Model HP300I

HYDRAULIC POWER TAKE-OFF

HP300I

Quality is Standard

- Hydraulically actuated
- Ease of installation
- Remote actuation
- Clutch adjustment not required

At the heart of the HP300I is an oil-filled, multiple disc, hydraulically-actuated self-adjusting clutch. Twin Disc's patented actuating technology facilitates seamless engagements and provides extraordinary durability resulting in long life and low maintenance.

Features and Benefits

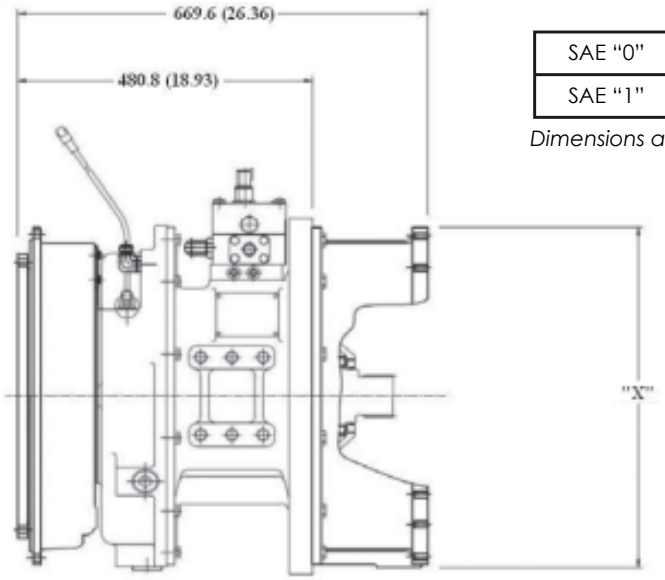
- Modular design
- Up to 1050 hp
- Torsional coupling input
- SAE #1, #0

SPECIFICATIONS – HP300I

Model Number	Maximum Torque Rating* Nm (lb-ft)	Maximum Speed	Weight kg (lbs)
HP300I	4070 (3000)	2100	586 (1289)

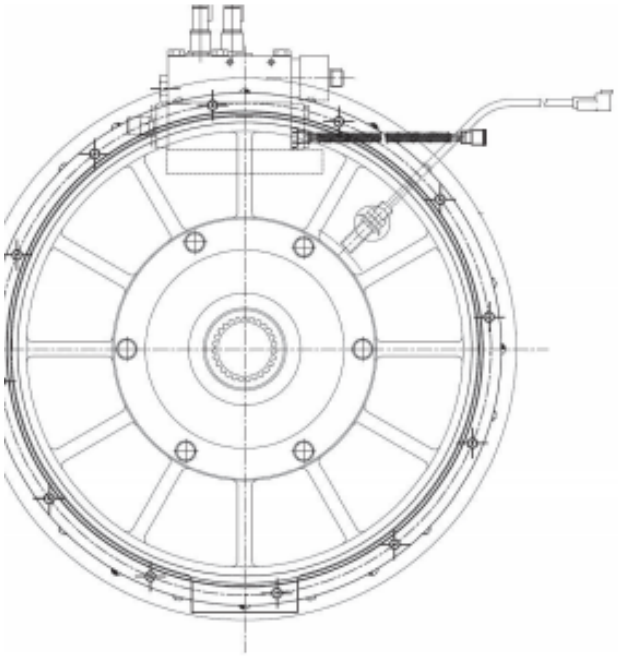
** Actual rating depends on application, prime mover and shock loads. Contact Twin Disc Application Engineering for load classification and assistance in the selection of the correct hydraulic PTO.*

HP300I



	"X"
SAE "0"	711.2 (28.00)
SAE "1"	552.4 (21.75)

Dimensions are in mm (inches)



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TORSIONAL VIBRATION
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Bulletin-HP300

Printed in the USA - 08/2012

Model HP600

HYDRAULIC POWER TAKE-OFF

HP600

Quality is Standard

- Optional sintered iron plates
- No pilot bearing
- Hydraulically actuated
- Straddle bearing design
- Creates 25% higher torque capacity
- Ease of installation
- Remote actuation
- Clutch adjustment not required
- Allows for maximum side load capability

