

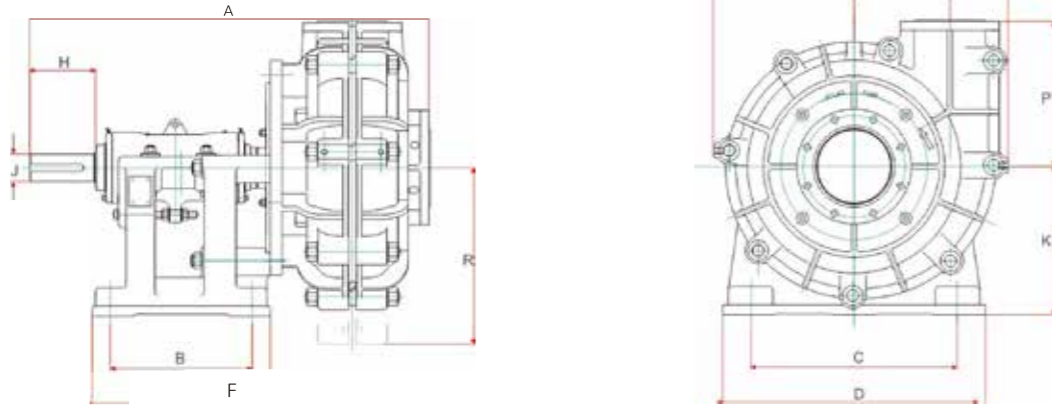
OUTLINE DIMENSION

TIEC
GROUP

INDUX[®]
ATLAS

WL(R)
Light Duty Slurry Pump

Mining | Power Plant | Coal | Metallurgy | Chemical



Pump model	A	B	C	D	F	H	J	K	N	S	Q	R	P	Weight(kg)	
														Metal pump	Rubber pump
20A-WL(R)	461	159	241	286	210	57	20	145	86	144	128	124	128	32	28
50B-WL(R)	624	143	254	295	248	80	28	197	114	197	155	154	163	58	46
75C-WL(R)	813	175	356	406	311	120	42	254	146	248	191	198	204	163	144
100D-WL(R)	950	213	432	492	364	163	65	330	190	308	236	249	262	343	309
150E-WL(R)	1218	257	546	622	448	220	80	457	248	403	303	324	324	718	696
200E-WL(R) 10x8E-WM(R)	1343	257	546	622	448	220	80	457	381	613	451	540	401	1625	1164
250F-WL(R) 12x10F-WM(R)	1549	349	762	857	636	280	100	610	438	696	476	603	470	1998	1340
300S-WL(R)	1720	640	760	920	780	280	120	450	475	740	599	634	570	2270	1802
350S-WL(R)	1776	640	760	920	780	280	120	450	530	825	643	691	620	3630	2823
400ST-WL(R)	1840	620	900	1150	780	280	120	650	600	942	747	809	740	4210	3212
450ST-WL(R)	1875	620	900	1150	780	280	120	650	660	1040	814	872	800	5596	4211
500T-WL(R)	2291	880	900	1150	1040	350	150	650	780	1251	1013	1112	975	8172	6356
550TU-WL(R)	2400	860	1200	1460	1050	350	150	900	860	1313	1055	1142	975	10900	8263
650TU-WL(R)	2517	860	1200	1460	1050	350	150	900	1020	1553	1248	1360	1175	18780	13915

All dimensions are in millimeter(mm)

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WL (R) LOW TO MEDIUM HEAD HEAVY DUTY SLURRY PUMP

WL(R) hard metal 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.

