# SALES NETWORK



Please consult Atlas headquarter for branches and distributors' contact information.

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1 4 4 ATLAS PUMP Slurry pumping solutions





# Mining & Mineral Processing Power Plant Coal Washing Metallurgy Chemical Dredging

# SLURRY PUMPS ON SITE

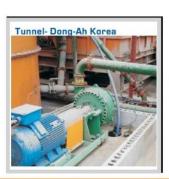
Copper Mine-Codelco Chile













# TYPICAL APPLICATI ONS

А	WSA	WX	WXH	WL	WG	VC	SPH	SPL	SPS	WXF	WDL
Mill discharge	•	•						•			
Coarse Sand	•	•	•			•	•	•			
Coarse taiings	•	•	•			•	•	•			
Phosphate matrix		•	•	٠	•	•	•	•			
Fine talings		•		•		٠	•	•			
Heavy media	•	•	•	٠		•	•	•			
Dredging					•				•		
GVJ>sum		•	•	•		•	•	•	•		
Coalwashing		•	•	•	•	•	•	•	•		
FGD		•	•	٠		•	•	•	•		•
<b>E</b> btation										•	

## ABOUT US

Atlas Equipment Manufacturing Company, as sub-branch of TIEC GROUP, is specialized in slurry pump manufacturing and service offering. Driven by quality-first, customer satisfaction and mutual benefit, Atlas develops and supplies high end slurry pump, valves, pipeline and pumping system solution to customers.

In past 10 years, always being a reliable partner by offering support to many industrial companies on equipments and production optimization in mining processing, power generation and coal washing etc. The high performance, steady runningand longer lifetime of metal& elastomer slurry pump successfully helpcustomer achieve more efficient and stable operating process. Till today, Atlas pump and Indux \* pumps have been installed in mines in South America, North America, Austra lia, Africa, Asia, Europe, and served many top mining companies, gained we ll-reserved reputation.

Through years of exploration and development, there are 11pump series including over 140 models gathered in our slurry pump family, over 3500 sets could be manufactured and put in the market each year, so far the biggest pump we manufacture is 760 mm( discharge ID) millcircuit slurry pump.

### Our pumps are featured with:

- Multiple series, full sizes slurry pumps to meet requirements of different applications
- Diverse wear&corrosion resistant hard metal and elastomer material to handle various media
- Quality guaranteed with State-of-art of foundry, heat treatment, machining processes and well equipped testing tools as well as reliable QC system
- Performance guaranteed with advanced pump testing station
- Quick delivery is assured with stable and effective production system



# SERVICE PACKAGE

## Except as a slurry pumo manufacturer. We also provide :

- Pumping system design and upgrading service, to achieve efficient operation.
- Complete solutions for slurry delivery system(EPC design).
- On-site technical support & stocking service.
- *Slurry pump contracting service.*
- On-site and in-house training.



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tion tion system

e efficient operation.



# WX(R) / WXA(R) - Heavy Duty Slurry Pump

WX(R) & WXA(R) hard metal/rubber heavy duty slurry pumps are designed for the most difficult pumping applications for highly abrasive , high density or erosive slurries. Extra thick sections at wear point and perfect Impeller structure ensures satisfactory performance with long life, and needs minimum maintenance requirements. Rubber lined pump expand applications to chemical products handling, several different rubber options are available to meet different application needs. Especially fit in aggressive applications like mill discharge, tailing transportation.



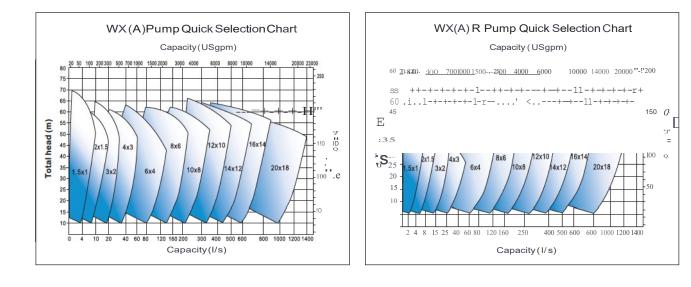
WXA(R) pumps are improved version of WX(R) pumps, by adopting adjustable Wear plate seated in Throatbush, the clearance between Impeller and Throatbush could be adjusted by pushing the wear plate towards the Impeller without stopping the pump and re-aligning pully or couplings, to extend wear parts life by 50% while reducing power consumption by 10%.



