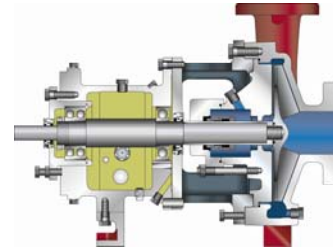


PRODUCT BULLETIN MODEL OSG ANSI PROCESS

The advanced design and precision manufacture of the rugged, heavy-duty OSG ANSI process pump provide long-term reliable performance and significantly enhance bearing and seal life. American-Marsh Pumps is committed to helping users maximize mean time between planned maintenance (MTBPM). American-Marsh Pumps' unique features and enhancements provide significant performance benefits for pump users. Some features of the OSG resulted from the suggestions of working engineers in the field, and were combined with others derived from the broad experience of American-Marsh engineers. Thus practical features, backed by over 130 years of quality pump manufacturing, assure you of excellent pump performance and full satisfaction.



Material Specifications

PART	CONSTRUCTION				
	DUCTILE IRON	DUCTILE IRON 316 SS FITTED	ALL 316 SS	ALL CD4MCU	ALL ALLOY 20
Casing	DUCTILE IRON	DUCTILE IRON	316 SS	CD4MCU	ALLOY 20
Impeller	DUCTILE IRON	316 SS	316 SS	CD4MCU	ALLOY 20
Shaft	STEEL	316 SS	316 SS	STEEL	STEEL
Seal Chamber	DUCTILE IRON	DUCTILE IRON	316 SS	CD4MCU	ALLOY 20
Seal Gland	316 SS	316 SS	316 SS	ALLOY 20	ALLOY 20
Power Frame	CAST IRON	CAST IRON	CAST IRON	CAST IRON	CAST IRON

Model OSG Specifications

Casing: The casing is constructed of high tensile ductile iron or other specified material. It is of the volute type, carefully and accurately proportioned to permit smooth flow and to convert high velocity energy of the fluid as it leaves the impeller into pressure. Suction and discharge nozzles are flanged and are cast integral with the volute. The casing has cast integral feet standard and the discharge port is of the vertical centerline type. The casing assembly fully meets ANSI B73.1 dimensional requirements. Necessary vent and drain openings can be provided upon request.

Impeller: The impeller is of the fully open, end suction type, casted in one piece of cast steel or other specified material. This design allows for greater wear area for longer life, renewable performance for reduced repairs, and minimum hydraulic loads. All impellers are hydraulically and dynamically balanced prior to assembly. All model meets the stringent performance requirements of ANSI B73.1

Shaft: The shaft is of high strength steel or other specified material, ground to accurate dimensions and polished to a smooth surface. It is designed for extra stiffness to avoid all critical speeds in operation. OSG pumps lead the industry in low L^3/D^4 ratio's minimizing shaft deflection at the stuffing box. All OSG models guarantee less than 0.002" shaft deflection at the seal face location, while in operation. As an option, the shaft can be protected by a shaft sleeve of ample thickness to ensure long life. The shaft sleeve can be supplied in various materials.

Seal Chamber: The seal chamber is available in two (2) different configurations depending on the jobsite requirement. OSG pumps feature the Standard Bore seal chamber designed for packing and accommodates mechanical seals. The Large Taper Bore is also available for increased seal life

through improved lubrication and cooling. Both are designed to meet the process requirements of the seal industry. Seal chambers have provisions for various flush plan arrangements customizing the seal chamber to meet the requirements of the end user. For abrasive applications, packing with a lantern ring can also be supplied. A wide variety of component and cartridge mechanical seals can be used with OSG standard components.

