



11.2022  
VERSION 1.1

# EHPU

## ELECTRO-HYDRAULIC POWER UNIT

**HIGH VOLTAGE | HEAVY-DUTY**  
SMART HYDRAULIC STEERING UNIT

Onboard pressure transducers  
200vDC to 800vDC





## EHPU

**HIGH VOLTAGE | HEAVY-DUTY**  
ELECTRO-HYDRAULIC POWER UNIT

The **Hydrapulse® EHPU** is a rugged smart motor package that includes functionality specifically designed around increasing efficiency in hydraulic applications, and simplifying the transition to EV and Hybrid platforms.

The EHPU is currently available in high voltage (200 – 800VDC) for your EV or HEV chassis integration with low voltage (24 – 72VDC) options to come in the near future. The EHPU comes with a standard SAE Mounting interfaces for ultimate flexibility in pump selection, call our engineering team to discuss custom options for mounting or output interfaces.

## FEATURES

With our integrated cooling, power electronics, motor, and pump, the Hydrapulse® EHPU provides the cleanest and most cost effective integration into your chassis, machine, or vehicle platform.

- Onboard pressure transducers
- Power dense permanent magnet motor
- 200vDC to 800vDC
- HVIL connection
- Integrated cooling (no external cooling required)
- CAN / J1939 Communications
- Onboard diagnostics
- Power-on-demand / energy savings
- Complete temperature monitoring

## APPLICATIONS

Our high voltage architecture makes the EHPU perfect for any HEV or BEV platform utilizing 200 to 800VDC battery packs. The rugged design of the motor and inverter guarantee a long life in the harshest of environments.

- Auxiliary Hydraulics
- Refuse Truck Applications
- “Idle Free” Auxiliary functions
- Off-Highway Equipment
- Electric Vehicle Steering
- Mining Vehicles
- Airport Ground Support Equipment
- Dump Trucks

