

# Product Introduction

# LSA S

## Series Overview

LSA Series Slurry Pumps are designed for severe duties with operating flows from 100-60,000 gpm (20-13,600 m<sup>3</sup>/h). Total dynamic head is up to 300 ft. (90m) per stage and power rating is up to 2,500 hp (1,850kW).

## Fields of Application

LSA S slurry pumps are widely used in ore transport, mill discharge, cyclone feed, tailings and plant process. The LSA S can also be used for environmental cleanup, dewatering (low head type), pulp and paper (liquid transfer), food process (sugar and sugar beets), coke and resin pumping, and ash handling.

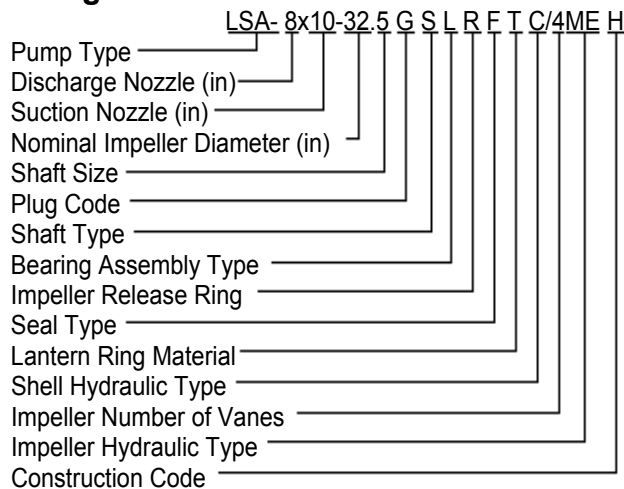


2-26 in (50-650mm) Discharge

## Design

LSA S slurry pumps are low-speed, horizontal, end suction, modified volute casing pumps. The LSA S accepts three or four vane impeller designs for the optimum combination of suction performance, efficiency and wear characteristics over a broad operating range. The basic, single wall construction and heavy section, hard metal wet end combined with the cartridge bearing assembly provides maximum reliability and ease of maintenance.

## Designation



### Shaft Size (Standard options)

- 2 2-15/16
- 3 3-15/16
- 4 4-7/16
- 5 5-7/16
- 6 6-7/16
- 7 7-3/16
- 9 9

### Plug Code (Standard options)

- D 2.0
- F 3.5S
- G 2C4.5
- J 6.5
- K 7.75

### Shaft Type

- S Stiffened

### Bearing Assembly Type

- L Limited End Float
- C Conventional
- U Underwater

### Impeller Release Ring

- R Impeller Release Ring
- N No Impeller Release Ring

### Seal Type

- F Packing, Forward Flush
- K Packing, Low Flow
- B Throat Bushing
- M Mechanical Seal

### Lantern Ring Material

- T Teflon
- M Metal
- N Not Applicable

### Shell Hydraulic Type

- A Annular
- C Semi-Volute
- T Volute

### Impeller Hydraulic Type

- RV Radial Vane
- ME Conventional Warped Vane
- HE High Efficiency

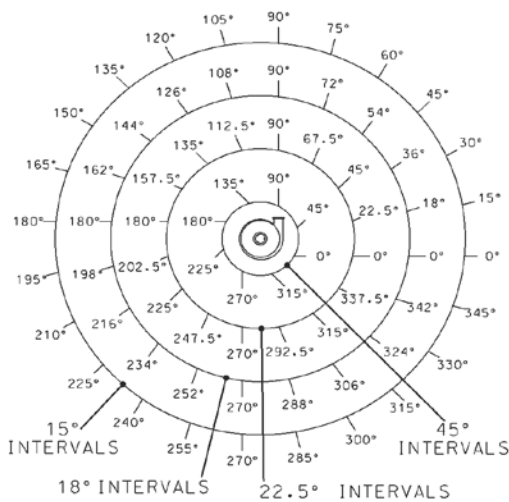
### Construction Code

- H Integral Hub Liner
- L Separate Hub Liner
- OD TOD Type Suction Liner
- HP High Pressure
- VHP Very High Pressure
- GL Gathane Lined
- RL Rubber Lined



