

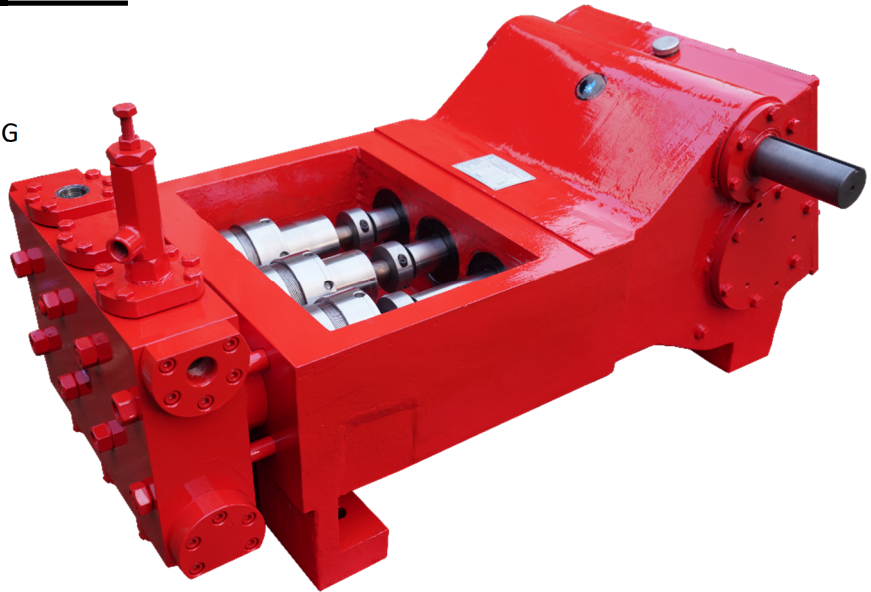


WJHG - 100

**Industrial Applications: **

- Industrial Spray Dryer -

High Pressure Triplex Plunger Pump: WJHG



Min. Pressure: 150 Bar	Max Pressure: 750 bar
Min Flow rate: 15 LPM	Max. Flow Rate: 63 LPM

Key Benefits for Slurry Spray Drying

- **Stable Atomization:** The three-plunger design staggered at 120-degree intervals ensures a **smooth, nearly pulsation-free flow**. This stability is critical for consistent atomization, which directly impacts the uniformity of the resulting detergent particle size and shape.
- **Precision Dosing:** These are positive displacement pumps, meaning they deliver a **fixed volume of slurry per stroke**. This allows for exact control over the flow rate, ensuring the spray dryer operates at peak efficiency with consistent product quality.
- **Handling High Viscosity & Solids:** Detergent slurry is often thick and contains suspended solids. Triplex plunger pumps are specifically engineered to handle **heavy, viscous, and abrasive fluids** that would cause other pump types to fail.
- **High-Pressure Capability:** Spray drying requires extreme pressure (often several thousand PSI) to overcome the resistance of the nozzles and create a fine mist. Triplex pumps efficiently generate these pressures while maintaining **volumetric efficiency of 90% or higher**.
- **Durability and Lower Maintenance:** For continuous detergent production, these pumps feature **TC plungers** and stainless-steel heads that resist the chemical corrosion and mechanical wear caused by detergent ingredients. They are also designed for easy access to valves and seals, minimizing production downtime.



WATERJET PUMPS & SYSTEMS

198, Hariom Park Society, Vinzol Road, Vatva, Ahmedabad-382440.
E-mail : info@waterjetpumps.in, sales@waterjetpumps.in Web : www.waterjetpumps.in

Pump Specification: WJHG

Technical Specification Of WJHG

Particular	Parameter
Plunger stroke	100 mm
Max. plunger speed	187 SPM
PLUNGER FORCE	45 KN (4588 KGF)
Required inlet pressure	5-7 bar
Required inlet flow rate	Booster pump flow require min. 2 times of rated flow rate
Oil type	SAE – 220 , 20w40
Oil capacity	15 Litters
Max. liquid temp	80°C
Discharge Connection	1½" inch BSP female
Suction Connection	1½ inch BSP Female
Weight	625 kg. Approx.
Overall dim. (L×B×H)	1200 mm × 650 mm × 480 mm

