

Heavy Duty Vertical Slurry Pump

SLV



- Sizes up to nominal size 10" (250 mm)
- Capacities to 4400 GPM (1000 m³/h)
- Heads to 115 feet (35 m)
- Temperatures to 250°F (121°C)
- Pressures to 230 PSIG (40 barg)

Range of Applications

The SLV series, rubber-coated or metallic vertical slurry pumps are low maintenance slurry pumps designed for heavy continuous handling of abrasive and corrosive slurries whilst submerged in sumps or pit. Hard metal and rubber parts are optional for different applications and interchangeable.

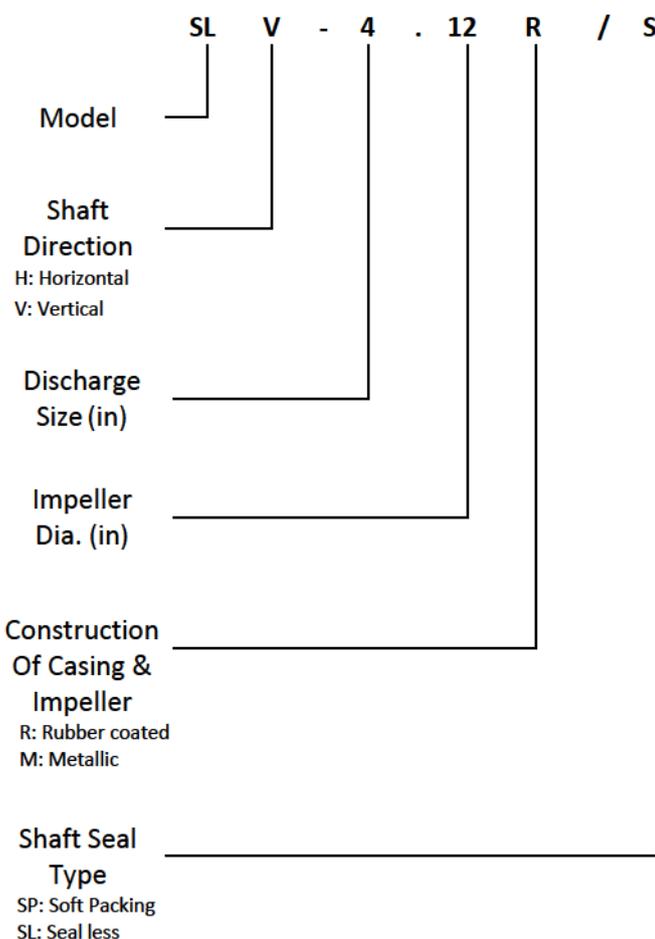
This Heavy Duty Sump Pumps are available in various standard lengths to suit common sump depths, for very deep sumps or where high shaft speeds limit the length of the pump, a suction extension pipe can be fitted to the bottom inlet to extend the depth of the pump by up to 2 meters.

Wetted components are available in a wide range of alloys and elastomers, from which APS selects the optimum combination of materials for maximum resistance to wear in virtually any industrial application, including those demanding both abrasion and corrosion resistance and where larger particles or high density slurries are encountered.

Pumping is maintained even when the top inlet is not submerged, thus enabling the level of liquid to be lowered right down to the bottom inlet or the bottom of any suction extension pipe. Generally our SLV series can be used in following cases:

- Primary Metals
- Mineral Processing
- Sand & Gravel
- Power Utility
- Pulp & Paper
- General Industry

Pump Designation Method



Design Features

Impeller

- Impellers from Wear resistant alloys or molded elastomer are available.
- Wear resistant alloys, and molded elastomer impellers are interchangeable
- In standard size of column, shaft seal is not required.
- Double suction impellers (top and bottom entry) induce low axial bearing loads and have heavy deep vanes for maximum wear resistance and for handling large solids.
- Impeller adjustment is made by putting shims between the bearing housing and the mounting plate attachment. No further adjustment is necessary.
- Metal and elastomer molded impeller are available that they are dimensionally interchangeable.
- The large impeller passages reduce the risk of blockages.

