



# CX31-P600

## Transmission with Pump Drives

### Petroleum



Image shown may not reflect actual transmission.

## FEATURES AND BENEFITS

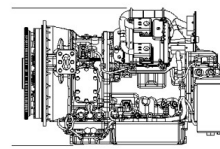
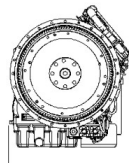
- CX31-P600 is the most advanced Cat® well service transmission and is designed specifically to meet the demands of this market.
- Lightweight with superior power-to-weight ratio
- Diagnostics via Cat Electronic Technician
- Integral pump drives available
  - Allows for two SAE B pads and two SAE C pads to direct mount on transmission
  - Additional options for rear PTO
- Advanced software specifically designed for the well service market.
- Integral options streamline service
  - Same warranty integral pump drives and rear PTO
  - One source supplier - one source service
- Rear PTO option increases application flexibility
- With more than 40 well service software features, CX31-P600 is the most advanced transmission available. Features include multiple modes of operation:
  - Auto Pumper
  - Manual Pumper
  - Workover/drawworks
  - Dynamic Transmission Output Control (DTOC)
- For all your petroleum power requirements, visit [www.cat.com/oilandgas](http://www.cat.com/oilandgas)

## SPECIFICATIONS

Gross Input Power .....	600 bhp (447 kW)
Gross Peak Input Torque .....	2025 lb-ft (2746 N•m)
Maximum Turbine Torque .....	2600 lb-ft (3525 N•m)
Rated Input Speed .....	2100 rpm
Maximum Input Speed .....	2500 rpm
Minimum Input Speed .....	600 rpm
Electrical System .....	12V or 24V
Gears	
Type.....	Planetary Spur
Forward/Reverse .....	6F/1R
Transmission Gear Ratios	
Gear.....	Ratio
1st .....	4.40
2nd .....	2.33
3rd .....	1.53
4th .....	1.00
5th .....	0.72
6th .....	0.61
1R .....	-3.97
Overall .....	7.21

## DIMENSIONS

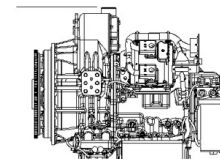
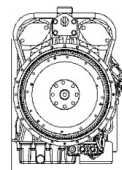
### Transmission with Side PTO



Weight (approx.)	1006 lbs (456 kg)
Overall Height (A)	28.3 in (719 mm)
Overall Width (B)	24 in (613 mm)
Overall Length (C)	43.2 in (1098 mm)
Length of Drive Train (D)*	36.2 in (920 mm)
Overall Length with Retarder Option	47 in (1203 mm)
Overall Weight with Retarder Option	1094 lbs (496 kg)

\*The length that is shown is with a standard 1810 companion flange.

### Transmission with Integral Pump Drives



Weight (approx.)	1320 lbs (598 kg)
Overall Height (A)	33.4 in (848 mm)
Overall Width (B)	24 in (613.4 mm)
Overall Length (C)	43.3 in (1100 mm)
Length of Drive Train (D)*	36.3 in (921 mm)
Overall Length with Retarder Option	47.4 in (1203 mm)
Overall Weight with Retarder Option	1405 lbs (637 kg)

\*The length that is shown is with a standard 1810 companion flange.

## OPTIONS

### CAT ENGINE FOR OPTIMIZED POWERTRAIN

C9 ACERT™, C11 ACERT, C13 ACERT, C15 ACERT, C18 ACERT (A & B ratings)

### TRANSMISSION ROTATION

Input rotation - counterclockwise  
Output rotation - counterclockwise  
(as viewed from rear)

### TORQUE CONVERTER

Lock-up clutch, torque converter drive in all gears  
Integral to transmission  
Stall torque ratio  
2.669 (< 400 bhp engine)  
2.324 (> 400 bhp engine)

### CLUTCHES

Clutches - Electro-hydraulic fully modulated, oil cooled, multidisc  
Clutch modulation control - Cat Electronic Clutch Pressure Control (ECPC)

### INSTALLATION CONNECTIONS

2 oil cooler lines  
1 electrical connector

### OIL SYSTEM

Cat Transmission/Drive Train Oil - 4 (TDTO)  
Sump oil temperatures  
Continuous - 194°F (90°C)  
Maximum Intermittent - 210°F (99°C)  
Maximum converter outlet oil temperature - 250°F (121°C)  
Hydraulic fill capacity - 6.5 gal (25 L)  
subject to cooler size, lines, and installation - initial fill may be greater  
Filter Type  
Direct Mount - standard  
Remote mount - optional

### MOUNTINGS

Input (flywheel) - SAE #1 dry flywheel housing  
Side supports - two SAE #2 pads  
Output - 1710 yoke, 1810 yoke, 1810 companion flange, ISO 8667-T180 flange  
Remote-mount ECU option  
Remote-mount filter option

## POWER TAKE-OFF (PUMP AUXILIARY DRIVE)

	PTO Drives (Basic)	Integral PTOs (Optional)	Rear PTO (Optional)
Location	1 o'clock and 8 o'clock; as viewed from rear	1 o'clock and 11 o'clock; as viewed from rear	5 o'clock as viewed from rear
Mounting Type	10 bolt	Front: 2 SAE B Rear: 2 SAE C	8 bolt*
Rated Torque	Single: 700 lb-ft (950 N•m) Total: 1200 lb-ft (1630 N•m)	Single: 500 lb-ft (678 N•m) Total: 688 lb-ft (933 N•m)	1000 lb-ft (1360 N•m)
Rotation	Same as engine	Same as engine as viewed from rear	Opposite of engine
Ratio	1:1	1.09:1	1.25:1

\*SAE pump adapters and drive flanges available from third party suppliers.