Model Selection Charts For WJHG

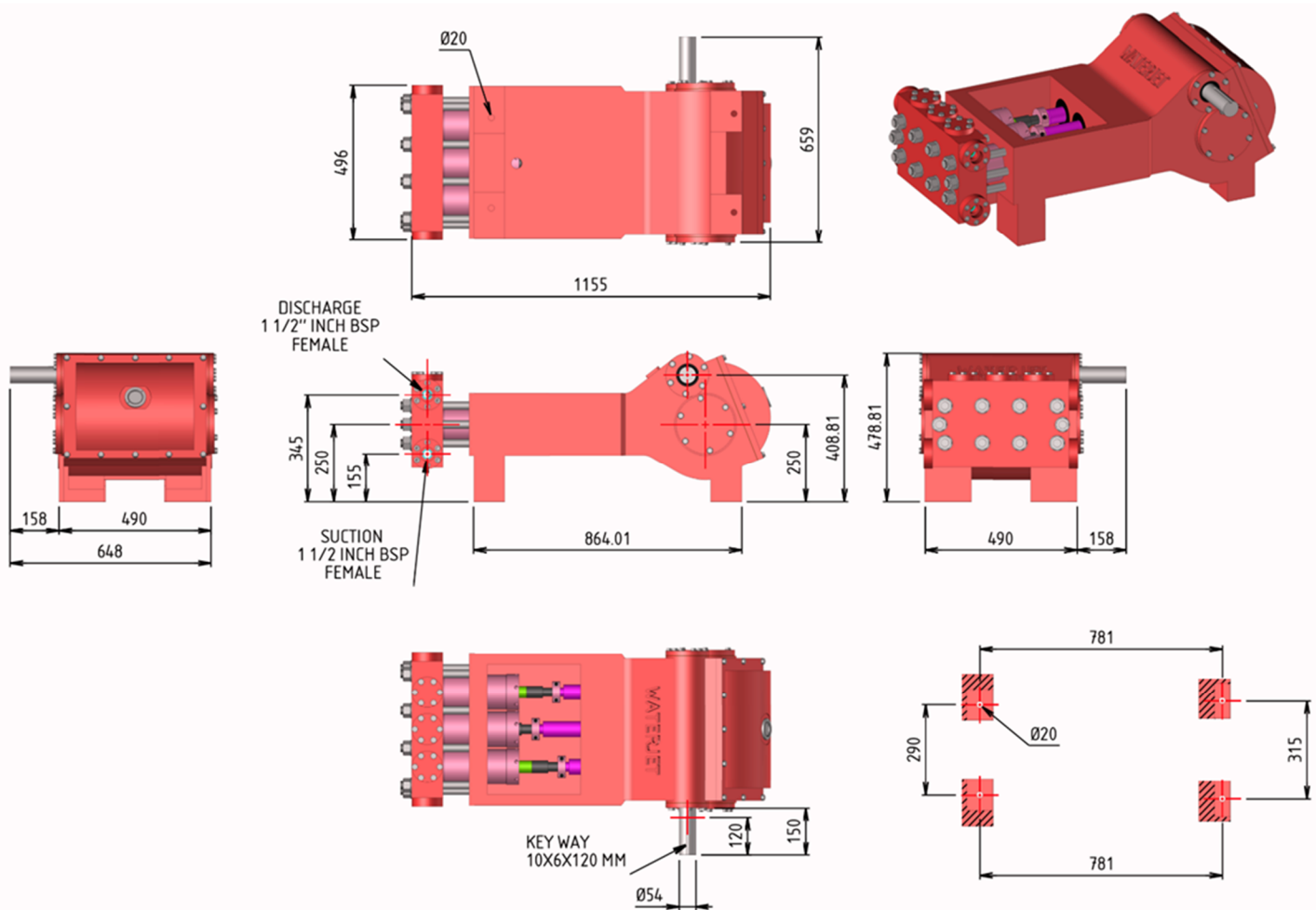
WJHG - 100									
PLUNGER DAI Ø MM	FLOW IN LPM	FLOW IN LPH	GPM	PRESSURE IN BAR	PSI	PUMP SPM	KW	HP	ELE MOTOR RPM
20	15	900	3.96	750	10875	187	45	60	1440
20	15	900	3.96	550	7975	187	30	40	1440
20	15	900	3.96	350	5075	187	18.5	25	1440
25	24	1440	6.336	750	10875	187	55	75	1440
25	24	1440	6.336	550	7975	187	45	60	1440
25	24	1440	6.336	350	5075	187	30	40	1440
30	35	2100	9.24	750	10875	187	75	100	1440
30	35	2100	9.24	550	7975	187	55	75	1440
30	35	2100	9.24	350	5075	187	37	50	1440
35	48	2880	12.672	750	10875	187	110	150	1440
35	48	2880	12.672	550	7975	187	75	100	1440
35	48	2880	12.672	350	5075	187	55	75	1440
35	48	2880	12.672	250	3625	187	37	50	1440
40	63	3780	16.632	500	7250	187	90	120	1440
40	63	3780	16.632	350	5075	187	75	100	1440
40	63	3780	16.632	150	2175	187	37	50	1440