SPECIFICATIONS – HP300I

Model Number	Maximum Torque Rating Nm (lb-ft)	Maximum Safe Speed	Maximum Pulley Diameter	Maximum Pulley Length (Grooves)	Weight kg (lbs)
HP600S – Short	8677 (6400)	2200	16.00	12.62 (10)	586 (1289)
HP600S – Long	8677 (6400)	2200	16.00	14.38 (12)	632 (1390)

LOAD CLASSIFICATIONS BASED UPON AGMA LOAD CHARACTERISTICS

PRIME MOVER	DURATION OF SERVICE	DRIVEN MACHINE LOAD CLASSIFICATIONS		
		UNIFORM	MODERATE SHOCK	HEAVY SHOCK
Electric motor	Up to 3 hours per day 3–10 hours per day Over 10 hours per day	1.00 1.00 1.25	1.25 1.25 1.50	1.50 1.75 2.00
Multi-cylinder internal combustion engine	Up to 3 hours per day 3–10 hours per day Over 10 hours per day	1.00 1.25 1.50	1.25 1.50 1.75	1.75 2.00 2.25
Multi-cylinder internal combustion engine with high torque rise	Up to 3 hours per day 3–10 hours per day Over 10 hours per day	1.50 1.75 2.00	1.75 2.00 2.25	2.25 2.50 2.75
Single cylinder internal combustion engine	Up to 3 hours per day 3–10 hours per day Over 10 hours per day	1.25 1.50 1.75	1.50 1.75 2.00	2.00 2.25 2.50

All clutch engagements to be with prime mover below 1000 RPM. High inertia loads may require use of larger clutch. Contact Twin Disc application engineering department for assistance.

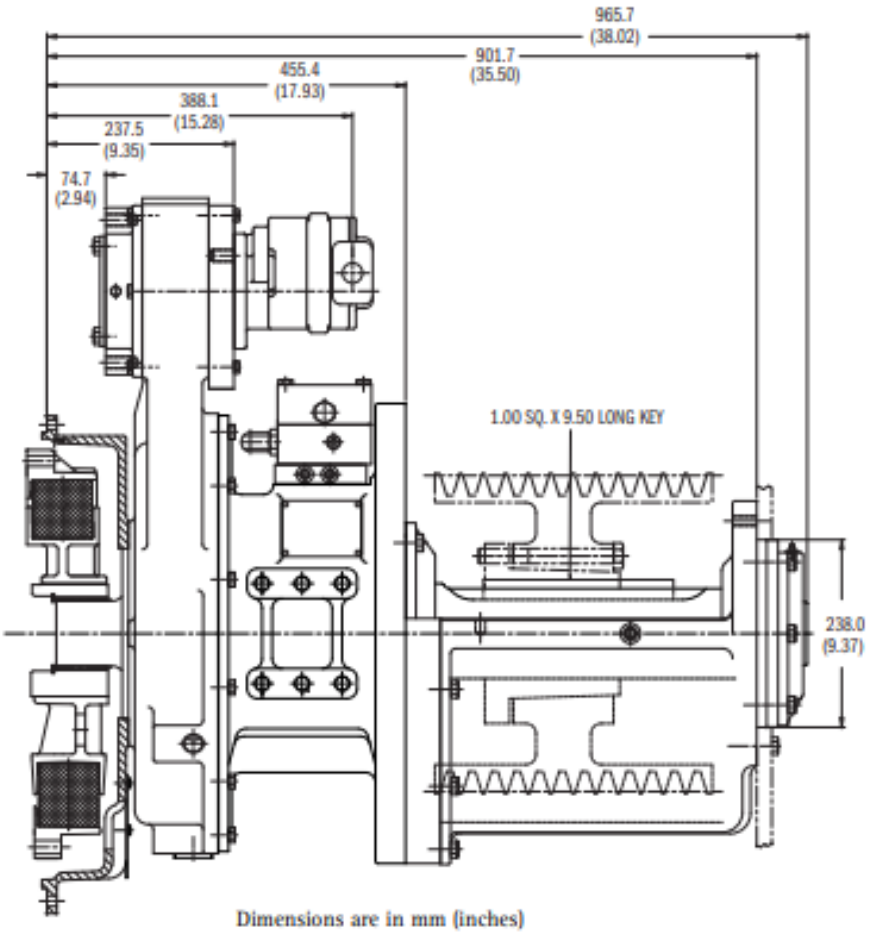
To calculate application torque:

