

Design Considerations

The VS and VSR slurry pumps are designed for tough slurry pump applications

- Abrasive and/or corrosive applications
- High specific gravities
- Continuous duty pump applications
- Solid handling applications
- VTV50 twin discharge top suction is available only with high chrome or stainless steel materials
- Can operate in snore conditions

Casing

- VS - 27% and 35% chrome iron
- VSR - elastomer moulded
- VTV - 27% chrome or stainless steel

Impeller

- VS pumps - metal or elastomer moulded
- VSR pumps - elastomer moulded
- No shaft seals are required
- VS Impeller adjustment is made by shimming between the bearing housing and the mounting plate attachment to ensure maximum performance
- Metal and moulded elastomer impellers are available and are dimensionally interchangeable
- VTV pumps - 27% chrome or stainless steel

Column Assembly

- VS and VTV pumps - metal column
- VSR pumps - elastomer metal column

Discharge Pipe

- Metal for VS and VTV; elastomer-covered metal for the VSR

Materials of Construction

PART	TYPE VS and VTV	TYPE VSR
Bearing housing	Cast iron	Cast iron
Casing & rear liner	High chrome	Elastomer
Impeller	High chrome	High chrome or elastomer
Shaft	Mild steel	Elastomer-covered mild steel
Mounting plate	Mild steel	Mild steel w/opt. elastomer covering
Strainers	Cast iron	Elastomer

Bearing & Shaft Assembly

- VS and VSR pumps are cantilever shaft designs. Bearings are grease-lubricated with double-row taper thrust bearing located at the lower end of the bearing housing, and roller-line bearing at the upper end of the bearing housing. Bearing and clearing adjustments are not required when assembling the bearing housing assembly. VS and VSR pumps of the same sizes are dimensionally interchangeable
- Bearing loads are minimised using double race impellers

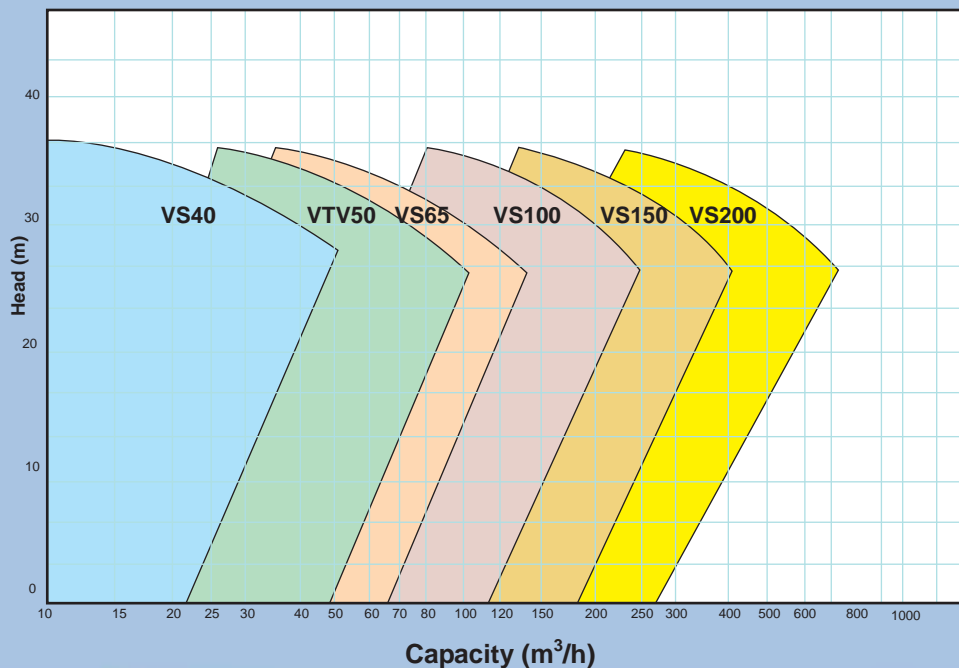
Strainers

- Moulded elastomer for VSR and metal for VS and VTV
- Tailpipe configurations optional on VS pumps

Agitator

- Agitator optional on VS pumps to prevent settling and sump silting

Coverage Chart for VS and VSR Vertical Spindle Slurry Pumps



Assembly diagram

VS

VSR

BEARING AND SHAFT ASSEMBLY

VS - metal shaft / VSR - elastomer coated shaft

upper bearing seal

upper parallel roller bearing

bearing housing

lower bearing - double roller taper

lower bearing seal - lip seal and flinger

COLUMN ASSEMBLY

metal mounting plate
(VSR elastomer-coated on bottom)

VS - metal column / VSR - elastomer coated column

VS - metal discharge pipe / VSR - elastomer-coated discharge pipe

LIQUID END ASSEMBLY

elastomer upper strainer

impeller thread seal

elastomer socket head protectors

VS - metal back liner / VSR - elastomer back liner

VS - metal impeller / VSR - elastomer impeller

VS - metal casing / VSR - elastomer casing

agitator (optional on VS model only)

