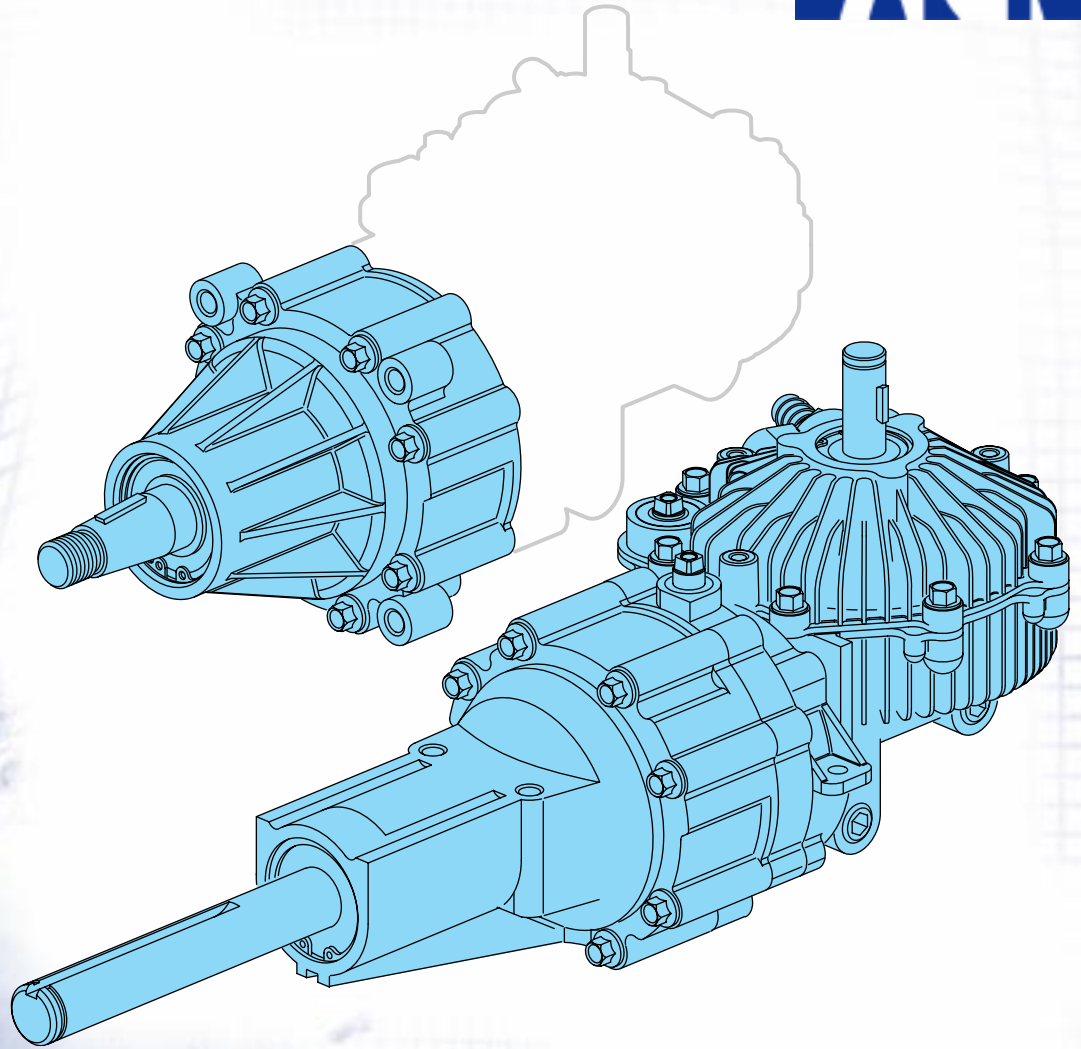


Hydraulics

Specialty Hydraulic Solutions

Eaton®
Hydrostatic Transaxles

No. 11-701
August 1998



Models 778 Right Angle Transaxle

We Manufacture

Solutions

Model 778

Eaton Hydrostatic Transaxles

Transaxles for the ZTR (Zero Turn Radius) type vehicles

Eaton Models 778 use the time proven radial ball piston design for both pumps and motors. The 778 is an assembly with one pump and one motor. Two assemblies, are required on each vehicle.

Eaton Ball Piston Design

The simple radial ball piston design provides high efficiency and long life. It is environment and temperature tolerant. This means that the transaxle is resistant to damage.

Eaton Transaxles

Eaton hydrostatic transaxles have integral pump, motor and axle housing with planetary gears using state-of-the-art materials, to provide a strong, long lasting, compact drive package.

These Transaxles Provide:

- Smooth Performance — Infinitely adjustable control, delivering smooth operation in both forward and reverse.
- Easy Operation — One control provides both forward and reverse, plus speed. No clutch, no synchronizer, no shifting.
- Hydrostatic Dynamic Braking — In all kinds of weather, all kinds of terrain, Eaton hydros provide dynamic braking in either forward or reverse.
- Quiet Operation — Equipped with special pistons to reduce noise and vibration no matter how tough the job.
- Trouble Free Performance — A proven, tested design ensures years of reliable operation with little or no maintenance.