$$\frac{5252 \times HP}{\text{Engine RPM}} = \text{Torque}$$

Torque x Load Factor = Application Torque

Use load factor from chart at left

HP600



Dimensions are in mm (inches)

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STANDARD AND STRETCH SIDE LOAD CAPACITY VALUES

S DIMENSION mm (in)	2100 RPM Max. Load Nm (lbs)	1800 RPM Max. Load Nm (lbs)	1200 RPM Max. Load Nm (lbs)
127.0 (5.0)	67165 (15100)	70728 (15800)	79619 (17900)
152.4 (6.0)	73837 (16600)	77395 (17400)	87181 (19600)
177.8 (7.0)	81843 (18400)	85846 (19300)	96966 (21800)
203.2 (8.0)	83622 (18800)	87626 (19700)	97856 (22000)
228.6 (9.0)	78730 (17700)	82288 (18500)	92074 (20700)
254.0 (10.0)	70723 (15900)	73837 (16600)	82510 (18550)
279.0 (11.0)	64051 (14400)	66720 (15000)	74726 (16800)

The following general formula should be used for determining the actual applied load:

WHERE **L =** Actual Applied Load (lbs)
N = Shaft Speed (RPM)
D = Pitch Diameter (in) of Sheave, etc.
F = Load Factor
1.0 for Chain or Gear Drive, 1.5 for Timing Belts, 2.5 for All V Belts, 3.5 for Flat Belts
LF = 2.1 for Reciprocating Compressors and other Severe Shock Drives and 1.8 for Large Inertia Type Drives (i.e. crushers, chippers, planers, etc.)

$$L = \frac{126{,}000 \times HP}{N \times D} \times F \times LF$$

Compound Drives and Power Engaged Power Take-Off applications must have written factory review.

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TD-Bulletin-HP600

Printed in the USA - 04/2007

Model HP610S

HYDRAULIC POWER TAKE-OFF

HP610S

Quality is Standard

- No pilot bearing
- Hydraulically actuated
- Straddle bearing design
- Ease of installation
- Remote actuation
- Clutch adjustment not required

At the heart of the HP610S is an oil-filled, multiple disc, hydraulically-actuated self-adjusting clutch. Twin Disc's patented actuating technology facilitates seamless engagements and provides extraordinary durability resulting in long life and low maintenance.

Features and Benefits

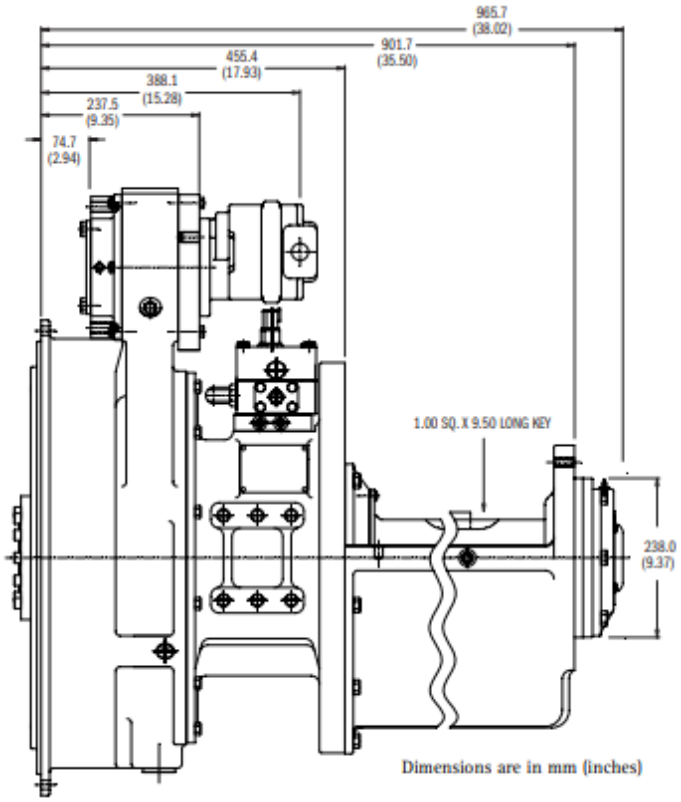
- Modular design
- Up to 1050 hp
- Side load (shown)
- Four live pump pads – 300 hp each, 480 hp total
- Torsional coupling input
- SAE #1, #0
- 18˝ diameter sheave housing rotates 360°
- Charge pump included