Casing

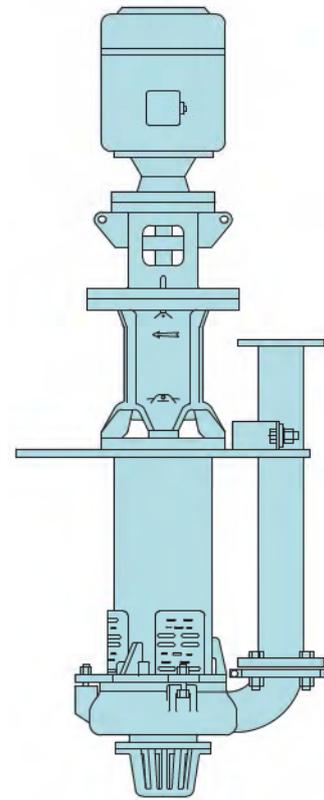
- Casing is available in Metallic and elastomer molded types.

Coupling methods

- Direct coupling and vary-pitch coupling types are available.

Bearing and shaft assembly

- The bearings, shaft and housing are generously proportioned to avoid problems associated with the operation of cantilevered shafts in the first critical speed zones.
- The robust cantilever shaft avoids the need for lower submerged bearings - which are often the source of premature bearing failure.
- The vertical cantilever design with no gland or submerged bearings avoids the need for expensive bearing flushing water.
- Heavy duty double row taper trust bearings.
- The radial forces are controlled by a heavy duty roller bearing.
- Grease lubricated bearings.
- Rigid, large diameter shaft.



Direct coupling

Shaft sealing

- The vertical cantilever design requires no shaft seal.

Column Assembly

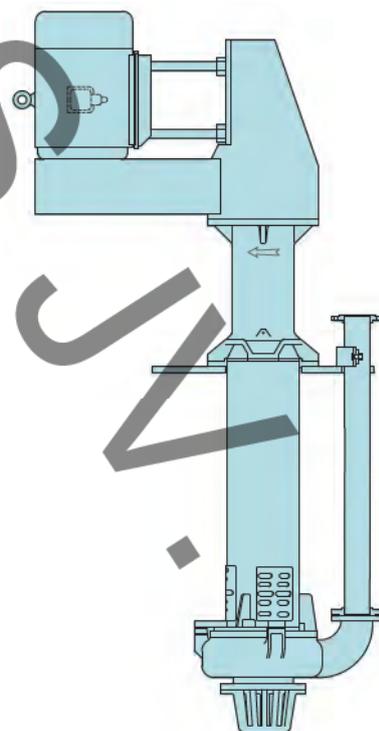
- Completely fabricated from mild steel.

Upper Strainer

- Snap-on elastomer or polyurethane for SLV-M and SLV-R pumps. Strainers fit in column openings.

Lower Strainer

- Bolted metal or polyurethane for SLV-M; molded snap-on elastomer for SLV-R.



Vary-pitch Coupling

Material Selections and Application Guide for SLH Pumps

Please use the following charts as a general guide only. Refer to factory for specific Material recommendations.

Elastomer Type	Hardness Durometer Shore A	Temperature		pH		Resistance to		
		Maximum		Min.	Max.	Abrasion	Moderate Chemicals	Hydrocarbons & Oils
Natural Rubber	40	154°F	68°C	4.5	12	E	G ⁽¹⁾	P
Neoprene	60	212°F	100°C	3.0	12	E	G ⁽¹⁾	G
Urethane	81	149°F	65°C	3.0	11	E ⁽²⁾	G ⁽¹⁾	E

E = Excellent G = Good P = Poor

(1) Poor for oxidizing chemicals and strong acids

(2) Fine particles only (150 meshes or less)