**LSA S RANGE PUMP INFORMATION TABLE**

Assembly Number	Nominal Size		Maximum Operating Pressure		Free Passage		Discharge Position Intervals	Vane Number & Type
	in	mm	psi	bar	in	mm		
0572x	2x3-21	50x75-530	220	15.17	1.0x1.0	25x25	45	4ME
0573x	3x4-21	75x100-530	220	15.17	1.0x1.0	25x25	45	4ME
0574x	4X6-21	100x150-530	220	15.17	2.5X2.8	63X71	45	4ME
0516x	4X6-25	100x150-635	180	12.41	1.5x1.5	39x39	22.5	4ME
0501x	6x8-25	150x200-635	180	12.41	3.2x3.6	81x92	22.5	4ME
0575x	8x10-25	200x250-635	163	11.24	2.4x4.9	63x125	22.5	4ME
0562x	8x10-32	200x250-810	172	11.86	3.9x4.6	99x117	22.5	4ME
0563x	8X10-32	200x250-810	172	11.86	4.6x4.6	117x117	22.5	3ME
0564x, 0566x	8x10-32	200x250-810	172	11.86	3.9x4.6	99x117	15	4ME
0565x, 0567x	8x10-32	200x250-810	172	11.86	4.6x4.6	117x117	15	3ME
0576x, 0577x	10x12-32	250x300-810	140	9.65	3.7x6.7	95X171	15	4ME
0508x, 0510x	10x12-36	250x300-910	156	10.75	4.0x6.7	102x171	15	4ME
0509x, 0511x	10x12-36	250x300-910	156	10.75	6.3x6.7	160x171	15	3ME
0568x, 0570x	12x14-36	300x350-910	173	11.93	5.1x8.3	129x210	15	4ME
0569x, 0571x	12x14-36	300x350-910	173	11.93	6.4x8.3	162x210	15	3ME
0578x	16x16-39	400x400-990	120	8.27	5.8x8.2	148x209	15	4ME
0579x, 0580x	16x16-39	400x400-990	126	8.68	4.4x8.7	112x222	30	4ME
0581x, 0583x	16x18-44	400x450-1115	165	11.37	5.5x7.6	141x193	18	4ME
0582x, 0584x	16x18-44	400x450-1115	165	11.37	7.6X7.6	193x193	18	3ME
0538x, 0540x	18x18-44	450x450-1115	160	11.03	6.3x11.6	161x295	18	4ME
0539x, 0541x	18x18-44	450x450-1115	160	11.03	8.9x11.6	226x295	18	3ME
0589x, 0590x	20x20-48	500x600-1220	105	7.24	9.7x13.0	247x330	9	4ME
0548x	20x20-48	500x600-1220	130	8.96	9.7x13.0	247x330	15	4RV
0549x	20x24-48	500x600-1220	113	7.79	6.1x13.0	155x330	15	4ME
0550x	22x24-54	550x600-1370	186	12.82	8.1x13.5	208x343	18	4ME
0551x	26x28-58	650x700-1470	91	6.27	8.6x11.7	218x298	15	4ME



**Discharge Positions**

Rotation direction is clockwise from the drive end.  
A vertical discharge is standard.

