



Cat[®] UEL45 V

GEARBOX

Specifications

Typical Application

Chain Type Longwall Machinery like Armored Face Conveyors (AFC) and Beam Stage Loader (BSL)

Technical Data

Rated Continuous Input Power Maximum at n1 = 1,500 rpm	1050 kW	1,428 hp
Rated Continuous Input Power Maximum at n1 = 1,800 rpm	1250 kW	1,700 hp
Maximum Rated Output Torque	450 000 N·m	331,902.5 lbf·ft
Maximum Rated Input Speed	1500 min ⁻¹	1,800 rpm
Motor Stalling Torque T Motor	2 × T1	
Weight (gearbox without oil)	8500 kg	18,739.3 lb
Oil filling volume at 0° position	500 L	132 gal
Oil temperature at rated power	75° C	167° F
Bearing Service Life (continuous operation at rated power, corresponds to 90% of calculated nominal service life)	13,500 hr	
Required Cooling Water Volume	25 L/min	6.6 gal/min
Pressure Relief Valve Set to	30 bar	435.11 psi
Size of Water Supply Connections to Heat Exchanger (inlet and outlet)	DN20	
Maximum Cooling Water Inlet Temperature	25° C	77° F
Maximum Cooling Water Dirt Particle Size	0,25 mm	0.0098 inch
Required pH of the Cooling Water	7 pH	
Output Hub	N 260×10×30×24 DIN	

Performance Data

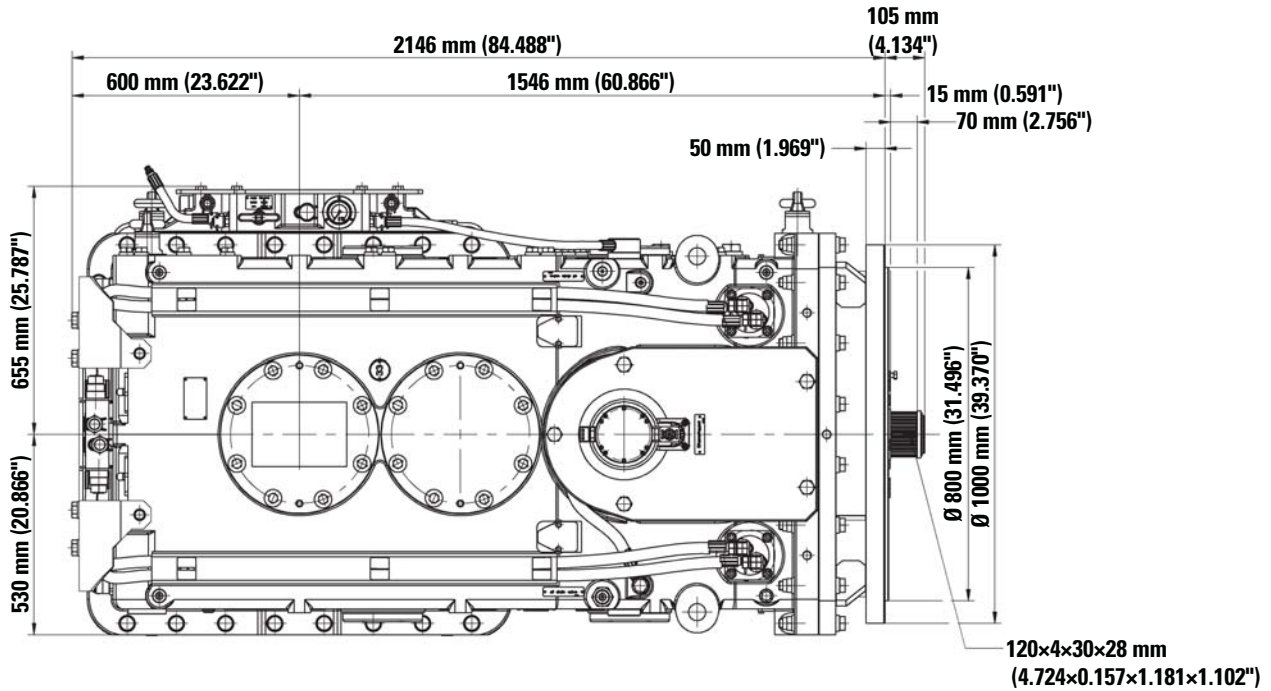
Rated Continuous Input Torque at 1,485 rpm and 1,782 rpm