Discharge size: 1"-18"

Capacities to:5400m³/hr

Heads to: 68m



#### **Pump Features**

Single stage, single suction, overhang shaft, centrifuga I, double casing horizontal pump Material

Casing-Made of ductile Iron, ribs help casing to stand high pressure.

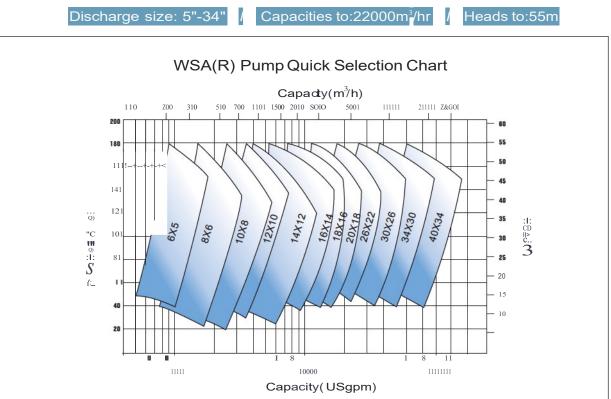
Wet Ends-Impellers, liners, volutes are made of high-chrome alloy or rubber or polyurethane, to resist wear, corrosion, erosion or impact, parts made of metal or rubber are interchangeable. Shaft sleeve: Ceramic, tungsten carbide or other hard material are optional for coating to increase wear resistance.

Bearing Assembly- Grease Lubrication and oil lubrication are optional depend on the usage. Seal options-Gland Seal, expeller (centrifugal or dynamic) seal and mechanical seal are optional to fit different application Parts design:

Impeller-Multiple impeller types for diverse applications to get best performance: High efficiency, High efficiency with bwer NPSHr, large particle, enhanced performance, flow reducer, Recessed eyes are available. Liners-different types to match different impellers.

aggressive applications like ball and Sag Mill cyclone feed, dredging and all coarse sand slurries. The WSA series are designed to pump highly concentrated slurries and slurries containing large particles which standard slurry pumps cannot dealwith effectively.

Made of hard metal impellers & liners or hard metal Impellers combined with elastomer liners are optional in achieving maximum wear life whilst ensuring reduced maintenance costs.



#### **Pump Features**

Single stage, single suction, overhang shaft, centrifuga I, double casing horizontal pump Material- Interchangeable parts and a wide range of hard alloys plus molded elastomer materials are optional in manufacturing liners, this allows for the best balanced wear life on each component .

Passage-Large diameter impellers with a wide passage design assures lower running speeds which achieve longer wear life and reduces maintenance.

Bearings-A short and large diameter shaft together with quality heavy duty roller bearings reduce shaft bending, pump vibration and overheating whilst pump is in operation.

Adjustable impeller clearance-The clearance between the impeller and the throat bush can be adjusted to assure the pumps run at their best efficiencies.

Flanges-Flange sizes are in accord with standard ASME/ANS IB 16.5 and 16.47, or be customized regarding specific requirement.

## WSA(R) - Mill Circuit Sever Duty Slurry pump

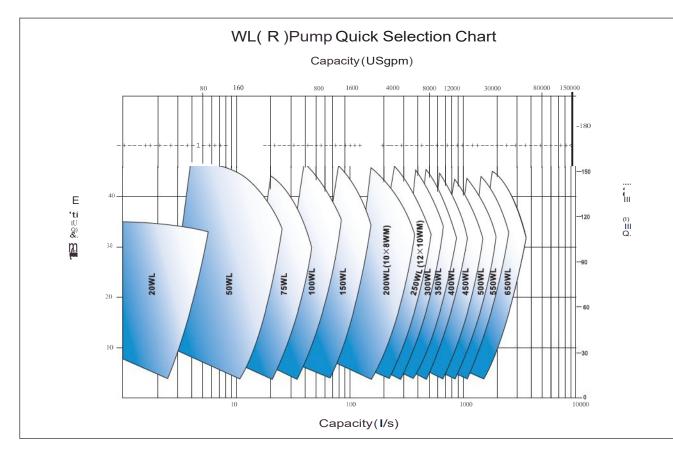


## WL(R)-Low to Medium Head Heavy duty Slurry Pump

WL( R ) light to medium duty slurry pumps are designed for continuous slurry handling applications where a large flow at a low to medium head is required. Especially for medium abrasive and lower solids concentrations applications. Similar in structure to WX pump, WL( R )pumps are smaller sized and relatively economical to handle mild slurries.

