

# Heavy-Duty Construction Drainage Pumps (1.5 HP to 10.0 HP)

**LAS**

## Performance Range

- Flow rate up to 2500 l/min. (150 m³/h)
- Dynamic head up to 38 m.

## Applications

- Civil engineering dewatering of tunneling and ground works, also for storm water sewers.
- Dewatering of fluids containing solid sediments.

## Features

- Specifically designed for civil engineering applications, where a heavy duty, light weight, top discharge design, is required which is easy to handle. The double outer casing, water cooled motor makes it particularly suitable for low water level applications.
- A fully waterproof IP 68 stainless steel structure, combined with a high grade silicon carbide double mechanical seals.
- The LAS range of pumps are compact, strong and easy to operate in any situation.
- Special designed high efficient and wear resistant HCR (High Chrome) impeller.
- Multi impeller design suitable from high head with small capacity to low head with large capacity of application requirement.
- Optional discharge connection (Hose, flange and thread connection)

## Direction of Rotation

- Clockwise as seen from the motor rear end.

## Special Features on Request

- Other voltages.
- Available in 60Hz.

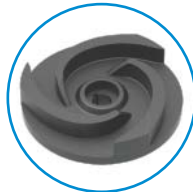
## Thermal overload protector

- Equipped with Automatic reset motor protector, prevents motor from burning due to high temperature/phase failure/voltage drop and locked impeller.



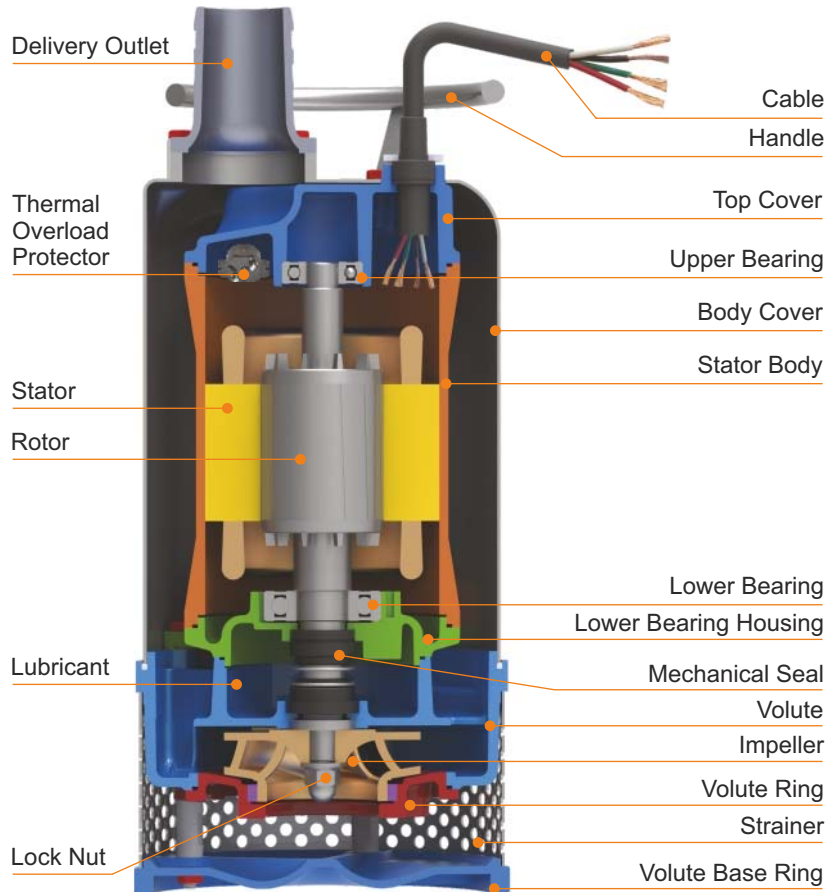
## HCR Impeller

- The LAS impeller is manufactured with a high chrome alloy (HCR) steel with a hardness of 55 - 60 Rc., which makes it resistant to prolonged use in abrasive applications.