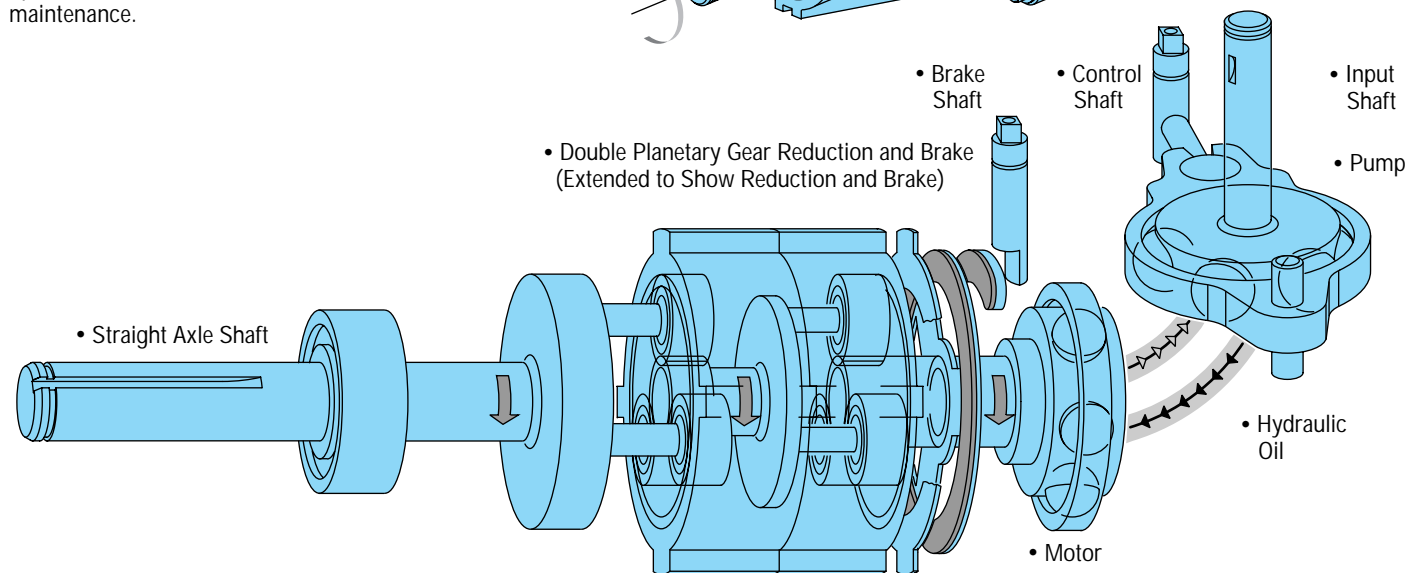
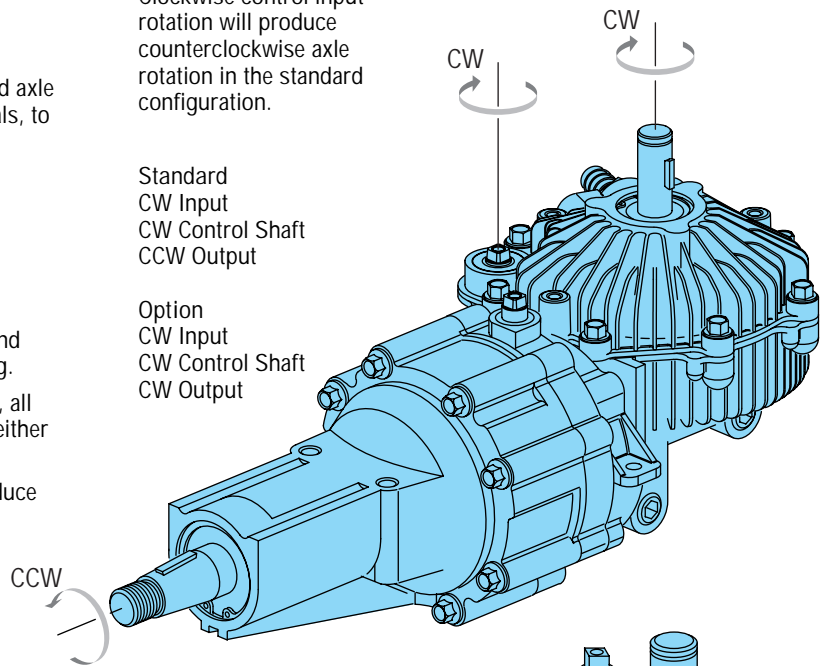
Transaxles Also Feature:

- Environmentally protected wet type parking / emergency brake, which can be used for full emergency stops, in addition to the dynamic braking capability of the hydrostatic transmission.
- Vertical input shaft which allows use with today's popular vertical shaft engine.
- 1 inch diameter axle shaft supported with ball bearings provides high axle loading capability.
- Installation mounting points for axle, torsional load, and linkage.

Clockwise control input rotation will produce counterclockwise axle rotation in the standard configuration.

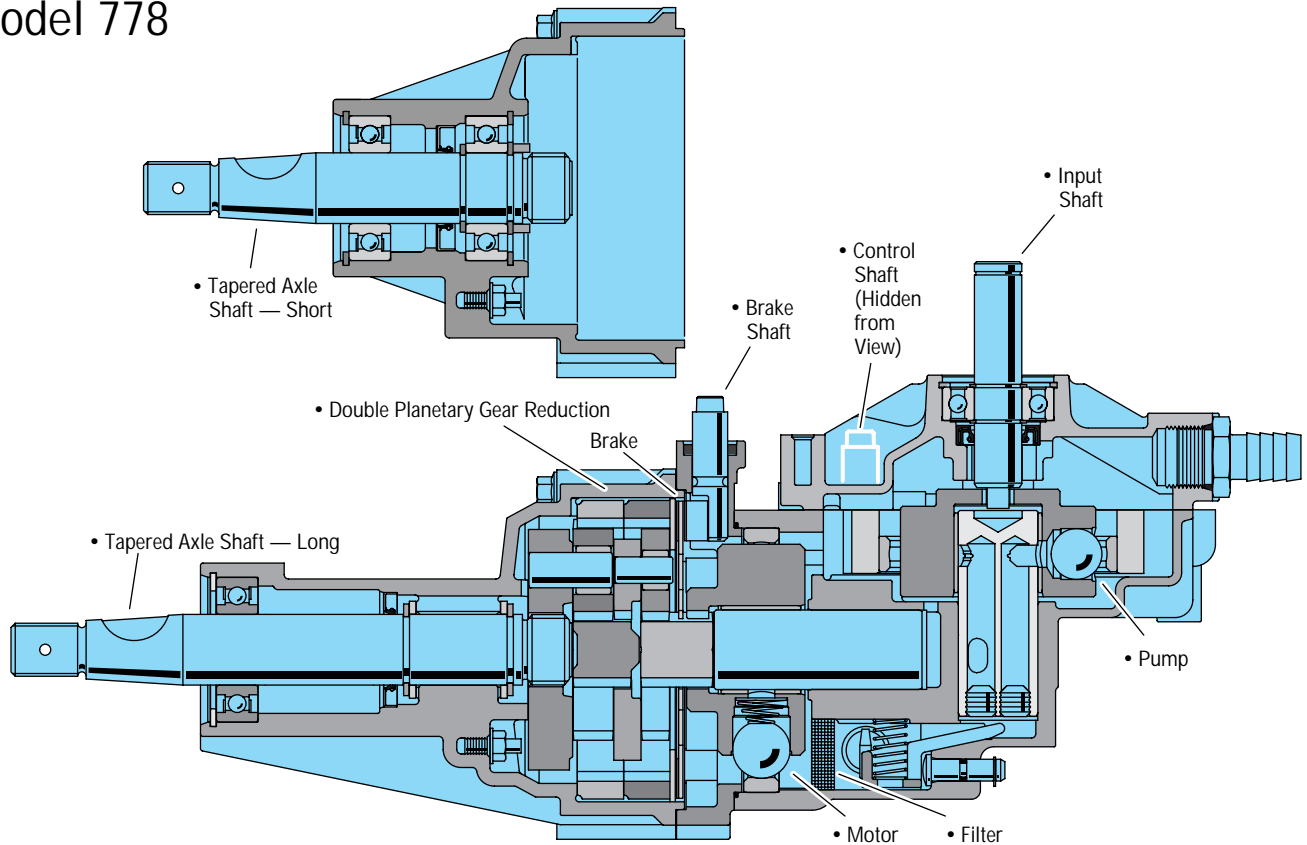
Standard
 CW Input
 CW Control Shaft
 CCW Output