Discharge size: 20-650mm





### **Pump Features**

Single stage, single suction, overhang shaft, centrifugal, double casing horizontal pump Material:

Casing-Made of ductile Iron, ribs help casing to stand high pressure.

Wet Ends-Impellers, liners, volutes are made of high-chrome alloy or rubber, to resist wear, corrosion,

impact or erosion, parts made of metal or rubber are interchangeable.

Bearing Assembly- Grease Lubrication and oil lubrication are optional depending on the usage.

Seal options-Gland Seal, expeller( centrifugal or dynamic) seal and mechanical seal are optional to fit different application.

#### Parts design:

Compare with WX(R), WL(R)pumps are smaller sized, more economical when dealing with mild media.

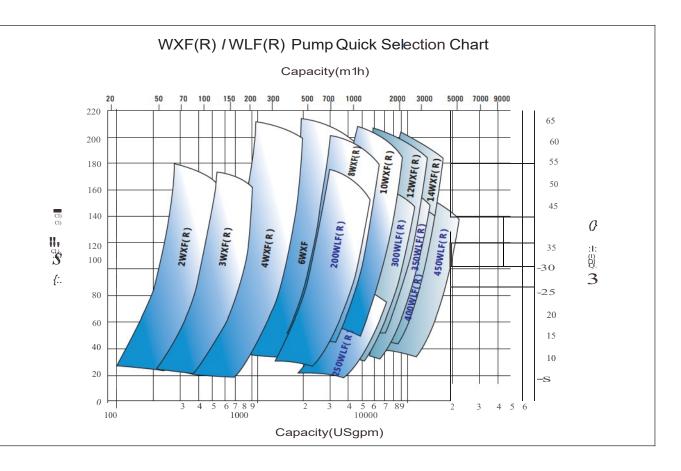
## WXF(R)/WLF(R) - Froth Pump

The WXF(R)/WLF(R)Slurry Pump series are particularly designed to handle froth and high viscosity slurry in non-ferrous metal extraction where flotation process is utilized ,the slurry which contains fine particles and fine dispersion of air bubbles need to be pumped from one flotation cell to another or to the next process, inthese conditions the froth pumps are needed.

Wear-resistance high chrome white irons or various elastomer molded wet parts are optional for different slurries.

WXF pumps are converted from WX (R)pumps, WLF pumps are converted from WL(R) pumps.

Dischargesize:2"(50mm)-450mm



### **Pumu Features**

Single stage, single suction, overhang shaft, centrifugal, double casing horizontal pump Material: Hard metal Impellers and Elastomer molded/ hard metal Liners are used to handle corrosive/abrasive froth slurries. Structure:

-The enlarged inlet of throat bush reduces NPSHr.

-The blade shape of open impeller and venting pipe in suction pipe help to get as more as froth or viscous slurries into the pump, minimize the pump size and increase efficiency.

-Venting pipe helps to relief air from system, promotes the movement of the froth slurry into the impeller eye. Seals-When froth factor isover 1.8, we adopt Gland seal with venting system to help release air from the pump. so 3 seal methods are optional:

Gland seal, Gland seal with venting system, and Mechanical seal.