## Specification

HP		1.1 to 3.7 kW	5.5 to 7.5 kW		
Diameter (mm)		50 - 80	80	100 - 150	
Pumping liquid	Ambient temp	Max. +50°C			
	Liquid temp	0°C to +50°C			
	Liquid nature	Suitable for dewatering at civil engineering sites and pumping of storm water.			
Pump	Structure	Impeller	Open	Open	Enclosed
		Mech. seal	Double Mechanical seal		
		Bearing	Ball type bearing		
	Material	Body cover	S.S. AISI 304L		
		Upper cover	Grey Iron		
		Volute	Grey Iron		
		Impeller	HCR		
		Wear Ring	-	-	HCR
	M. seal	Motor Side	Carbon v/s Ceramic		
		Pump Side	Silicon Carbide v/s Silicon Carbide		
Motor	Type	Dry motor			
	Insulation	F Class			
	Frequency	50 Hz			
	Thermal Protector	Automatic reset motor protector			
	Material	Stator body	S.S. AISI 304L	Grey Iron	
		Shaft	S.S. AISI 410		
Cable		Thermoplastic Rubber/PVC			
Protection	IP 68				
Duty	S1 - When pump is completely or partially submerged.				
Voltage	1 Ph. 230 v +/-15%, 3 Ph. 400 v +/-15%		3 Ph. 400 v +/-15%		



## Performance Range

- Flow rate up to 2600 l/min. (156 m<sup>3</sup>/h)
- Dynamic head up to 57 m.

## Applications

- Civil engineering dewatering of tunneling and ground works, also for storm water sewers.
- Dewatering of fluids containing solid sediments.

## Features

- Specifically designed for civil engineering applications, where a heavy duty, light weight, top discharge design, is required which is easy to handle. The double outer casing, water cooled motor makes it particularly suitable for low water level applications.
- A water detector is provided in the seal chamber. In case of seal failure if water enters the seal chamber, a signal can be sent to the control panel so that the pump operator is made aware of a potential seal leakage problem.
- A fully waterproof IP 68 stainless steel structure, combined with a high grade silicon carbide double mechanical seals.
- The LAS range of pumps are compact, strong and easy to operate in any situation.
- Special designed high efficient and wear resistant HCR (High Chrome) impeller.
- Multi impeller design suitable from high head with small capacity to low head with large capacity of application requirement.
- Optional discharge connection (Hose, flange and thread connection)

## Direction of Rotation

- Clockwise as seen from the motor rear end.

## Special Features on Request

- Other voltages.
- Available in 60Hz.

## Miniature Thermal Protector

- Miniature Thermal Protector (MTP) is embedded in the windings of the motor. The MTP will transmit a signal to a control panel when windings temperature reaches a set point.