**LSA S Specifications**

Capacities (Qmax.) 100-60,000 gpm  
20-13,600 m<sup>3</sup>/h  
Heads (H max.) 300 ft  
90 m

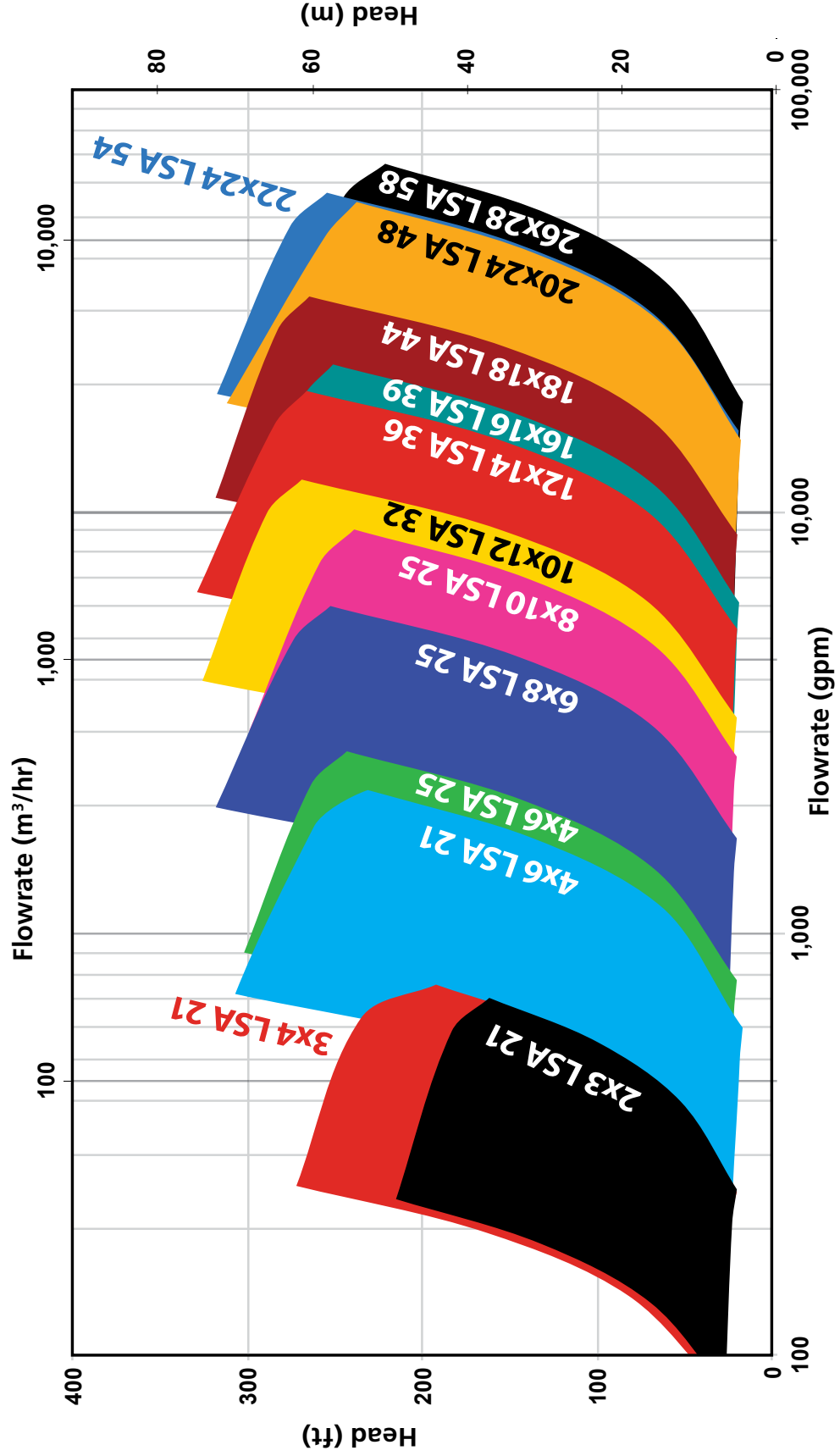
Normal temperature limit is 150° F (65°C). Consult the factory for materials and configurations for temperatures above 150°.

Part No.	Item	Standard
101	Shell	Gasite® WD28G
230	Impeller	Gasite® WD28G
16-1	Suction Plate	Ductile Iron
13-19	Suction Liner	Gasite® 18G
332	Pedestal	Fab Steel
210	Shaft	4150 Steel
451	Stuffing Box	Grey Iron
524	Shaft Sleeve	Carbide Coated Steel
350	Bearing Housing	Grey Iron

Alternate material options are available.

