CHANGYU

PUMP CUSTOMIZATION EXPERT

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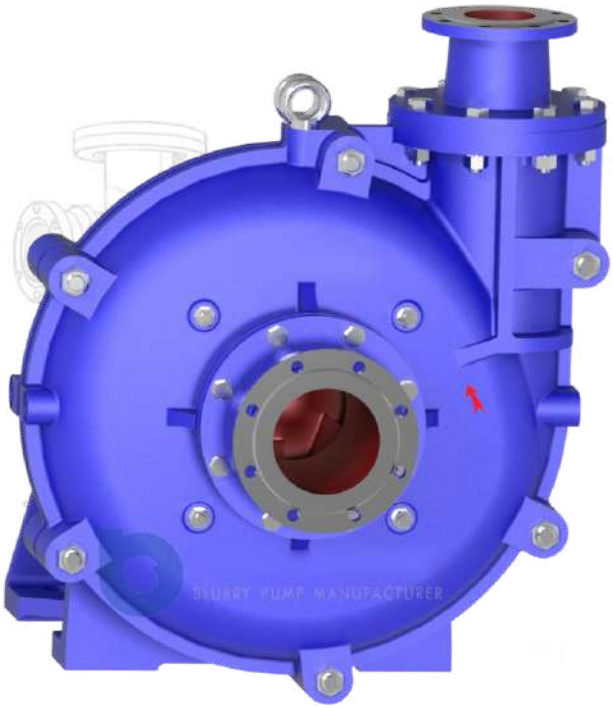
Innovative fluid solutions.

The choice of trust in the chemical industry

PGY heavy-duty horizontal slurry pump

PRODUCT CATALOG



Anhui Changyu pump and valve manufacturing Co., LTD

The PGY series slurry pumps are heavy-duty horizontal slurry pumps, designed with high head capability and oil-lubricated bearings.

The PGY series heavy-duty slurry pumps are available in a complete range of models, with a wide performance range and convenient selection.

This series of products is designed as single-stage, single-suction centrifugal horizontal slurry pumps, with discharge diameters ranging from 40 mm to 400 mm and various other specifications available.

Application scope: Electric power, metallurgy, coal, building materials , chemical industry, and other industrial sectors.

Product features

The larger the impeller diameter, the higher the head.

The PGY series slurry pumps feature the principle that the larger the impeller diameter, the higher the head. The maximum head can reach approximately 100 meters.

Discharge direction is adjustable.

This series of slurry pumps has eight discharge orientations that can be adjusted according to site operating conditions.

Multiple sealing configurations available.

Packing seal, mechanical seal.

Inlet and outlet short pipes

Each pump is equipped with inlet and outlet short pipes to facilitate connection with the on-site piping system.

Double-casing structure

This series of slurry pumps adopts a double casing structure, which facilitates the replacement of wetted (flow) components.

Wear-resistant wetted parts.

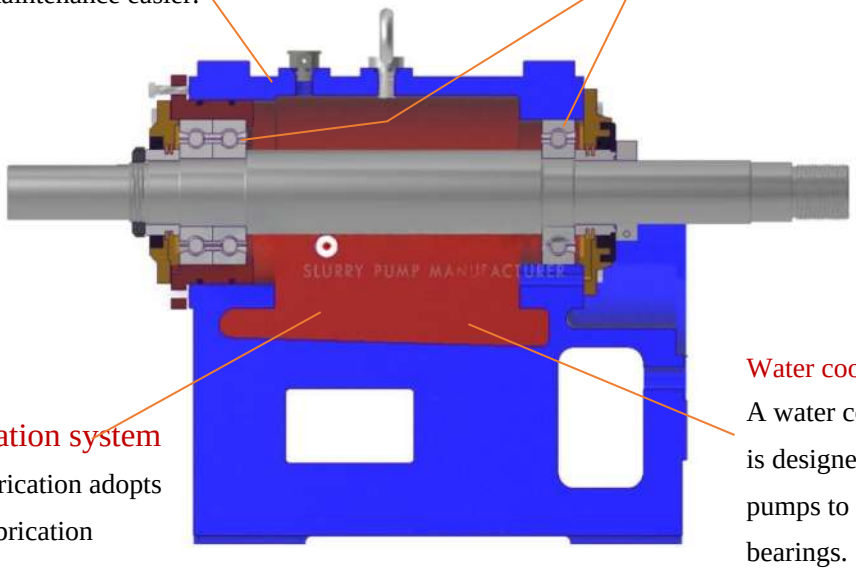
The wetted parts of this series of slurry pumps are made of high-chromium alloy, which improves wear resistance.