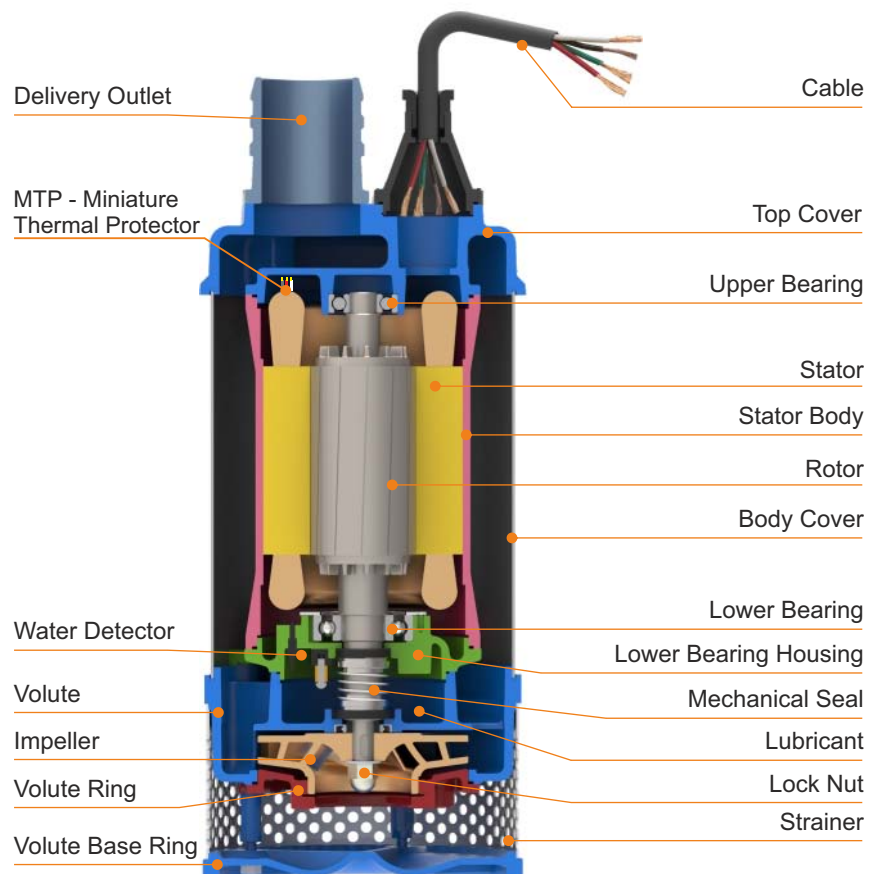
## HCR Impeller

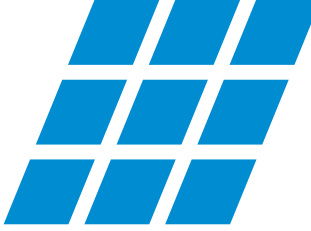
- The LAS impeller is manufactured with a high chrome alloy (HCR) steel with a hardness of 55 - 60 Rc., which makes it resistant to prolonged use in abrasive applications.



## Specification

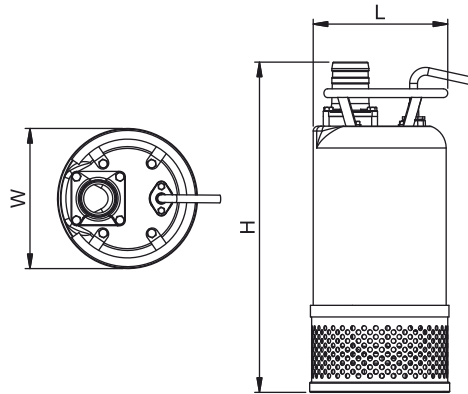
HP		11 to 15 kW	
Diameter (mm)		100 - 150	
Pumping liquid	Ambient temp	Max. +50°C	
	Liquid temp	0°C to +50°C	
	Liquid nature	Suitable for dewatering at civil engineering sites and pumping of storm water.	
Pump	Structure	Impeller	Enclosed
		Mech. seal	Double Mechanical seal
		Water detector	Installed in the seal chamber to detect water leakage from water infiltrating
		Bearing	Ball type bearing
	Material	Body cover	S.S. AISI 304L
		Upper cover	Grey Iron
		Volute	Grey Iron
		Impeller	HCR
		Wear Ring	HCR
	M. seal	Motor Side	Carbon v/s Ceramic
Pump Side		Silicon Carbide v/s Silicon Carbide	
Motor	Type	Dry motor	
	Insulation	F Class	
	Frequency	50 Hz	
	Thermal Protector	Miniature Thermal Protector	
	Material	Stator body	Grey Iron
		Shaft	S.S. AISI 410
		Cable	Thermoplastic Rubber/PVC
	Protection	IP 68	
Duty	S1 - When pump is completely or partially submerged.		
Voltage	3 Ph. 400 v +5/-15%		





