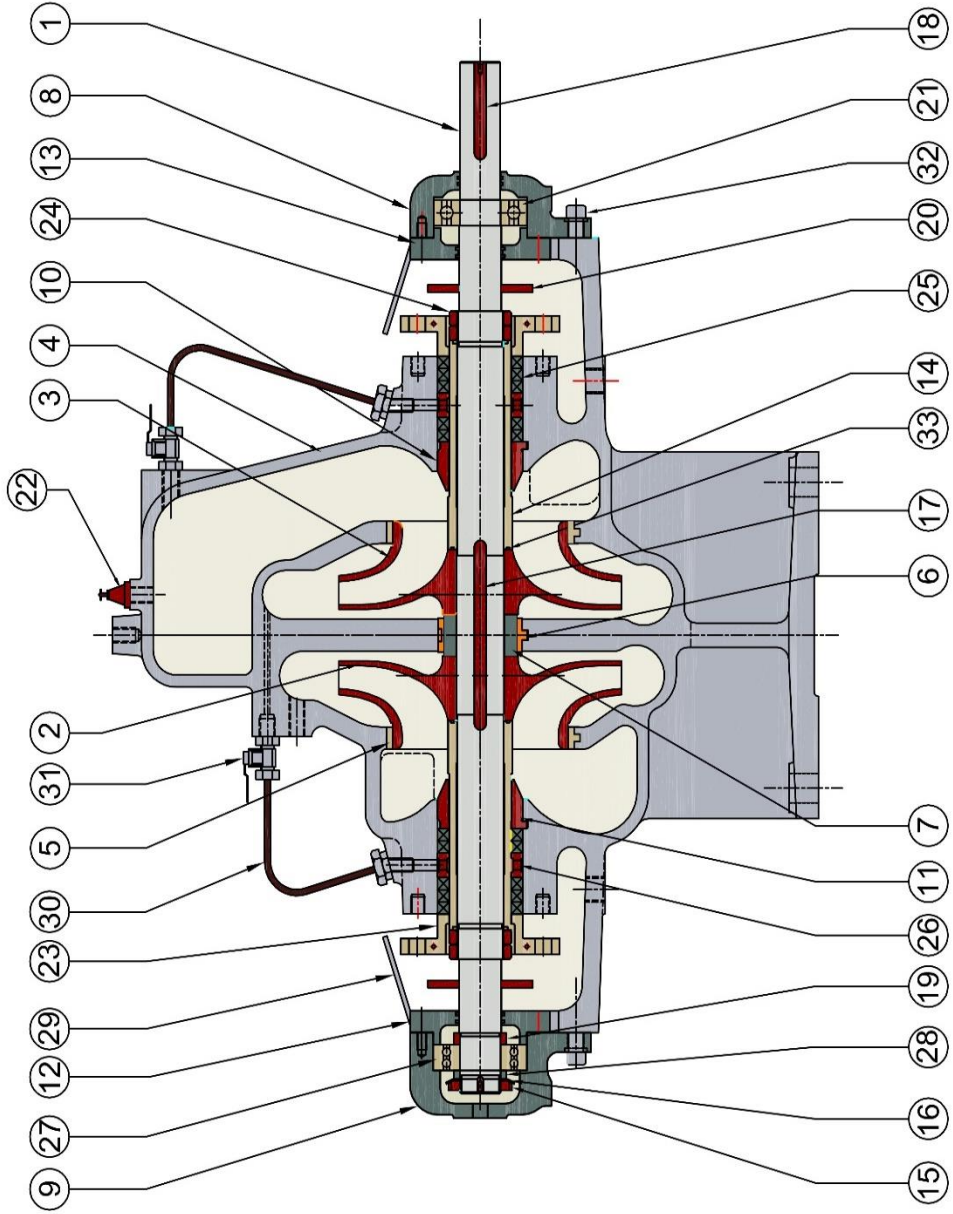



CROSS SECTIONAL DRAWING FOR SINGLE ENTRY IMPELLER WITH INTERNAL  
CROSS-OVER TWO STAGE PUMP WITH PACKED GLAND



SL.NO.	DESCRIPTION	QTY.	PART NO.
1	SHAFT	1	101
2	IMPELLER 1st STAGE (L.H.)	1	102-L
3	IMPELLER 2nd STAGE (R.H.)	1	102-R
4	CASING	1SET	183
5	CASING WEAR RING	2	129
6	INTER STAGE BUSH	1	300
7	INTER STAGE COLLAR	1	301
8	BEARING BRACKET (P.E.)	1	254
9	BEARING BRACKET (F.E.)	1	271
10	STUFFING BOX BUSH (P.E.)	1	260
11	STUFFING BOX BUSH (F.E.)	1	292
12	BEARING END COVER INNER (F.E.)	1	277
13	BEARING END COVER INNER (P.E.)	1	276
14	SHAFT SLEEVE	2	150