	Continuous Input Torque T1 (n=1,485/1,782 rpm) (f=50/60 Hz)	Continuous Input Torque T1 (n=1,485/1,782 rpm) (f=50/60 Hz)
Nominal ratio (i) 33	6750 N·m	4,978.5 lbf·ft

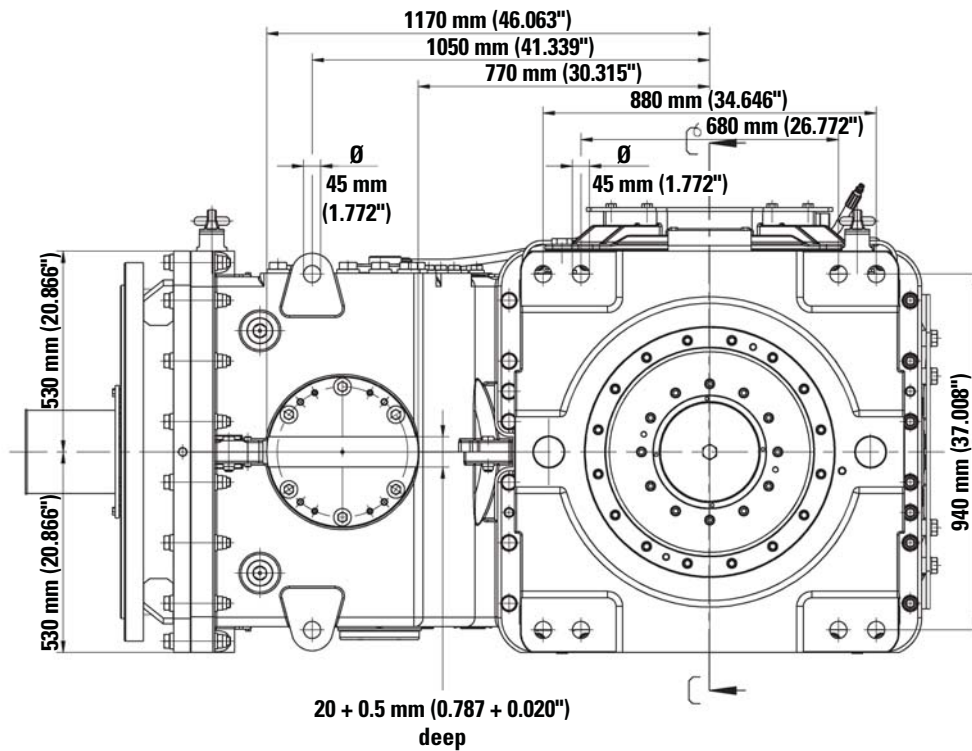
Rated Continuous Power at 1,485 rpm and 1,782 rpm

	Rated Continuous Power (n=1,485 rpm) (f=50 Hz)	Rated Continuous Power (n=1,782 rpm) (f=60 Hz)
Nominal ratio (i) 33	1050 kW	1680 hp