Power Frame: The power frame is constructed of cast iron and provides support for the inboard and outboard bearings. The outboard bearing is of the double row, angular contact type and the inboard bearing is of the single row, deep groove type for excellent axial and radial load support. For axial adjustment of the impeller, the power frame employs a micrometer adjustment which allows the user to dial back factory tolerances between the impeller and the pump casing. This re-adjustment of tolerances can be done on the bench, compensating for proper seal setting and eliminating the need to have the casing near for final adjustment. Double lip seals ensure that contaminants are kept out of the power frame. Upgraded bearing isolators can be supplied upon request. For extremely crucial applications, magnetic bearing isolators with a poppet breather can be specified, hermetically sealing the power frame. The power frame has an oversized, integral oil sump that provides oil for lubrication to each bearing. A large one inch oil level eye is provided standard on the power frame to visually indicate the oil level. The bearings and shafts are so designed to last up to 61% longer than the competition. With shaft deflection indices surpassing nearly all of the competition, 43-252% greater stiffness is achieved resulting in longer Mean Time Between Planned Maintenance (MTBPM).

INDUSTRIAL

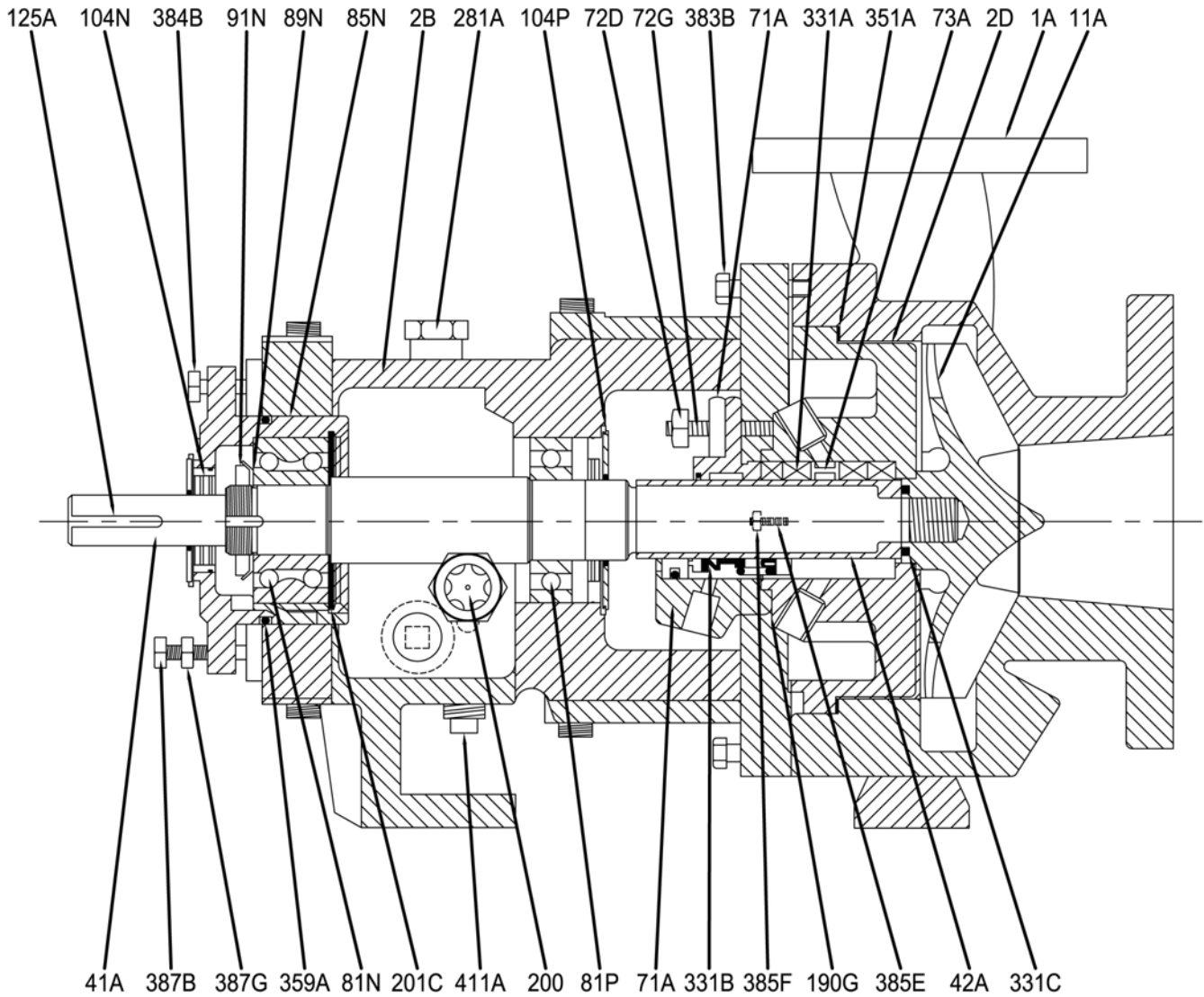
Propane, Butane, Crude Oil, Acids, Gasoline, Naphtha, Organic, Petrochemical, Black Liquor, Ammonia, Organic Fluids, Cargo Transfer

