

Allied Motion

Electro Hydraulic Systems

The New Generation EHS

*Brushless Hydraulic
Pump Motors with
Integrated Drive Electronics*



***Compact, Robust with Integrated Intelligence
“The Ultimate Motion Solution for Hydraulic Systems”***

Motion Solutions that Change the Game

www.alliedmotion.com

Motion Control for Electro Hydraulic Systems

The Allied Motion EHS series of products are specifically designed for hydraulic pump applications, such as electro-hydraulic steering of buses and trucks and lift- or auxiliary applications on fork lift trucks. They can be directly connected to hydraulic pumps and will provide an intelligent node in a modern vehicle network.

Its robust construction is designed for long life, even in very tough conditions.



- Very compact design!
 - Up to 90% total efficiency!
 - Simple installation; battery+, battery- and signal connector
 - Mounting configurations available for common SAE standards
 - Degree of protection IP54 standard, IP67 or IP6k9k optional
 - Fulfilling most standards common for on- and off-road vehicles.
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- PMAC 8 pole motor (Permanent Magnet Alternating Current)
 - 1,5-6 kW peak output power, 0,5-2 kW S2 60 minutes
 - Integrated electronics for power and control
 - Sinusoidal current wave form for maximum efficiency and ripple free rotation
 - High resolution rotational sensor for smooth, quiet operation also at low speeds
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- Isolated CAN bus with J1939 protocol or CAN open
 - Speed control down to 200 rpm with full torque, to zero rpm with reduced torque
 - Hardware interface for operation without CAN
 - Self-protected against over temperature, overload, over- and under voltage
 - Protection and fault messages via CAN or hard wire
 - Integrated reverse polarity protection optional
 - Provisions for customized diagnostics
 - Customized speed / torque performance and control algorithms to reduce system energy consumption and optimize solution to exact system requirements

Manufacturers of road trucks and buses ask for improved fuel efficiency and flexibility, especially but not only for their hybrid versions. A separate motor for the hydraulic steering or other auxiliary functions offers cost savings in fuel economy as well as complete flexibility. The motor can either shut down or reduce speed when steering is not required, but the engine needs to run. Thanks to very low inertia, the motor can accelerate quickly as soon as steering power is required.

Fork lift truck manufacturers also receive requirements for separate hydraulic steering motors, but also separate motors for auxiliary equipment, which needs hydraulic power. Again this saves energy and improves flexibility, adding range and run-time.

The **EHS series** products support these applications well, with several options and versions facilitating optimization for each occasion.

Preliminary, may be changed without notice.

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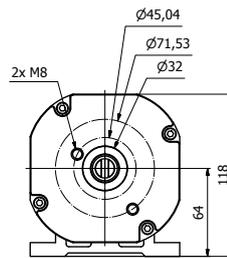
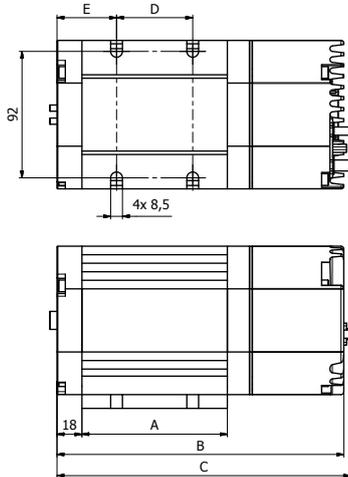
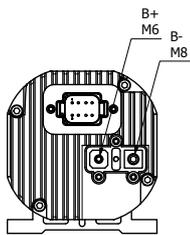
Technical Data and Dimensions

Model no	Voltage V DC	Torque Nm at S2 60 min	Output power kW S2 60 min at speed rpm	Peak Torque Nm for 30 s	Output power kW peak 30 s at speed rpm	DC Current Nominal / Peak	Dimensions in mm				
							A	B	C	D	E
EHS-11024J10	24	2	0,6 kW at 3600 rpm	8	1,5 kW at 2600 rpm	30 / 95	85	187	192	55	43
EHS-11024J20	24	3	1,0 kW at 3000 rpm	12	2,5 kW at 2000 rpm	52 / 130	105	207	212	55	43
EHS-11048J20	48	3	1,0 kW at 3000 rpm	12	2,5 kW at 2000 rpm	27 / 65	105	207	212	55	43
EHS-15024J20	24	5	1,2 kW at 2400 rpm	15	3,0 kW at 2000 rpm	55 / 145	118	217	236,5	100	45,5
EHS-15048J20	48	5	1,2 kW at 2400 rpm	15	3,0 kW at 2000 rpm	27 / 72	118	217	236,5	100	45,5
EHS-15024J30	24	8	1,75 kW at 2100 rpm	30	5,3 kW at 1700 rpm	77 / 275	148	247	266,5	100	45,5
EHS-15048J30	48	8	1,75 kW at 2100 rpm	30	5,3 kW at 1700 rpm	38 / 137	148	247	266,5	100	45,5