SPECIFICATIONS – HP610S

Model Number	Maximum Torque Rating Nm (lb-ft)	Maximum Safe Speed	Maximum Pulley Diameter	Maximum Pulley Length (Grooves)	Weight kg (lbs)
HP610S – Short	4070 (3000)	2100	18.00	12.62 (10)	586 (1289)
HP610S – Long	4070 (3000)	2100	18.00	14.38 (12)	632 (1390)

** Actual rating depends on application, prime mover and shock loads. Contact Twin Disc Application Engineering for load classification and assistance in the selection of the correct hydraulic PTO.*

HP610S



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STANDARD AND STRETCH SIDE LOAD CAPACITY VALUES

S DIMENSION mm (in)	2100 RPM Max. Load Nm (lbs)	1800 RPM Max. Load Nm (lbs)	1200 RPM Max. Load Nm (lbs)
127.0 (5.0)	67165 (15100)	70728 (15800)	79619 (17900)
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279.0 (11.0)	64051 (14400)	66720 (15000)	74726 (16800)

The following general formula should be used for determining the actual applied load:

$$L = \frac{126{,}000 \times HP}{N \times D} \times F \times LF$$

WHERE **L =** Actual Applied Load (lbs)
N = Shaft Speed (RPM)
D = Pitch Diameter (in) of Sheave, etc.
F = Load Factor
1.0 for Chain or Gear Drive, 1.5 for Timing Belts, 2.5 for All V Belts, 3.5 for Flat Belts
LF = 2.1 for Reciprocating Compressors and other Severe Shock Drives and 1.8 for Large Inertia Type Drives (i.e. crushers, chippers, planers, etc.)

TORSIONAL VIBRATION
Responsibility for ensuring that the torsional compatibility of the drive train is satisfactory rests with the assembler of the drive and driven equipment, regardless of whether Twin Disc supplies the flexible input coupling or it is customer supplied. Torsional vibration analysis can be made by the engine builder, independent consultants or others. Twin Disc is prepared to assist in finding solutions to potential torsional problems that relate to the Twin Disc supplied equipment.
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TD-Bulletin-HP610S

Printed in the USA - 4/2014

HP1200

HYDRAULIC POWER TAKE-OFF

HP1200

The HP1200 is an oil-filled, multiple disc, hydraulicallyactuated self-adjusting clutch. The HP1200 has been developed with a number of unique features that offer reliability, productivity and power, including: integral mechanical brake release, optional integrated reservoir and standard hydraulic gear pump. The HP1200 has been designed for a wide range of heavy-duty applications including crushers, grinders, mulchers, dredgers, heavy-duty drills and many others.