Option
 CW Input
 CW Control Shaft
 CW Output



This catalog information was current at date of printing, but may be subject to change.

Model 778



This compact package includes one radial ball piston pump and one radial ball piston motor, with a set of double planetary gear reduction. One piece construction forms a strong frame member for the vehicle. It has a single input control.

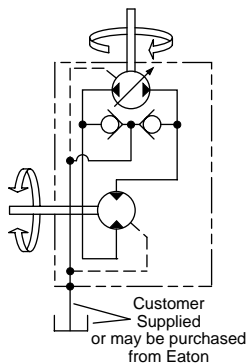
Base Unit Description:

Tapered Shaft Product Number 778-001 Long Axle
778-012 Short Axle

Includes 16:1 final drive ratio, CW input shaft rotation, vertical input orientation, environmentally protected wet type parking brake, barb fittings for external expansion tank (see table below), 1 inch dia. output shaft tapered and push (dump) valve.

5/8 inch barb fitting 778-001 — 45° fitting*
778-012 — Straight fitting*

*Other fittings or attached Expansion tank available.



Combined Operating Specifications

Horsepower, Input — Kw [HP] (per side)	2,3 [3]
Speed — Input	3200 RPM Max.
— Output	0-121 RPM
Axle Torque — Nm [lb-in] (per side)	217 [1920] Continuous
(26:1 Final Drive w/16:1 Gears)	304 [2687] Intermittent
	390 [3455] Peak
Max. Weight Over Axle — kg [lb]	181 [400] (per side)
Max. Operating Temp. — °C [°F]	82° C [180° F]
Max. Case Pressure —Bar [PSI]	,8 [12] Intermittent
	,5 [7] Continuous

Fluid Capacities

Transaxle Case	700 mL [23.7 oz] (each)
Recommended Fluids	(See Eaton Bulletin No. 3-401) — factory filled with premium hydraulic fluid

Oil Filter

Internal

Control Specifications

Control Torque —Nm [lb-in]	9 [80]
(@ 113 Nm [1000 in-lb] Axle Torque and Full Stroke)	
Control Shaft Rotation Max.	
Forward	19°±2° 15'
Reverse	19°±2° 15'

Note: With (customer supplied) control lever mounted parallel with the output shaft (axle), forward motion of the lever yields forward motion of the vehicle (Standard Configuration).

Brake

	Parking/Emergency Brake Included
Axle Braking Torque	204 Nm [150 lb-ft] @ 3,9 Nm [2.9 lb-ft] brake lever input