Split-type bearing housing design

Split-type bearing housing design, making inspection and maintenance easier.

Metric bearing

This series of slurry pumps adopts metric bearings.



Oil lubrication system

Bearing lubrication adopts a thin oil lubrication system.

Water cooling system

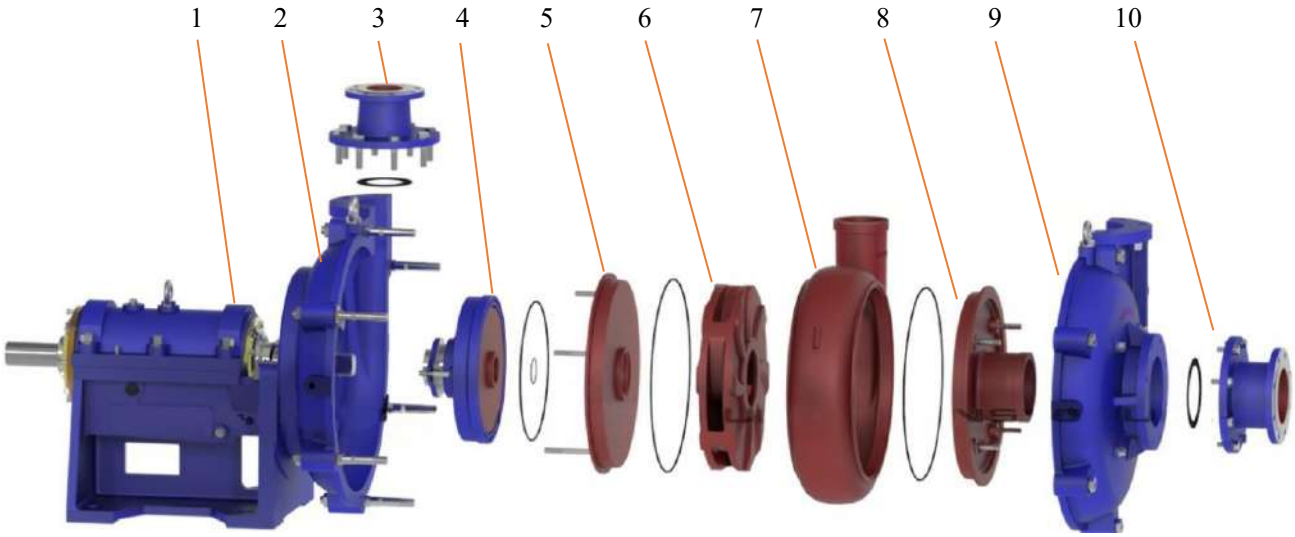
A water cooling system is designed for large pumps to cool the bearings.

Material of wetted parts

Name	Material description	Hardness	Applicable working conditions
BTMCr27	27% chromium corrosion-resistant white iron	≥56HRC	It is a wear-resistant white iron that provides excellent performance under corrosive conditions.
BTMCr28	28% chromium, low carbon, high-chromium white iron	≥45HRC	It is particularly suitable for FGD and other corrosive applications where the pH is below 4.
BTMCr33	33% chromium, erosion- and corrosion-resistant alloy, high-chromium, low-carbon material	≥35HRC	It can handle oxygen-containing slurries with a pH not lower than 1, such as in phosphoric acid processes and other corrosive applications.