FEATURES & BENEFITS:

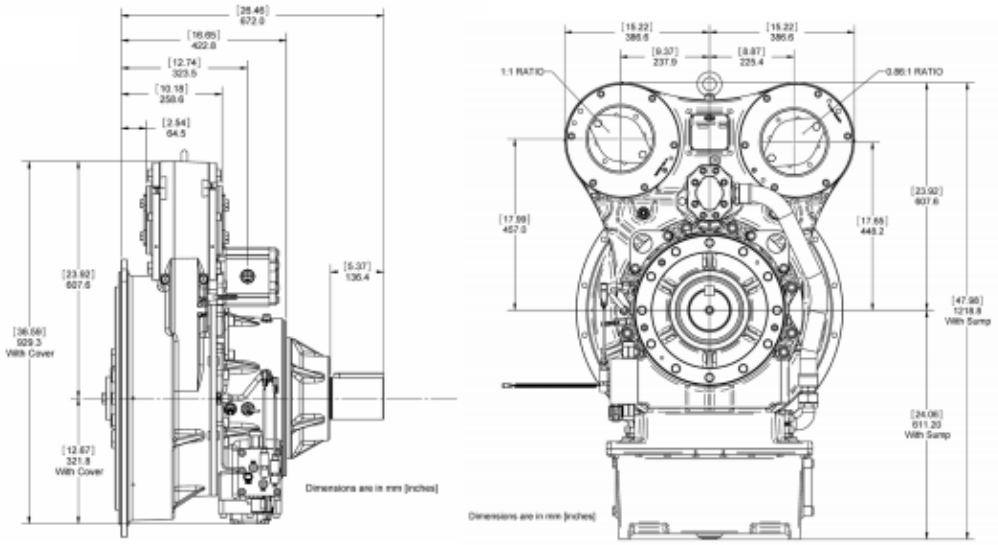
- Hydraulically actuated and self-adjusting wet clutch
- Suitable for in-line and side-load applications
- Advanced control system for smooth engagement
- Remote actuation via J1939 or switch input
- No pilot bearing
- High side load capability
- Maximum power rating 1243 HP @ 1800 rpm
- Two towers with two pump pads each
  - 400 HP maximum capacity per tower
  - 550 HP maximum capacity for both towers
- Available pump pads:
  - SAE “A” • SAE “B” • SAE “C” • SAE “D” • SAE “E”
- Pump tower rotatable by 0°/45°/90° CW/CCW
- Optional 0.86:1 speed increase on pump tower
- SAE #0 input housing
- SAE 460 (18”) input coupling
- Optional integrated reservoir
- Standard charge/lube pump included

SPECIFICATIONS – HP1200

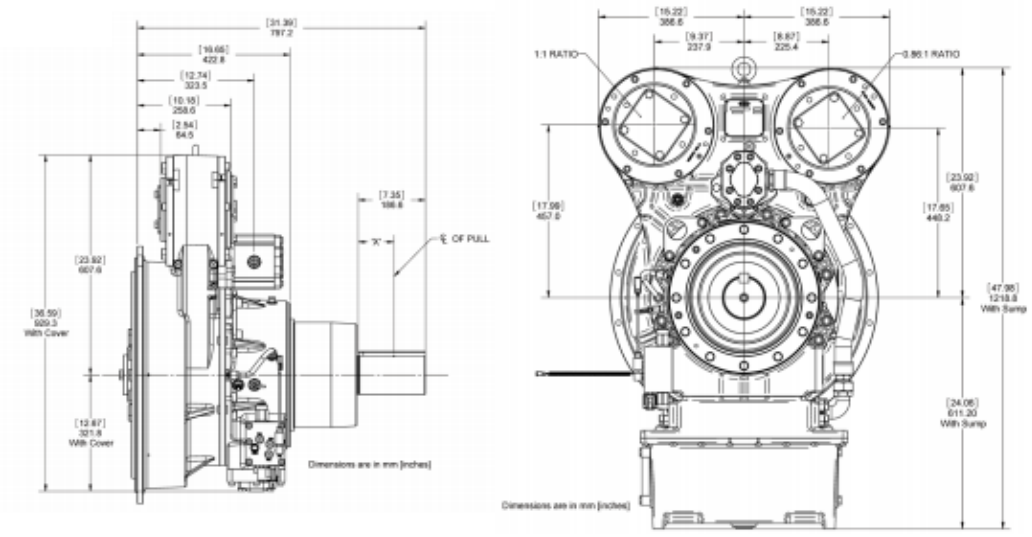
Model Number	Maximum Power Rating			Maximum Speed (RPM)	Pump Tower Capacity		Weight kg (lbs)
	@1200 RPM	@1800 RPM	@2100 RPM		1 Tower kg (lbs) (2 Pads)	2 Tower (4 Pads)	
HP1200P	828 HP (617 kW)	1243 HP (923 kW)	1448 HP (1080 kW)	2250	400 HP (299 kW)	550 HP (410 kW)	805 kg (1775 lbs)*
HP1200I	828 HP (617 kW)	1243 HP (923 kW)	1448 HP (1080 kW)	2250	400 HP (299 kW)	550 HP (410 kW)	770 kg (1697 lbs)*

