

Viking Motor



Series 44, 64, 84

HÄGGLUNDS

Hägglunds Drives AB

Hägglunds Drives AB is the worldwide market leader in design, manufacture and supply of heavy-duty hydraulic motors and complete drive systems. Our head office and main production plant is located in Mellansel, a town in the north of Sweden.

Our motors, power units and control systems are designed for service with tough applications and extreme environmental conditions. Hägglunds Drives can support you with sales offices and representatives all over the world.

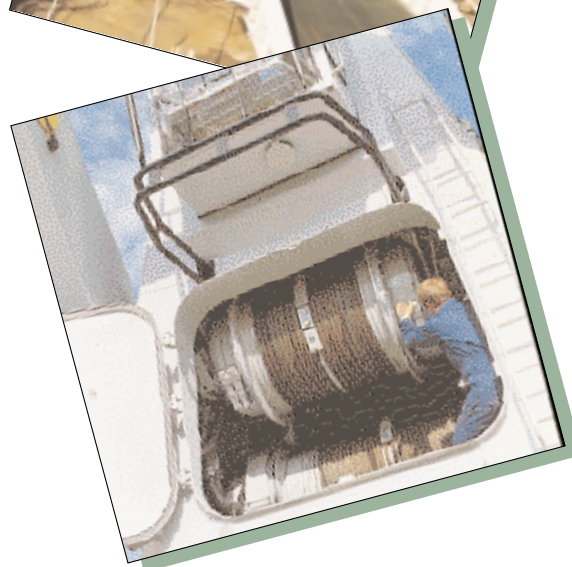
The first hydraulic motor was manufactured in the early 1960s. Today Hägglunds Drives is more than just a motor manufacturer, we are a supplier of complete and reliable hydraulic drive systems.

Through the years over 80,000 hydraulic drives have been delivered around the world for demanding applications in a wide range of industries such as:

- Heavy industry, including Building & Construction, Bulk Material Handling, Mining, Recycling and Steel.
- Marine, including Dredging, Fishing, Merchant and Offshore.
- Processing, including Cement, Chemicals, Pulp & Paper, Rubber & Plastics and Sugar.

Our drive systems are renowned for reliability, operating versatility and efficiency. Production is certified in accordance with ISO 9001 and the drive systems also satisfy strict environmental requirements.

Hägglunds Drives offer more than just a range of hydraulic systems. We have a thorough understanding of the particular demands of each application and an organisation dedicated to providing high quality services, from planning to maintenance. This has been and will continue to be our competitive advantage, the key to our success.



VIKING

- as tough as the name suggests



In the late 1950`s Hägglunds started work on a hydraulic motor for the Hägglunds ship crane. It had to be tough, hardworking and reliable. When the motor was ready for production a few years later the name came naturally: VIKING.

Since then the Viking has been fitted into many thousands of deck cranes on board ships sailing on the seven seas. Working in tropical heat and arctic cold. Day after day, year after year. But the Viking motor can be found in many other areas as well. In the marine and offshore industry, for sure, but also in the chemical industry, mining, pulp and paper, and other industrial applications.

The Viking motor is a high-torque low speed motor which can be mounted directly on a winch drum or to a shaft without the need of a gearbox. This presents many practical benefits which appeal

to the users of the equipment. The mechanical efficiency as well as its starting efficiency is 97 %, this makes it ideal for tension control applications with winches. Because of the extremely low moment of inertia the motor is highly responsive and insensitive to shock loads.

The Viking motor can drive and brake in both directions with variable speed by smoothly controlling the flow of oil in the circuit. It is designed to be highly resistant to severe working conditions and environments. The Viking motor has proven itself on board ships, in underwater applications, in explosive and chemically corrosive industrial environments, in extreme heat and freezing cold.