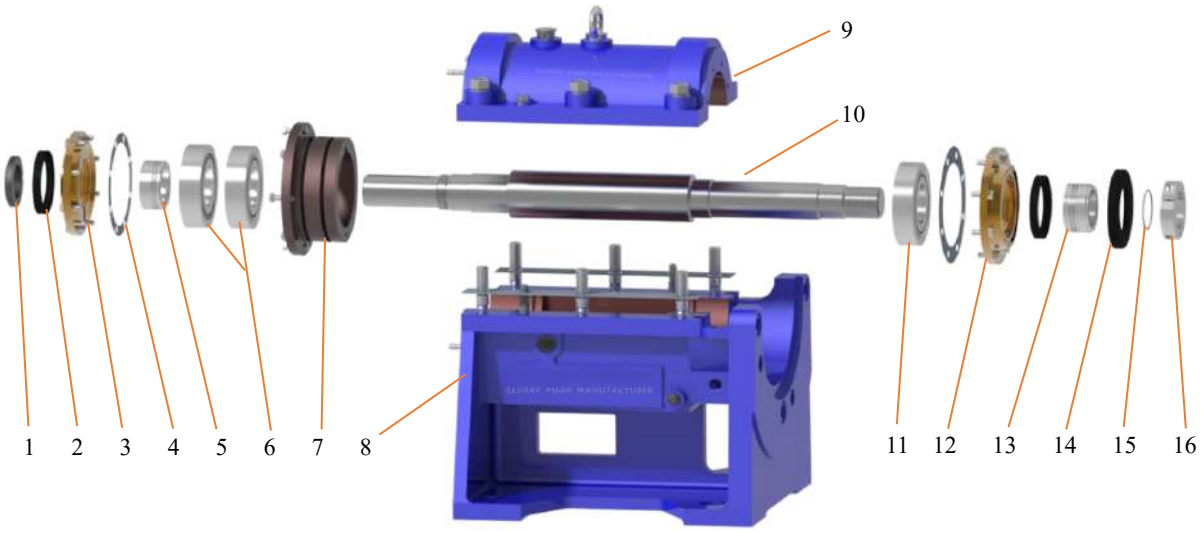
Other wetted parts materials include corrosion-resistant alloys such as austenitic stainless steel, stainless steel, and duplex stainless steel. If other materials are required, please contact us.

Exploded view of the structure



PGY Slurry Pump Wet-End Structure Diagram

1. Bearing Assembly	2. Rear Casing	3. Discharge short pipe	4. Seal assembly	5. Rear wear plate
6. Impeller	3. Sleeve	8. Front wear plate	5. Front casing	10. Suction short pipe



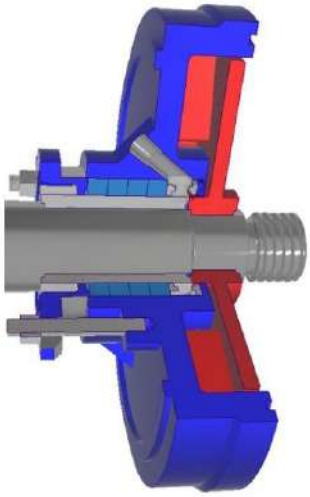
PGY Bearing Assembly Structure Diagram

1. Round nut	2. Oil seal	3. Rear bearing cover	4. Rear bearing cover gasket	5. Spacer sleeve
6. Rear bearing	7. Bearing housing	8. Bearing bracket	9. Bearing bracket cover	10. Shaft
11. Front bearing	12. Front bearing cover	13. Spacer sleeve	14. Rubber water deflector plate	15. O-ring
16. Removal ring				

Note: This is the basic structural diagram of the PGY slurry pump. There may be some variations between different models.

Shaft Seal Type

The shaft seal is one of the most critical mechanical components in a centrifugal slurry pump, and the correct seal type must be carefully selected to suit each specific pumping system.
For PGY pumps, several commonly used shaft sealing options are available:

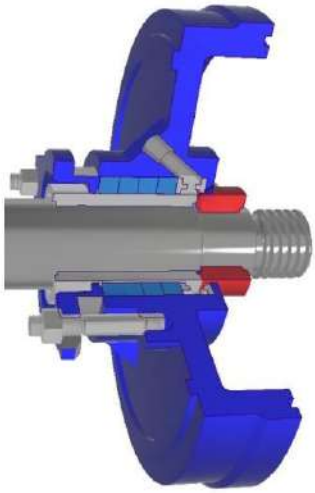


Gland packing with auxiliary impeller double seal

The auxiliary impeller acts as a turbine, reducing the pressure of slurry escaping from the rear of the impeller.

The gland packing seal serves as a secondary seal, where multiple packing rings are compressed by the stuffing box and wear-resistant sleeve, requiring only low-pressure flushing water.

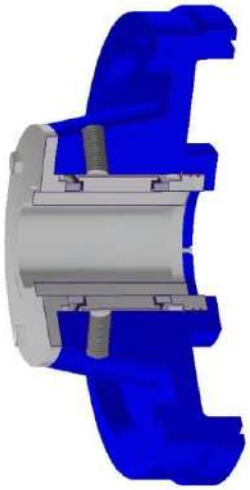
This is the standard sealing type for PGY pumps, offering easy maintenance and low cost.



