrust generated by the impeller, thereby reducing the axial force required on the motor bearings.

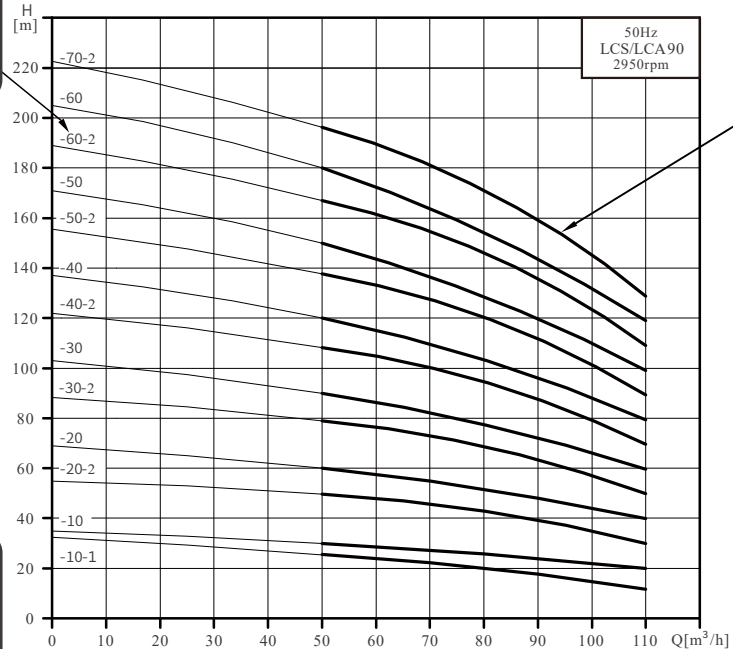


Thrust Balancer Material Sheet

No.	Parts	Material	GB	EN DIN	AISI/ASTM
16	Ferrule	Stainless steels	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
17	Dynamic ring gland	Stainless steels	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
18	Rotating ring	Tungsten carbide	/	/	/
19	Stationary ring	Tungsten carbide	/	/	/
20	Seals	Fluoroelastomer	/	/	/
21	Suspension Bracket	Stainless steels	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
22	Static ring seat	Stainless steels	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304

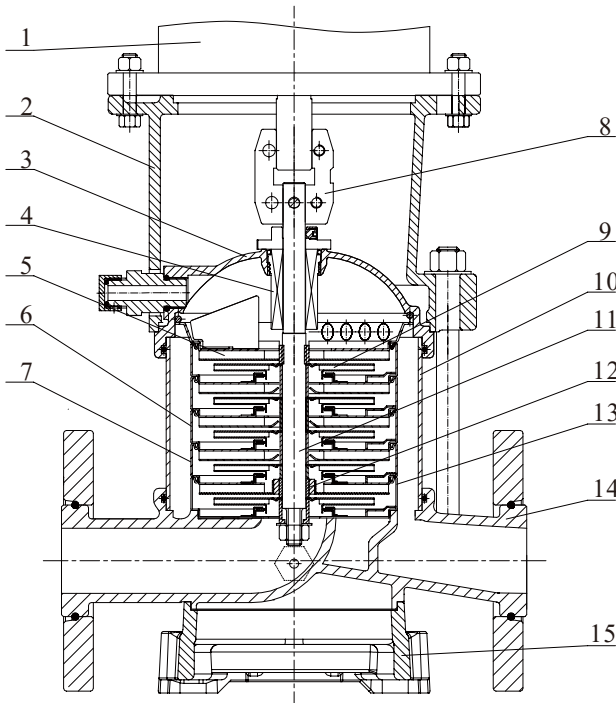
Explanation of performance curve reading

Number of levels
First digit.
Number of levels x 10
Second number.
Number of impeller wheels