Metal Type	Hardness	Composition					Standard code
		Min.	C (%)	Mn (%)	Ni (%)	Cr (%)	
Ni-Hard 1	550 HB	3.0-3.6	1.3 max	3.0-5.0	1.4-4.0	-	ASTM A532 Class I Type A ⁽¹⁾
Ni-Hard 2	550 HB	2.5-3.0	1.3 max	3.0-5.0	1.4-4.0	1.0 max	ASTM A532 Class I Type B ⁽²⁾
Ni-Hard 4	550 HB	2.5-3.6	1.0-2.2	4.5-7.0	7.0-10.0	1.0 max	ASTM A532 Class I Type D ⁽³⁾
16% High-Chrome	450 HB	2.4-2.8	0.5-1.0	0.5 max	14.0-18.0	1.0-3.0	ASTM A532 Class II Type B ⁽⁴⁾
16% High-Chrome	450 HB	2.8-3.6	0.5-1.0	0.5 max	14.0-18.0	2.3-3.5	ASTM A532 Class II Type C ⁽⁴⁾
27% High-Chrome	450 HB	2.3-3.0	1.0 max	1.5 max	23.0-28.0	1.5 max	ASTM A532 Class III Type A ⁽⁵⁾

(1) When resistance to grain-friction abrasion is the principal requirement, and resistance to impact loading is secondary (as in casing liners), alloys having high carbon contents, ASTM A532 class I type A (Ni-Hard 1) are recommended.

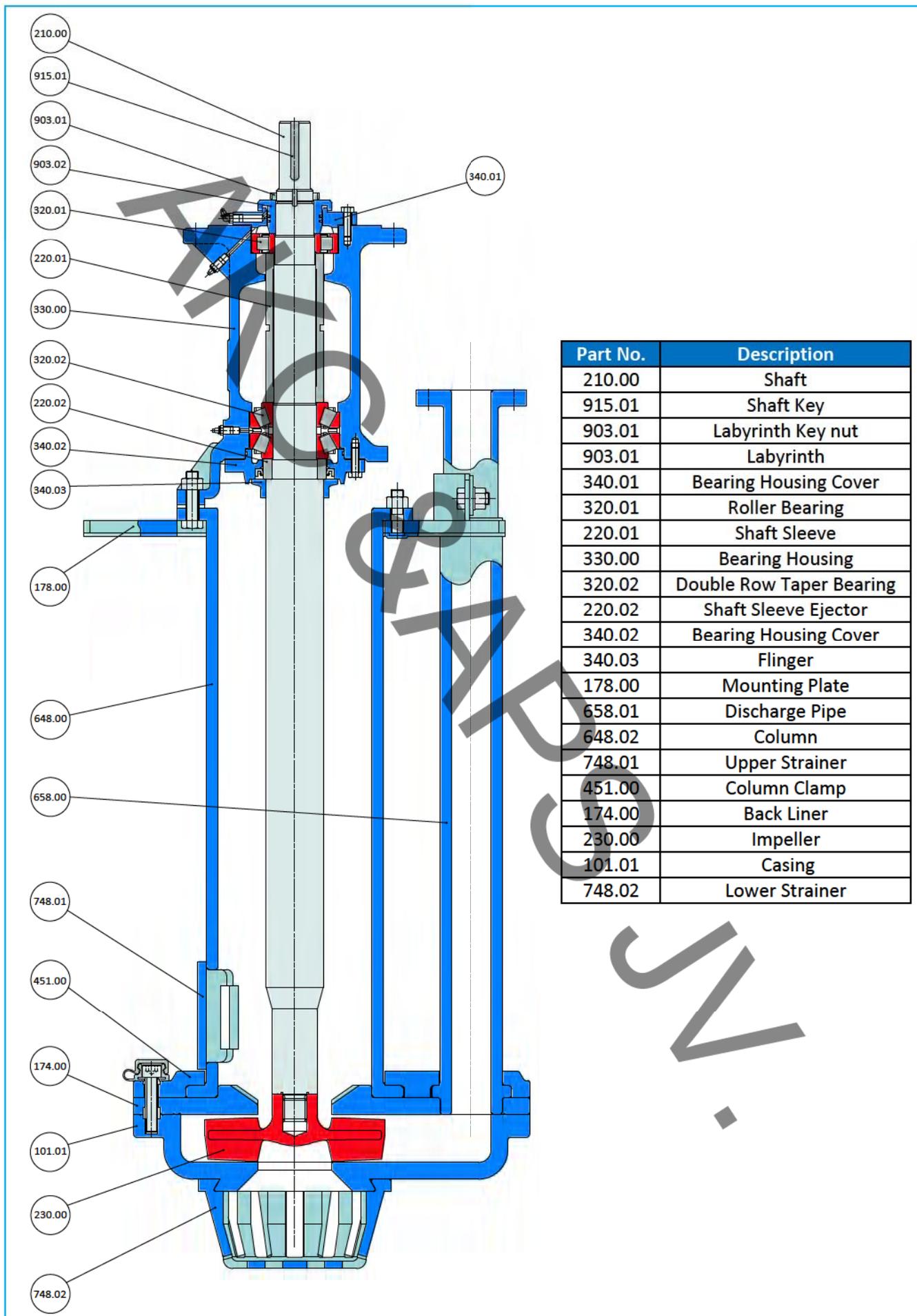
(2) In repeated impact (as in impeller), the lower carbon alloys, class I type B (Ni-Hard 2) are recommended because of the existence of less carbide, and therefore, greater toughness.