15	BEARING LOCK NUT	1	141
16	BEARING LOCK WASHER	1	142
17	IMPELLER KEY	1	180
18	COUPLING KEY	1	138
19	THRUST COLLAR	1	125
20	WATER THROWER	2	145
21	Single Row Cylindrical Roller Bearing (DE)	1	272
22	AIR COCK	2	114
23	SPLIT GLAND	2	144
24	SLEEVE NUT (L.H & R.H)	2+2	146
25	GLAND PACKING	-	143
26	LANTERN RING	2	149
27	Double Row Angular Contact Ball Bearings (FE)	1	257
28	BEARING SPACER	1	228
29	SHAFT GUARD	2	252
30	WATER SEALING PIPE	2	118
31	BALL VALVE	2	-
32	DOWEL PIN FOR BEARING BRACKET	4	245
33	O'RING FOR SLEEVE	2	156

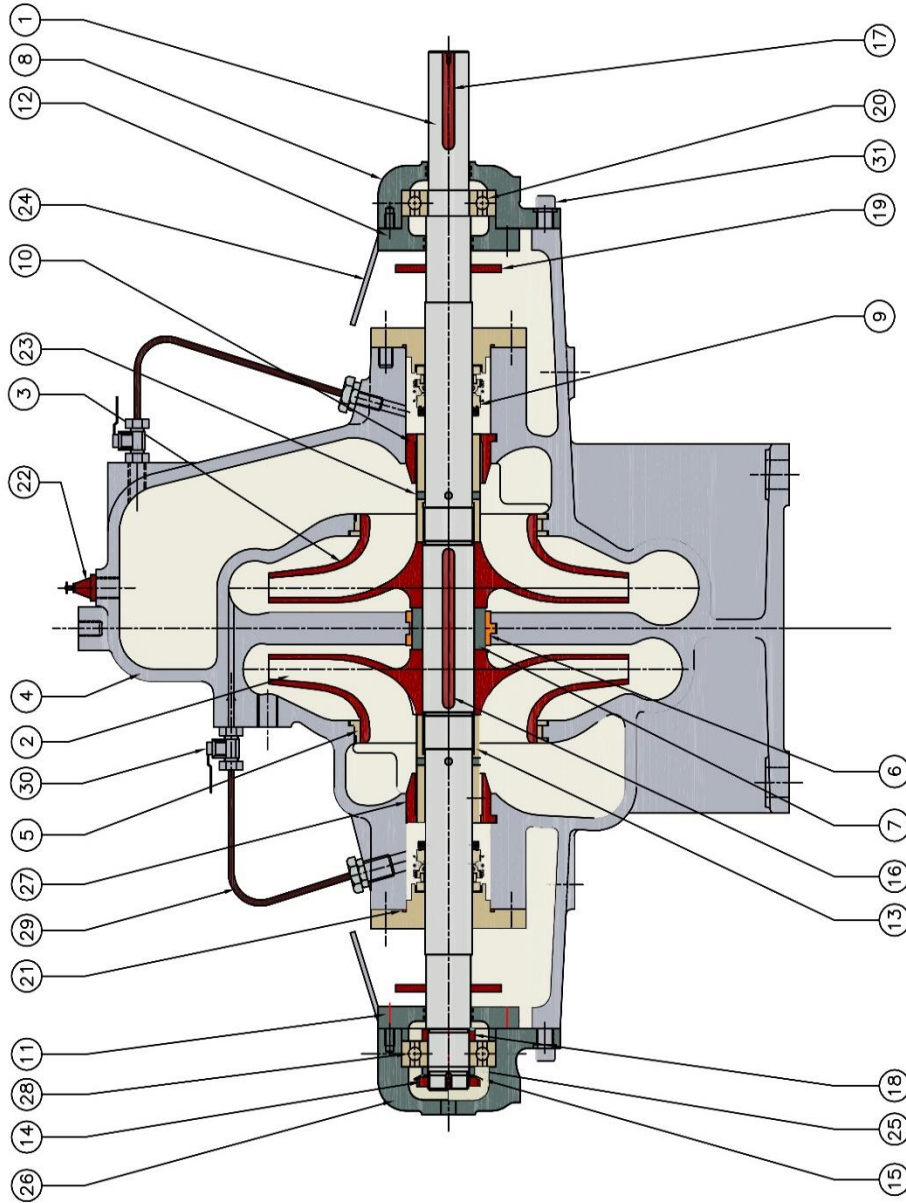
\*\* P.E.-POWER END , F.E.-FREE END.



