

# ATLAS PUMP

Slurry pumping solutions

MINING & MINERAL PROCESS | COAL WASHING | POWER | CHEMICAL | METALLURGY

# SPH

MEDIUM DUTY SLURRY PUMP

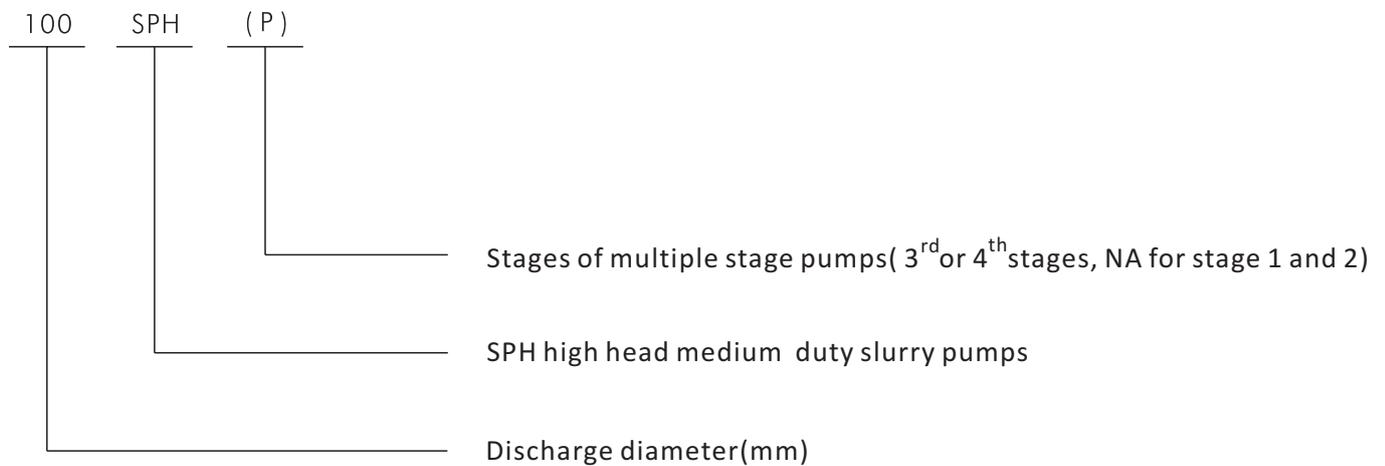


## SPH MEDIUM DUTY SLURRY PUMPS

SPH pumps are single stage, single suction, over hang, double casing horizontal slurry pumps, widely used in power plant, metallurgy, mining, coal ,building material and chemical industries to deliver abrasive or corrosives fluids. Due to its large flow rate and high head, SPH pumps are particularly suit for pumping long distance slug in power plants.

SPH pumps could be used as multi-stage pumps in series.

### MODEL DESCRIPTIONS



- Pump Range: 65~300mm
- Capacity to: 1920m<sup>3</sup>/hr
- Head to: 94m

### CLEAR WATER PERFORMANCE

Model	Max. Motor Power Kw	Clear water performance					Impeller			Weight (Kg)
		Capacity Q(m <sup>3</sup> /h)	Head H(m)	Max. pump speed n (rpm)	Best efficiency $\eta$ (%)	NPSHr (m)	Max. particle size (mm)	Impeller diameter (mm)	Qty. of vanes	
65SPH	55	52~132	25~63.3	1480	63	2.6~5.8	15	398	5	760
80SPH(P)	132	82~205	33~92	1480	66	2.4~5.2	20	485	5	1400
100SPH(P)	200	170~420	33~94	1480	66	2.5~6.0	30	500	5	1420
150SPH(P)	355	300~740	31~91	980	78	2.4~3.8	50	740	5	3450
200SPH(P)	560	430~1080	34~94.7	980	76	2.1~6.5	60	740	5	4000
250SPH(P)	630	560~1420	32~90	980	79	2.4~7.3	70	740	5	4500
300SPH	710	790~1920	32~94	980	81.5	3.9~7.5	90	760	5	5500

NPSH value refer to the pressue needed when pumps running at the Max. speed and best efficiency

## TYPICAL APPLICATIONS

Usage of versatile wear-resistant metal allows SPL slurry pumps could be used in different industries such as mill discharge and tailings in mining process, ash removal and FGD in power plants, coal washing in coal preparations, to reduce operation cost, minimize maintenance and down time.