(3) As the section size increases (for Large pumps), the chromium content must increase, Ni-Hard4 alloy is a modified nickel-chromium iron that contains higher levels of chromium, ranging from 7-11%, and increased levels of nickel, ranging from 4.5-7%, high levels of nickel avoids the formation of pearlite and low hardness.

(4) Can be supplied heat-treated with a martensitic matrix micro structure for maximum abrasion resistance and toughness.

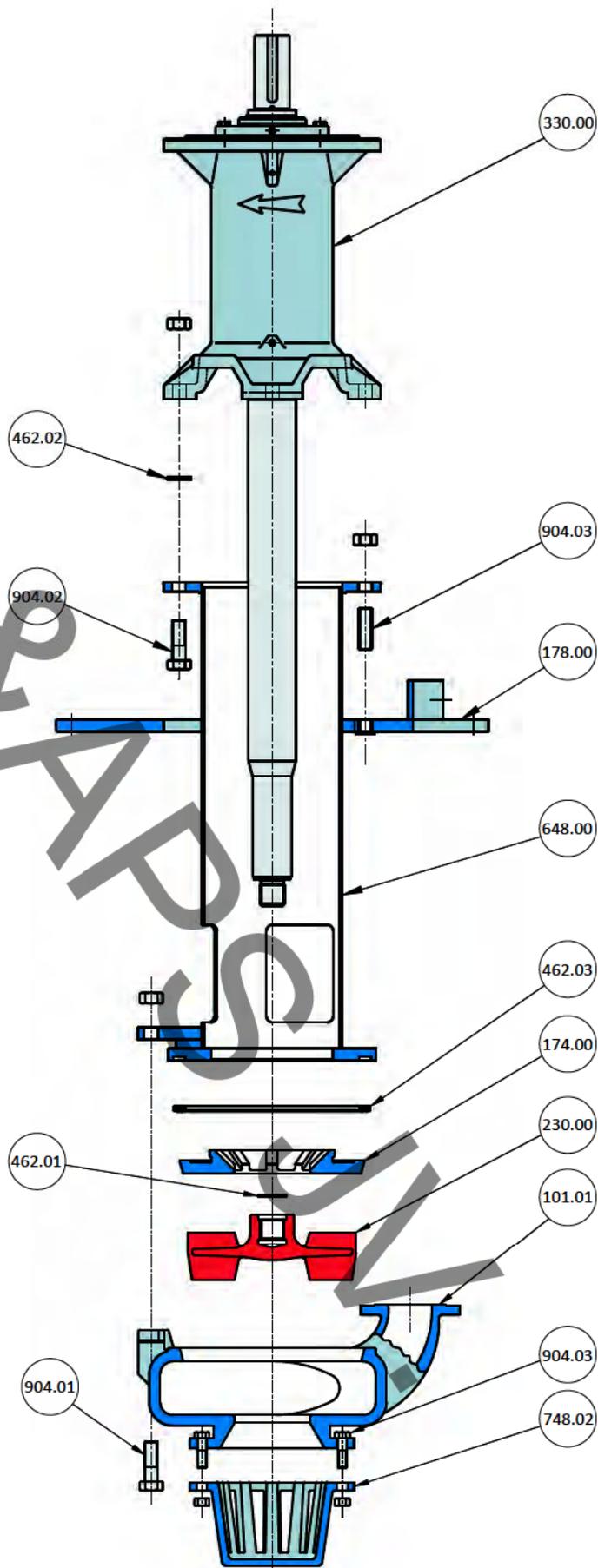
(5) Class III is used when resistance to corrosion is needed.