## PUMPSENSE

DRN	AD	08.12.15	ASSEMBLY NO.
APPD	HS	REV	GPSEINT-01-340
		0	

CROSS SECTIONAL DRAWING FOR SINGLE ENTRY IMPELLER WITH INTERNAL  
CROSS-OVER TWO STAGE PUMP WITH CATRIDGE MECHANICAL SEALS



SL.NO.	DESCRIPTION	QTY.	PART NO.
1	SHAFT	1	153
2	IMPELLER 1st STAGE (L.H.)	1	102-L
3	IMPELLER 2nd STAGE (R.H.)	1	102-R
4	CASING	1SET	103
5	CASING WEAR RING	2	129
6	INTER STAGE BUSH	1	300
7	INTER STAGE COLLAR	1	301
8	BEARING BRACKET (P.E)	1	254
9	BALANCED CATRIDGE MECHANICAL SEAL	2	151
10	STUFFING BOX BUSH (P.E)	1	260
11	BEARING END COVER INNER (F.E.)	1	277
12	BEARING END COVER INNER (P.E.)	1	276
13	IMPELLER NUT	2	302
14	BEARING LOCK NUT	1	141
15	BEARING LOCK WASHER	1	142
16	IMPELLER KEY	1	137
17	COUPLING KEY	1	138
18	THRUST COLLAR	1	125
19	WATER THROWER	2	145
20	DEEP GROOVE BALL BEARING (P.E)	1	272
21	'O' RING FOR GLAND PLATE	2	303
22	AIR COCK	2	114
23	GRUB SCREW	2	304
24	SHAFT GUARD	2	252
25	BEARING SPACER	1	228
26	BEARING BRACKET (F.E)	1	271
27	STUFFING BOX BUSH (F.E)	1	292
28	DEEP GROOVE BALL BEARING (F.E)	1	257
29	WATER SEALING PIPE	2	118
30	BALL VALVE	2	-
31	DOWEL PIN FOR BEARING BRACKET	4	245