- Pump Range: 20mm~650mm
- Capacity to : 10260m³/hr
- Head to : 63m

CLEAR WATER PERFORMANCE

Model	Max.Motor Power Kw	Material		Clear Water Performance					
		Liner	Impeller	Capacity(Q)		Head H(m)	Pump Speed n(r/min)	Eff. η%	NPSH (m)
				(m ³ /hr)	(l/s)				
20A-WL	7.5	M	M	2.34~10.8	0.65~3	6~37	1400~3000	39	3~5
20A-WLR		R	R	2.69~9	0.6~2.5	7~32	1600~3000	33	
50B-WL	15	M	M	16.2~76	4.5~20	9~44	1400~2800	62	3~5
50B-WLR		R	R	12.6~60	3.5~17.6	6~38	1200~2600	48	
75C-WL	30	M	M	18~151	5~42	4~45	900~2400	57	3~6
75C-WLR		R	R	25~144	7~40	9~43	1000~2200	60	3~5
100D-WL	60	M	M	50~252	14~70	7~46	800~1800	60	2~3.5
100D-WLR		R	R	61~252	17~70	8~38	800~1600	65	2~5
150E-WL	120	M	M	115~486	32~135	12~51.5	800~1500	65	2~6
150E-WLR		R	R	137~486	38~135	10~36.5	800~1300		2.5~5.5
200E-WL 10×8E-WM	120	M	M	446~1325	124~368	14~63	600~1100	73	3~14
200E-WLR 10×8E-WMR		R	R	277~1088	27~322	11~43	500~900	79	3~10
250F-WL 12×10F-WM	260	M	M	468~1386	130~385	9~47	500~1000	73	3~10
250F-WLR 12×10F-WMR		R	R	522~1278	140~355	10~39	500~900	73	5~10
300S-WL	560	M	M	468~2538	130~705	8~60	400~950	79	2~10
300S-WLR		R	R	432~1900	120~528	7~41	400~800	81	3~8
350S-WL	560	M	M	650~2800	180~780	10~59	400~840	81	3~10
350S-WLR		R	R	720~2844	200~790	10~41	400~700	86	3~7
400ST-WLR	560	R	R	756~3312	210~920	7~37.5	300~600	85	2~8
400ST-WL		M	M	720~3312	200~920	7~51	300~700	80	2~10
450ST-WLR	560	R	R	1080~4356	300~1210	9~40	300~550	87	3~10
450ST-WR		M	M	1008~4356	280~1210	9~48	300~600	80	2~9
500T-WL	1200	M	M	1440~5580	400~1550	8~51	250~550	86	3~10
500T-WLR		R	R	1152~5112	320~1420	8~42	250~500	87	3~10
550TU-WL	1200	M	M	1980~7920	560~2200	10~50	250~475	86	4~10
550TU-WLR		R	R	2160~6660	600~1850	13~43	250~425	88	3~10
650TU-WL	1200	M	M	3600~10260	1000~2850	10~57	200~425	86	4~10
650TU-WLR		R	R	2520~9108	700~2530	10~39	200~350	86	2~8

1. Recommend 50%Q' ≤ Q ≤ 110%Q', (Q ≈ Capacity at Max.eff.point)

2. M means metal, R means rubber

APPLICATIONS

Usage of versatile wear-resistant and corrosion-resistant materials allows WL(R) series slurry pumps to service in various industries, such as construction material processing, ash removal in power plant, flue gas desulphurization and coal washing in coal plant, and etc., resulting in low operating cost, as well as minimized maintenance and downtime.

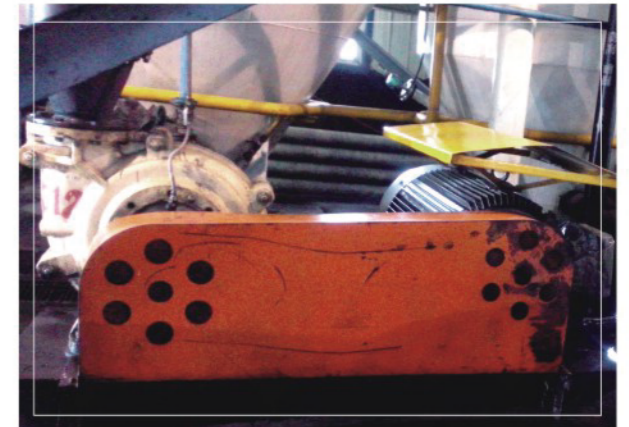
Construction Material Processing

Wide fluid passage ensures excellent passage ability for big particles. Hard abrasion-resistant alloy or rubber is especially suitable for construction material processing with mild abrasion.