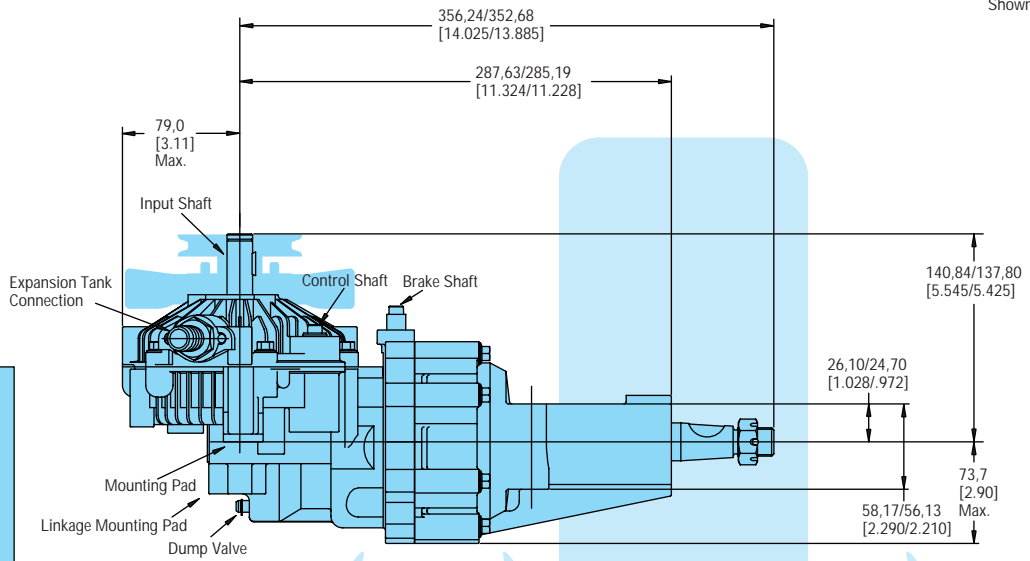
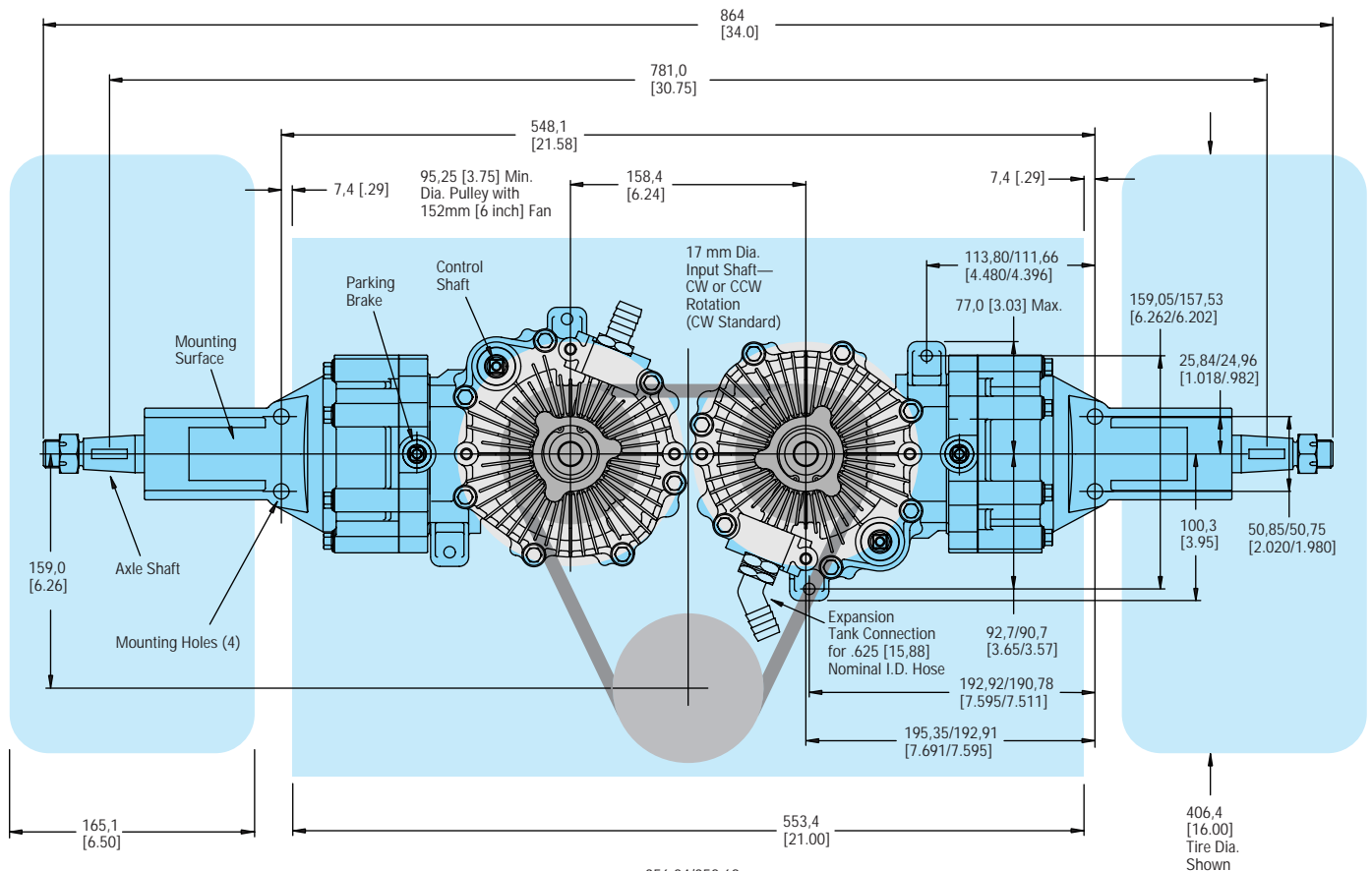
Options

- Integrated Reservoir
- Input Rotation
- Control Shaft Rotation
- 23:1 Gear Ratio
- 45° 5/8 inch Fitting
- 90° 5/8 inch Fitting
- Fan and Pulley

Net Weight

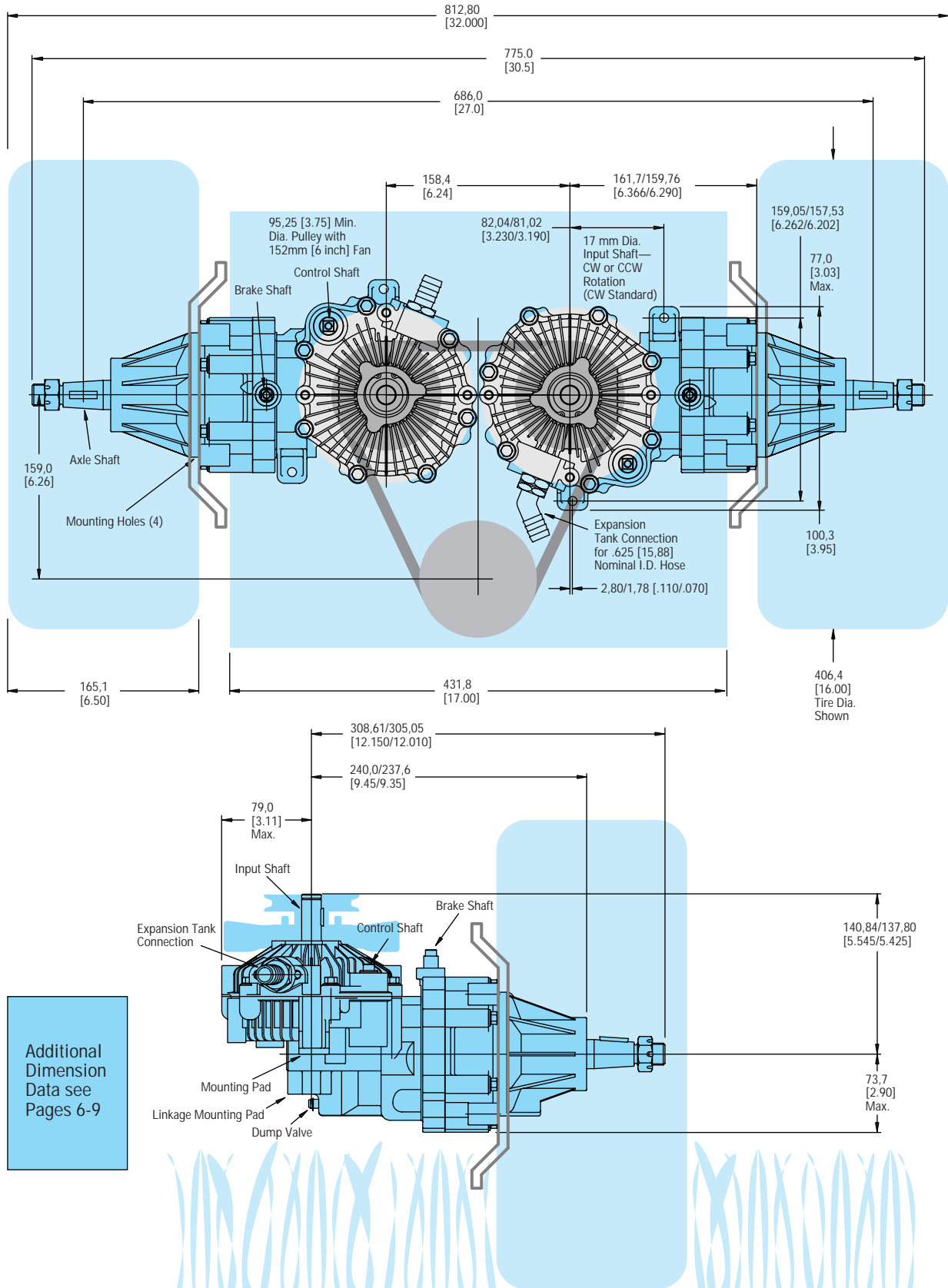
12 kg [26 lbs] (each)