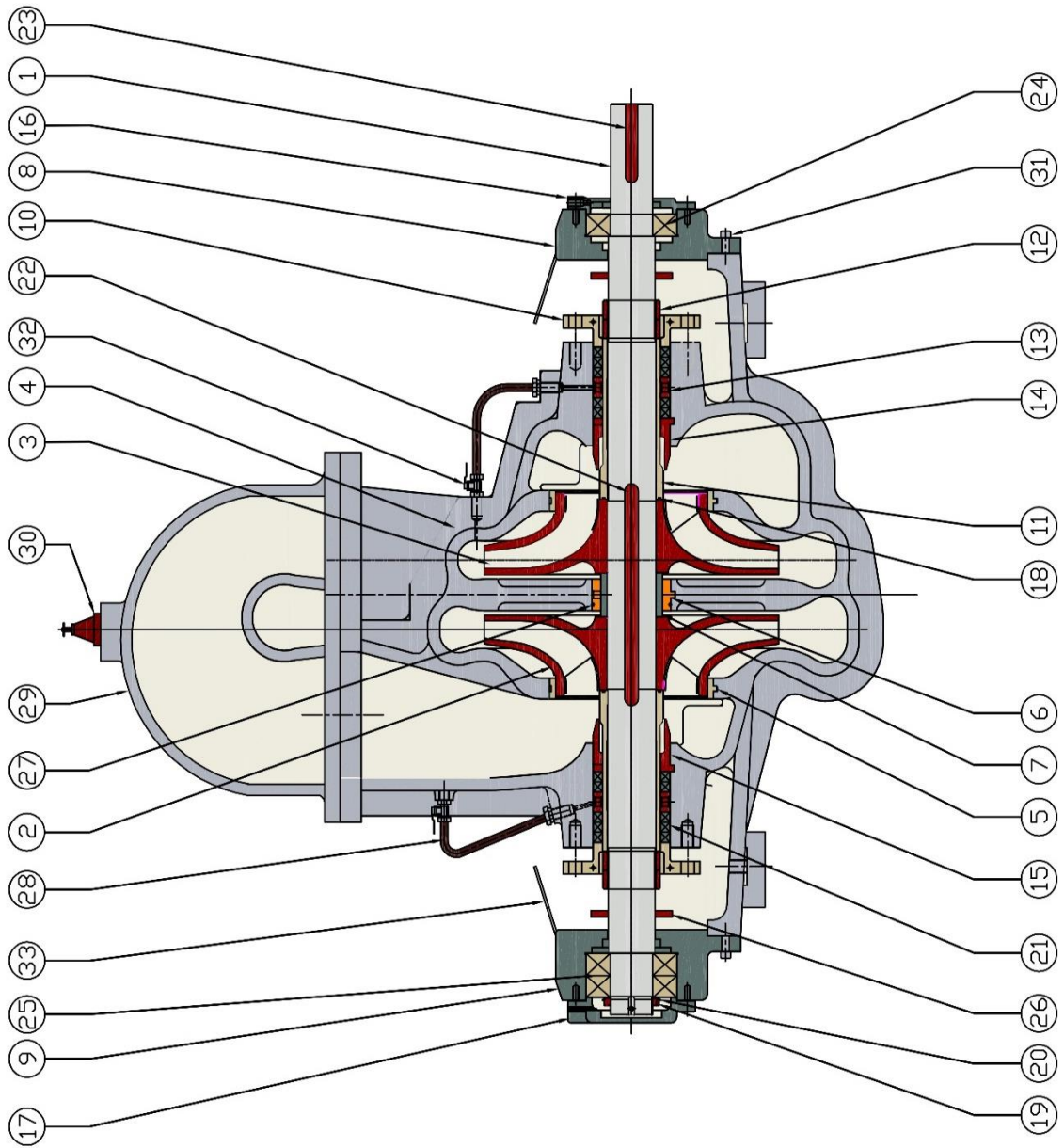
\*\* P.E- POWER END , F.E -FREE END.



**PUMPSENSE**

DRN	AD	08.12.15	ASSEMBLY NO.
APPD	HS	REV	MSSEINT-02-341
		0	

CROSS SECTIONAL DRAWING FOR SINGLE ENTRY IMPELLER WITH EXTERNAL  
 CROSS-OVER TWO STAGE PUMP WITH PACKED GLAND



SL.NO.	DESCRIPTION	QTY.	PART NO.
1	SHAFT	1	101
2	IMPELLER 1st STAGE (L.H.)	1	102-L
3	IMPELLER 2nd STAGE (R.H.)	1	102-R
4	CASING	1	183
5	CASING WEAR RING	2	129
6	INTER STAGE BUSH	1	300
7	INTER STAGE COLLAR	1	301
8	BEARING BRACKET (P.E)	1	254
9	BEARING BRACKET (F.E)	1	271
10	SPLIT GLAND	2	144
11	SHAFT SLEEVE	2	150
12	SLEEVE NUT (L.H & R.H)	2+2	146
13	LANTERN RING	2	149
14	STUFFING BOX BUSH (P.E)	1	260
15	STUFFING BOX BUSH (F.E)	1	292
16	BEARING END COVER OUTER (P.E)	1	134
17	BEARING END COVER OUTER (F.E)	1	133
18	' O' RING FOR SLEEVE	2	156
19	BEARING LOCK NUT	1	141
20	BEARING LOCK WASHER	1	142
21	GLAND PACKING	-	143
22	IMPELLER KEY	1	180
23	COUPLING KEY	1	138
24	BEARING AT POWER END	1	272
25	BEARING AT FREE END	2	257
26	WATER THROWER	2	145
27	' O' RING FOR INTER STAGE BUSH	1	305
28	WATER SEALING PIPE	2	118
29	EXTERNAL CROSS OVER	1	306
30	AIR COCK	1	114
31	DOWEL PIN FOR BEARING BRACKET	4	245
32	BALL VALVE	2	-
33	SHAFT GUARD	2	252