Q-H curve, thick line is recommended performance range

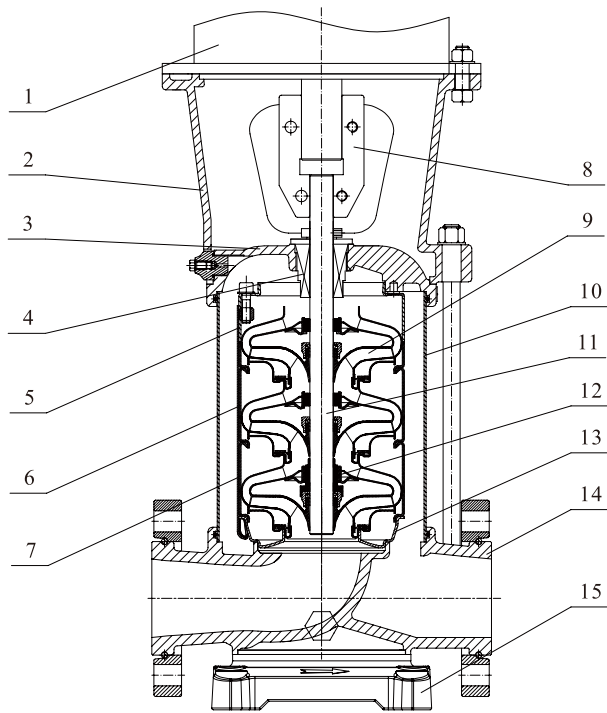
Structure plan LCS/LCA1,2,3,4,5



Structure plan LCS/LCA1,2,3,4,5

No.	Parts	Materials		GB		EN DIN		AISI/ASTM	
		LCA	LCS	LCA	LCS	LCA	LCS	LCA	LCS
1	Electrical machinery	/		/		/		/	
2	Brackets	ductile iron		GB 1348-QT500-7		EN 1563 EN-GJS-500-7		ASTMA536 65-45-12	
3	Seal Seat	Ductile Iron /Stainless steel		GB 1348-QT500-7/ GB/T20878-06Cr19Ni10		EN 1563 EN-GJS-500-7/ EN 10088-1.4301		ASTMA536 65-45-12/ AISI304	
4	Mechanical seal	/		/		/		/	
5	Outlet vane	Stainless steels		GB/T20878-06Cr19Ni10		EN 10088-1.4301		AISI304	
6	Guide vane	Stainless steels		GB/T20878-06Cr19Ni10		EN 10088-1.4			

Structure plan LCS/LCA 32,45,64,90



Structure plan LCS/LCA 32,45,64,90

No.	Parts	Materials		GB		EN DIN		AISI/ASTM	
		LCA	LCS	LCA	LCS	LCA	LCS	LCA	LCS
1	Electrical machinery	/		/		/		/	
2	Brackets	ductile iron		GB 1348-QT500-7		EN 1563 EN-GJS-500-7		ASTMA536 65-45-12	
3	Seal Seat	Ductile Iron /Stainless steel		GB 1348-QT500-7/ GB/T20878-06Cr19Ni10		EN 1563 EN-GJS-500-7/ EN 10088-1.4301		ASTMA536 65-45-12/ AISI304	
4	Mechanical seal	/		/		/		/	
5	Outlet vane	Stainless steels		GB/T20878-06Cr19Ni10		EN 10088-1.4301		AISI304	
6	Guide vane	Stainless steels		GB/T20878-06Cr19Ni10		EN 10088-1.4301		AISI304	
7	Support vane	Stainless steels							

Recommended liquids for pumps

Stainless steel vertical multi-stage pumps can transport thin, clean, non-flammable and explosive media without solid particles or fibers, of which LCS can transport mildly corrosive media, LCA can transport non-corrosive media, please refer to the appendix table for details. The table recommended part of the liquid with, there are not exhaustive please consult our company again. The content of the table is for reference only, in the actual process of selecting the pump, please also note that the other characteristics of the liquid, such as the density of the liquid, freezing point, viscosity, and explosion-proof, protection level requirements, as well as the pressure and temperature of the environment also need to be taken into account, and can not be a substitute for the actual use of the working environment in a particular application and testing.

Liquid Recommendations

Conveying liquids	Liquid concentration temperature	LCA (foundry iron)			LCS (stainless steels)		
		EPDM	VITON	NBR	EPDM	VITON	NBR
Acetic acid (CH3COOH)	5 %,20°C				✓		
Benzoic acid C6H5COOH	50 %,20°C					✓	
Slaked lime	20 %,40°C				✓		
Chromate	1 %,20°C						✓
Borax	10 %,50°C						✓
Corn oil	100 %,80°C					✓	
Ethanol (alcohol)	100 %,20°C		✓				
Glycol	50 %,50°C				✓		
Glycerol	50 %,50°C						✓
Isopropanol	100 %,20°C			✓			
Lactic acid	100 %,20°C					✓	
Methanol (wood spirit)	100 %,20°C			✓			
Diesel	80°C						✓
Oxalic acid C2H2O4	1 %,20°C				✓		
Sodium pyrophosphate	20 %,20°C				✓		
Potassium carbonate	20 %,50°C					✓	
Potassium permanganate	5 %,20°C				✓		
Sodium bicarbonate	10 %,60°C					✓	
Sodium nitrate	10 %,60°C					✓	
Sodium phosphate	10 %,60°C					✓	
Sodium sulfate							