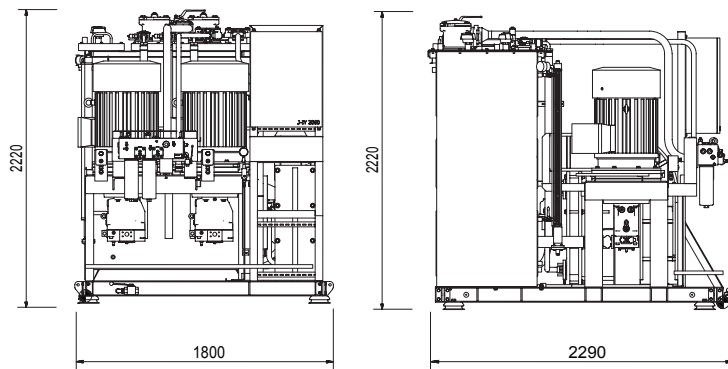


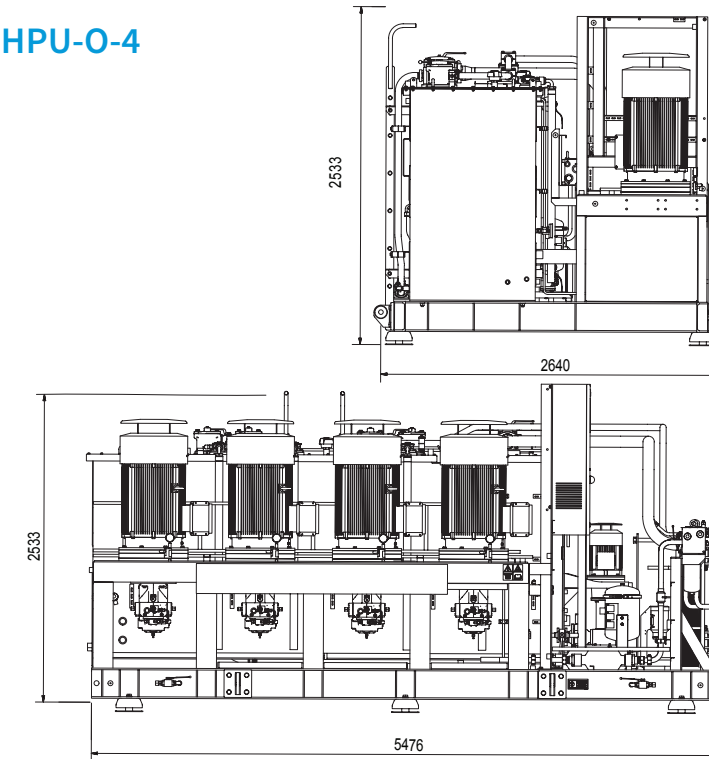
The Hydraulic Power Unit (HPU) is a skid mounted free-standing unit designed to feed high pressure hydraulic oil, with appropriate cleanliness, to both drilling equipment ring line system (open loop type) and Active Heave Compensator (AHC). The HPU skid is a self-bearing steel frame with lifting brackets. This design eases deck interface, installation and handling. The unit is designed for locations in both safe zones or hazardous areas and may be operated locally or remotely from driller's cabin.