Gland packing seal

Where an impeller is not applicable, a soft gland packing seal is used. Several soft packing rings are compressed by the stuffing box and wear-resistant sleeve.

Since there is no auxiliary impeller to reduce pressure by centrifugal action, higher-pressure flushing water must be introduced into the packing through a water seal ring to cool the packing and prevent casing leakage.

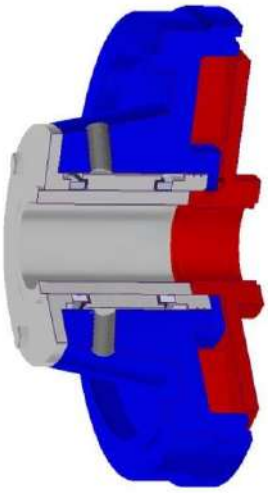


Mechanical seal

A mechanical seal consists of a stationary face and a rotating face, which are pressed together under mechanical and hydraulic forces to prevent leakage.

It provides the best sealing performance and is used in zero-leakage conditions.

The PGY pump adopts a double mechanical seal, requiring the flushing water pressure to be higher than the pressure in the sealing chamber.



Mechanical seal with auxiliary impeller

An auxiliary impeller is installed between the mechanical seal and the impeller. The auxiliary impeller acts as a turbine, reducing the pressure in the sealing chamber. Therefore, this sealing arrangement requires a lower flushing water pressure than a conventional mechanical seal, as long as a good water flow is maintained.

The above types of shaft seals require appropriate flushing water. The flow rate and pressure of the flushing water will depend on the pump parameters. For other special shaft seal options, please contact us.

PGY Slurry Pump Clean Water Performance Parameter Table

Model	Speed	Flow		Head	Shaft Power	EFF	NPSHr	Motor	
								Frame size	Power
	r/min	m3/h	L/s	m	kW	%	m		kW
40PGY-17	2900	9	2.5	44.5	3.3	33	4.5	Y132S1-2	5.5
		18	5	42.5	4.2	50		Y132S2-2	7.5
		23	6.4	39.2	4.6	53		Y132S2-2	7.5
	1400	4	1.1	10.4	0.3	33	2.5	Y80M1-4	0.55
		9	2.5	9.8	0.5	50		Y90S-4	1.1
		11	3.1	9	0.5	53		Y90S-4	1.1
50PGY-19	2930	16.3	4.5	57.1	6.5	39.2	4.9	Y160M1-2	11
		30	8.3	54.9	8.1	55.4		Y160M1-2	11
		34.9	9.7	53.7	8.7	58.8		Y160M1-2	11
	1430	8	2.2	13.6	0.8	39.2	1.3	Y90L-4	1.5
		14.6	4.1	13.1	0.9	55.4		Y90L-4	1.5
		17	4.7	12.8	1	58.8		Y100L1-4	2.2
80PGY-33	1480	26	7.2	42.5	9.2	32.8	6	Y160L-4	15
		40	11.1	40	10.7	40.6		Y180M-4	18.5
		54	15	34.5	12.3	41.4		Y180M-4	18.5
	960	17	4.7	17.9	2.5	32.8	2.9	Y132M1-6	4
		26	7.2	16.8	2.9	40.6		Y132M2-6	5.5
		35	9.7	14.5	3.3	41.4		Y132M2-6	5.5
80PGY-46	1480	48	13.3	85.8	34.8	32.2	2.9	Y225M-4	45
		77	21.4	82.3	41.4	41.7		Y250M-4	55
		94	26.1	79.9	45.8	44.7		Y250M-4	55
	970	31	8.6	36.9	9.7	32.2	1.4	Y180L-6	15
		50	13.9	35.4	11.6	41.7		Y180L-6	15
		62	17.2	34.3	13	44.7		Y200L1-6	18.5
80PGY-50	1480	57	15.8	110.7	50.7	33.9	3.8	Y280S-4	75
		91	25.3	105.5	60.8	43		Y280S-4	75
		111	30.8	99.8	66.9	45.1		Y280M-4	90
	980	38	10.6	48.5	14.8	33.9	3	Y200L2-6	22
		60	16.7	46.3	17.6	43		Y225M-6	30
		74	20.6	43.8	19.6	45.1		Y225M-6	30
100PGY-27	1480	42	11.7	28.2	6	54.2	2.7	Y160M-4	11
		56	15.6	27.5	7	60		Y160M-4	11
		71	19.7	25.9	8.1	61.5		Y160M-4	11
	980	28	7.8	12.2	1.7	54.2	1.8	Y132S-6	3
		37	10.3	11.9	2	60		Y132M1-6	4
		47	13.1	11.2	2.3	61.5		Y132M1-6	4

Note: Pump parameters can be adjusted by varying the rotational speed or the impeller diameter. Please contact us for detailed pump performance curves.