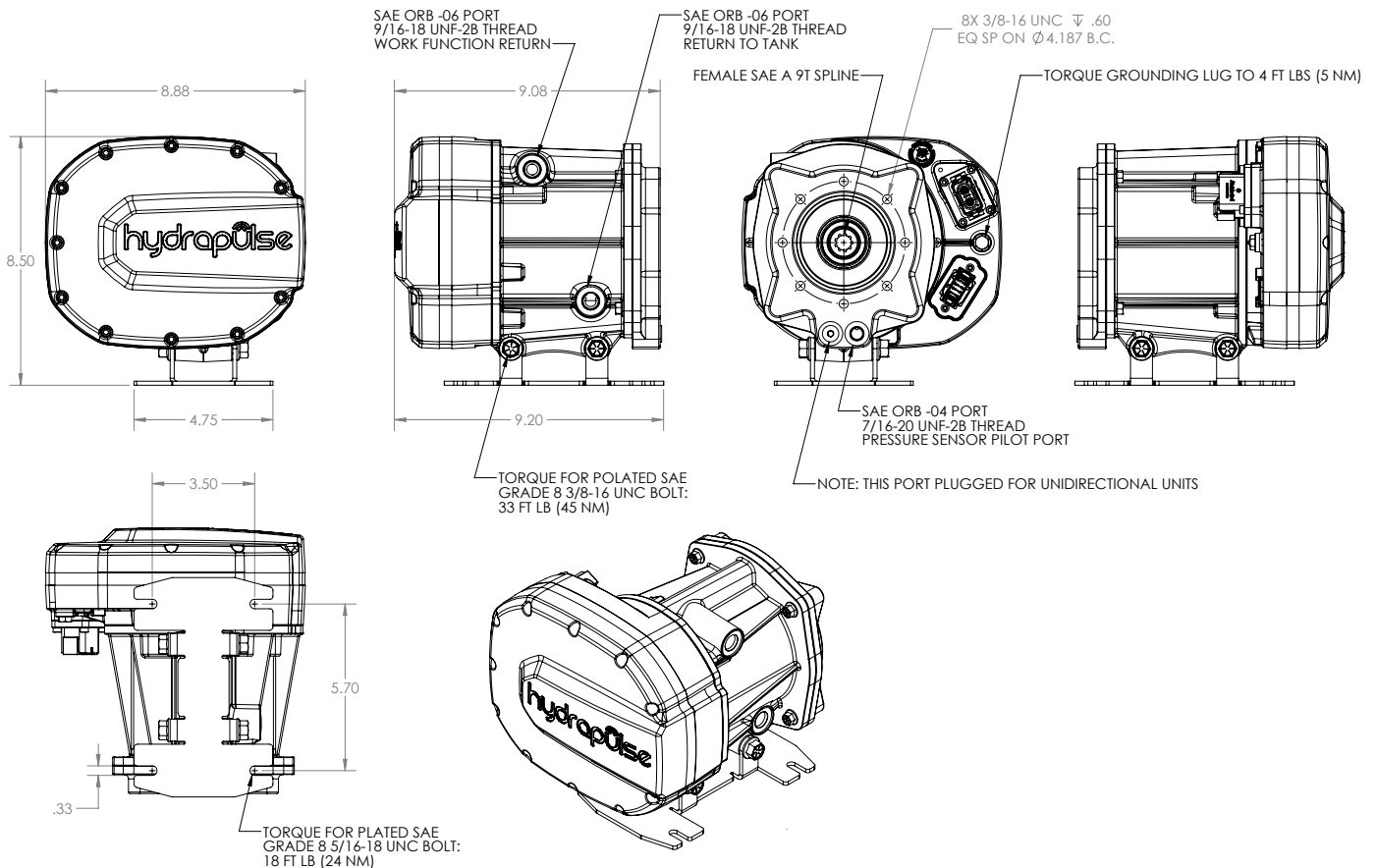
## SPECIFICATIONS

EHPU MODEL	EHPU-1-056-350	EHPU-1-056-650
Rated Voltage (Vdc)	350	650
Rated Power kW (HP)	2.5 (3.3)	2.5 (3.3)
Cont Torque Rating (Nm)	5.5	5.5
Peak Torque Rating (Nm)	10	10
Cont. Rated Current (A)	7	3.8
Protection	IP67	IP67
Max Speed (RPM)	4000	4000
Operating Temp.	-40 C to 85 C	-40 C to 85 C
Storage Temp.	-40 C to 125 C	-40 C to 125 C
Weight lbs. (kg)	31.4 (14.2)	31.4 (14.2)

Specifications are nominal and subject to change. Consult Factory prior to ordering.