Sectional View & Main Parts List of SLV-R

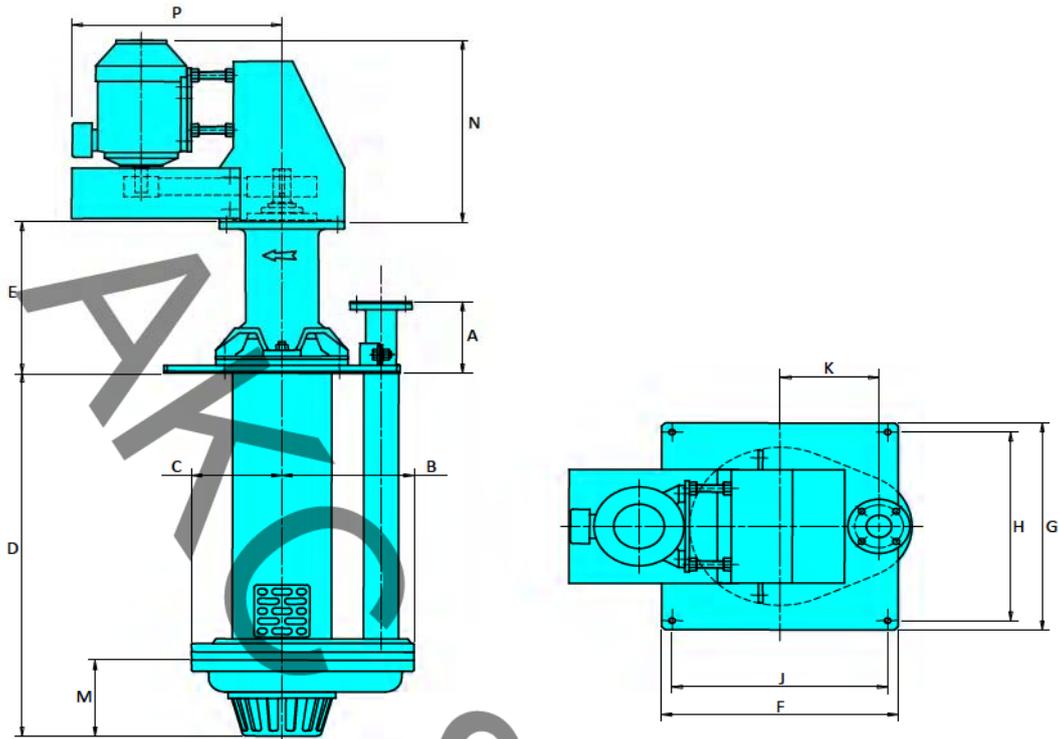


Sectional View & Main Parts List of SLV-M

Part No.	Description
330.00	Bearing Housing
462.02	Spacer
904.02	Column Bolt & Nut
904.03	Column Stud & Nut
178.00	Mounting Plate
648.02	Column
462.03	Back Liner Seal
174.00	Back Liner
462.01	Impeller O-ring
230.00	Impeller
101.01	Casing
904.01	Column Bolt
904.02	Intake Flange Bolt
748.02	Lower Strainer