Coal Washing

For applications of low head, low rotation speed and mild abrasion, the WL(R) series pumps can be used to handle heavy media or to deliver slurry at shallow sump position.



Flue Gas Desulphurization(FGD)

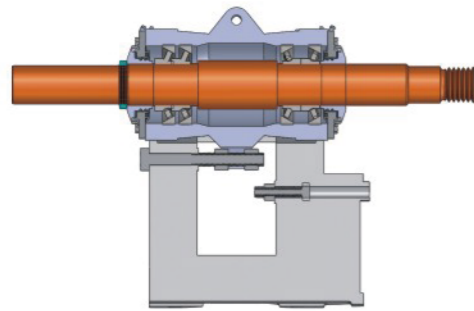
Usage of wear-resistant and corrosion-resistant metal and rubber, which are specially developed for the corrosive slurries containing chloride ion, allows the wide applications of the WL(R) series slurry pumps in this area.



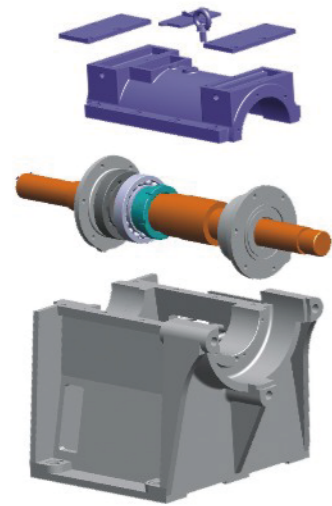
Metallurgy

Usage of versatile wear-resistant materials and abrasive structural design, along with special cooling system, ensures the bearings to run at low temperature while delivering high temperature media, allowing its wide applications in delivery of steel slag and clinker.