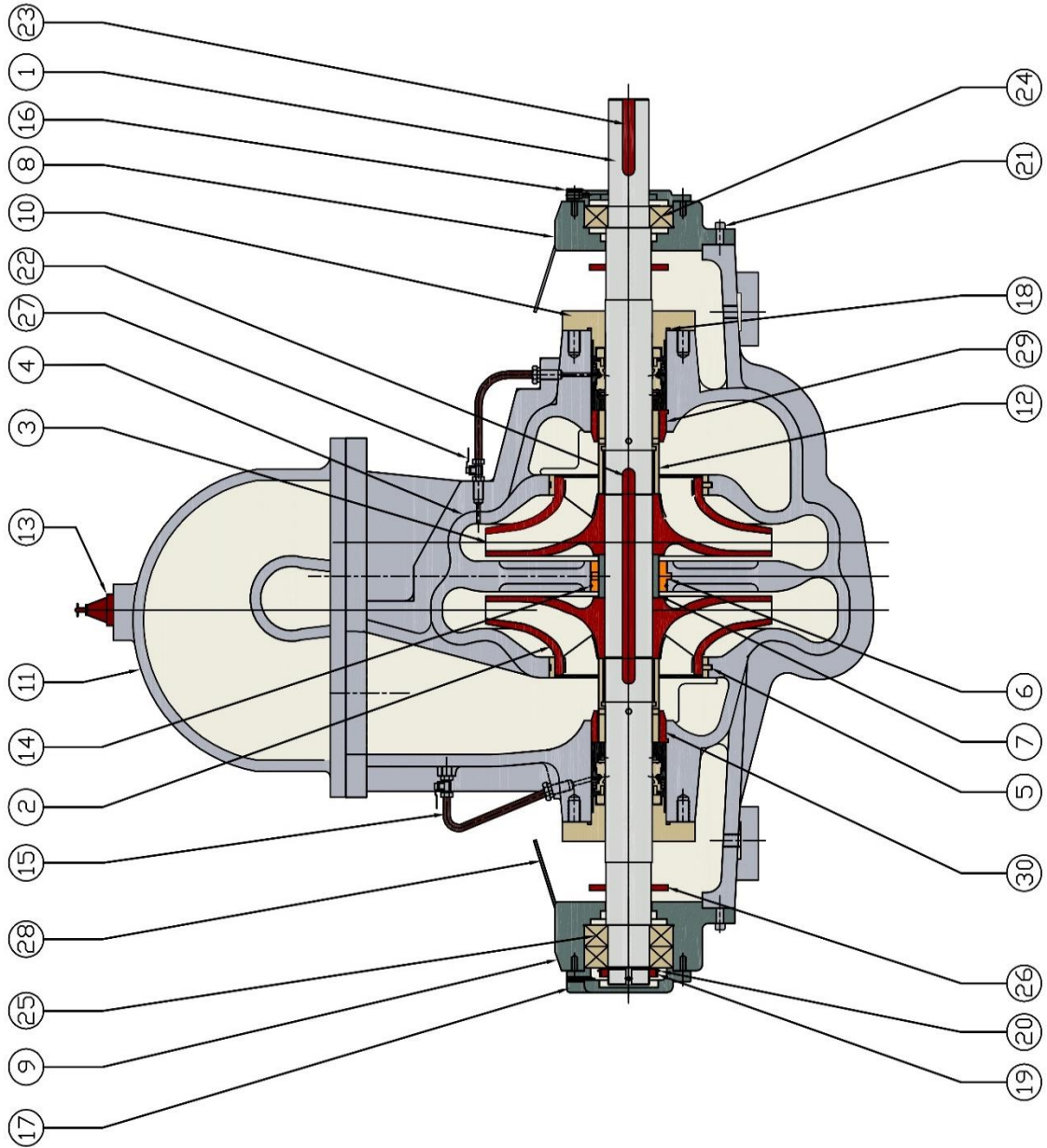
\*\* P.E.- POWER END , F.E.-FREE END.



