

03.2022
VERSION 1.0

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 available in high voltage (200 – 800VDC) for your EV or HEV chassis integration or low voltage (24 – 72VDC) for easier integration into traditional ICE chassis'. 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

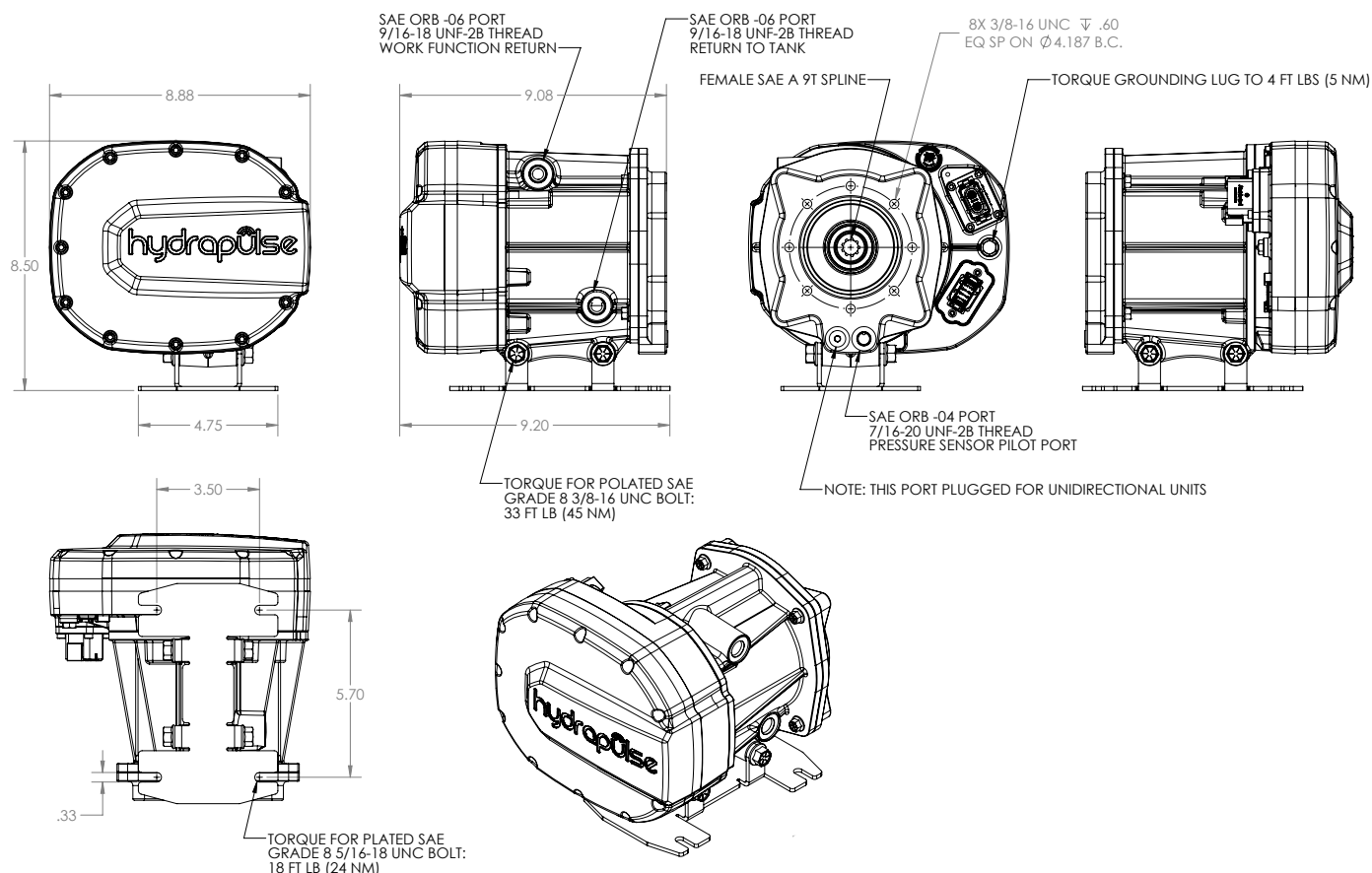
SPECIFICATIONS

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	IP6K9K	IP6K9K
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