Model	Speed	Flow		Head	Shaft Power	EFF	NPSHr	Motor	
								Frame size	Power
	r/min	m3/h	L/s	m	kW	%	m		kW
100PGY-30	1480	48	13.3	35.8	8.3	56.2	3	Y160M-4	11
		63	17.5	34.8	9.6	62		Y160M-4	11
		80	22.2	32.9	11.3	63.5		Y160L-4	15
	980	32	8.9	15.7	2.4	56.2	2	Y132M1-6	4
		42	11.7	15.3	2.8	62		Y132M2-6	5.5
		53	14.7	14.4	3.3	63.5		Y132M2-6	5.5
125PGY-36	1480	98	27.2	51.5	23.6	58.2	3.7	Y200L-4	30
		145	40.3	48.6	29	66.2		Y225S-4	37
		190	52.8	44.7	32.6	67.7		Y225M-4	45
	980	63	17.5	22.6	6.7	58.2	2.5	Y160L-6	11
		96	26.7	21.3	8.4	66.2		Y160L-6	11
		126	35	19.6	9.5	67.7		Y180L-6	15
125PGY-42	1480	130	36.1	70.6	40.5	61.7	4.2	Y250M-4	55
		170	47.2	67.2	47.1	66.1		Y280S-4	75
		204	56.7	64.2	52.6	67.8		Y280S-4	75
	980	85	23.6	31	11.6	61.7	2.5	Y200L1-6	18.5
		112	31.1	29.6	13.7	66.1		Y200L2-6	22
		135	37.5	28.1	15.2	67.8		Y200L2-6	22
125PGY-52	1480	107	29.7	109.8	82.5	38.8	4.3	Y315S-4	110
		182	50.6	105.5	100.6	52		Y315M-4	132
		242	67.2	99	115.9	56.3		Y315L1-4	160
	980	71	19.7	48.1	24	38.8	2.1	Y225M-6	30
		121	33.6	46.3	29.3	52		Y250M-6	37
		160	44.4	43.4	33.6	56.3		Y280S-6	45
150PGY-36	1480	130	36.1	48.6	27.1	63.4	3	Y225S-4	37
		210	58.3	43.3	34.6	71.6		Y225M-4	45
		245	68.1	40.6	37.3	72.6		Y250M-4	55
	980	85	23.6	21.3	7.8	63.4	2	Y180L-6	15
		140	38.9	19	10.1	71.6		Y180L-6	15
		160	44.4	17.8	10.7	72.6		Y200L1-6	18.5
150PGY-42	1480	140	38.9	71	49.2	55	3.9	Y280S-4	75
		245	68.1	67	63.9	70		Y280M-4	90
		275	76.4	65.5	69.1	71		Y280M-4	90
	980	95	26.4	31	14.6	55	2.5	Y200L2-6	22
		160	44.4	29.4	18.3	70		Y225M-6	30
		180	50	28.7	19.8	71		Y225M-6	30

Note: The pump parameters can be modified by adjusting the rotational speed or the impeller diameter. Please contact us for detailed pump performance curves.