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GA DRAWING



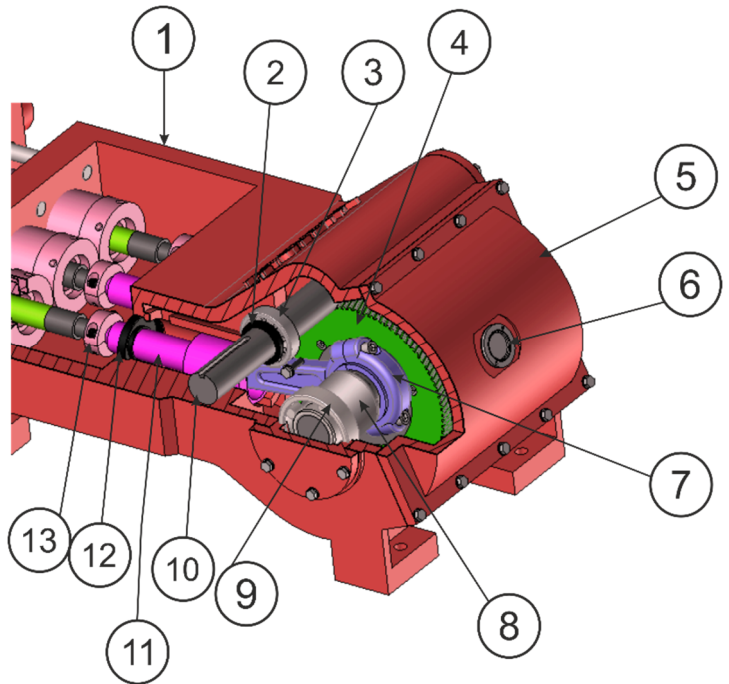


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POWER END

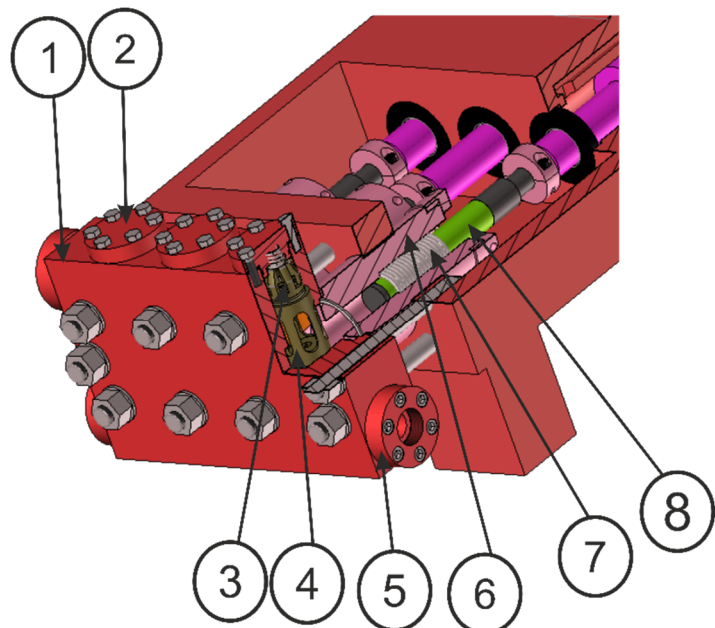
1. Crank Case - SGI CASTING
2. Pinion shaft Oil Seal - WITON
3. PINION SHAFT BEARING
4. Helical Gear
5. Crank Case Cover – SGI CASTING
6. OIL GLASS
7. Connecting rod Assembly - SGI
8. Crank Shaft – EN 19
9. Tapper Roller Bearing
10. Pinion shaft – EN31
11. Piston – EN 19 with Hard Corm
12. Piston Oil seal – Viton
13. Piston Lock



LIQUID END

Liquid contact parts available in SS 316 / SS 316L / DUPLEX SS / SUPER DUPLEX SS / HASTELLOY C / as per requirement

1. Center Block
2. NRV Flange
3. NRV Sets
4. NRV Sleeve
5. In Out Connections
6. Stuffing Box
7. Gland Packing PTFE Aramid
8. Plunger TC Coated