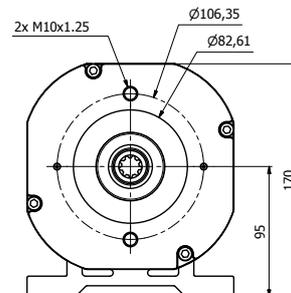
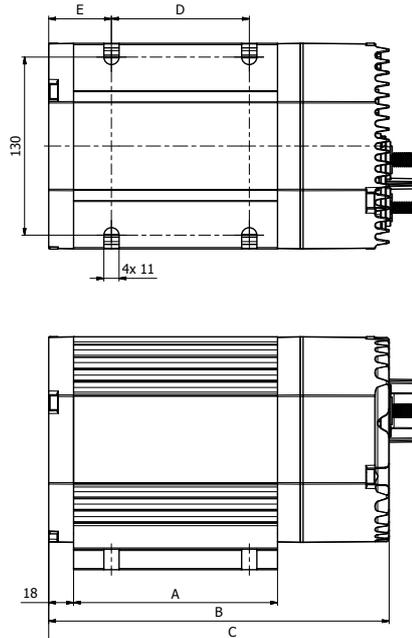
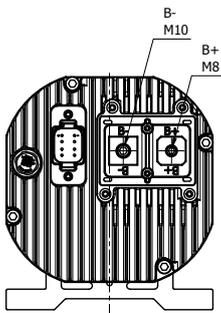
Other power, voltages, torque and speed data available on request

Drawings

EHS-110



EHS-150



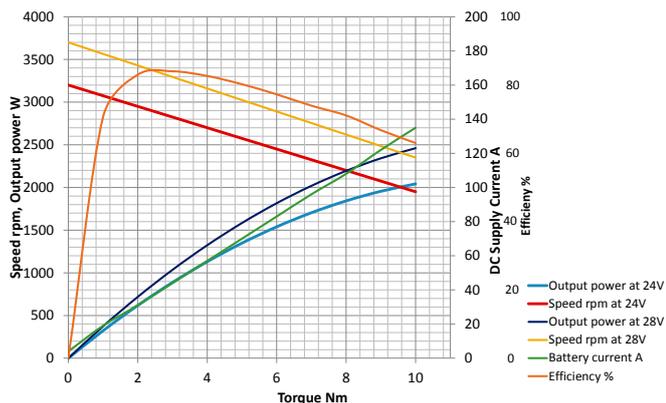
Spline Data

Standard	ANSI B92.1-1996
Root type	Flat
Fit type	Side
Number of teeth	9
Pressure angle	30
Pitch diameter	0,5625"
Hardness	HRC 58-62

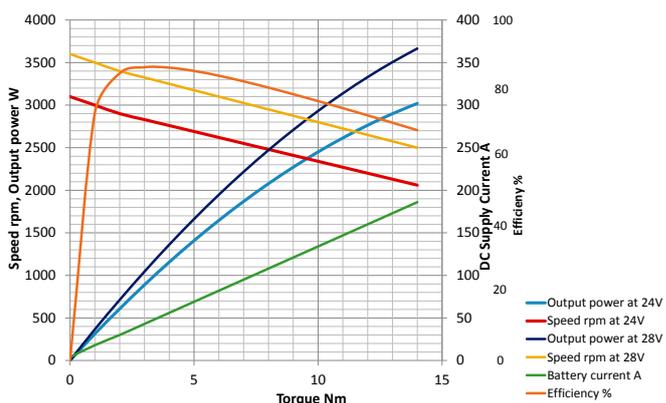
Preliminary, may be changed without notice.

Performance Curves

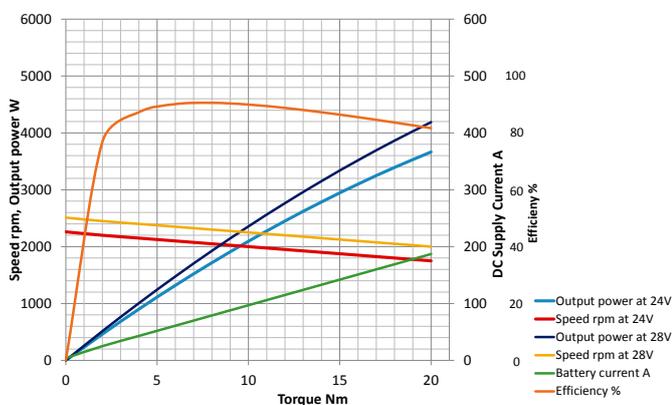
EHS-11024N10 at 24V and 28V



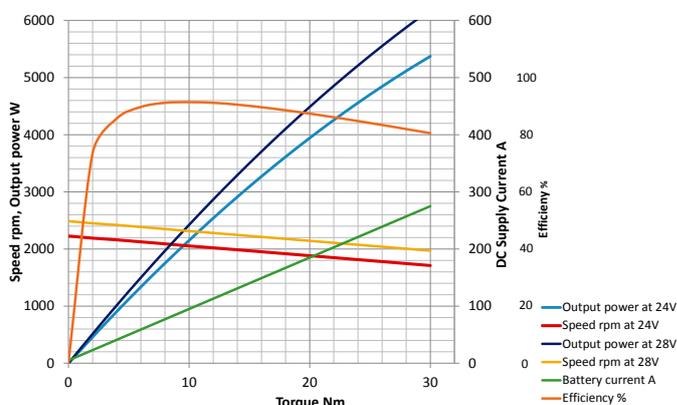
EHS-11024N20 at 24V and 28V



EHS-15024N20 at 24V and 28V



EHS-15024N30 at 24V and 28V



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