Models 778 (Long) Dimension Data

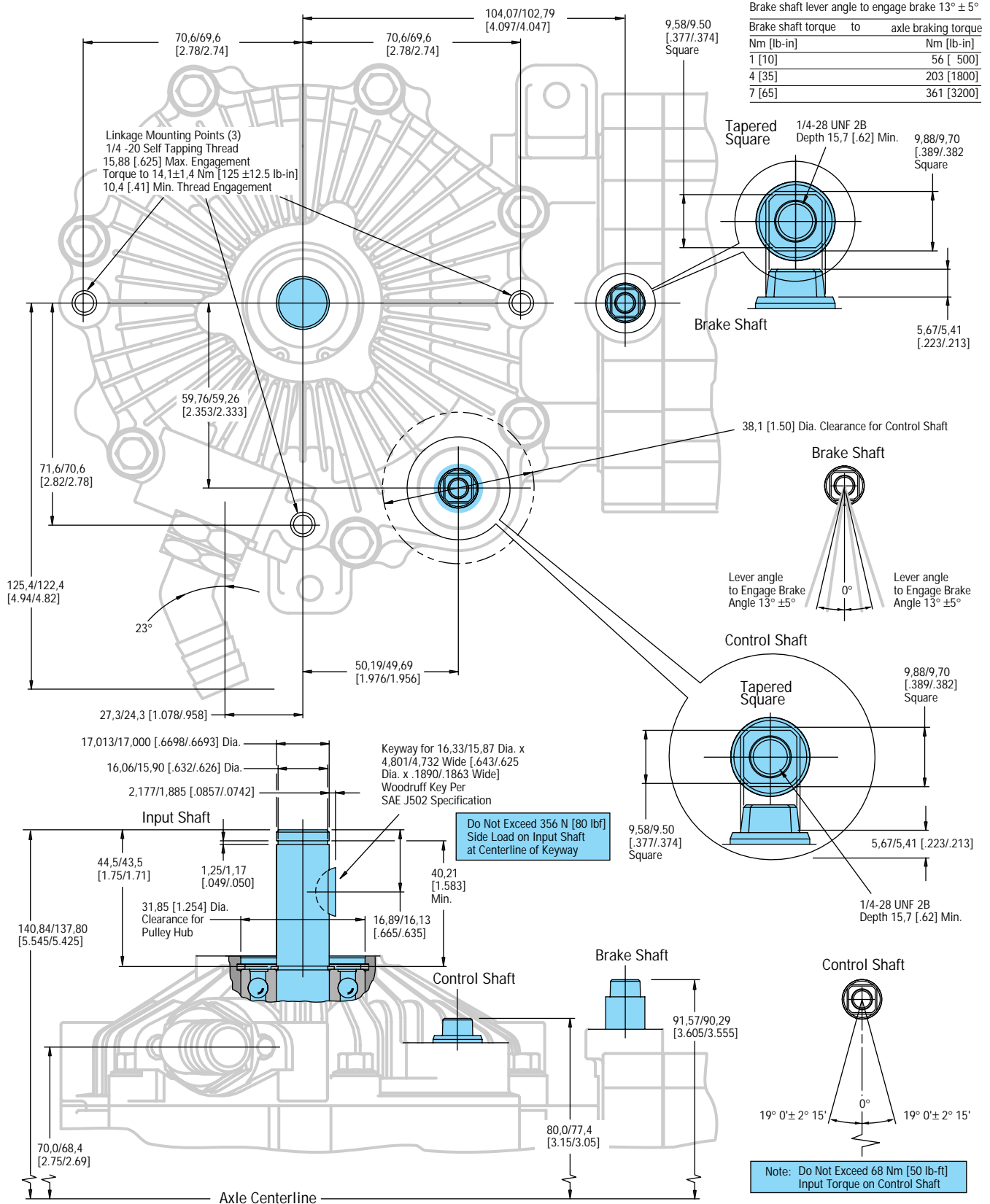


Additional Dimension Data see Pages 6-9

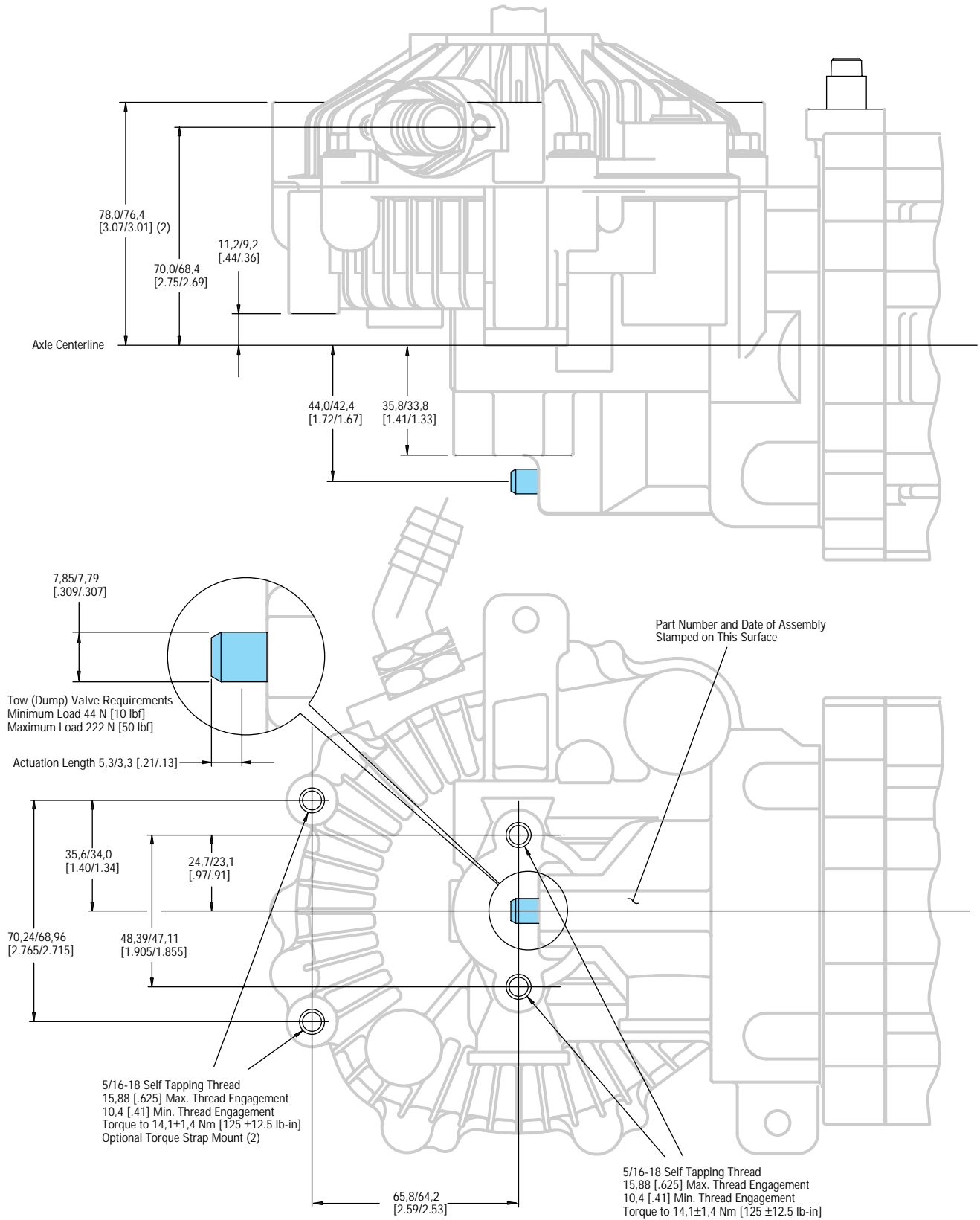
Models 778 (Short) Dimension Data