Model	Speed	Flow		Head	Shaft power	EFF	NPSHr	Motor	
								Frame size	Power
	r/min	m3/h	L/s	m	kW	%	m		kW
150PGY-B42	1480	176	48.9	66.8	55.7	57.5	5.1	Y280S-4	75
		309	85.8	60.5	73.3	69.5		Y280M-4	90
		365	101.4	56.9	79	71.6		Y280M-4	90
	980	117	32.5	29.3	16.2	57.5	2.5	Y200L2-6	22
		205	56.9	26.5	21.3	69.5		Y225M-6	30
		242	67.2	24.9	22.9	71.6		Y225M-6	30
150PGY-50	1480	180	50	101.6	86.2	57.8	4.1	Y315S-4	110
		300	83.3	95	112.6	68.9		Y315M-4	132
		360	100	90.2	124	71.3		Y315L1-4	160
	980	120	33.3	44.6	25.2	57.8	2.5	Y225M-6	30
		195	54.2	41.5	32	68.9		Y280S-6	45
		240	66.7	39.6	36.3	71.3		Y280M-6	55
200PGY-50	980	230	63.9	43.1	41.5	65	3.2	Y280M-6	55
		380	105.6	40.5	54.4	77		Y315S-6	75
		460	127.8	37	59.4	78		Y315S-6	75
	730	171	47.5	23.9	17.1	65	2.5	Y250M-8	30
		280	77.8	22	21.8	77		Y250M-8	30
		343	95.3	21.1	25.3	78		Y280S-8	37
200PGY-55	980	248	68.9	53.4	65.3	55.2	3.5	Y315M-6	90
		431	119.7	50.8	86.4	69		Y315L1-6	110
		504	140	49.3	94.5	71.6		Y355L1-6	110
	730	184	51.1	29.6	26.9	55.2	2.3	Y280S-8	37
		321	89.2	28.2	35.7	69		Y280M-8	45
		376	104.4	27.4	39.2	71.6		Y315S-8	55
200PGY-60	980	270	75	64.5	79	60	3.8	Y315L1-6	110
		470	130.6	61.7	105.3	75		Y315L2-6	132
		550	152.8	59.2	114.4	77.5		Y355M1-6	160
	730	200	55.6	35.5	32.2	60	2.5	Y280M-8	45
		350	97.2	34.2	43.5	75		Y315S-8	55
		410	113.9	32.9	47.4	77.5		Y315M-8	75
200PGY-65	980	300	83.3	78.5	114.5	56	3.9	Y315L2-6	132
		500	138.9	75	148	69		Y355M2-6	185
		600	166.7	72.5	164.5	72		Y355M3-6	200
	730	225	62.5	43.5	47.6	56	2.5	Y315M-8	75
		370	102.8	41.6	60.7	69		Y315M-8	75
		450	125	40.2	68.4	72		Y315L1-8	90

Note: The pump parameters can be modified by adjusting the rotational speed or the impeller diameter. Please contact us for detailed pump performance curves.

Model	Speed	Flow		Head	Shaft power	EFF	NPSHr	Motor	
								Frame size	Power
	r/min	m3/h	L/s	m	kW	%	m		kW
200PGY-70	980	186	51.7	91.2	95.4	48.4	3	Y315L2-6	132
		285	79.2	87.1	115.8	58.4		Y355M1-6	160
		400	111.1	80	139.9	62.3		Y355M2-6	185
	730	140	38.9	50.6	39.9	48.4	2	Y315S-8	55
		212	58.9	48.3	47.7	58.4		Y315M-8	75
		300	83.3	44.3	58.1	62.3		Y315M-8	75
250PGY-60	980	435	120.8	64	112.8	67.2	4	Y315L2-6	132
		760	211.1	59	152.3	80.2		Y355M2-6	185
		870	241.7	56.3	161.3	82.7		Y355M3-6	200
	730	325	90.3	35.5	46.8	67.2	2.5	Y315M-8	75
		565	156.9	32.7	62.7	80.2		Y315L1-8	90
		650	180.6	31.2	66.8	82.7		Y315L1-8	90
250PGY-65	980	470	130.6	72	141.8	65	4.3	Y355M2-6	185
		820	227.8	68	197.2	77		Y355L2-6	250
		950	263.9	66	213.4	80		Y355-6	250
	730	350	97.2	40	58.7	65	2.5	Y315M-8	75
		610	169.4	37.8	81.6	77		Y315L2-8	110
		705	195.8	36.6	87.8	80		Y315L2-8	110
250PGY-70	980	409	113.6	86.4	172.5	55.8	3.8	Y355M3-6	200
		738	205	82.3	230.7	71.7		Y400-6	280
		976	271.1	77.6	272.8	75.6		Y400-6	315
	730	305	84.7	47.9	71.3	55.8	2.8	Y315L1-8	90
		550	152.8	45.7	95.5	71.7		Y355M1-8	132
		727	201.9	43.1	112.9	75.6		Y355M1-8	132
250PGY-75	980	450	125	103	206.9	61	4.5	Y355L2-6	250
		750	208.3	95.7	271.5	72		Y400-6	355
		900	250	91	299.4	74.5		Y400-6	355
	730	335	93.1	57.5	86	61	3	Y315L2-8	110
		560	155.6	53.1	112.5	72		Y355M1-8	132
		670	186.1	51.1	125.2	74.5		Y355M2-8	160
250PGY-85	980	441	122.5	133.7	321.1	50	5	Y400-6	400
		858	238.3	128.2	437.9	68.4		Y450-6	560
		907	251.9	127.9	448.1	70.5		Y450-6	560
	730	329	91.4	74.2	133	50	2.8	Y355M2-8	160
		639	177.5	71.1	180.9	68.4		Y400-8	220
		676	187.8	71	185.4	70.5		Y400-8	220

Note: The pump parameters can be adjusted by changing the rotational speed or the impeller diameter. Please contact us for detailed pump performance curves.