HPU-O-2



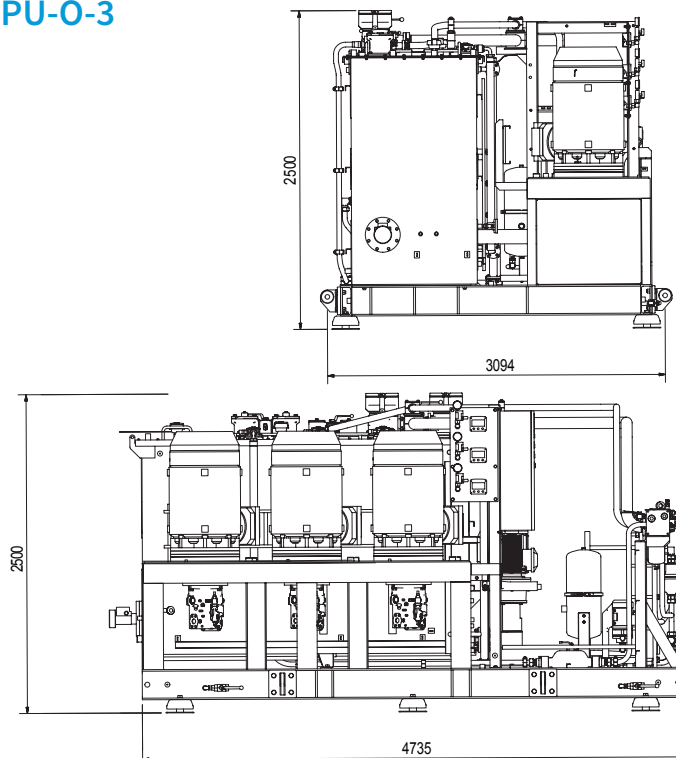
DESIGN DATA		
1	Area classification	SAFE AREA (options for Exx sone 2 -IIB-T3)
2	Cleanliness	ISO 17/15/12 (NAS 1638 Class 6)
3	Oil temperature	40-60 degrees Celsius
4	Weight, dry [kg]	3,500 approx
5	Equipment size (L x W x H) [mm]	1,800 x 2,290 x 2,220
UTILITY CONSUMPTION		
6	Normal oil level [liter]	1,000-1,500
7	Max. Hydr. ringline flow rate [l/min.]	500 (2 x 250)
8	Normal operating pressure [barg.]	207
9	Voltage [V]	400-690
10	Frequency [Hz]	60
11	Electrical power - Motor heating [Kw]	204,3 + 18 (2 x 99+ 6,3) 230V (100W)
COOLER		
12	Cooling medium/type	Fresh water
13	Max inlet temperature	36 degrees Celsius
14	Required cooling medium flow rate	100 l/min
15	Max oil flow	300 l/min.
16	Max water pressure	10 bar
17	Max heat transfer at max oil temp	50 kW
OPTION:		
18	Cooling medium/type	Sea Water
19	Max inlet temperature	28 degrees Celsius

HPU-O-4



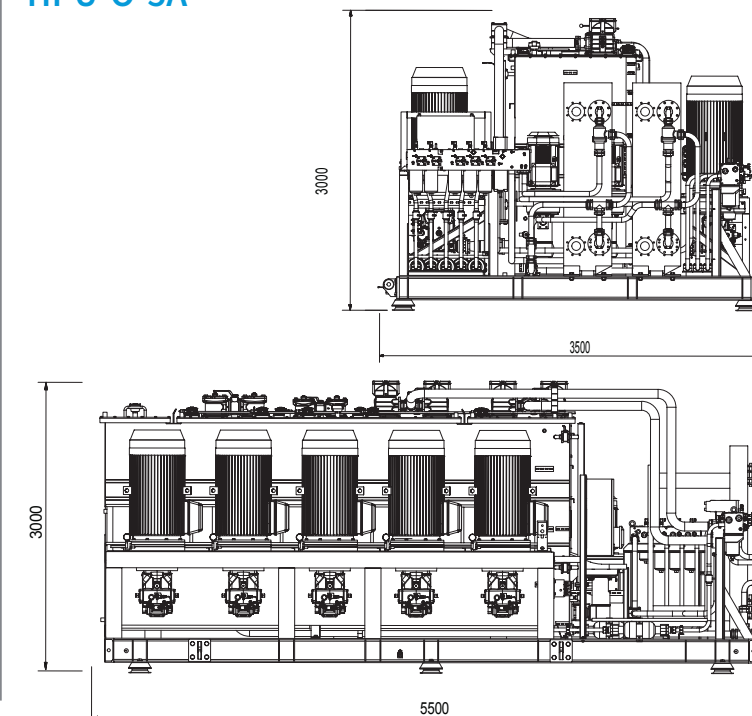
DESIGN DATA		
1	Area classification	SAFE AREA (options for Exx sone 2 -IIB-T3)
2	Cleanliness	ISO 17/15/12 (NAS 1638 Class 6)
3	Oil temperature	40-60 degrees Celsius
4	Weight, dry [kg]	12500approx
5	Equipment size (L x W x H) [mm]	5476 x 2640 x 2533
UTILITY CONSUMPTION		
6	Normal oil level [liter]	4,500
7	Max. Hydr. ringline flow rate [l/min.]	1600 (4 x 400)
8	Normal operating pressure [barg.]	207
9	Voltage [V]	400-690
10	Frequency [Hz]	60
11	Electrical power - Motor heating [Kw]	660 + 15 (4 x 165 + 7.5 + 2) 230V (100W)
COOLER		
12	Cooling medium/type	Fresh water
13	Max inlet temperature	36 degrees Celsius
14	Required cooling medium flow rate	680 l/min
15	Max oil flow	510 l/min.
16	Max water pressure	10 bar
17	Max heat transfer at max oil temp	260 kW
OPTION 1:		
18	Cooling medium/type	Sea Water
19	Max inlet temperature	28 degrees Celsius
OPTION 2:		
20	Cooling medium/type	Air
21	Max inlet temperature	45 degrees Celsius