#### / Capacities to:5000m<sup>3</sup>/hr Headsto:65m

## WXH - High Head Heavy Duty Slurry Pump

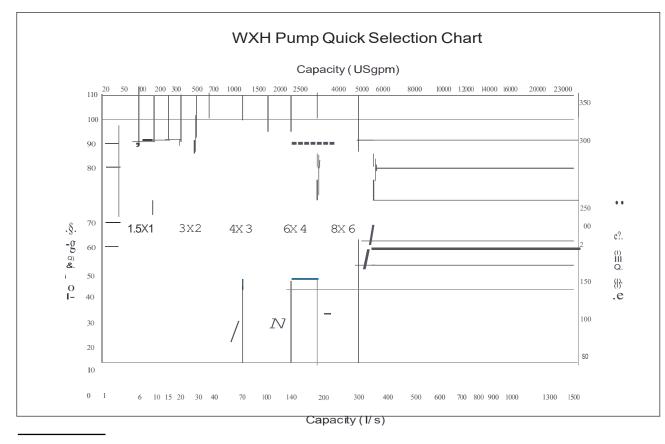
WXH pump are designed for heavy duty applications require high head per stage at high pressures, suitable for long distance transporting or where other applications require more than one pump in series.



Heads to: 98m

Discharge size: 1"-6"

Capacities to:1152m<sup>3</sup>/hr



#### **PumpFeatures**

Single stage, single suction, overhang shaft, centrifugal, double casing horizontal pump

#### Material:

Casing-Made of ductile Iro, ribs help casing to stand high pressure.

Wet Ends-Impellers, liners, volutes are made of high-chrome alloy to resist wear, corrosion, impact or erosion.

Bearing Assembly- Grease Lubrication and oil lubrication are optional depending on the usage. Seal options-Gland Seal, expeller( centrifugal or dynamic) seal and mechanical seal are optional to fit different application.

#### Parts design:

Impeller-Large diameter, bw turning speed ,wide passage and recessed vanes help to lower internal velocity to extend wear life.

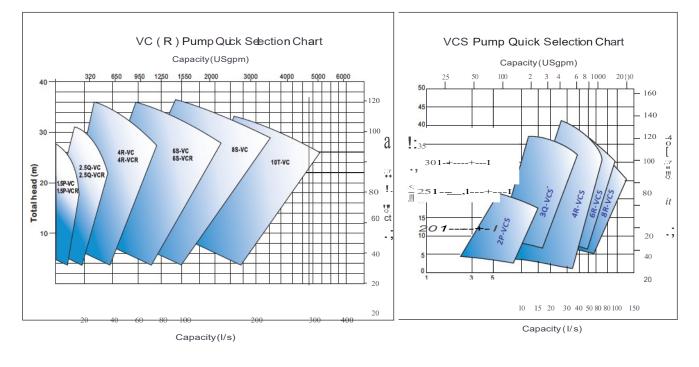
# VC(R)/VCS - Heavy Duty Sump Pump

VC(R)/VCS slurry pumps are designed for handling abrasive and corrosive slurries whilst submerged in sumps or pit. The pump has no shaft seal,easy to maintenance and cost less

Hard metal and rubber parts are optional for different applications and interchangeable. Suit for most applications where sump slurry pumps are needed.

VC(R) pump are equipped with standard impellers while VCS pumps are equipped with recessed impellers.

### Discharge size: 40-250mm



#### **Pump Features**

VC( R) & VCS pumps are single stage, single suction, overhang shaft, centrifugal, single casing structure

### Material:

Wet Ends- Casings, Impellers, liners are made of high-chrome alloy or rubber, to resist wear, corrosion, impact or erosion, parts made of metal or rubber are interchangeable. \* For VCS, only metal material are optional

Seal options-No shaft seal, free of shaft sealing problems. Structure-No Impeller clearance adjustment is needed, easy to maintain and operate. Bearing Assembly- Grease Lubrication, easy to maintenance. Heavy duty bearing assembly ensures the stability of pump while slurries containing large size particles are delivered.

#### VC(R)-Standard impellers

Inlet-The bottom and top inlet design allow no priming required. Screens- Reduce blockage rate. Impeller-Double suction vanes reduce the axial load.

Suction pipe- could be fixed to draw away the high concentrated slurry deposited on the bottom of pit.



VCS- Non-clogging Sump Pumps with recessed impellers The recessed impeller and the casing with specially designed flow passage permit passage of big particles unbroken. This series is specially designed for the applications where heavy abrasive slurries exist and the particles

are required to keep unbroken during pumping,e.g. transportation of pellets in mineral processing.