## DRAWINGS

EHSU-1-56-350-U-SAEA



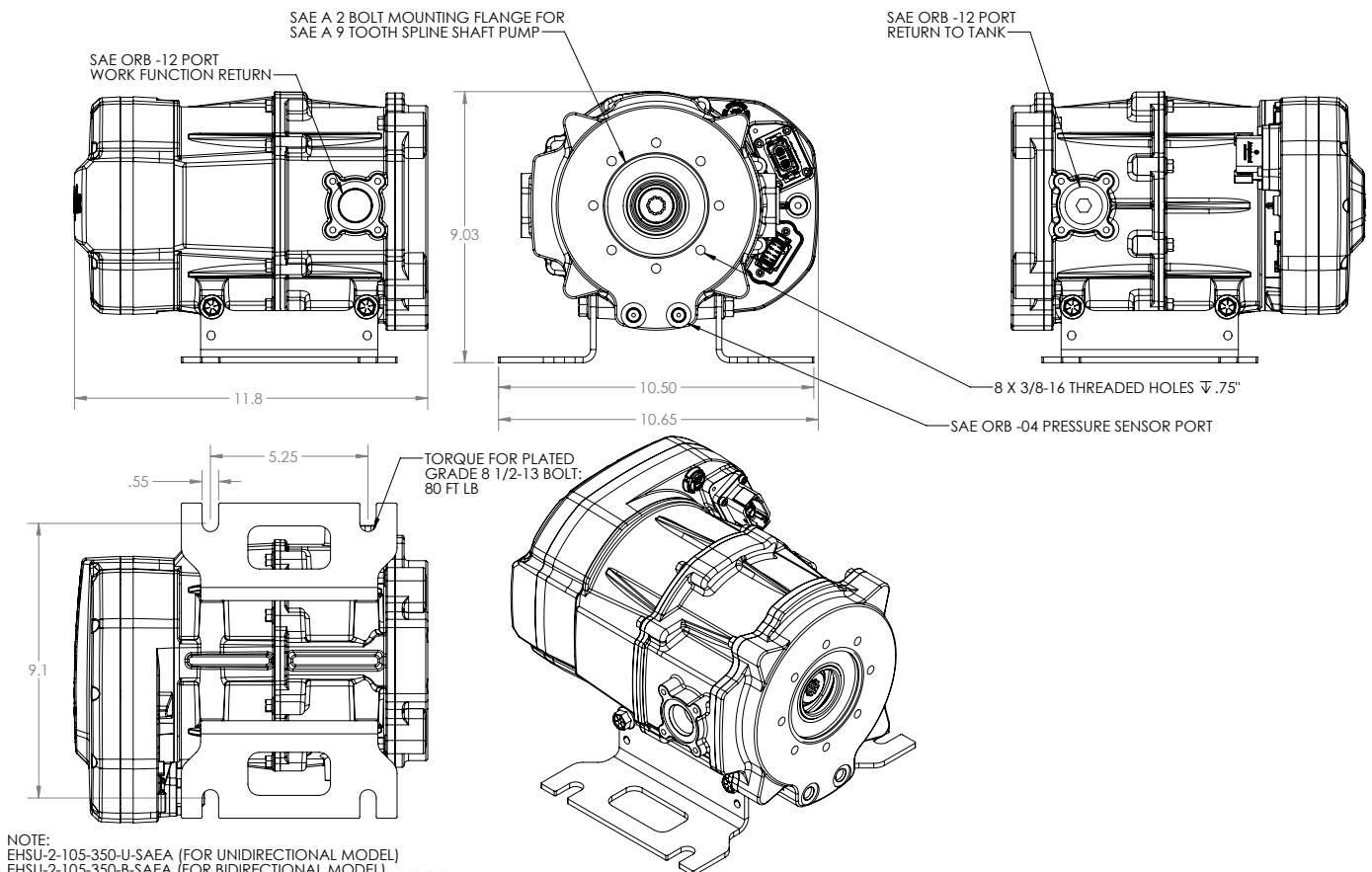
## SPECIFICATIONS

EHPU MODEL	EHPU-2-105-350	EHPU-2-105-650
Rated Voltage (Vdc)	350	650
Rated Power kW (HP)	10 (13.4)	10 (13.4)
Cont Torque Rating (Nm)	21	21
Peak Torque Rating (Nm)	30	30
Cont. Rated Current (A)	30	17
Protection	IP67	IP67
Max Speed (RPM)	3500	3500
Operating Temp.	-40 C to 85 C	-40 C to 85 C
Storage Temp.	-40 C to 125 C	-40 C to 125 C
Weight lbs. (kg)	48 (21.8)	48 (21.8)

Specifications are nominal and subject to change. Consult Factory prior to ordering.