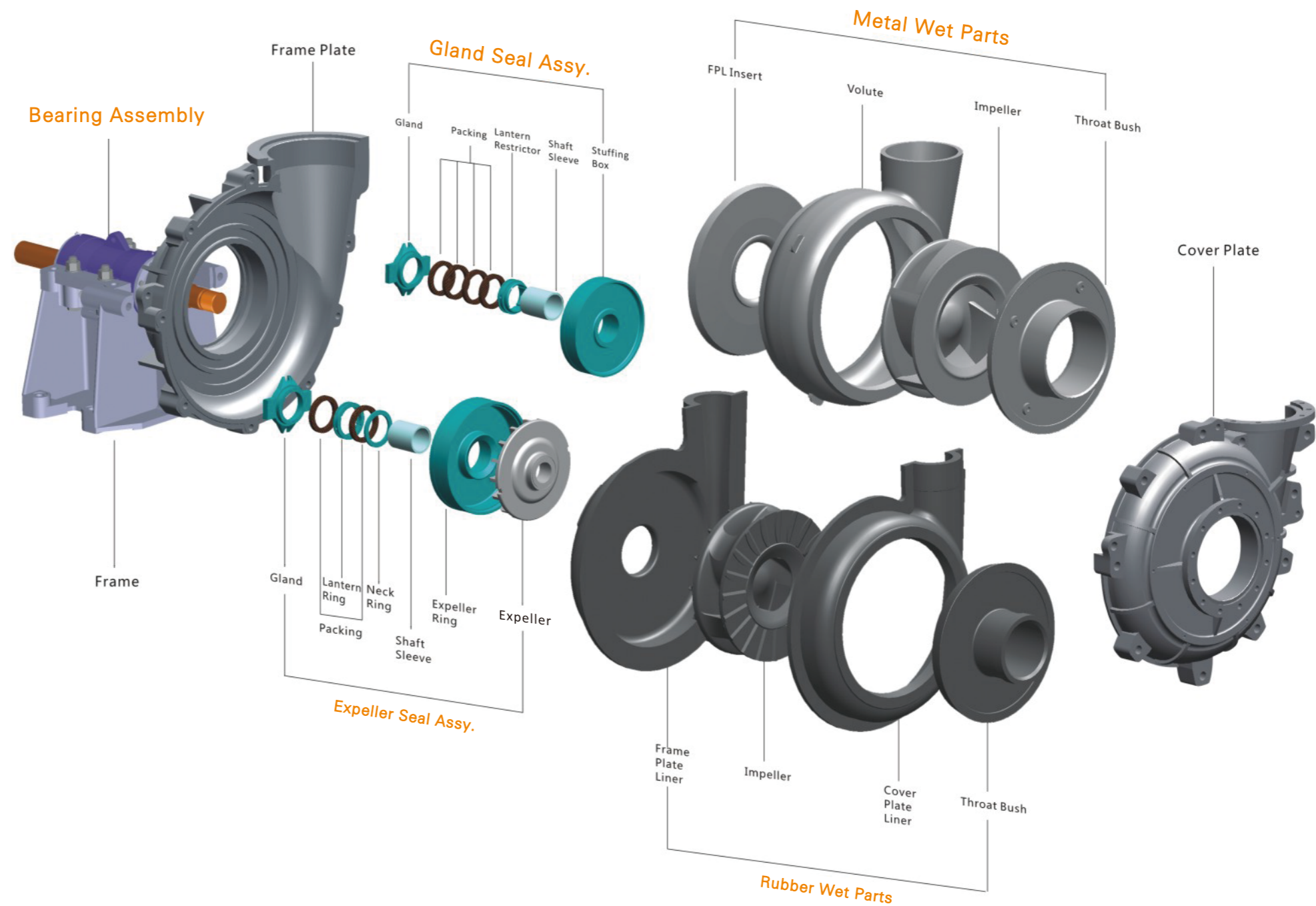
STRUCTURE & FEATURES



Grease Lubrication Bearing Assembly

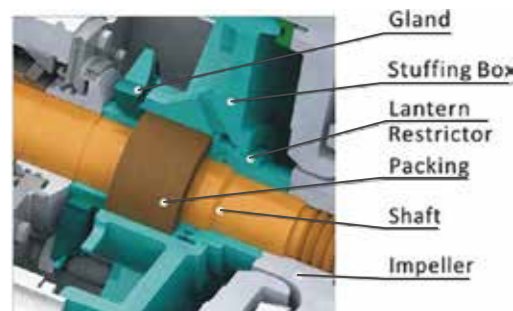


Oil Lubrication Bearing Assembly

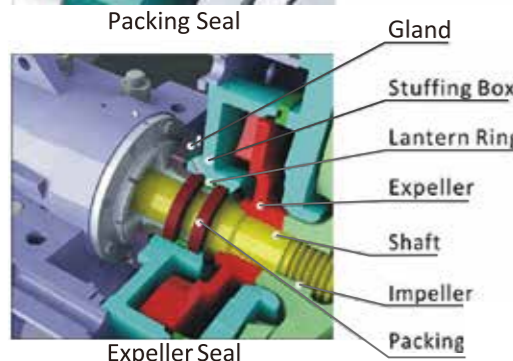


- **Pump Features:**
Single stage, single suction, overhang shaft, centrifugal, double casing horizontal pump
- **Material:**
Casing-Made of ductile Iron, ribs help casing to stand high pressure.
Wet Ends- Made of high-chrome alloy or rubber, to resist wear, corrosion, impact or erosion. Metal wet parts and rubber wet parts 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 applications.
- **Part Design:**
Compare with WX(R), WL(R) pumps are smaller sized, more economical when dealing with mild media.