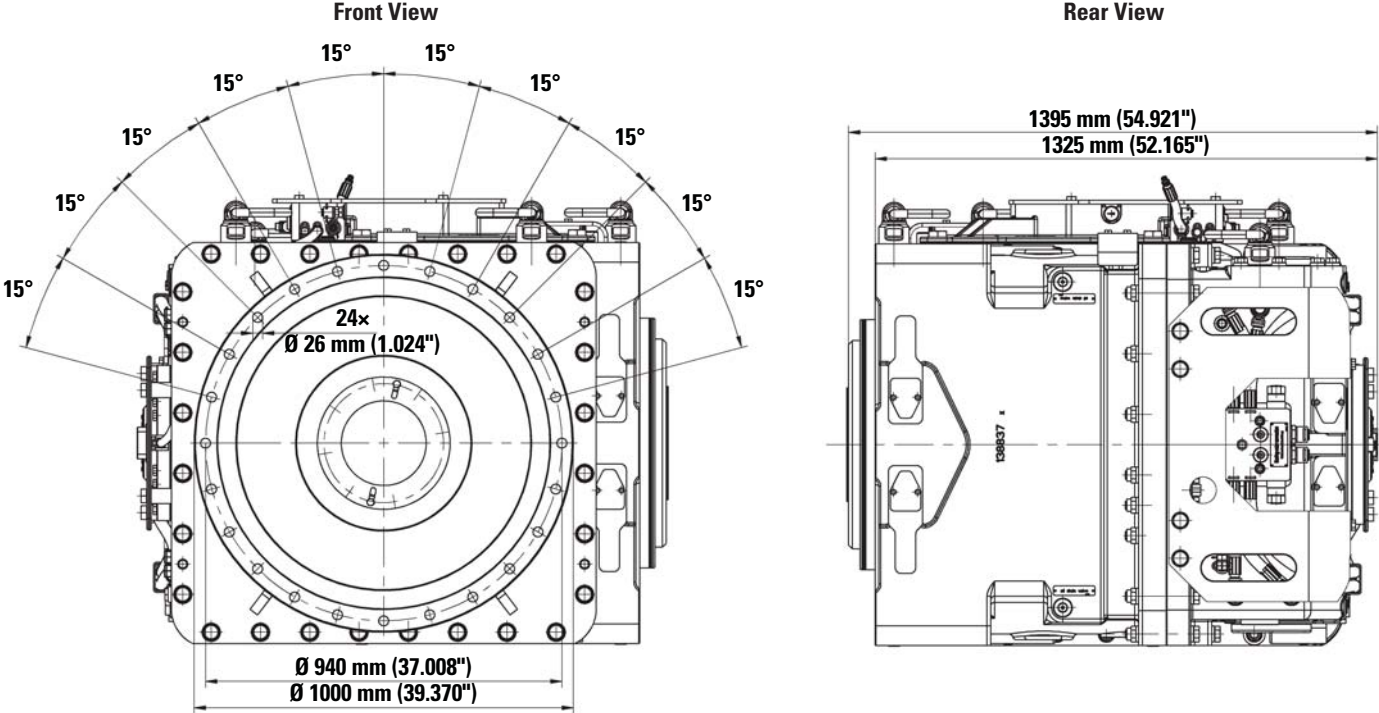
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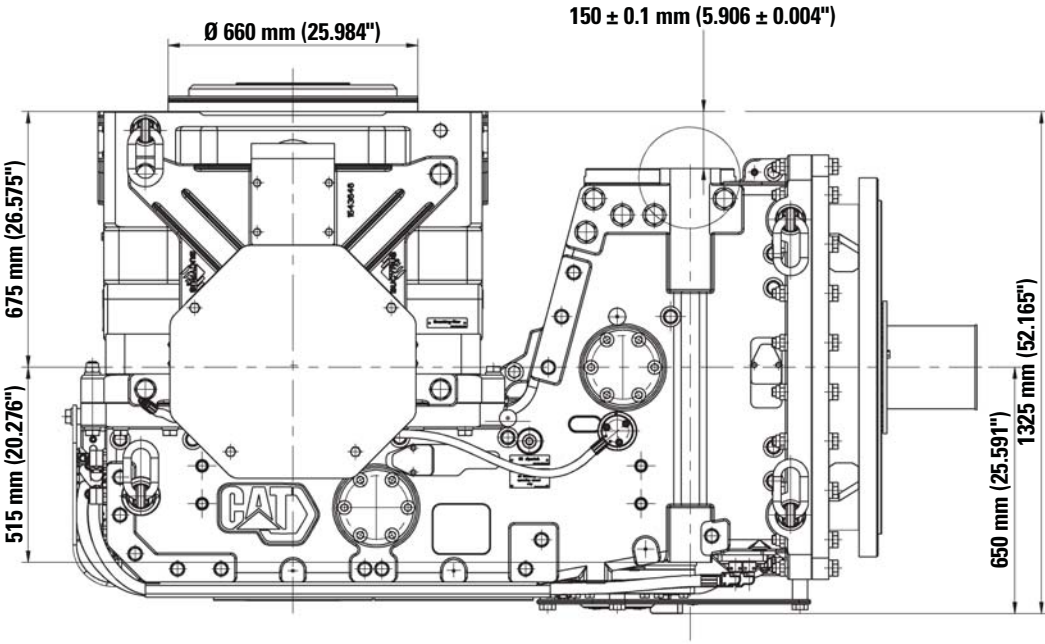
Dimensions – Side View #1 (All dimensions are approximate.)



Dimensions – Side View #2 (All dimensions are approximate.)