# Heavy-Duty Construction Drainage Pumps (1.5 HP to 5.0 HP)

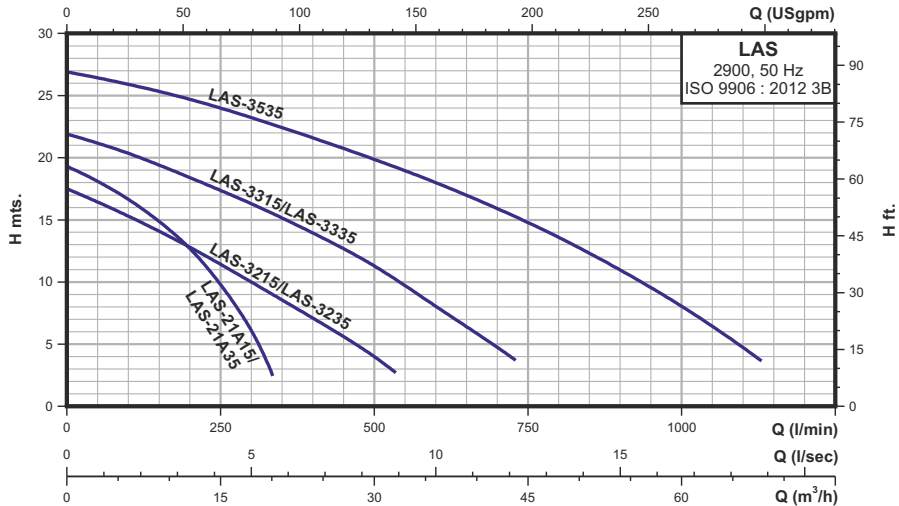
**LAS**



## DIMENSIONS

Model		Disc. mm (Inch)	Dimensions (mm)			Solid Passage mm	Net Weight (kg.)	Gross Weight (kg.)	Volume (m <sup>3</sup> )	Cable data cable x core x size (mm <sup>2</sup> ) x length (m) x Material
Single Phase	Three Phase		Length	Width	Height					
LAS 21A15/21A15F	-	50 (2")	210	210	510	8	29.0	49.0	0.077	1 x 3 x 1.0 x 5 x PVC
-	LAS 21A35/21A35F		210	210	435	8	25.0	45.0	0.068	1 x 4 x 1.0 x 5 x PVC
LAS 3215/3215F	-	80 (3")	250	240	630	11	43.0	68.0	0.111	1 x 3 x 2.0 x 8 x PVC
-	LAS 3235/3235F		250	240	535	11	39.0	64.0	0.097	1 x 4 x 1.8 x 8 x PVC
LAS 3315/3315F	-	80 (3")	250	240	645	11	47.0	72.0	0.113	1 x 3 x 3.5 x 8 x PVC
-	LAS 3335/3335F		250	240	560	11	42.0	67.0	0.101	1 x 4 x 1.8 x 8 x PVC
-	LAS 3535	80 (3")	250	240	600	11	46.0	71.0	0.107	1 x 4 x 1.8 x 8 x PVC
-	LAS 3735	80 (3")	290	290	690	10	74.0	102.0	0.150	1 x 4 x 3.5 x 8 x PVC
-	LAS 4735	100 (4")	290	290	690	10	76.0	104.0	0.150	1 x 4 x 3.5 x 8 x PVC
-	LAS 6735	150 (6")	290	290	745	10	78.0	106.0	0.160	1 x 4 x 3.5 x 8 x PVC
-	LAS 41035	100 (4")	290	290	690	10	76.0	104.0	0.150	1 x 4 x 3.5 x 8 x PVC
-	LAS 61035	150 (6")	290	290	745	10	80.0	108.0	0.160	1 x 4 x 3.5 x 8 x PVC
-	LAS 41535	100 (4")	290	290	725	10	82.0	112.0	0.170	1 x 7 x 6.0 x 8 x Thermoplastic rubber 1 x 3 x 0.75 x 8 x Thermoplastic rubber
-	LAS 61535	150 (6")	290	290	785	10	86.0	116.0	0.180	1 x 7 x 6.0 x 8 x Thermoplastic rubber 1 x 3 x 0.75 x 8 x Thermoplastic rubber
-	LAS 42035	100 (4")	332	332	770	10	142.0	185.0	0.200	1 x 7 x 6.0 x 8 x Thermoplastic rubber 1 x 3 x 0.75 x 8 x Thermoplastic rubber