VS - metal lower strainer / VSR - elastomer lower strainer

VTV

belt guard

motor

bearing assembly

discharge

clamp

base

discharge column

shaft

clamp

strainer

backplate

volute

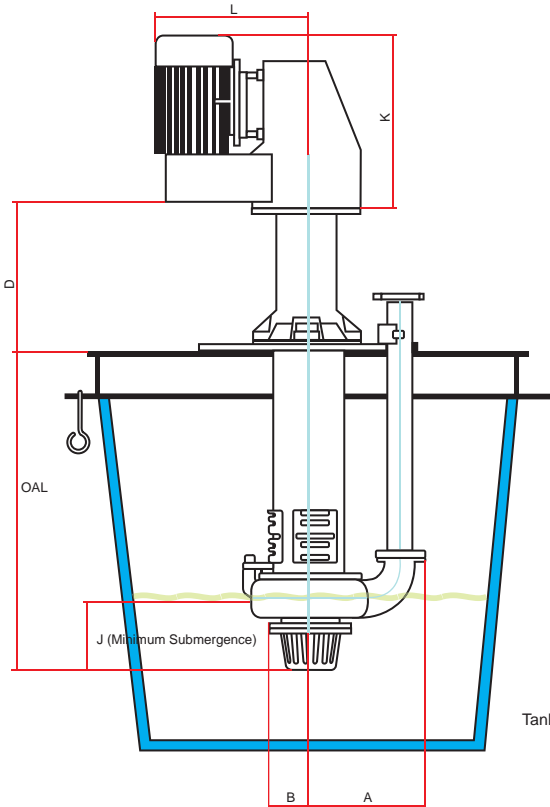


VS Agitator to prevent settling and clogging

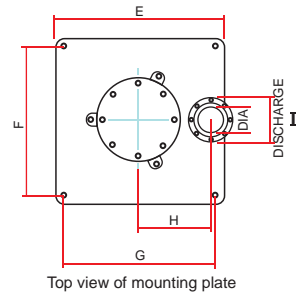
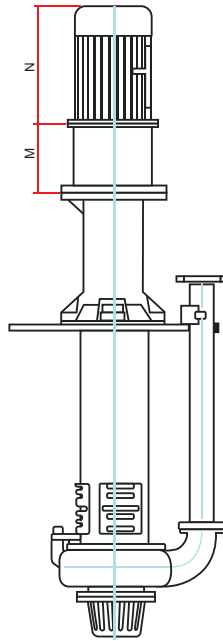


battlemax
HEAVY DUTY SLURRY SOLUTIONS

Belt Driven Unit Options



Direct Drive



Top view of mounting plate

Tank & Mounting I-beam support is provided by others

PUMP SIZE	SHAFT	OAL (mm)	WEIGHT
VS40	40	900	285
		1200	345
VTV50	60	980	375
		1370	387
		1830	447
VS65	50	900	435
		1200	465
		1500	492
VS100	80	1200	865
		1500	905
		1800	941
VS150	80	1500	1751
		1800	1799
		2100	1840
VS200	80	1500	3084
		1800	3160
		2100	3259

DISCHARGE FLANGE				
PUMP SIZE	OD	ID	PCD	Ø
VS40	127	40	98	4 x 14
VTV50	185	85	145	4 X 14
VS65	178	65	140	4 X 19
VS100	229	100	191	8 x 19
VS150	335	150	292	8 X 19

1. Do not use for construction purposes unless certified.
2. Do not scale.
3. Discharge pipes must be independently supported.

PUMP	PUMP		A	B	OAL Std L	D	E	F	G	H	I (Dia.)	J	K	L	M	N
	FRAME	TYPE														
VS40	VP	VS	285	153	900	380	500	450	450	205	127	174	733	675	246	629
		VSR	265	175	1500	380	500	450	450	205	127	174	733	675	246	629
VTV50	VT	VS	253	n/a	990	267	510	457	537	240	n/a	180	n/a	n/a	n/a	n/a
		VSR	253	n/a	1880	267	510	457	537	240	n/a	180	n/a	n/a	n/a	n/a
VS65	VQ	VS	399	231	900	492	655	620	620	285	178	265	923	794	290	681
		VSR	380	260	1800	492	655	620	620	285	178	265	923	794	290	681
VS100	VR	VS	538	317	900	662	1000	800	800	400	229	393	1141	1020	416	960
		VSR	535	332	1800	662	1000	800	800	400	229	393	1141	1020	416	960
VS150	VS	VS	670	365	900	875	1100	1030	1030	500	280	475	1311	1200	476	1011
		VSR	670	400	1800	875	1100	1030	1030	500	280	475	1311	1200	476	1011
VS200	VS	VS	805	440	1500	878	1300	1100	1200	600	343	550	1313	1300	476	1011

Note 1: Dimensions K, L, M, N are shown with maximum size motor
 Note 2: All dimensions are in millimeters and include Joint Ring

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