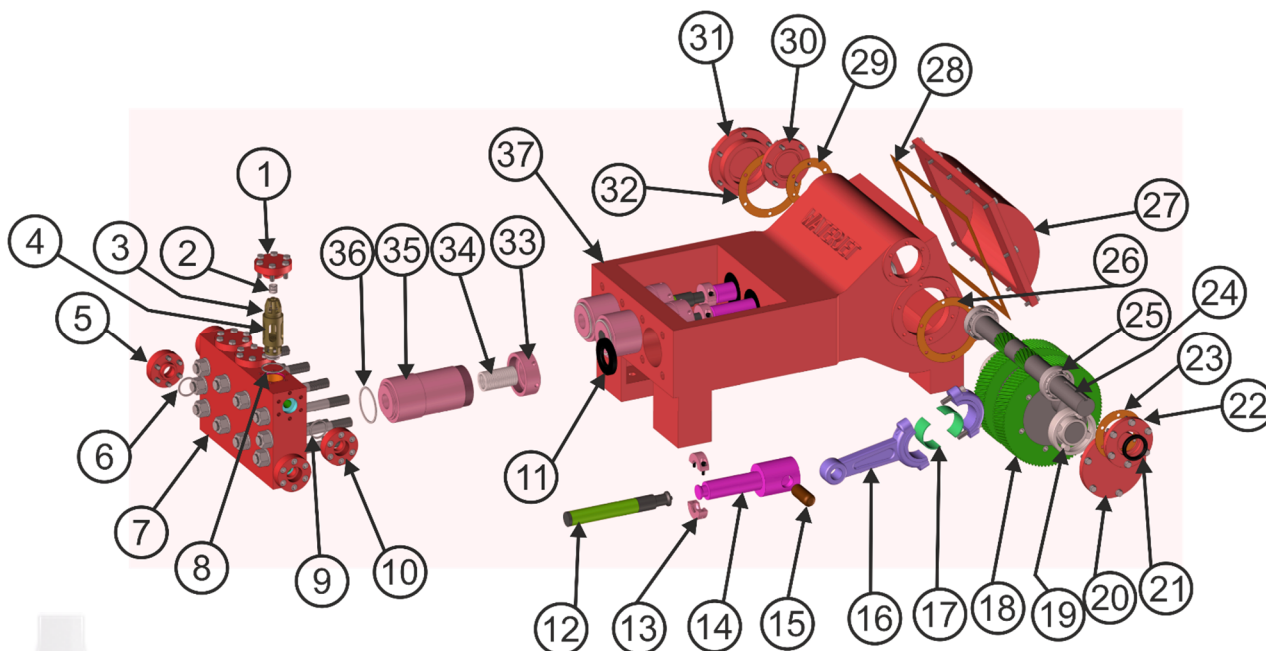




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ASSEMBLY DRAWING



BILL OF MATEIAL FOR WJHG - 100

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SR. NO.	PART NAME	QTY.	MATERIAL	SR. NO.	PART NAME	QTY.	MATERIAL
1	NRV FLANGE	3	SS 316	20	BEARING COVER CRANK SHAFT	1	S.G.I
2	NRV FLANGE SPRING	3	SS 316	21	OIL SEAL FOR PINION SHAFT 55×75×10	1	VITON
3	NRV SETS	6	SS 316	22	BEARING COVER FOR PINION SHAFT OPED SIDE	1	S.G.I
4	NRV SLEEVE	3	SS 316	23	BEARING COVER GASKET FOR PINION SHAFT	1	OIL PAPER
5	DISCHARGE FLANGE	2	SS 316	24	PINION SHAFT	1	EN 19
6	SUCTION FLANGE GASKET	2	TEFLON	25	TAPPER ROLLER BEARING FOR PINION SHAFT	2	33111
7	CENTER BLOCK(LIQUIED END)	1	SS 316	26	CRANK SHAFT BEARING COVER GASKET	1	OIL PAPER
8	NRV FLANGE GASKET	3	TEFLON	27	CEANK CASE COVER	1	S.G.I
9	DISCHARGE FLANGE GASKET	2	TEFLON	28	CRANK CASE COVER GASKET	1	OIL PAPER
10	DISCHARGE FLANGE	2	SS 316	29	PINION SHAFT COVER GASKET	1	OIL PAPER
11	PISTON OIL SEAL 50×100×13	3	VITON	30	PINION SHAFT BEARING COVER NON DRVIE SIDE	1	S.G.I
12	PLUNGER TC COATED	3	SS 316	31	CRANK SHAFT BEARING COVER	1	S.G.I
13	PISTON LOCK	3	SS 410	32	CRANK SHAFT BEARING COVER GASKET	1	OIL PAPER
14	PISTON	3	EN 19	33	STUFFING NUT	3	SS 316
15	PISTON PIN	1	EN 19	34	GLAND PACKING SETS	3	PTFE AR
16	CONNECTING ROD	3	S.G.I	35	STUFFING BOX	3	SS 316
17	C.R. BEARING SETS	3	TRIMETAL	36	STUFFING BOX GASKET	3	TEFLON
18	HELICAL GEAR SETS	1	EN 19	37	CRANK CASE (MAIN BODY)	1	S.G.I
19	TAPPER ROLLER BEARING FOR CRANK SHAFT	2	NJ 130				



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Pump installation and pipe connection