COMMERCIAL

Boiler Feed, Transfer, Condensate Return

PRODUCT BULLETIN
MODEL OSG ANSI PROCESS

OSG STX Sectional Drawing

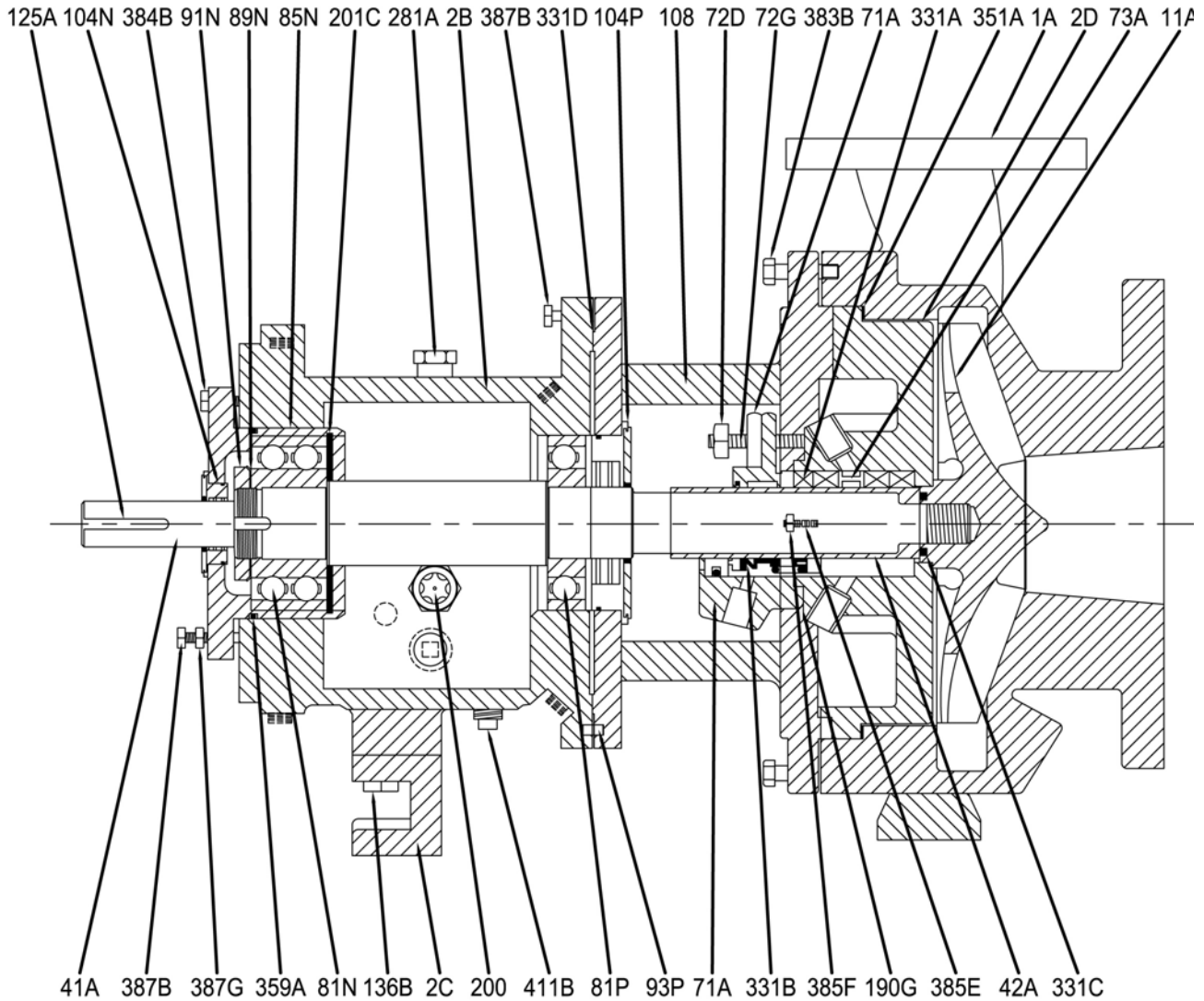


Item Number	Item Description	Num. Req.
1A	Casing	
2B	Bearing Housing	
2D	Rear Cover	
11A	Impeller	
41A	Shaft	
42A	Shaft Hook Sleeve	
71A	Stuffing Box Gland	
72D	Gland Nut	
72G	Gland Stud	
73A	Lantern Ring	
81N	Outboard Bearing, Thrust	
81P	Inboard Bearing, Radial	
85N	Bearing Carrier	
89N	Outboard Bearing Lockwasher	
91N	Outboard Bearing Locknut	
104N	Outboard Lip Seal	
104P	Inboard Lip Seal	

Item Number	Item Description	Num. Req.
125A	Coupling Key	
190G	Stuffing Box Gland Gasket	
200	Sight Gauge	
201C	Bearing Carrier Retainer	
281A	Bearing Housing Vent Plug	
331A	Packing	
331B	Mechanical Seal	
331C	Impeller O-Ring	
351A	Casing Gasket	
359A	Bearing Carrier O-Ring	
383B	Casing Bolt	
384B	Bearing Carrier Bolt	
385B	Casing Jacking Bolt	
385E	Rear Cover Stud	
385F	Rear Cover Nut	
387G	Bearing Housing Jam Nut	
411B	Bearing Housing Drain Plug	

Recommended spare parts are in **BOLD**.