SEAL OPTIONS



Gland Seal- Most popular type of seal. Clean water at a certain pressure being injected into the packing through the lantern restrictor, preventing leakage from casing. Simple structure, easy maintenance and low cost, suitable for where expeller seal is unsuitable.

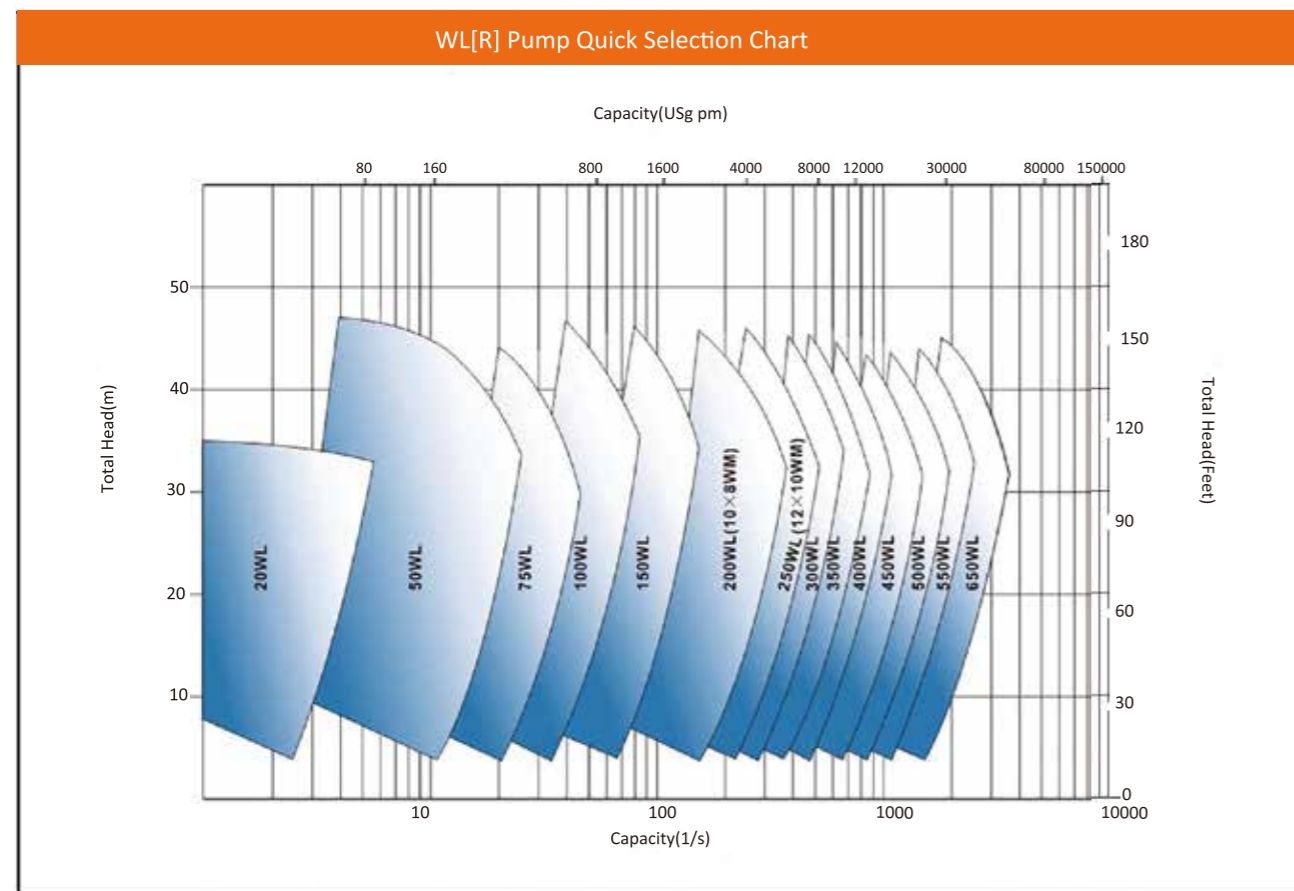


Expeller Seal - The expeller generate a reverse centrifugal force to prevents the leakage. It can be used for single-stage pump or the first pump of multiple pumps in series when the positive pressure at suction side is larger than that at discharge side by no more than 10%. No gland water is needed, the slurry will not be diluted and the sealing effect is reliable, used in where dilution of slurry is not allowed.