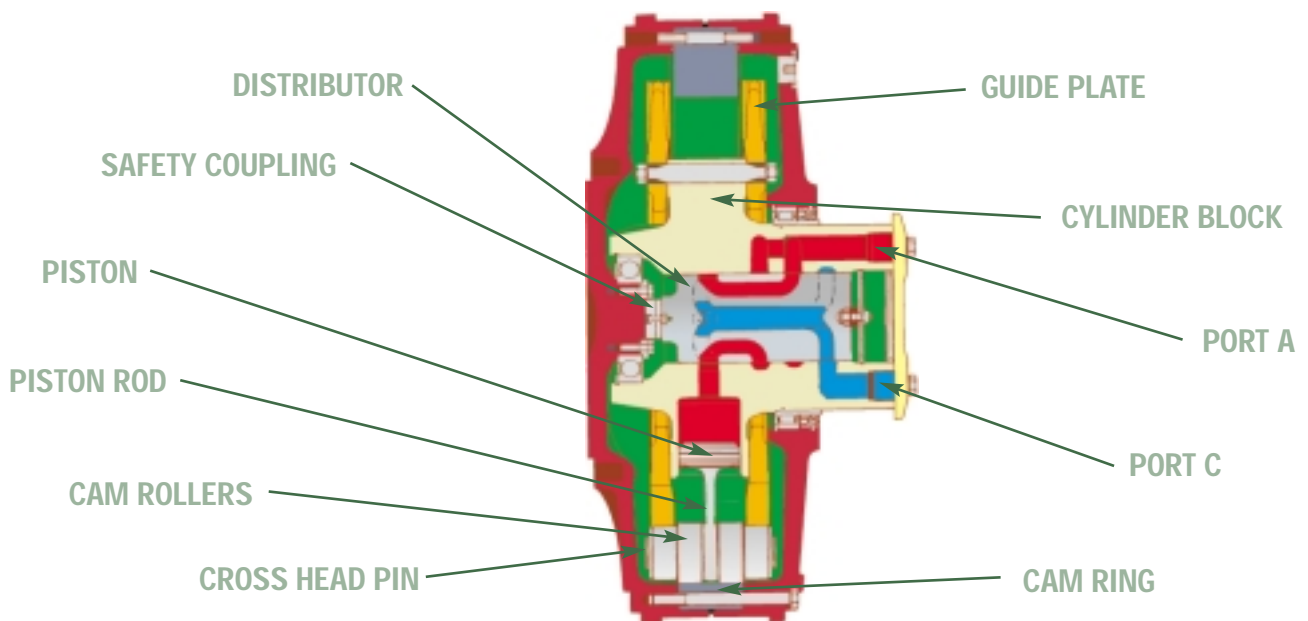
If you need a low speed - high torque drive that's unique, tough and a winner wherever it goes - Viking is the one to choose.

Data

MOTOR-TYPE	Displacement (cm ³ /rev)		Specific torque * (Nm/bar)		Rated speed ** (rev/min)	Max speed (rev/min)	Max pressure *** (bar)
	full	reduced	full	reduced			
44-03300	3325	1662	53	26	100	200	320
44-04700	4710	2356	75	37	100	200	320
44-06800	6790	3393	108	54	90	170	320
44-09200	9240	4618	147	74	80	145	320
64-11100	11080	5542	176	88	70	120	320
64-13500	13499	6750	215	107	60	110	250
64-16300	16340	8171	260	130	50	100	250
84-14800	14840	-	236	-	55	90	320
84-17900	17961	-	286	-	55	85	320
84-21300	21375	-	340	-	55	80	320
84-25100	25090	-	399	-	55	75	320
84-38000	38000	-	605	-	40	60	250
84-22300	22300	11150	355	177	55	55	320
84-33800	33780	16889	538	269	35	35	250
84-25100	25090	8362	399	133	40	55	250
84-33800	38000	12667	605	202	25	35	250
84-25100	25090	16724	399	266	40	55	250
84-38000	38000	25334	605	403	25	35	250

*) Theoretical value. **) Special considerations regarding charge pressure, cooling and choice of hydraulic systems for speed above rated.
 ***) The motors are designed according to DNV-rules. Test pressure 70 bar/1000 psi above max pressure. Peak/transient pressure 70 bar (1000 psi) above max pressure allowed to occur 10 000 times.