**PUMPSENSE**

DRN	AD	08.12.15	ASSEMBLY NO.	
APPD	HS	REV	GPSEEXT-03-342	
		0		

CROSS SECTIONAL DRAWING FOR SINGLE ENTRY IMPELLER WITH EXTERNAL  
CROSS-OVER TWO STAGE PUMP WITH CARTRIDGE MECHANICAL SEALS



SL.NO.	DESCRIPTION	QTY.	PART NO.
1	SHAFT	1	153
2	IMPELLER 1st STAGE (L.H.)	1	102-L
3	IMPELLER 2nd STAGE (R.H.)	1	102-R
4	CASING	1SET	103
5	CASING WEAR RING	2	129
6	INTER STAGE BUSH	1	300
7	INTER STAGE COLLAR	1	301
8	BEARING BRACKET (P.E)	1	254
9	BEARING BRACKET (F.E)	1	271
10	BALANCED CATRIDGE MECHANICAL SEAL	2	151
11	EXTERNAL CROSS OVER	1	306
12	EXTENDED IMPELLER NUT	2	302
13	AIR COCK	1	114
14	'O' RING FOR INTER STAGE BUSH	1	305
15	WATER SEALING PIPE	2	118
16	BEARING END COVER OUTER (P.E)	1	134
17	BEARING END COVER OUTER (F.E)	1	133
18	'O' RING FOR GLAND PLATE	2	303
19	BEARING LOCK NUT	1	141
20	BEARING LOCK WASHER	1	142
21	DOWEL PIN FOR BEARING BRACKET	4	245
22	IMPELLER KEY	1	137
23	COUPLING KEY	1	138
24	BEARING AT POWER END	1	272
25	BEARING AT FREE END	2	257
26	WATER THROWER	2	145
27	BALL VALVE	2	-
28	SHAFT GUARD	2	252
29	STUFFING BOX BUSH (P.E)	1	260
30	STUFFING BOX BUSH (F.E)	1	292

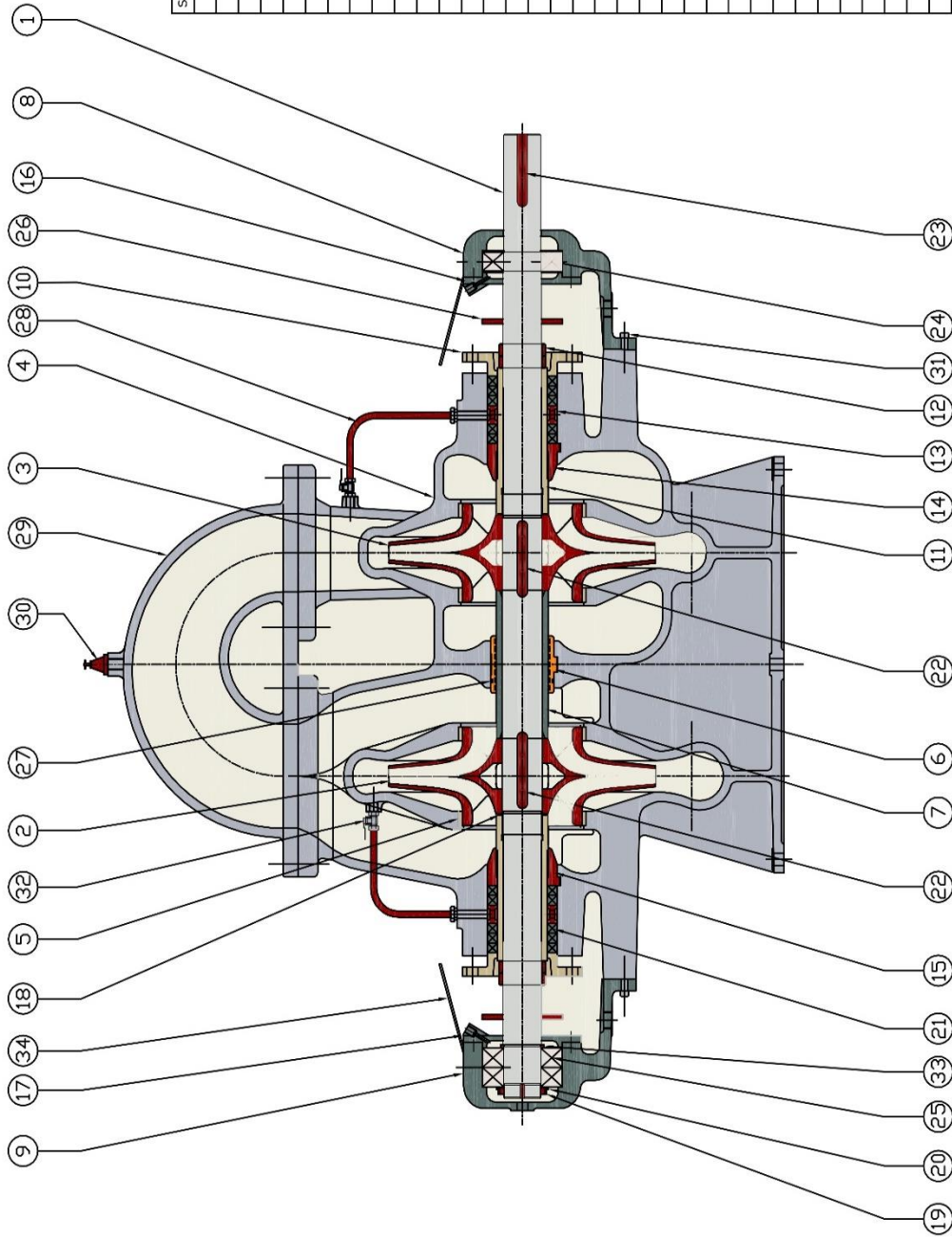
\*\* P.E.- POWER END , F.E.-FREE END.