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

For more details, please consult TIIEC.

QUICK SELECTION CHART



MATERIAL OPTIONS

Material Code	Material Description	Performance Comparison				Applicable Parts		Applications
		Hardness HRC	Anti-Brush	PH Value 3 7 12	Max. Particle Size	Impeller	Liner	
AT01	Medium-Cr Martensitic White Iron	≥55	0.9			●	●	Mud & slag applications.
AT03	Ni-Martensitic White Iron	≥56	0.8			●	●	Neutral water-sand slurry or lower impact load.
AT05	27% Cr White Iron	≥56	1.0 (Datum)			●	●	High impact load abrasion PH rate ranging from 5 to 12.
AT07	Chromium/Molybdenum	≥58	1.2			●	●	High impact load abrasion.
AT08	27% Cr White Iron	≥56	1.0			●	●	Same as AT05, suit for thick wall parts.
AT11	Low Alloy With Iron	38-42	0.7			●	●	Fine particles ,light abrasion.
AT12	30% Cr Hyper eutectic Chromium White Iron	≥62	1.5			●		Highly abrasive ,fine particles.
AT33	33% Cr Erosions & Corrosion Resistance White Iron	≥43	0.7			●	●	Acidic slurries like Phosphoric.
AT49	28% Cr Low Carbon White Iron	≥45	0.7			●	●	FGD process in power plant
AT530	Super high-Cr White Iron	63-68	1.8			●		Severe abrasive ,fine particles.

Material	Material#	Applications
Natural Rubber	RT08	RT08 is low to medium hardness rubber used for impellers where slurry contains fine particles and more erosive.
Natural Rubber(soft)	RT26	RT26 is soft natural rubber used for liners where slurry contains fine particle and more erosive,
Natural Rubber(soft)	RT33	RT33 is widely used for frame plate liners, cover plate liners and impellers. Maximal particle diameter is 10 mm; impeller peripheral speed should be less than 25m/s; suitable for temperature not exceeding 75°C.
Natural Rubber	RT55	RT55 is widely used for impellers, frame plate liners, cover plate liners and throat bushes. Maximal particle diameter can be 20 mm; impeller peripheral speed should be less than 27.5m/s; suitable for temperature not exceeding 75°C.
EPDM Rubber	ST01	ST01 is widely used for impellers, frame plate liners, cover plate liners and throat bushes. Maximal particle diameter can be 8 mm; impeller peripheral speed should be less than 25m/s; suitable for temperature not exceeding 120°C (continuous duty) Or 140°C (discontinuity duty)
Nitrile Rubber (NBR)	ST12	ST12 is widely used for frame plate liners, cover plate liners, throat bushes, lip seals, impellers and expellers. Maximal particle diameter is 7mm; impeller peripheral speed should be less than 27m/s; suitable for temperature not exceeding 95°C.
Butyl Rubber	ST21	ST21 is widely used for impellers, frame plate liners, cover plate liners, expellers, volute seals and throat bushes. Maximal particle diameter can be 7 mm; impeller peripheral speed should be less than 30m/s; suitable for temperature not exceeding 100°C.
Hypalon	ST31	ST31 can be used for impellers, frame plate liners, cover plate liners and throat bushes. It is recommended to use for strong acid slurry with mild or moderate corrosion. Maximal particle diameter can be 10 mm; impeller peripheral speed should be less than 30m/s; suitable for temperature not exceeding 110°C

DRIVE ARRANGEMENT



CV Drive



ZV(Z) Drive



CR(Z)/Cl(Z) Drive



DC(Z) Drive