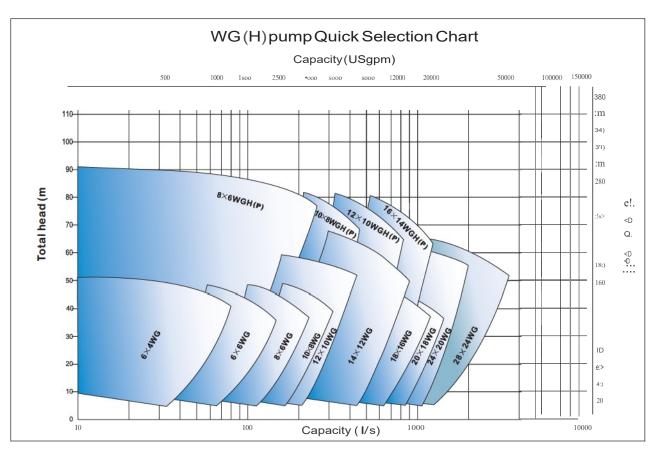
## WG(H) - Gravel & Dredge Pump

WG(H) pump are designed for continuous pumping of highly abrasive slurries that containing large particles which other Atlas pumps can not handle, Large passage inside casing make it the best choice for gravel, dredging and other applications where large particles needed to be handled, especially for big flow, high concentration, high head media. Low NPSH requirement and robust design ensures long life under severe duties.



Dischargesize:4"-20"

Capacities to:5600m³/hr Heads to: 78m



#### **Pump Features**

Single stage, single suction, overhang shaft, centrifugal, single casing horizontal pump Material

Wet Ends-Casing, Impeller, Plates are made of high-chrome alloyto resist wear, corrosion, impact or erosion. Bearing Assembly- Grease Lubrication and oil lubrication are optional depending on the usage Seal options-Gland Seal, expeller (centrifugal or dynamic) seal and mechanical seal are optional to fit different application.

#### Parts design

Wet parts: wide internal passage allow large particle go through and reduce down time. Impeller: wide passage and recessed vanes help to lower internal velocity to extend wear life. Beltjoint: Discharge could be any angle. Excellent NPSH performance.

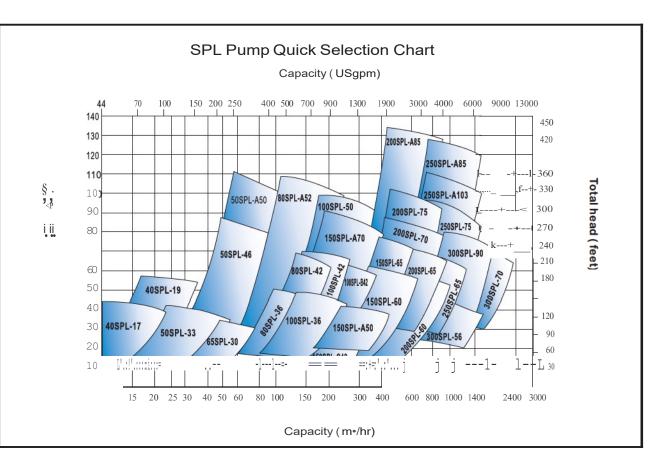
## SPL - Heavy Duty High Head Slurry Pump

SPL hard metal slurry pump are designed for high head applications Widely used in Coal preparation applications.

Oil lubrication with water-cooling design makes the bearings always working at lower temperature thus shaft could rotate more rapidly to get high head, direct connected drive are always optional by trimming impeller to appropriate diameter and to get performance just in need, save the cost for variable-frequency motor.Specially designed liners and impellers structure help pump get higher efficiency and high head.

Could be used in sea water handling applications after special improvement. Could be used in series under 3.6MPa.

## Dischargesize:40-300mm



### **Pump Features**

#### Material

Casing-Made of ductile Iron, ribs help casing to stand high pressure. Wet Ends-Impellers, liners, volutes are made of high-chrome alloy to resist wear, corrosion, shock or brush Structure

-Special structure design to fit in high head applications where more than one pump inseries are needed. High efficiency, lower power cost.