Pump Dimensions



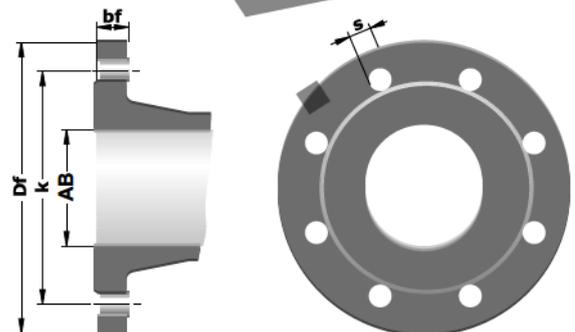
Pump Type	Dimensions ³ (mm)													Weight (Kg)
	Overall								Mounting Plate					
	DN2	A	B	C	D ¹	E	N ²	P ²	F	J	G	H	K	
SLV 1M.8-M	40	137	285	153	900	380	380	380	500	450	500	450	205	285
SLV 1M.8-R	40	140	265	175	900	380	380	380	500	450	500	450	205	249
SLV 2M.10-M	65	227	399	231	1200	492	492	492	680	620	680	620	285	432
SLV 2M.10-R	65	230	380	260	1200	498	498	498	680	620	680	620	285	386
SLV 4.14-M	100	260	538	317	1500	662	662	662	1000	930	870	800	400	867
SLV 4.14-R	100	266	535	332	1500	668	668	668	1000	930	870	800	400	771
SLV 6.20-M	150	390	670	365	1800	875	875	875	1100	1030	1100	1030	500	1737
SLV 6.20-R	150	395	670	400	1800	883	883	883	1100	1030	1100	1030	500	1520
SLV 8.27-M	200	450	805	440	1800	878	878	878	1300	1200	440	1100	600	3048
SLV 10.30-M	250	500	930	470	2100	1000	1000	1000	1750	1650	1450	1350	700	4082