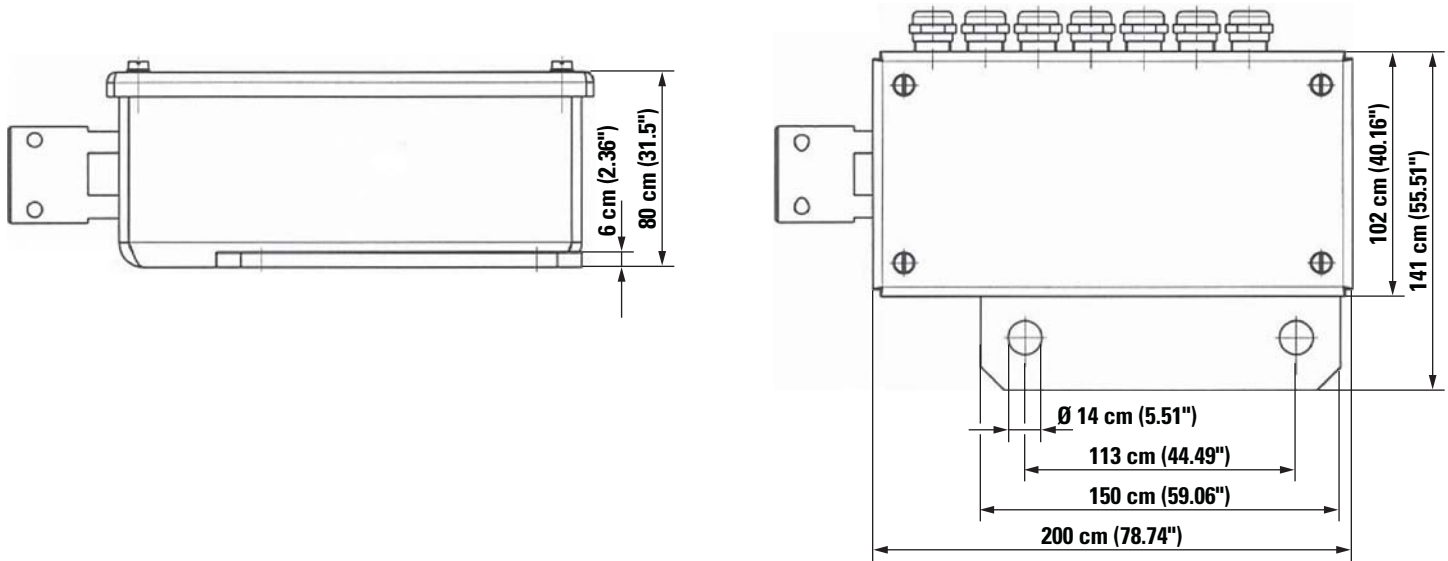
Dimensions – Front View and Rear View (All dimensions are approximate.)



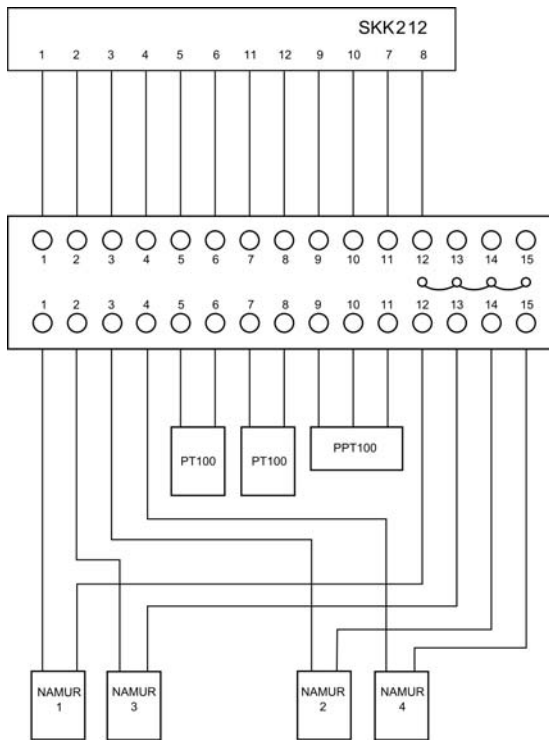
Dimensions – Top View (All dimensions are approximate.)

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Distributor Box Diagram



Gearbox Circuit Diagram



Terminals SKK212		Terminal Block	Sensors		
1	White	1	Blue	Namur 1	Output Speed
2	Brown	2			
3	Green	3	Blue	Namur 2	Input Speed
4	Yellow	4			
5	Grey	5	Brown	PT100	Gear Temperature
6	Pink	6	Green	PT100	Gear Temperature
11	Orange	7	Brown	PT100	Clutch Temperature
12	Transparent	8	Green	PT100	Clutch Temperature
9	Black	9	Brown	PPT100	Clutch Pressure
10	Purple	10	Yellow	PPT100	Clutch Pressure
7	Blue	11	White	PPT100	Clutch Pressure
8	Red	12	Brown	Namur 1	Output Speed
		14	Brown	Namur 2	Input Speed

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