-Oil lubrication to lower bearing temperature, reduce down time. -Impellers are designed to be trimmed multiple times to fit motor speed, coupling connection between pump and motor help pump running more stable and reliable.

Seal:Expller+packing seal and mechanical seal are optional, to reduce leakage risk.



## SPH - Medium Duty High Head Slurry Pump

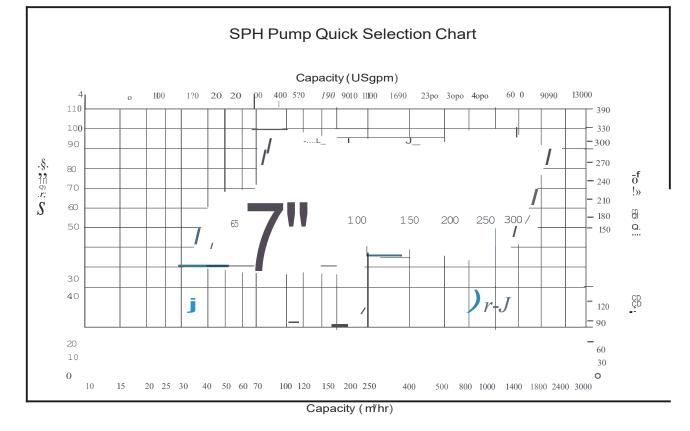
SPH hard metal slurry pumps are designed for high head applications, widely used in miningtailing transportation applications. Oil lubrication with water-cooling design makes the bearings always working at lower temperature thus shaft could rotate more rapidly to get high head, direct connected drive are always optional by trimming impeller to appropriate diameter and to get performance just in need, save the cost for variable-frequency motor. Specially designed liners and impellers structure help pump get higher efficiency and high head.



Could be used in sea water handling applications after special improvement. Could be used in series under 3.6MPa.

Discharge size: 65-300mm

Capacities to: 1920m<sup>3</sup>/hr Heads to: 94m



Pump Features

### Material

Casing-Made of ductile Iron, ribs help casing to stand high pressure.

Wet Ends-Impellers, liners, volutes are made of high-chrome alloy to resist wear, corrosion, shock or brush Structure

-Special structure design to fit in high head applications where more than one pump in series are needed.

High efficiency, lower power cost.

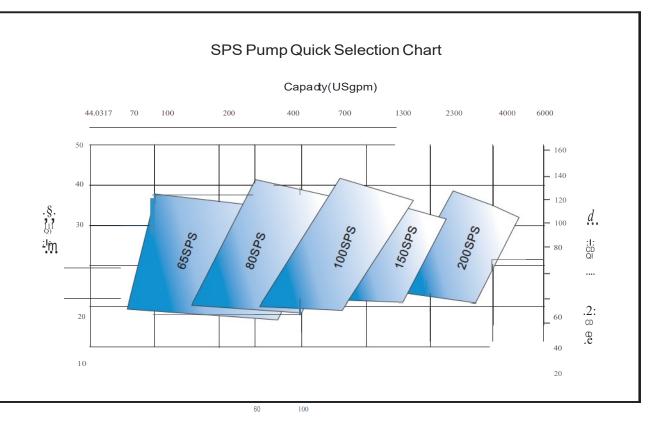
-Oil lubrication to lower bearing temperature, reduce down time.

-Impellers are designed to be trimmed multiple times to fit motor speed, coupling connection between pump and motor help pump running more stable and reliable.

Seal: Expeller+packing seal and mechanical seal are optional, to reduce leakage risk.

## SPS - Submerged Slurry Pump

Single stage, single suction, single casing, submerged over-hang shaft centrifugal slurry pump. suit for corrosive with solid particles applications like mining, power plant, metallurgical, coal; especially handle corrosive slurry with crystals.



Capacity(m<sup>3</sup>/h)

**Pump Features** 

#### Structure:

- -Pump and motor are one-piece unit, impeller and motor share the same shaft, ensure stable operation. -No shaft seal needed, reduce down time.
- -The unit works under water, no primming needed.
- -No need for protection or fixing, could be moved to the right place conveniently. Less noise and vibration.

#### Material:

Wet parts are made of high-chrome a loy to resist wear, corrosion, impact or erosion.