## DRAWINGS

EHSU-2-105-350-SAEA



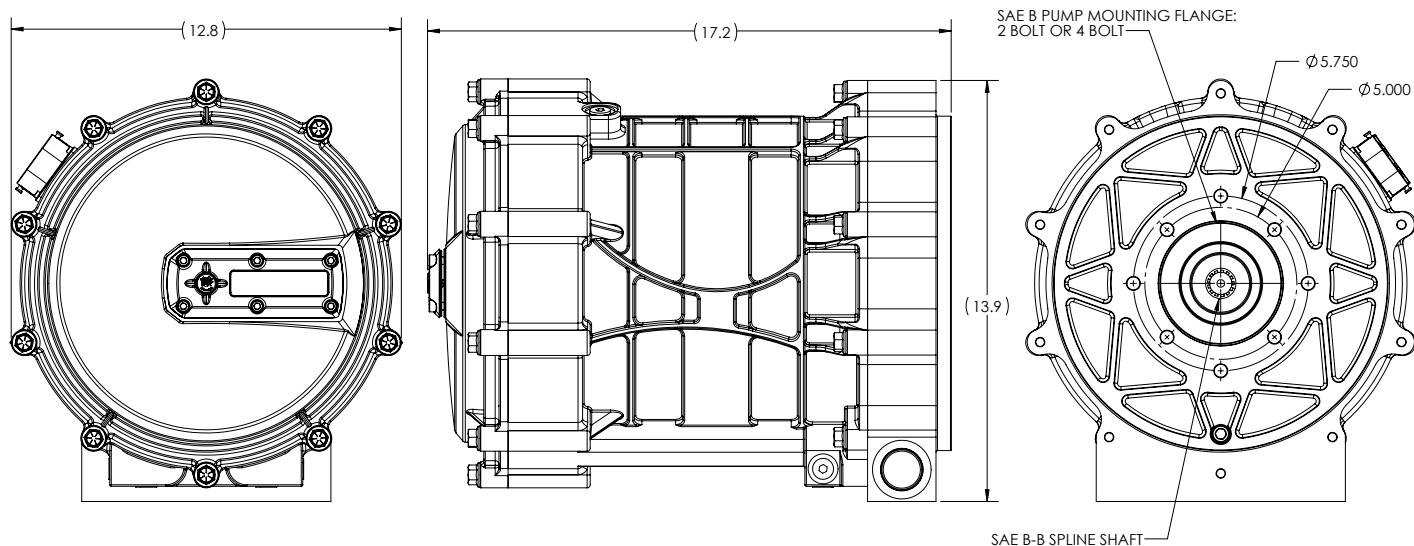
## SPECIFICATIONS

EHPU MODEL	EHPU-3-105-350	EHPU-3-105-650	EHPU-3-215-350	EHPU-3-215-650	EHPU-3-340-350	EHPU-3-340-650
Rated Voltage (Vdc)	350	650	350	650	350	650
Rated Power kW (HP)	30 (40)	30 (40)	60 (80)	60 (80)	90 (120)	90 (120)
Cont. Torque Rating (Nm)	80	80	160	160	260	260
Peak Torque Rating (Nm)	100	100	220	220	340	340
Rated Current (A)						
Protection	IP67	IP67	IP67	IP67	IP67	IP67
Max Speed (RPM)	4000	4000	4000	4000	4000	4000
Operating Temp.	-40 C to 85 C	-40 C to 85 C	-40 C to 85 C	-40 C to 85 C	-40 C to 85 C	-40 C to 85 C
Storage Temp.	-40 C to 125 C	-40 C to 125 C	-40 C to 125 C	-40 C to 125 C	-40 C to 125 C	-40 C to 125 C
Weight lbs. (kg)	150 (68)	150 (68)	185 (83)	185 (83)	210 (95)	210 (95)

Specifications are nominal and subject to change. Consult Factory prior to ordering.

## DRAWINGS

EHPU-3-100-650





### EHPU-3-105-650-B-SAE-250N

#### Model Type

EHPU -  
Electro-Hydraulic Power Unit

#### Frame Size

1 - Small Frame    3 - Large Frame  
2 - Medium Frame

#### Motor Stack Length

1 - 56mm    \*\* 3 - 105 - 30kW    \*\* 3 - 340 - 90kW  
2 - 105mm    \*\* 3 - 215 - 60kW

#### Baud Rate

500N - 500K/Bits without Terminating Resistor  
500T - 500K/Bits with Terminating Resistor  
250N - 250K/Bits without Terminating Resistor  
250T - 250K/Bits with Terminating Resistor

#### Direction

B - Bi-Directional

#### Nominal Voltage

350 - 350 Vdc    650 - 650 Vdc

*\* Special Order only.*

*\*\* Only available on Prototype Level*

*Call for non-standard displacements,  
voltages, or other custom features.*

## ENVIRONMENTAL PROTECTION

### CLIMATE

SAE J1455-4.1.3 Temperature Cycle  
SAE J1455-4.1.3 Thermal Shock  
SAE J1455-4.1.3 Thermal Stress  
SAE J1455-4.2 Humidity

### MECHANICAL VIBRATION

SAE J1455-4.10 Swept Sine Vibration  
SAE J1455-4.10.4 Random Vibration  
SAE J1455-4.11 Mechanical Shock  
SAE J1455-4.11 Operational Shock / Harness Shock  
SAE J1455-4.12 Combined Environmental  
ISO 16750 Vibration

### ELECTRICAL

SAE J1455-4.13 Heavy-Duty Truck Electrical Environment

### EMI/EMC

EIC 61000-6-4 Radiated Emissions  
IEC 61000-6-2 Industrial Immunity  
FCC Part 15B Class A  
CISPR 25  
ISO 11452-2 RI  
ISO 11452-4 BCI  
ISO 10605 ESD  
ISO 7637-2 3rd Edition transients (on 12vdc)

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**WARNING!** FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HERE-IN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Terzo Power Systems, LLC, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure, and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Terzo Power Systems, LLC and its subsidiaries at any time without notice.



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

WARNING!

EHPU Datasheet v1.1 – 11.2022

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