## PERFORMANCE CHART AT n = 2900 RPM FOR CONSTRUCTION DRAINAGE PUMP

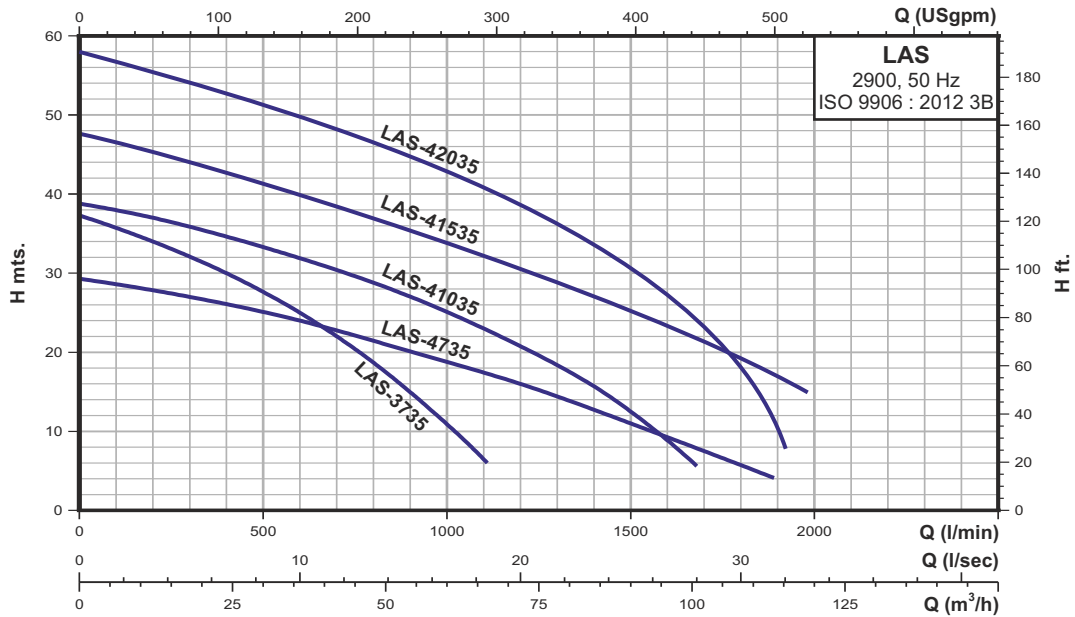


## PERFORMANCE DATA AT n = 2900 RPM

Model		Power		Start Method	m <sup>3</sup> /h	6	12	18	24	30	36	42	48	60	66										
Single Phase	Three Phase	kW	HP																						
LAS 21A15/21A15F	-	1.1	1.5	Capacitor	H m	100	200	300	400	500	600	700	800	1000	1100										
-	LAS 21A35/21A35F			Direct												16.5	12.5	6	-	-	-	-	-	-	
LAS 3215/3215F	-	1.5	2.0	Capacitor												15.3	12.8	10	7	4	-	-	-	-	-
-	LAS 3235/3235F			Direct												20.3	18.4	16.4	14	12.5	8	5.5	-	-	-
LAS 3315/3315F	-	2.2	3.0	Capacitor												26	24.5	23.3	21.6	19.9	18	16	13.5	8	4.7
-	LAS 3335/3335F			Direct												26	24.5	23.3	21.6	19.9	18	16	13.5	8	4.7
-	LAS 3535	3.7	5.0	Direct												26	24.5	23.3	21.6	19.9	18	16	13.5	8	4.7

Note : Subscript "F" pumps will be provided with a float switch.