HPU-O-3



DESIGN DATA		
1	Area classification	SAFE AREA (options for Exx sone 2 -IIB-T3)
2	Cleanliness	ISO 17/15/12 (NAS 1638 Class 6)
3	Oil temperature	40-60 degrees Celsius
4	Weight, dry [kg]	9,000 approx
5	Equipment size (L x W x H) [mm]	4,735 x 3,094 x 2,500
UTILITY CONSUMPTION		
6	Normal oil level [liter]	2,600-3,500
7	Max. Hydr. ringline flow rate [l/min.]	915 (3 x 305)
8	Normal operating pressure [barg.]	207
9	Voltage [V]	400-690
10	Frequency [Hz]	60
11	Electrical power - Motor heating [Kw]	375 + 18 (3 x 125 + 2 x 9) 230V (100W)
COOLER		
12	Cooling medium/type	Fresh water
13	Max inlet temperature	36 degrees Celsius
14	Required cooling medium flow rate	2 x 420 l/min.
15	Max oil flow	2 x 300 l/min.
16	Max water pressure	10 bar
17	Max heat transfer at max oil temp	2 x 100 kW
OPTION 1:		
18	Cooling medium/type	Sea Water
19	Max inlet temperature	28 degrees Celsius
OPTION 2:		
20	Cooling medium/type	Air
21	Max inlet temperature	45 degrees Celsius

HPU-O-5A



DESIGN DATA		
1	Area classification	SAFE AREA (options for Exx sone 2 -IIB-T3)
2	Cleanliness	ISO 17/15/12 (NAS 1638 Class 6)
3	Oil temperature	40-60 degrees Celsius
4	Weight, dry [kg]	17,000 approx
5	Equipment size (L x W x H) [mm]	5,500 x 3,500 x 3,000
UTILITY CONSUMPTION		
6	Normal oil level [liter]	9,500 - 7,500
7	Max. Hydr. ringline flow rate [l/min.]	2,000 (5 x 400)
8	Normal operating pressure [barg.]	207
9	Voltage [V]	400-690
10	Frequency [Hz]	60
11	Electrical power - Motor heating [Kw]	851 (5 x 165 + 13 + 2) 230V (100W)
COOLER		
12	Cooling medium/type	Fresh water
13	Max inlet temperature	36 degrees Celsius
14	Required cooling medium flow rate	680 l/min
15	Max oil flow	510 l/min.
16	Max water pressure	10 bar
17	Max heat transfer at max oil temp	260 kW
OPTION:		
18	Cooling medium/type	Sea Water
19	Max inlet temperature	32 degrees Celsius
AHC		
20	Max. Hydr. flow rate [l/min.]	3 x 300 (900 l.)
21	Normal operating pressure [barg.]	170