**PUMPSENSE**

DRN	AD	08.12.15	ASSEMBLY NO.
APPD	HS	REV	MSSEET-04-343
		0	

# TWO STAGE PUMPS WITH TWO DOUBLE ENTRY IMPELLERS WITH PACKED GLAND



SL.NO.	DESCRIPTION	QTY.	PART NO.
1	SHAFT	1	101
2	IMPELLER 1st STAGE (L.H.)	1	102-L
3	IMPELLER 2nd STAGE (R.H.)	1	102-R
4	CASING	1	183
5	CASING WEAR RING	4	129
6	INTER STAGE BUSH	1	300
7	INTER STAGE COLLAR	1	301
8	BEARING BRACKET (P.E)	1	254
9	BEARING BRACKET (F.E)	1	271
10	SPLIT GLAND	2	144
11	SHAFT SLEEVE	2	150
12	SLEEVE NUT (L.H & R.H)	2+2	146
13	LANTERN RING	2	149
14	STUFFING BOX BUSH (P.E)	1	260
15	STUFFING BOX BUSH (F.E)	1	292
16	BEARING END COVER INNER (P.E)	1	276
17	BEARING END COVER INNER (F.E)	1	277
18	O' RING FOR SLEEVE	2	156
19	BEARING LOCK NUT	1	141
20	BEARING LOCK WASHER	1	142
21	GLAND PACKING	-	143
22	IMPELLER KEY	2	180
23	COUPLING KEY	1	138
24	BEARING AT POWER END	1	272
25	BEARING AT FREE END	2	257
26	WATER THROWER	2	145
27	O' RING FOR INTER STAGE BUSH	1	305
28	WATER SEALING PIPE	2	118
29	EXTERNAL CROSS OVER	1	306
30	AIR COCK	1	114
31	DOWEL PIN FOR BEARING BRACKET	4	245
32	BALL VALVE	2	-
33	THRUST COLLAR	1	125
34	SHAFT GUARD	2	252