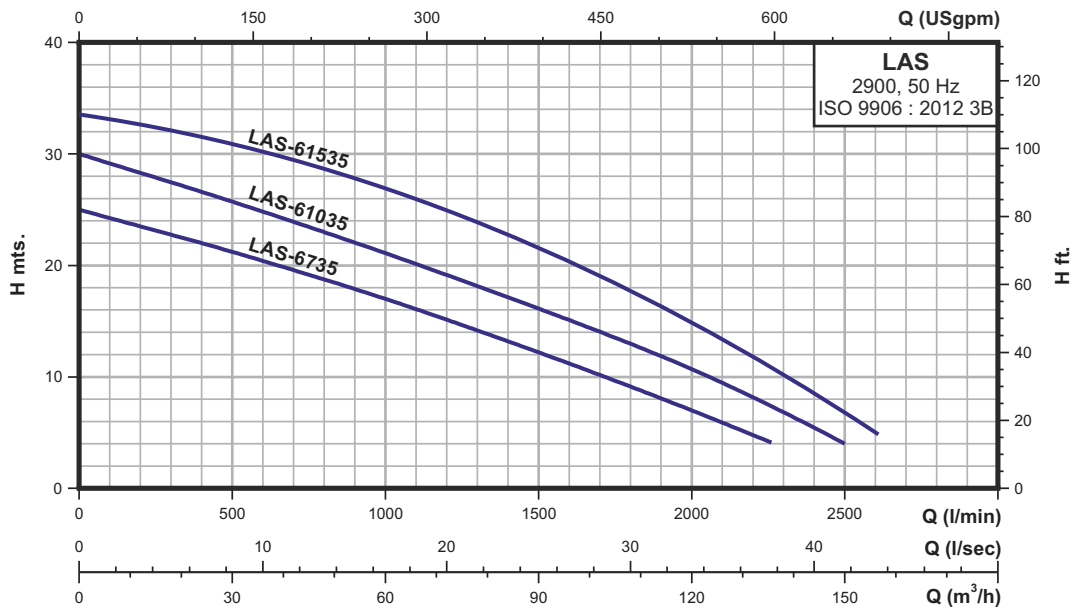
PERFORMANCE CHART AT n = 2900 RPM FOR CONSTRUCTION DRAINAGE PUMP



PERFORMANCE DATA AT n = 2900 RPM

Model	Power		Start Method	m³/h	12	18	24	30	36	48	54	60	66	72	84	96	108
	kW	HP			l/min	200	300	400	500	600	800	900	1000	1100	1200	1400	1600
LAS 3735	5.5	7.5	Direct	H m	34.0	32.0	30.0	27.5	25.0	18.6	15.0	11.0	6.2	-	-	-	-
LAS 4735			Direct		27.9	27.0	26.0	25.0	24.0	21.5	20.0	18.8	17.5	16.0	12.7	9.20	5.7
LAS 41035	7.5	10.0	Direct		37.0	35.9	34.6	33.4	32.0	28.8	27.0	25.0	23.0	20.8	15.6	9	-
LAS 41535	11.0	15.0	Y - Δ		45.3	44.0	42.7	41.3	39.9	37.0	35.4	33.8	32.2	30.5	27.0	23.3	19.3
LAS 42035	15.0	20.0	Y - Δ		55.5	54.0	52.8	51.2	50.0	46.5	44.8	42.8	40.8	38.6	33.7	27.0	8.0

PERFORMANCE CHART AT n = 2900 RPM FOR CONSTRUCTION DRAINAGE PUMP



PERFORMANCE DATA AT n = 2900 RPM

Model	Power		Start Method	m³/h	18	36	54	72	90	108	126	144
	kW	HP			l/min	300	600	900	1200	1500	1800	2100
LAS 6735	5.5	7.5	Direct	H m	22.8	20.5	18.0	15.0	12.1	9.0	6.0	-
LAS 61035	7.5	10.0	Direct		27.5	24.9	22.0	19.0	16.0	13.0	9.4	5.4
LAS 61535	11.0	15.0	Y - Δ		32.1	30.2	27.8	26.0	21.5	17.7	14.9	8.6