OSG MTX Sectional Drawing

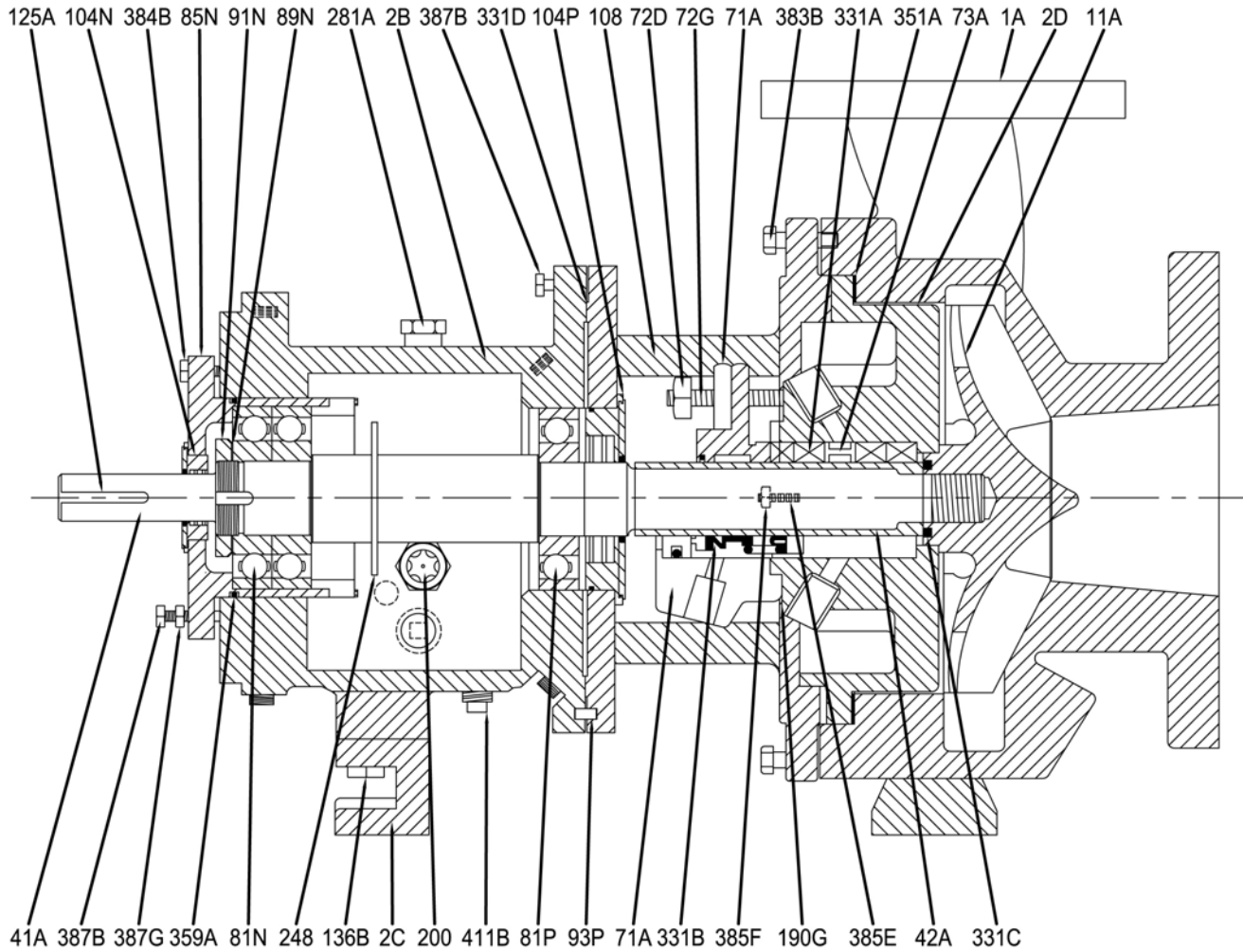


Item Number	Item Description	Num. Req.
1A	Casing	
2B	Bearing Housing	
2C	Bearing Housing Foot	
2D	Rear Cover	
11A	Impeller	
41A	Shaft	
42A	Shaft Hook Sleeve	
71A	Stuffing Box Gland	
72D	Gland Nut	
72G	Gland Stud	
73A	Lantern Ring	
81N	Outboard Bearing, Thrust	
81P	Inboard Bearing, Radial	
85N	Bearing Carrier	
89N	Outboard Bearing Lockwasher	
91N	Outboard Bearing Locknut	
93P	Bearing Housing Dowel Pin	
104N	Outboard Lip Seal	
104P	Inboard Lip Seal	
108	Bearing Housing Adapter	

Item Number	Item Description	Num. Req.
125A	Coupling Key	
136B	Bearing Housing Foot Capscrew	
190G	Stuffing Box Gland Gasket	
200	Sight Gauge	
201C	Bearing Carrier Retainer	
281A	Bearing Housing Vent Plug	
331A	Packing	
331B	Mechanical Seal	
331C	Impeller O-Ring	
331D	Bearing Housing Gasket	
351A	Casing Gasket	
359A	Bearing Carrier O-Ring	
383B	Casing Bolt	
384B	Bearing Carrier / Housing Bolt	
385B	Casing Jacking Bolt	
385E	Rear Cover Stud	
385F	Rear Cover Nut	
387G	Bearing Housing Jam Nut	
411B	Bearing Housing Drain Plug	

Recommended spare parts are in BOLD.