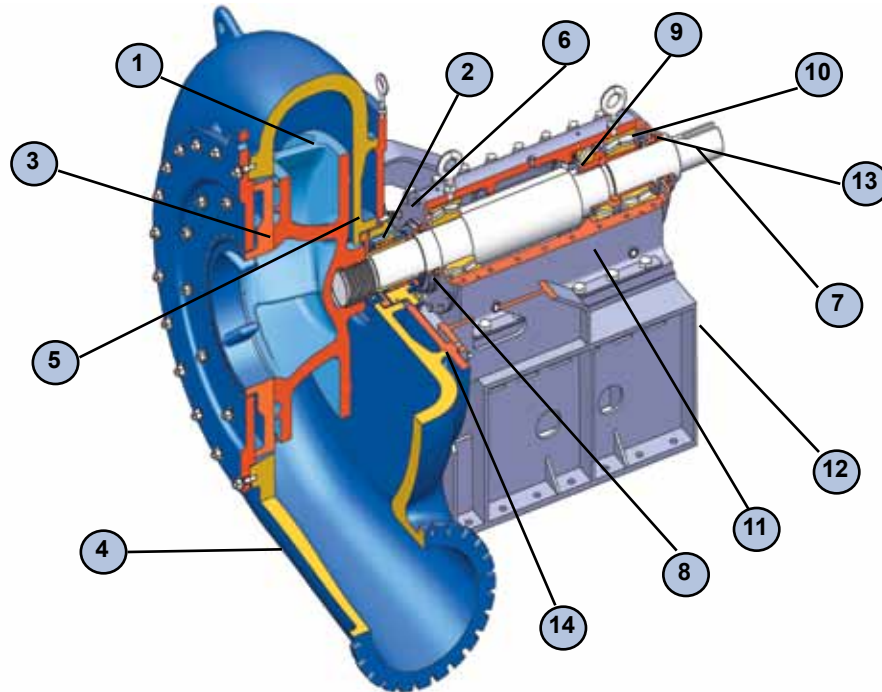
# LSA S Pump Range

Standard Pressure and Optimized Hydraulics  
 2000 to 7500 SFPM, 10 to 38 SMPM, 40% (or min. flow) to 120% BEPQ



# GIW Model LSA S Pumps

## Low Maintenance, Severe Duty, Abrasion Resistant



### Wear Parts

- ① Impeller is designed for wear-resistant operation in highly abrasive slurries using GIW's flow simulation computer program.
- ② Two aramid gaskets aid in the removal of the impeller.
- ③ Replaceable suction liner facilitates pump internal inspection and minimizes wear part usage cost. Liner can be rotated at intervals to increase wear life.
- ④ Pump shell is computer designed to optimize wear and efficiency.

### Shaft Seal

- ⑤ Replaceable wear plate maximizes stuffing box life. Reduced water consumption options available.
- ⑥ Shaft sleeve with fused carbide hard coating to maximize packing life.

### Mechanical End

- ⑦ Robust stiffened shaft to improve the wear life of the mechanical end and stuffing box.

- ⑧ Impeller release ring for easy impeller removal. Feature is standard on larger pump sizes.
- ⑨ Spring retainer ring locates the thrust bearing pre-load springs for correct axial thrust load.
- ⑩ Radial bearings are a heavy duty, self-aligning, double-row, spherical roller-type design.
- ⑪ Split-cartridge bearing assembly offers ease of inspection and maintenance.
- ⑫ Accurate impeller clearance adjustments are easily made with the adjusting screw.
- ⑬ Labyrinth seals protect bearings

### Quick Alignment

- ⑭ Rabbet fits machined in the pedestal support the shell and provide component alignment

### Interchangeability

To optimize wear life and efficiency, various hydraulic design and material options can be used on the same mechanical end.