**includes optional reservoir and standard charge/lube pump*

HP1200I



HP1200P



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HP1200P SIDE LOAD CAPACITY VALUES

RPM	mm	-50.8	-25.4	0.0	25.4	50.8	76.2	101.6	127	152.4
	inches	-2.0	-1.0	0.0	1.0	2.0	3.0	4.0	5.0	6.0
1200	N	146393	131794	119843	109879	91821	75869	64639	56305	49874
	Lbf.	32938	29654	26965	24723	20660	17071	14544	12669	11222
1800	N	129626	116699	106117	97294	81305	67179	57235	49856	44162
	Lbf.	29166	26257	23876	21891	18294	15115	12878	11218	9936
2100	N	123768	111425	101321	92897	77630	64143	54649	47603	42166
	Lbf.	27848	25071	22797	20902	17467	14432	12296	10711	9487

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TD-Bulletin-HP600

Printed in the USA - 04/2007

HP800

HYDRAULIC POWER TAKE-OFF

HP800

The HP800 is an oil-filled, multiple disc, hydraulically actuated self-adjusting clutch. The HP800 has been developed with a number of unique features that offer reliability, productivity and power, including: integral mechanical brake release, optional integrated reservoir and standard hydraulic gear pump. The HP800 has been designed for a wide range of heavy-duty applications including crushers, grinders, mulchers, dredgers, heavy-duty drills and many others.

FEATURES & BENEFITS:

- Hydraulically actuated and self-adjusting wet clutch
- Suitable for in-line and side-load applications
- Advanced control system for smooth engagement
- Remote actuation via J1939 or switch input
- No pilot bearing
- High side load capability
- Maximum power rating 800 HP @ 1800 rpm
- Two towers with two pump pads each
- 400 HP maximum capacity per tower
- 450 HP maximum capacity for both towers
- Available pump pads:
- SAE "A" • SAE "B" • SAE "C" • SAE "D" • SAE "E"
- Pump tower rotatable by 0°/45°/90° CW/CCW
- 1:1 standard with optional 0.83:1 & 0.77:1 speed increase on pump tower
- SAE #0 & SAE #1 input housing
- SAE 460 (18") & SAE 355 (14") input coupling
- Optional integrated reservoir
- Standard charge/lube pump included

SPECIFICATIONS – HP800

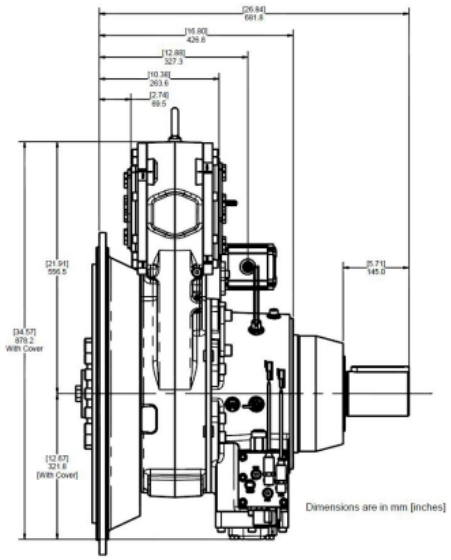
Model Number	Maximum Power Rating			Maximum Speed (RPM)	Pump Tower Capacity		Weight kg (lbs)
	@1200 RPM	@1800 RPM	@2200 RPM		1 Tower (2 Pads)	2 Tower (4 Pads)	
HP800P	533 HP (397 kW)	800 HP (597 kW)	978 HP (729 kW)	2300	400 HP (298 kW)	450 HP (336 kW)	755 kg (1665 lbs)*
HP800I							713 kg (1572 lbs)*