OSG LTX Sectional Drawing

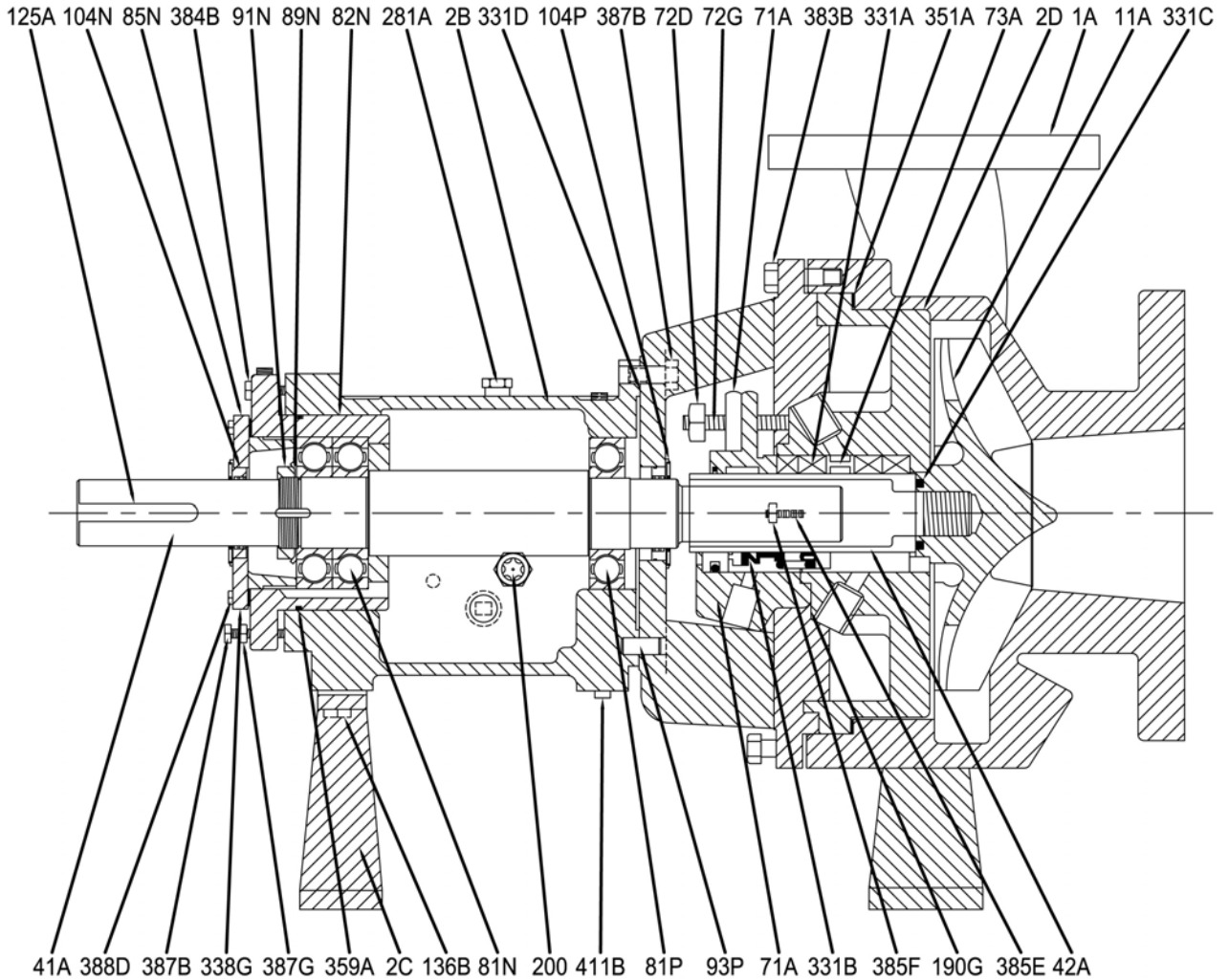


Item Number	Item Description	Num. Req.
1A	Casing	
2B	Bearing Housing	
2C	Bearing Housing Foot	
2D	Rear Cover	
11A	Impeller	
41A	Shaft	
42A	Shaft Hook Sleeve	
71A	Stuffing Box Gland	
72D	Gland Nut	
72G	Gland Stud	
73A	Lantern Ring	
81N	Outboard Bearing, Thrust	
81P	Inboard Bearing, Radial	
85N	Bearing Carrier	
89N	Outboard Bearing Lockwasher	
91N	Outboard Bearing Locknut	
93P	Bearing Housing Dowel Pin	
104N	Outboard Lip Seal	
104P	Inboard Lip Seal	
108	Bearing Housing Adapter	

Item Number	Item Description	Num. Req.
125A	Coupling Key	
136B	Bearing Housing Foot Capscrew	
190G	Stuffing Box Gland Gasket	
200	Sight Gauge	
201C	Bearing Carrier Retainer	
248	Oil Thrower	
281A	Bearing Housing Vent Plug	
331A	Packing	
331B	Mechanical Seal	
331C	Impeller O-Ring	
331D	Bearing Housing Gasket	
351A	Casing Gasket	
359A	Bearing Carrier O-Ring	
383B	Casing Bolt	
384B	Bearing Carrier / Housing Bolt	
385B	Casing Jacking Bolt	
385E	Rear Cover Stud	
385F	Rear Cover Nut	
387G	Bearing Housing Jam Nut	
411B	Bearing Housing Drain Plug	

Recommended spare parts are in **BOLD**.