### Ash Removal

Featured with high efficiency and high head, hard metal wet parts, plus the usage of oil lubrication bearing assembly, ensures the pump could running continuously without stop in ash removal in power plants.



### Coal Washing

High head performance could meet the needs of feeding process to filter press, allows the SPL pumps are widely used in coal washing applications.



### Mineral Processing

The rigid structure design and usage of wear-resistance hard metals, combined with low running speed, allows SPL slurry pumps could be used in long distance tailing transportation.

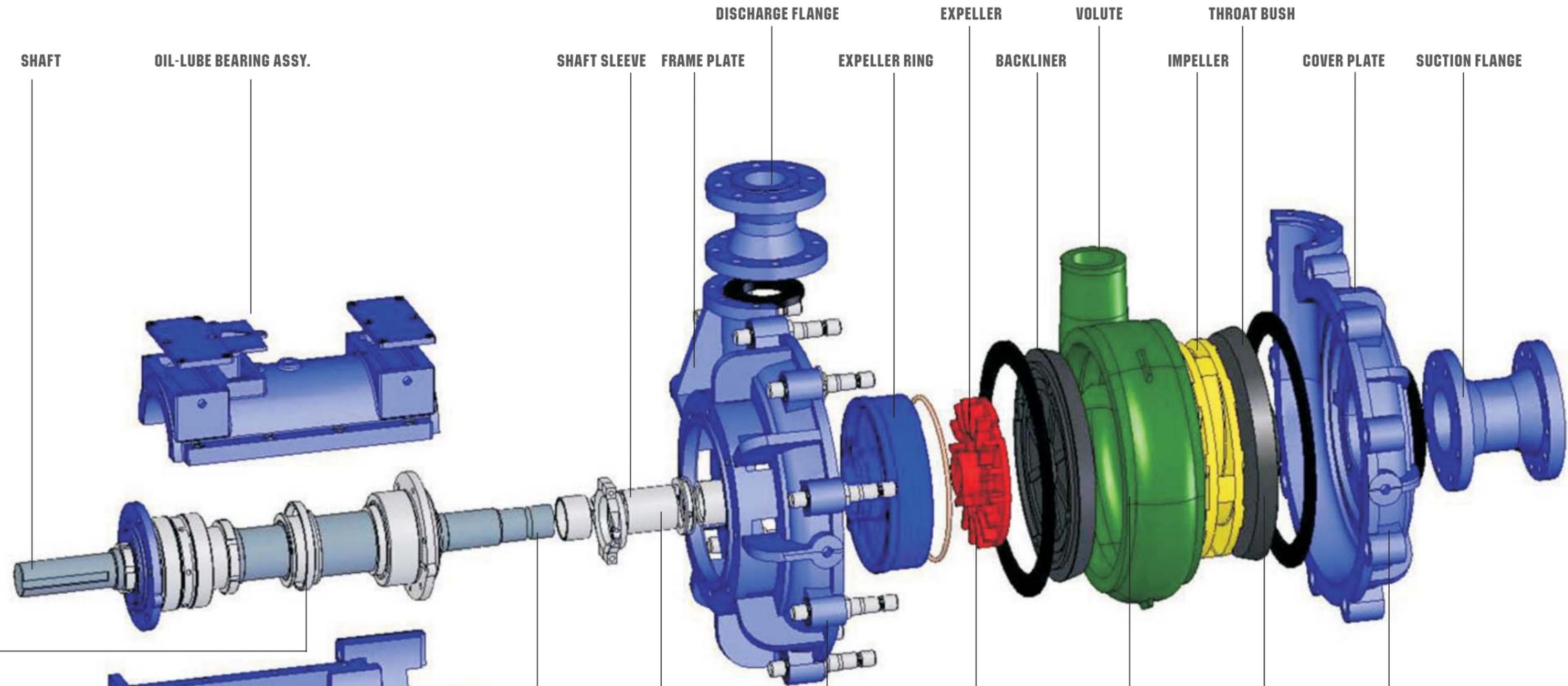
### FGD

Special materials are adopted to resist the abrasion and corrosion from the gas of powergeneration.