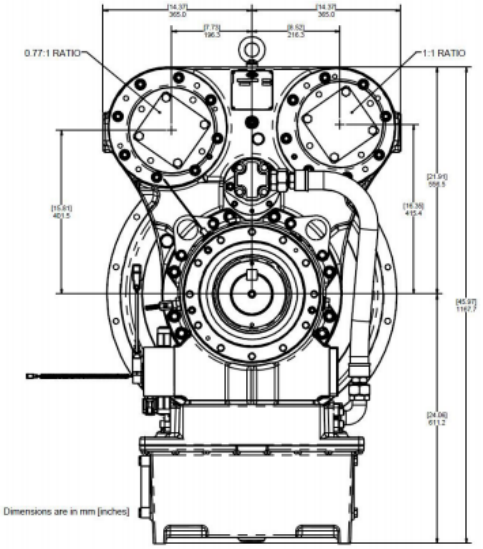
**includes dual tower, optional reservoir and standard charge pump*

Specifications subject to change without prior notice in the interest of continual product improvement.
Contact your local Twin Disc representative for engineering specifications.

Scan QR code to see Twin Disc's entire land-based product line.

HP800I





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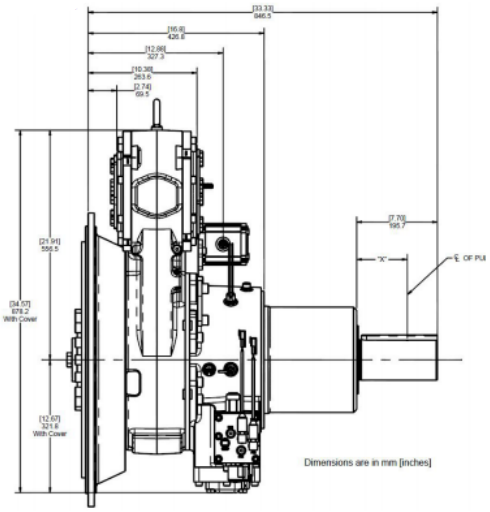
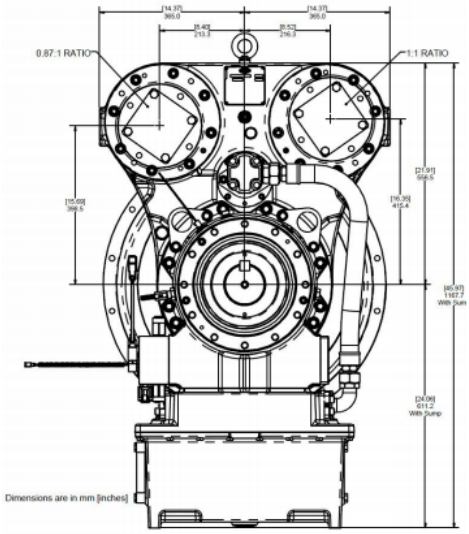
HP800P





HP1200P SIDE LOAD CAPACITY VALUES

RPM	mm	-50.8	-25.4	0.0	25.4	50.8	76.2	101.6	127	152.4
	inches	-2.0	-1.0	0.0	1.0	2.0	3.0	4.0	5.0	6.0
1200	N	133367	121158	110996	86930	68905	56575	47988	41664	36814
	Lbf.	29982	27237	24953	19543	15490	12718	10788	9367	8276
1800	N	122442	111233	101903	77342	61013	50095	42492	36892	32597
	Lbf.	27526	25006	22909	17387	13716	11262	9553	8294	7328
2100	N	118565	107711	98676	73986	58256	47831	40571	35225	31124
	Lbf.	26655	24214	22183	16633	13096	10753	9121	7919	6997

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TD-Bulletin-HP600

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