Model 778 Dimension Data



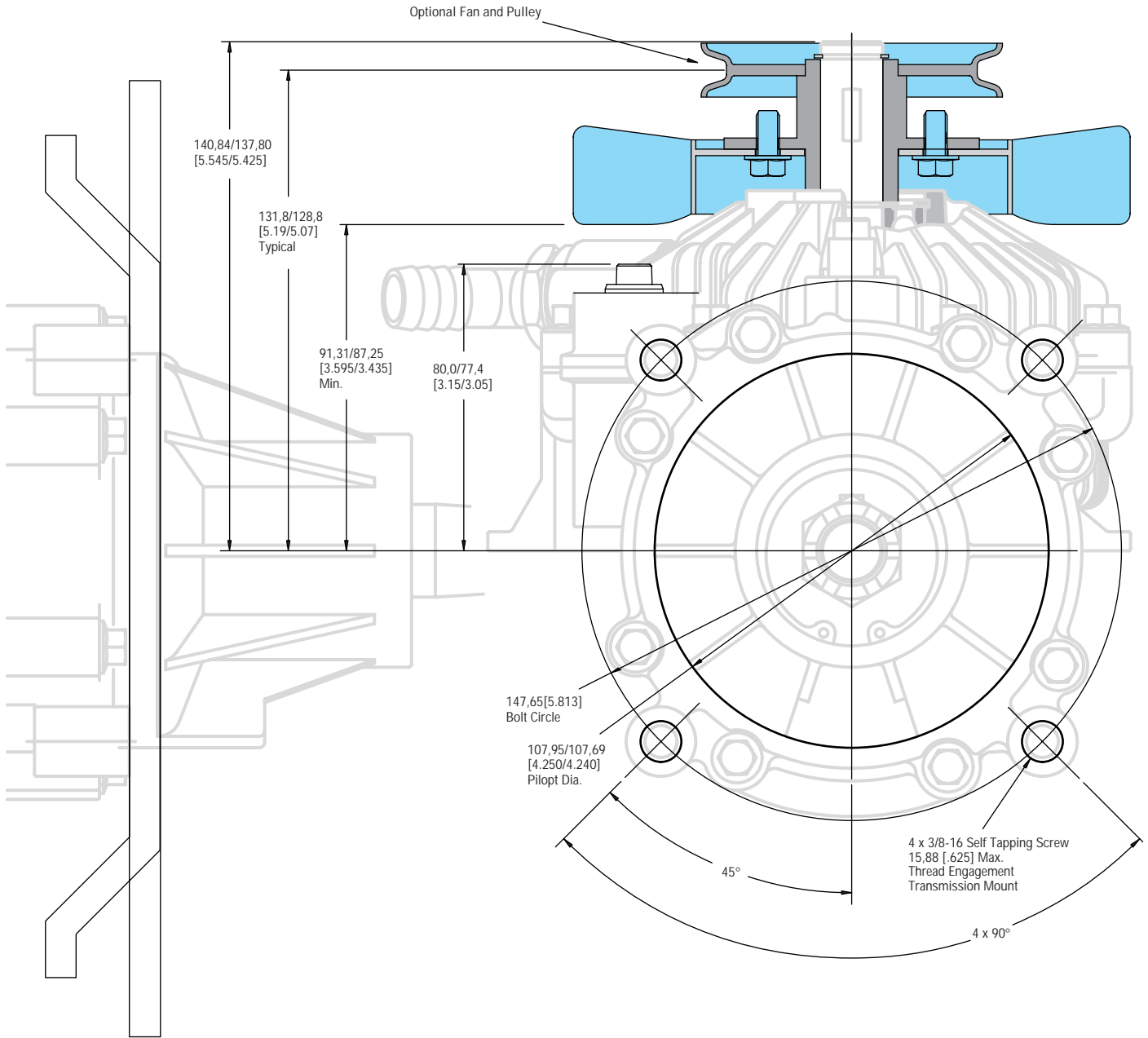
Model 778 Dimension Data



Model 778 Dimension Data

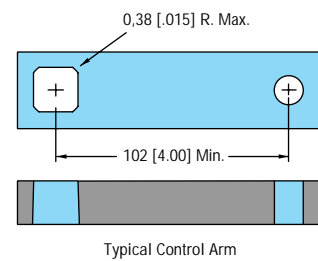
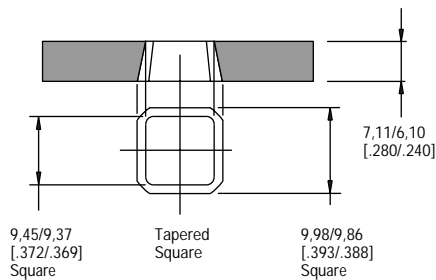