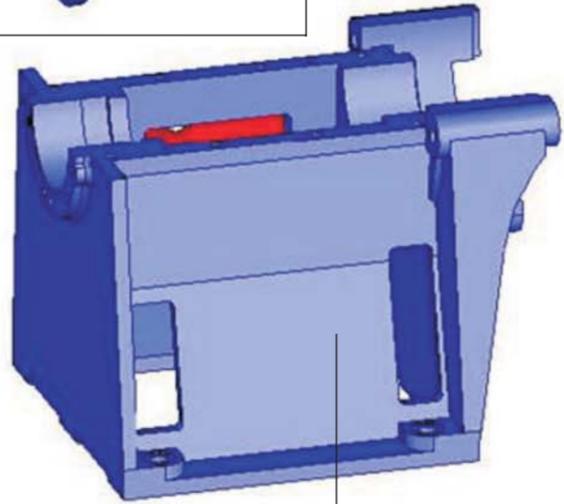
### Building Material

The usage of versatile wear/corrision resistance materials allow the pump could be used in this field to pump corrosive and sticky fluids.

**STRUCTURE AND FEATURES**



Bearings are lubricated and cooled with oil being taken by the oil flinger which hang on the shaft. Labyrinths on both shaft end to prevent the bearings from contamination.



Bearing assy. is fixed on highly strengthened rigid horizontal split Frame, the impeller clearance could be adjusted by turn the adjusting bolt on the Bearing housing

Hardened stainless steel shaft sleeve and shaft are loose matching, the O rings on both ends to prevent the shaft from abrasion and contamination.

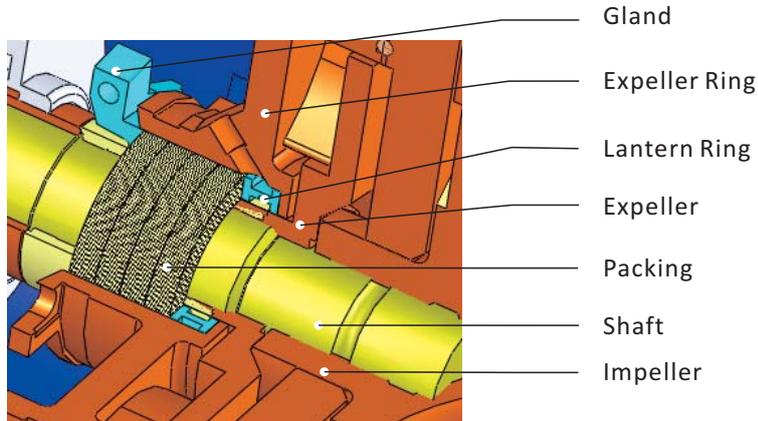
Large diameter and as short as possible shaft ensure the rigidity of the shaft, suit heavy duty applications.

Expeller+gland seal / Mechanical seal are optional

Multiple high chrome hard metals are optional to suit different applications, pump-out vanes on both shrouds of pumps to help reducing back flow and seal pressure.

Frame plate and Cover plate are made of ductile iron, and ribs help the parts to stand high pressure