1. Standard size of column.
2. Dimension for maximum motor size.
3. Not to be used for construction.

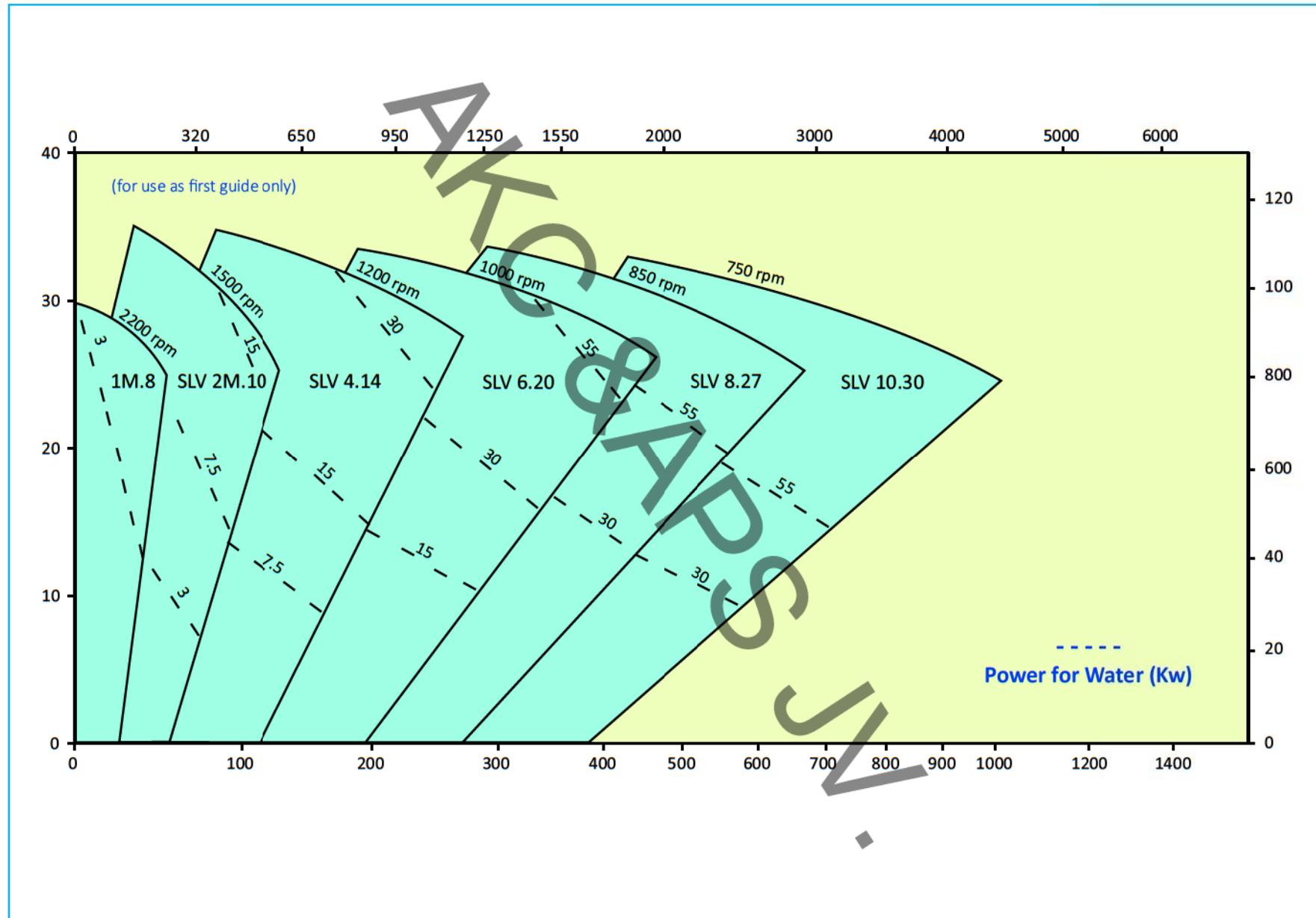
Flanges Dimensions

Pump Type	Discharge (PN 16)					
	DN2	Df	k	s	n	bf
SLV 1M.8	40	185	145	18	4	20
SLV 2M.10	65	185	145	18	4	20
SLV 4.14	100	220	180	18	8	20
SLV 6.20	150	285	240	22	8	22
SLV 8.27	200	340	295	22	12	24
SLV 10.30	250	405	355	26	12	26

"n" number of holes
ASME/ANSI B16.5 class 150 flanges on request.



Overlapping Curve



All of Our Centrifugal Pumps in a Glance

SLURRY HANDLING PUMPS



Lined horizontal slurry pump; suitable for coarse fine slurries

SLH SERIES



Lined vertical slurry pump; suitable for coarse fine slurries

SLV SERIES



Severe duty horizontal slurry pump; suitable for sand & gravel transferring

GRH SERIES



Severe duty vertical slurry pump; suitable for sand & gravel sump discharge

GRV SERIES

PROCESS PUMPS – API 610



Single stage horizontal pump; Heavy duty process pump acc. API610, type OH2

CMS SERIES



Single stage vertical pump; Line shaft sump pump acc. API610, type VS4

LSV SERIES

GENERAL SERVICE PUMP – ISO 5199



Single stage horizontal pump; General service pump foot mounted, type OH1

FMS SERIES

APS PUMPING SYSTEMS

Customer satisfaction

Continuity of Service

Confidence



Arad Pishesh Shareh Co

Design and manufacture of centrifugal pump

Address : No 342, Cience & Technology Park,
road of Emamzade, Andisheh Town, Tabriz

Phone/Cellphone : 041-34265065 / 09149277269

Website : www.aradpishesh.com

Email : info@aradpishesh.com