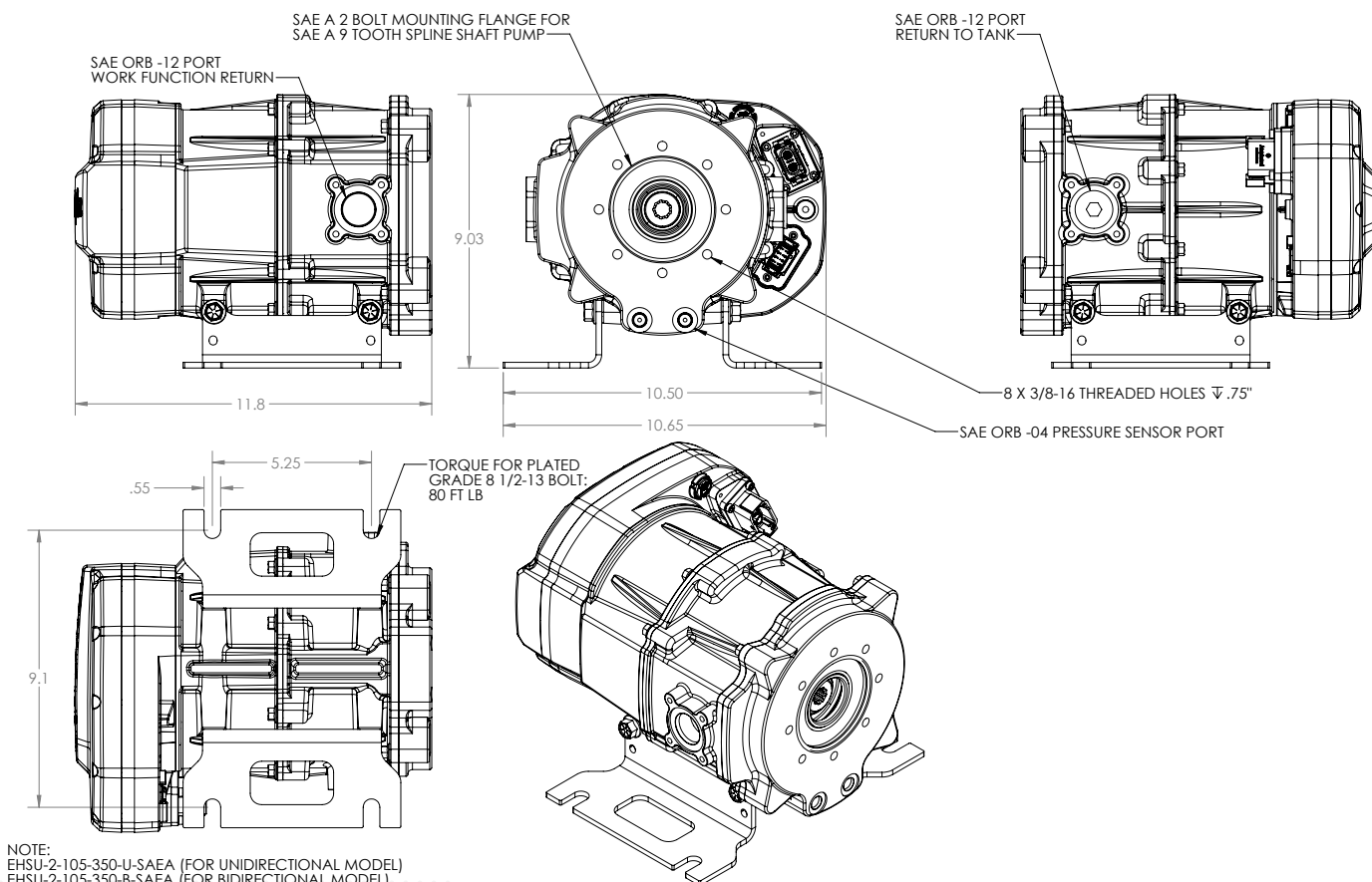
SPECIFICATIONS

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	IP6K9K	IP6K9K
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



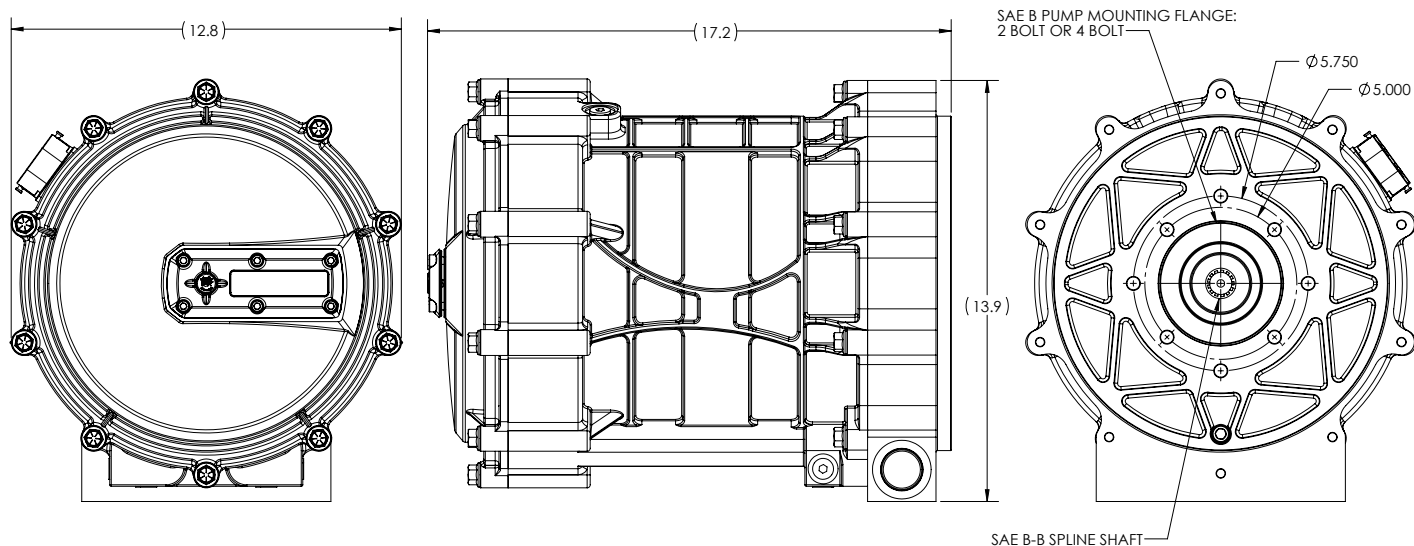
SPECIFICATIONS

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)	140	140	240	240	340	340
Rated Current (A)						
Protection	IP6K9K	IP6K9K	IP6K9K	IP6K9K	IP6K9K	IP6K9K
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 - 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.*

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
SAE J1455-4.3 Salt Spray Atmosphere
SAE J1455-4.3.3 Immersion Testing
SAE J1455-4.4 High Exposure Splash Testing
SAE J1455-4.5 Steam Cleaning and Pressure Washing

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)

Terzo Power Systems, LLC

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WARNING! FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN 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!

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