## SEAL OPTIONS



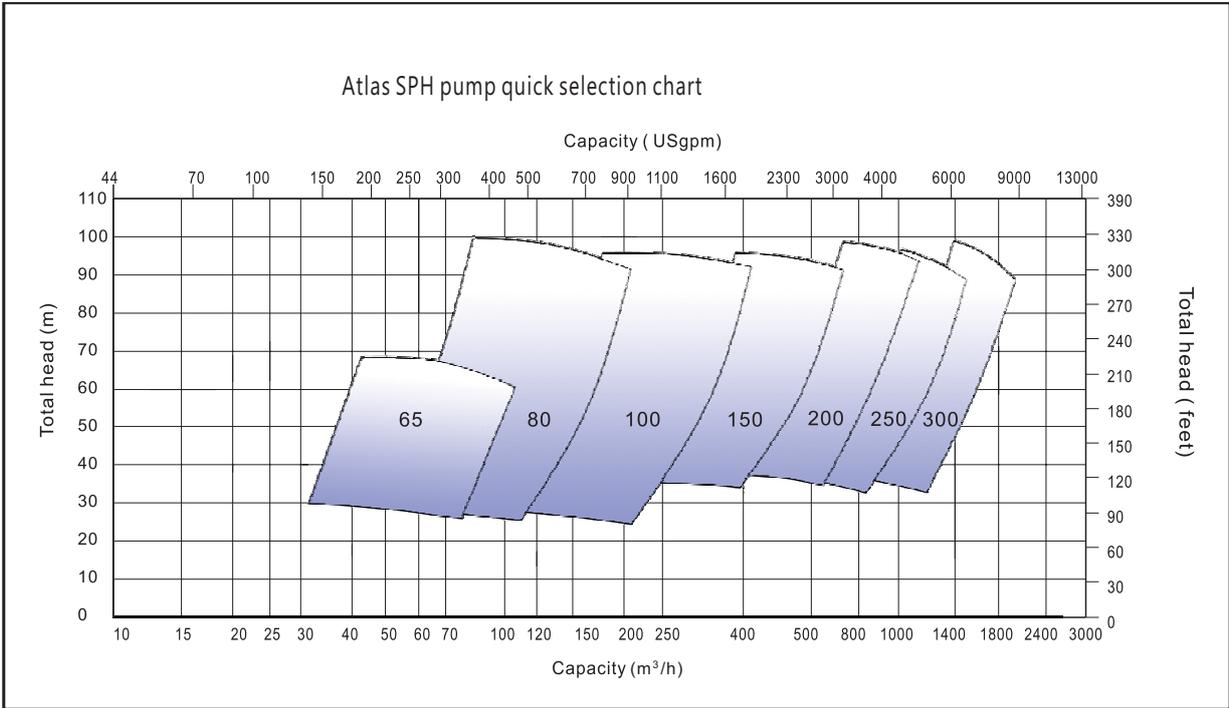
**Expeller +Gland Seal-** The expeller generates a reverse centrifugal force to prevent the leakage, two rings of packing are fixed beside the expeller to strength the seal. suit the applications which the suction pressure is too high that expellers are not capable of preventing leakage completely. for single stage pump, seal water pressure should be 0.2~0.3MPa; for multi-stage pump, the seal water pressure should be discharge pressure+0.1MPa.

**Mechanical Seal-** Suitable for applications where no extra substance is allowed to mix with the fluid being pumped, such as chemical or food industry.

## MATERIAL OPTIONS

ATLAS code	Material #	Hardness HRC	Performance	Applications
AT01	KmTBCr8	≥55	Abrasion-resistant performance is about 10% less than AT05.	Mud & slag applications
AT03	KmTBNi4Cr2	≥56	Abrasion-resistant performance is about 20% less than AT05.	Neutral water-sand slurry and applications with lower impact load.
AT05	KmTBCr26	≥56	Ranks second only to AT07 in abrasion-resistant performance; fair corrosion-resistant performance.	High impact load abrasion condition; PH rate ranging from 5 to 12.
AT07	KmTBCr15Mo3	≥59	Best abrasion-resistant performance; corrosion-resistant performance is inferior to AT05.	High impact load abrasion condition.
AT11	KmTBCrMnMo	38-42	Mild corrosion-resistant; lower hardness; drilling and tapping operations are applicable.	Fine particles with light abrasion.
AT33		≥35	Abrasion-resistant performance is close to AT03; fair corrosion-resistant performance.	Oxide slurry with PH rate no less than 1, like phosphogypsum in phosphate fertilizer plant, nitric acid, sulphoacid and phosphoric acid, etc.
AT49		≥43	Fair abrasion-resistant performance, close to AT03; fair corrosion-resistant performance in media with lower PH rate.	Corrosion conditions with low PH rate, especially for flue gas and FGD devices for media of $PH \geq 4$ ; general suitable for lower acid condition.
AT12		≥62	Higher abrasion-resistant performance than AT05; fair corrosion-resistant performance; suitable for media with PH rate is 6 ~ 14, where AT05 is not suitable.	High abrasive slurry with fine particles.
AT61		63~68	Optimized abrasion-resistant performance than AT12.	High abrasive slurry with fine particles.