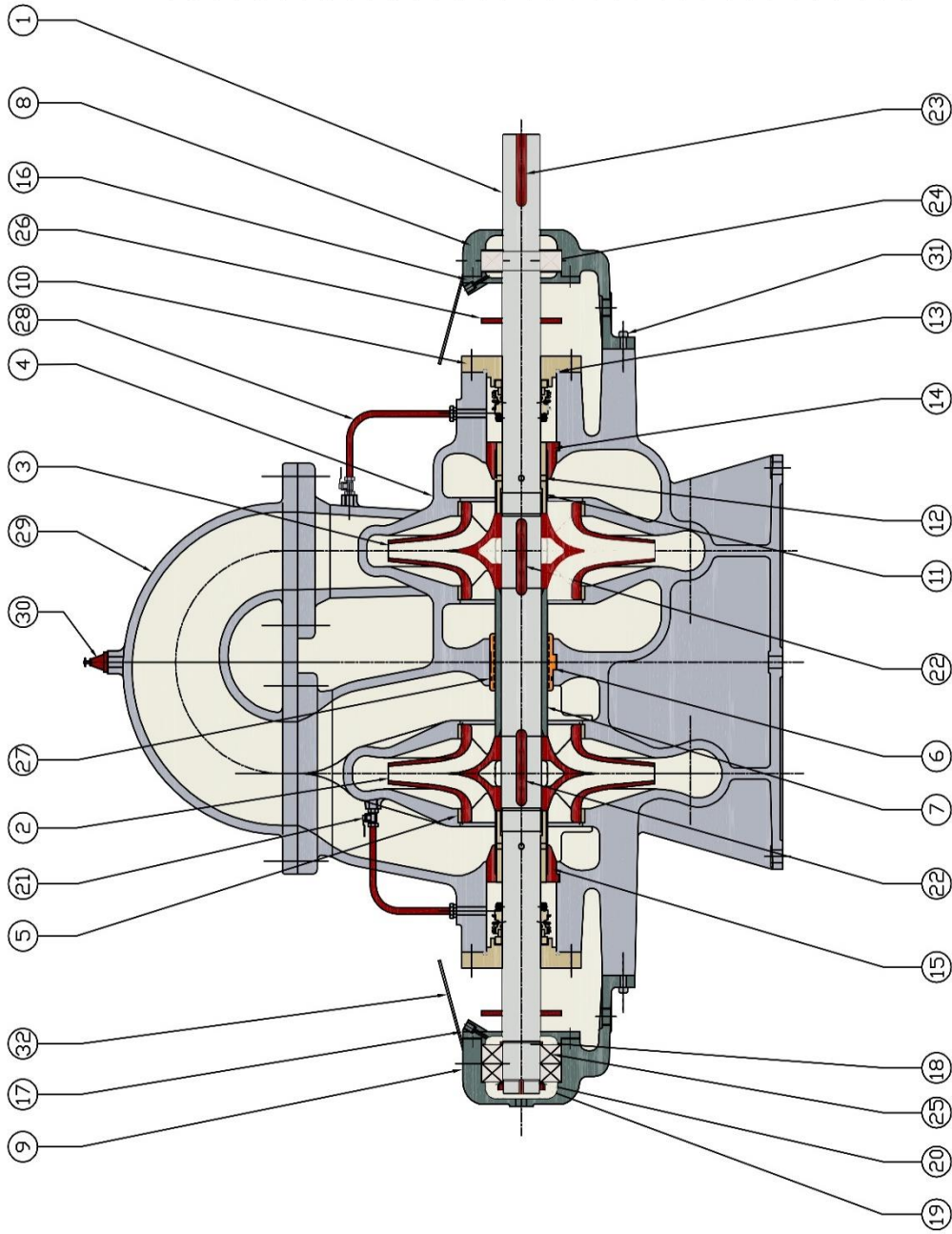
\*\* P.E - POWER END , F.E -FREE END.



**PUMPSENSE**


DRN	AD	08.12.15	ASSEMBLY NO.
APPD	HS	REV	GPDE-05-344
			0

# TWO STAGE PUMPS WITH TWO DOUBLE ENTRY IMPELLERS WITH MECHANICAL SEAL



SL. NO.	DESCRIPTION	QTY.	PART NO.
1	SHAFT	1	153
2	IMPELLER 1st STAGE (L.H.)	1	102-L
3	IMPELLER 2nd STAGE (R.H.)	1	102-R
4	CASING	1	103
5	CASING WEAR RING	4	129
6	INTER STAGE BUSH	1	300
7	INTER STAGE COLLAR	1	301
8	BEARING BRACKET (P.E)	1	254
9	BEARING BRACKET (F.E)	1	271
10	BALANCED CARTRIDGE MECHANICAL SEAL	2	151
11	IMPELLER NUT	2	302
12	GRUB SCREW	2	304
13	O' RING FOR GLAND PLATE	2	303
14	STUFFING BOX BUSH (P.E)	1	260
15	STUFFING BOX BUSH (F.E)	1	292
16	BEARING END COVER INNER (P.E)	1	276
17	BEARING END COVER INNER (F.E)	1	277
18	THRUST COLLAR	1	125
19	BEARING LOCK NUT	1	141
20	BEARING LOCK WASHER	1	142
21	BALL VALVE	2	-
22	IMPELLER KEY	2	137
23	COUPLING KEY	1	138
24	BEARING AT POWER END	1	272
25	BEARING AT FREE END	2	257
26	WATER THROWER	2	145
27	O' RING FOR INTER STAGE BUSH	1	305
28	WATER SEALING PIPE	2	118
29	EXTERNAL CROSS OVER	1	306
30	AIR COCK	1	114
31	DOWEL PIN FOR BEARING BRACKET	4	245
32	SHAFT GUARD	2	252

\*\* P.E- POWER END , F.E -FREE END.



## PUMPSENSE

DRN	AD	08.12.15	ASSEMBLY NO.
APPD	HS	REV	MSDE-06-345
		0	