OSG XLTX Sectional Drawing

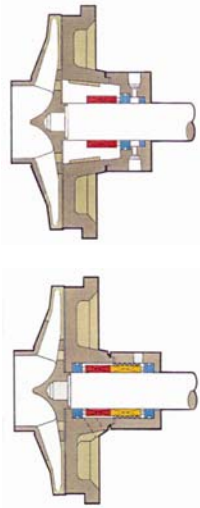


Item Number	Item Description	Num. Req.
1A	Casing	
2B	Bearing Housing	
2C	Bearing Housing Foot	
2D	Rear Cover	
11A	Impeller	
41A	Shaft	
42A	Shaft Hook Sleeve	
71A	Stuffing Box Gland	
72D	Gland Nut	
72G	Gland Stud	
73A	Lantern Ring	
81N	Outboard Bearing, Thrust	
81P	Inboard Bearing, Radial	
82N	Bearing Carrier	
85N	Bearing End Cover	
89N	Outboard Bearing Lockwasher	
91N	Outboard Bearing Locknut	
93P	Bearing Housing Dowel Pin	
104N	Outboard Lip Seal	
104P	Inboard Lip Seal	
108	Bearing Housing Adapter	

Item Number	Item Description	Num. Req.
125A	Coupling Key	
136B	Bearing Housing Foot Capscrew	
190G	Stuffing Box Gland Gasket	
200	Sight Gauge	
201C	Bearing Carrier Retainer	
281A	Bearing Housing Vent Plug	
331A	Packing	
331B	Mechanical Seal	
331C	Impeller O-Ring	
331D	Bearing Housing Gasket	
351A	Casing Gasket	
359A	Bearing Carrier O-Ring	
383B	Casing Bolt	
384B	Bearing Carrier / Housing Bolt	
385B	Casing Jacking Bolt	
385E	Rear Cover Stud	
385F	Rear Cover Nut	
387G	Bearing Housing Jam Nut	
388D	Bearing End Cover Capscrew	
411B	Bearing Housing Drain Plug	

Recommended spare parts are in BOLD.


Seal Chambers For Every Application



<p>Large Taper Bore Oversized, tapered bore with specially shaped and evenly spaced flow modifiers. Designed for seals with large gland bolt and gasket circles.</p>	<ul style="list-style-type: none"> • Single internal cartridge seals. • Dual internal/external cartridge seals. • Single internal component seals with flexibly mounted seats.* • Dual internal “true” tandem cartridge seals. <p>Note: <i>Bypass flush to internal seal normally not required. Barrier fluid or external flush may apply to dual seals (Plans 52, 53, etc.).</i></p>
<p>Standard Bore Standard cylindrical bore design for packing arrangements and conventional seals with small gland bolt and gasket circles.</p>	<ul style="list-style-type: none"> • Dual internal component seals. Isolates the seal chamber from the process. Allows less expensive seal materials. Recommended in tough slurry applications. Allows for thermal convection type flush plans; however, pumping ring devices are recommended. • Single internal component or cartridge seals when applied with a throat bushing. Usually selected to increase stuffing box pressure above the vapor pressure to avoid cavitation, etc. • Usually preferred over the CBL when jacketing is selected for increased effectiveness in cooling or heating. <p>Note: <i>Applied with Plan 11, etc.</i></p>

*All seal selections perform best when the faces are located directly within the flush path, particularly if solids, liquors, or slurries are present. Component seals with clamped seat gland designs locate the seal faces reasonably well. Flexibly mounted seat glands should include the vent and drain option to better locate the seal faces. The FML is always the first-choice chamber for maximum self-flush path benefits.

- Your Local Authorized Distributor -



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