# QUICK SELECTION CHART



# DRIVE ARRANGEMENTS



**GV(Z)**



**ZV(Z)**

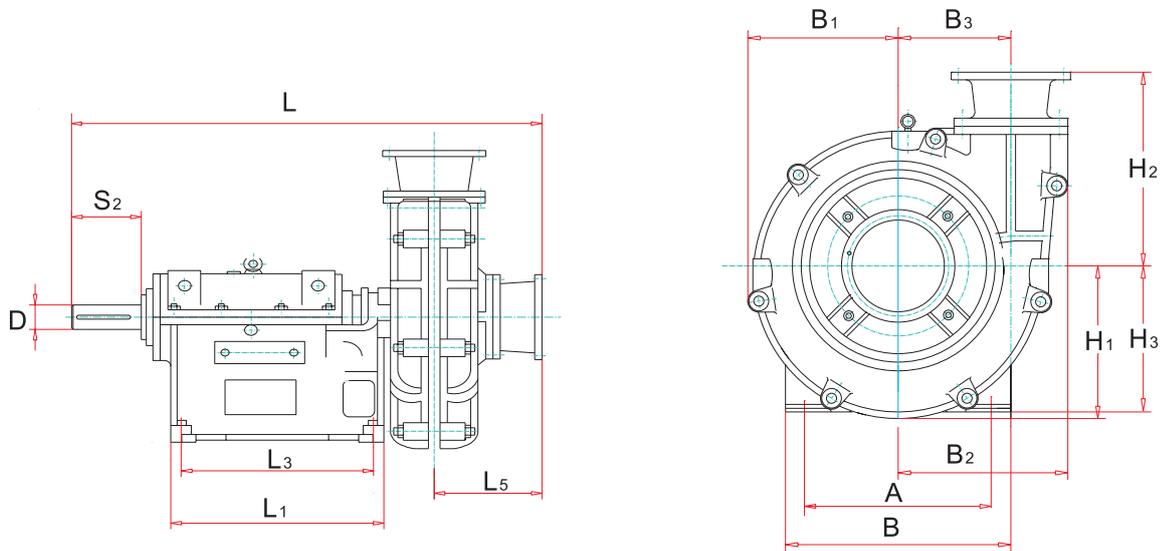


**CL(Z)/CR(Z)**



**DC(Z)**

## OUTLINE DIMENSIONS



PUMP MODEL	A	B	B1	B2	B3	D	H1	H2	H3	L	L1	L3	L5	S2
65SPH	432	492	352	377	220	65	360	475	415	1379	580	340	330	167
80SPH(P)	560	636	360	459	279	80	414	560	520	1598	725	440	296	222
100SPH(P)	560	636	395	467	290	80	394	597	520	1718	725	440	402	222
150SPH(P)	760	840	619	684	453	120	655	820	650	2006	1013	560	388	210
200SPH(P)	760	840	675	713	460	120	695	880	650	2213	1013	560	579	210
250SPH(P)	780	950	645	710	460	120	680	974	650	2160	978	550	500	215
300SPH	780	950	649	766	475	120	676	883	650	2282	978	550	610	215

All Dimensions are In Millimeter(mm)

## ATLAS EQUIPMENT MANUFACTURING LTD., HEBEI, CHINA

Website: [www.atlas-pump.com](http://www.atlas-pump.com)

Address: 201# Taihang St. Hi-tech Zone, Shijiazhuang, China 050035

### Sales Dept:

Tel: 86-311-85832151 / 85832152

Fax: 86-311-87777076

Email: [sales@atlas-pump.com](mailto:sales@atlas-pump.com)

### Marketing Dept:

Tel: 86-311-85832212

Fax: 86-311-87777076

Email: [marketing@atlas-pump.com](mailto:marketing@atlas-pump.com)