Do Not Exceed 320 N [72 lbf] Belt Load on Input Pulley

CW Shaft Rotation—View from Shaft End

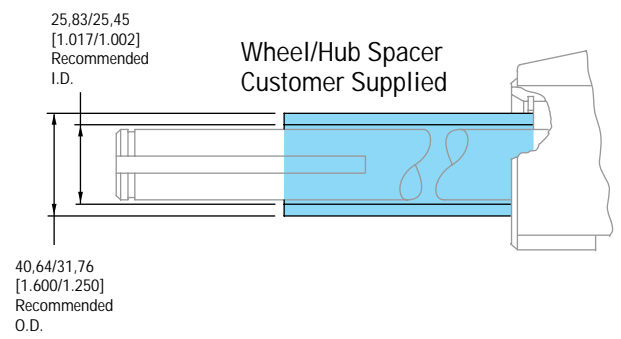
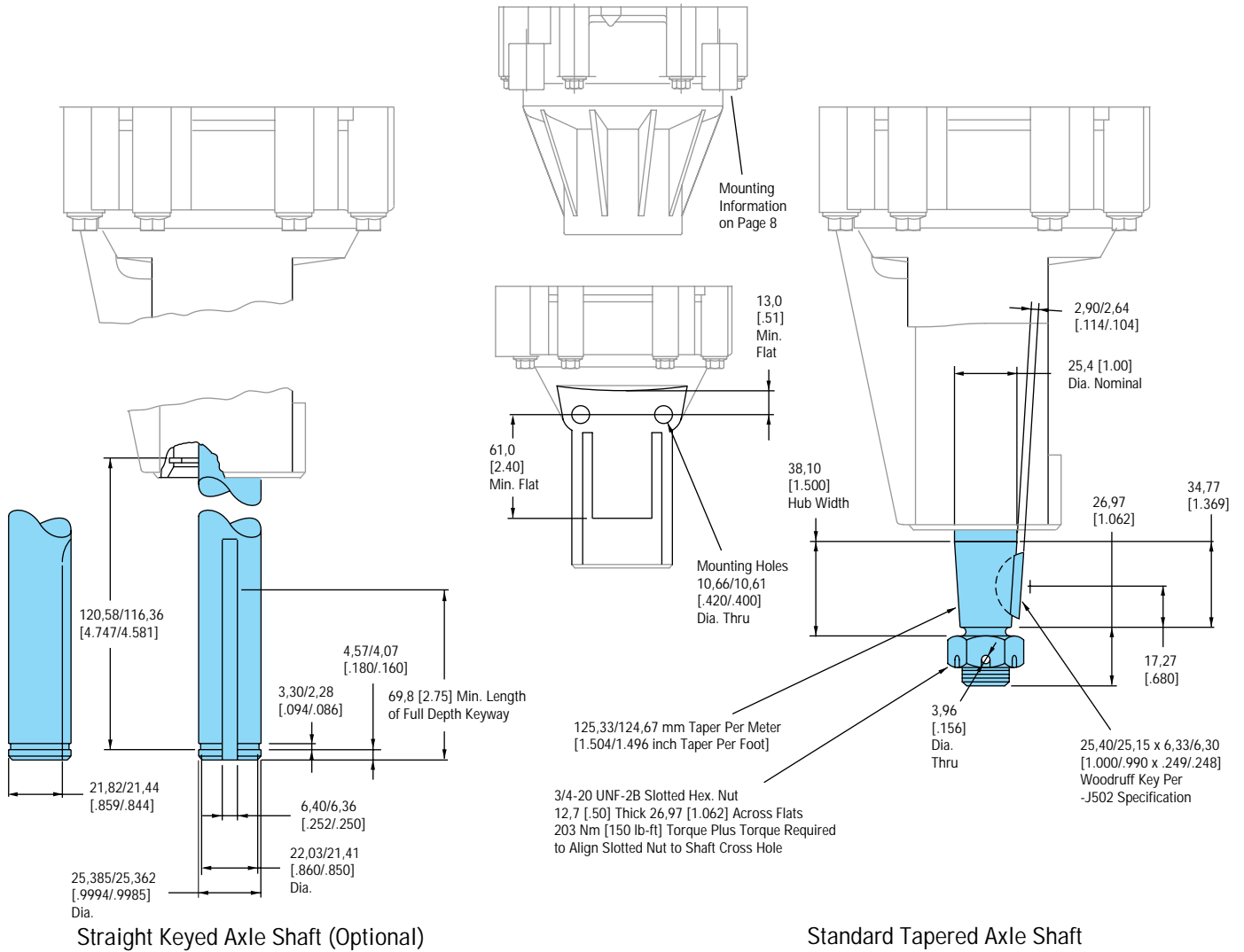