Model	Speed	Flow		Head	Shaft power	EFF	NPSHr	Motor	
								Frame size	Power
	r/min	m3/h	L/s	m	kW	%	m		kW
300PGY-65	980	597	165.8	69	168.7	66.5	4.5	Y355L1-6	220
		946	262.8	64.5	218.6	76		Y400-6	280
		1249	346.9	59.3	260.3	77.5		Y400-6	315
	730	445	123.6	38	69.2	66.5	3	Y315L1-8	90
		705	195.8	35.8	90.4	76		Y355M1-8	132
		930	258.3	32.9	107.5	77.5		Y355M1-8	132
300PGY-70	980	560	155.6	84.9	218.3	59.3	3.9	Y400-6	280
		1027	285.3	80.1	306.9	73		Y400-6	400
		1381	383.6	72.5	375.6	72.6		Y450-6	450
	730	417	115.8	47.1	90.2	59.3	2.9	Y315L2-8	110
		764	212.2	44.4	126.5	73		Y355M2-8	160
		1029	285.8	40.2	155.2	72.6		Y355L1-8	185
300PGY-75	980	600	166.7	98.4	255.2	63	4.1	Y400-6	315
		1100	305.6	91.9	362.2	76		Y450-6	450
		1480	411.1	84	447.8	75.6		Y450-6	560
	730	440	122.2	54.4	103.5	63	3	Y355M1-8	132
		820	227.8	51	149.9	76		Y355L1-8	185
		1100	305.6	46.2	183.1	75.6		Y400-8	220
300PGY-80	980	708	196.7	114.0	391.8	56.1	5.4	Y450-6	500
		1175	326.4	110.2	511.1	69		Y450-6	630
		1416	393.3	106.7	566.7	72.6		Y500-6	710
	730	527	146.4	63.2	161.7	56.1	3.4	Y400-8	200
		875	243.1	61.1	211.0	69		Y400-8	280
		1054	292.8	59.2	234.1	72.6		Y400-8	280
300PGY-85	980	752	208.9	129.8	449.8	59.1	5.5	Y450-6	560
		1262	350.6	126.2	586.1	74		Y500-6	710
		1504	417.8	120.7	653.9	75.6		Y500-6	800
	730	560	155.6	72	185.8	59.1	3.5	Y400-8	220
		940	261.1	70	242.2	74		Y450-8	315
		1120	311.1	67	270.3	75.6		Y450-8	315
300PGY-96	730	736	204.4	93.7	290.7	64.6	5.5	Y450-8	355
		1076	298.9	90	356.4	74		Y450-8	450
		1466	407.2	84.5	433.6	77.8		Y500-8	560
	590	595	165.3	61.2	153.5	64.6	3.5	Y450-10	185
		870	241.7	58.8	188.3	74		Y450-10	250
		1185	329.2	55.2	229	77.8		Y450-10	280

Note: Pump parameters can be adjusted by changing the rotational speed or impeller diameter. Please contact us for detailed pump performance curves.