Control Arm Dimensions for 778 Transaxles

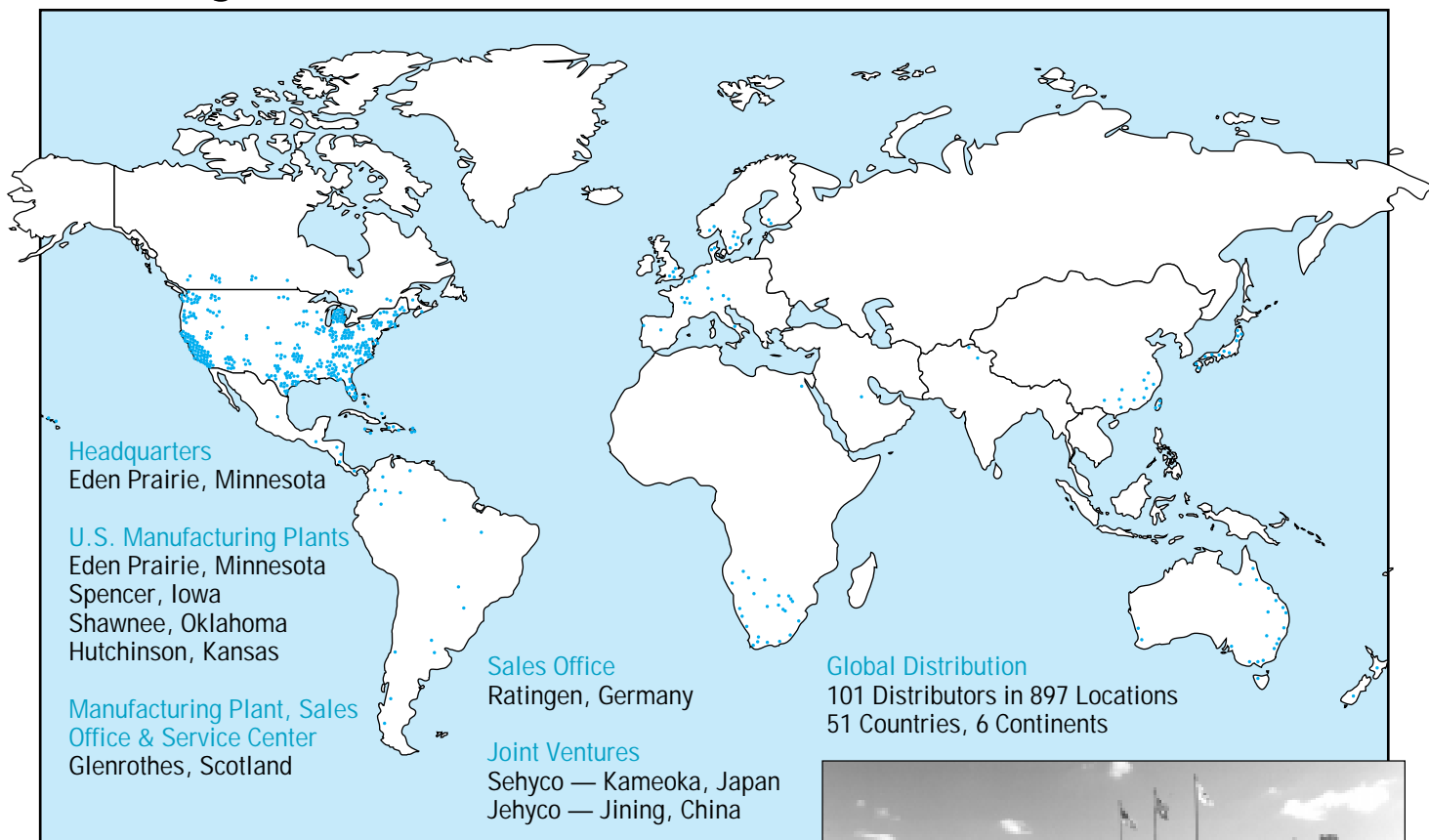
Control arms for the Transaxle must be manufactured by the customer because of the variety of control mechanisms that can be used on applications.



Model 778 Dimension Data



Serving Customers Worldwide



The Hydraulics Division of Eaton Corporation

The Eaton Hydraulics Division is your one-stop source for all your hydraulic design and application needs. From world-class engineering capabilities in system design assistance to comprehensive service and technical support after the sale, we are committed to one clear objective — to help assure your complete satisfaction with our products.



Hydraulics Division Headquarters, Eden Prairie, Minnesota

The Hydraulics Division manufactures and globally markets a complete line of reliable, high-efficiency hydraulic components and systems, including:

- Hydrostatic Transmissions
- Electronic Controls and Systems
- Axial Piston Pumps & Axial Motors
- Radial Ball Piston Pumps
- Fully Fluid-Linked Hydrostatic Power Steering
- Char-Lynn® Gerotor & Geroler® Low Speed/High Torque Motors
- Valves, Cylinders, Gear Pumps, & Gear Motors.

Backed by the most extensive distributor network in the fluid power industry, the Eaton Hydraulics Division has the resources to meet your needs. The Division has four manufacturing plants in the U.S., and one in Scotland. Joint ventures in Japan and China complete the global manufacturing network. All told, the Division currently employs more than 2,000 people with nearly 1,000,000 square feet of manufacturing space, all dedicated to quality, performance and timely response to your design and application needs.

Major Markets Served

- Agriculture
- Construction
- Fishing
- Lawn & Garden
- Mining
- Marine
- Industrial
- Lumber
- Food Processing

Eaton Corporation

Founded in 1911 to manufacture truck axles, Eaton now produces more than 40,000 different products, made in 24 countries on five continents. To serve your current and emerging business needs, Eaton Corporation has over 52,000 employees in 150 manufacturing sites worldwide.

Today, Eaton Corporation is one of the world's premier producers of electronic and electrical controls and vehicle components. With sales approaching \$7 billion annually, Eaton is ranked among the top 100 industrial companies in the United States, as well as one of the top 150 worldwide.

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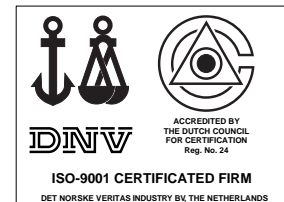
Eaton Corporation is a global manufacturer of highly engineered products that serve industrial, vehicle, construction, commercial and semiconductor markets. Principal products include electrical power distribution and control equipment, truck drivetrain systems, engine components, hydraulic products, ion implanters and a wide variety of controls. Headquartered in Cleveland, the company has 49,000 employees and 143 manufacturing sites in 26 countries around the world. Sales for 1997 were \$7.6 billion.

Information contained in this catalog is accurate as of the publication date and is subject to change without notice. Performance values are typical values. Customers are responsible for selecting products for their applications using normal engineering methods.

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