Model	Speed	Flow		Head	Shaft power	EFF	NPSHr	Motor	
								Frame size	Power
	r/min	m3/h	L/s	m	kW	%	m		kW
300PGY-103	730	734	203.9	110.5	366.3	60.3	4.3	Y450-8	450
		1067	296.4	106.7	445.5	69.6		Y500-8	560
		1573	436.9	98.9	568.7	74.5		Y500-8	710
	590	593	164.7	72.2	193.4	60.3	2.8	Y450-10	250
		862	239.4	69.7	235.1	69.6		Y450-10	280
		1271	353	64.6	300.1	71.5		Y450-10	355
350PGY-56	980	789	219.2	46	147.3	67.1	5.5	Y355M2-6	185
		1415	393.1	40.8	195.6	80.4		Y355L2-6	250
		1568	435.6	38.5	202.2	81.3		Y355-6	250
	730	588	163.3	26.6	63.5	67.1	3.5	Y315M-8	75
		1054	292.8	22.6	80.7	80.4		Y315L2-8	110
		1168	324.4	21.4	95.5	71.3		Y315L2-8	110
350PGY-70	980	1268	352.2	76.8	368.3	72	7	Y450-6	450
		2118	588.3	66.7	480.9	80		Y450-6	630
		2333	648.1	64	505.8	80.4		Y450-6	630
	730	945	262.5	42.6	152.3	72	3.9	Y355L1-8	185
		1578	438.3	37	198.8	80		Y400-8	250
		1738	482.8	35.5	209	80.4		Y400-8	250
350PGY-90	730	922	256.1	80	290.3	69.2	5.6	Y450-8	355
		1648	457.8	73.5	409.8	80.5		Y500-8	500
		1844	512.2	70.5	434.4	81.5		Y500-8	560
	590	745	206.9	52	152.5	69.2	3.8	Y450-10	185
		1332	370	48	216.3	80.5		Y450-10	280
		1491	414.2	46.1	229.7	81.5		Y450-10	280
400PGY-100	590	913	253.6	65.2	242.7	66.8	4.1	Y450-10	315
		1785	495.8	59.6	359.9	80.5		Y500-10	450
		1826	507.2	59.1	363.7	80.8		Y500-10	450
	490	758	210.6	45	139.1	66.8	3	Y450-12	185
		1482	411.7	41.2	206.6	80.5		Y450-12	250
		1517	421.4	40.8	208.6	80.8		Y450-12	250

Note: Pump parameters can be adjusted by changing the rotational speed or impeller diameter. Please contact us for detailed pump performance curves.

Application cases

Typical applications

Mining and mineral processing

Non-ferrous metal smelting

Mine waste rock and tailings

Coal washing plants

Steel plants

Power plant ash and slag

Environmental protection

Sand mining

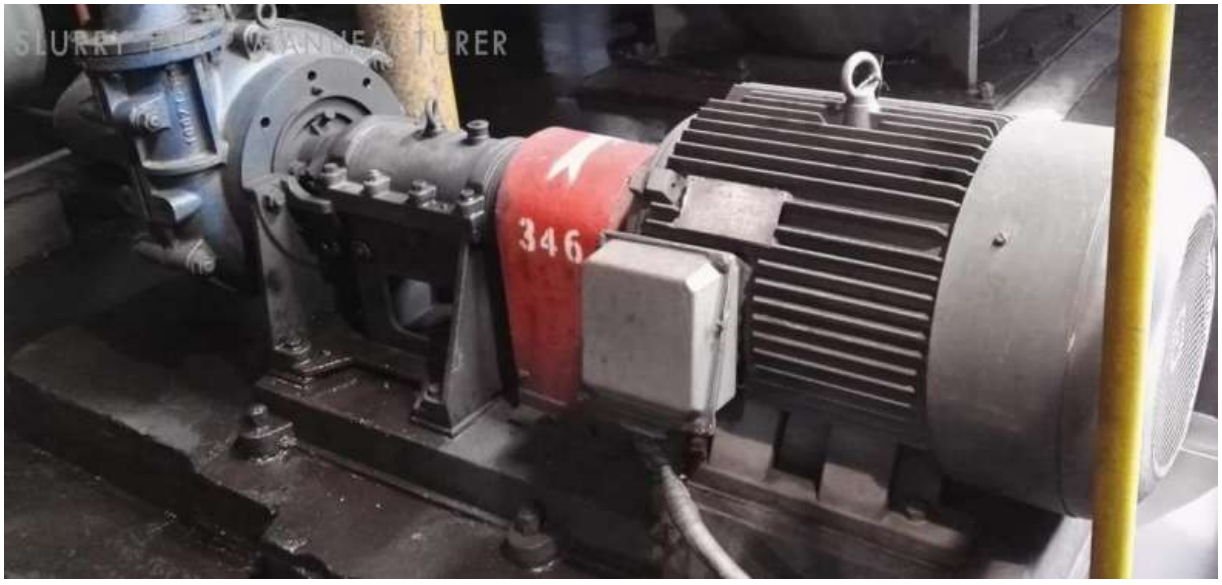
Alumina industry

Fertilizer industry

Chemical industry

Municipal engineering applications

PGY slurry pump used in steel plants



PGY slurry pump used in coal washing plants