Section of motor



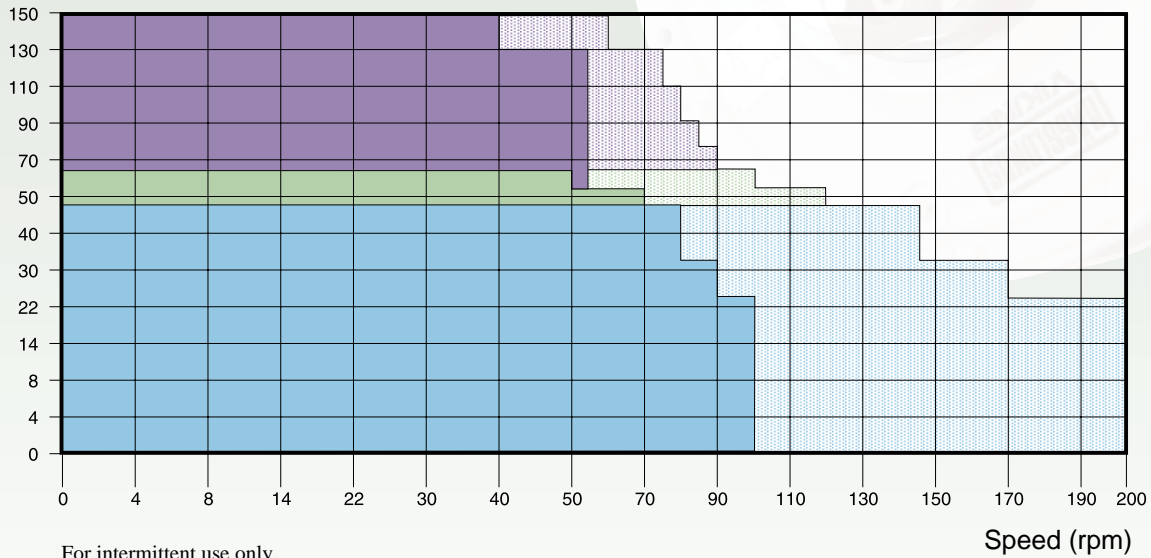
VIKING MOTOR (SERIES 44-64)

Operating range

At full displacement

For operation in patterned area, please contact your Hägglunds Drives representative.

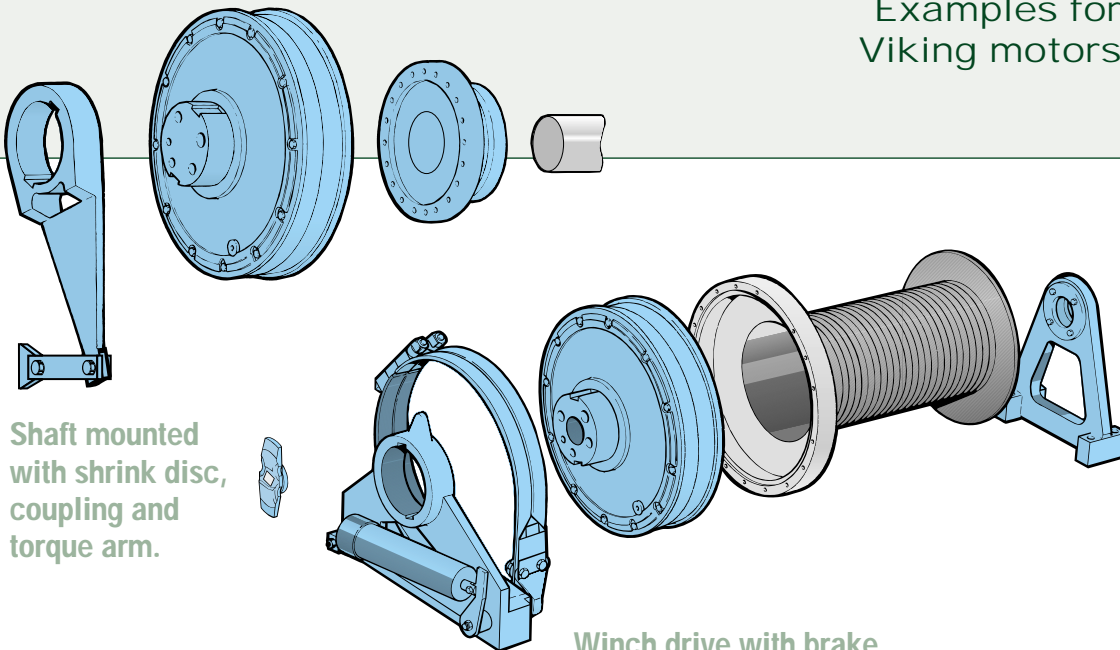
Torque (kNm)



For intermittent use only.
For continuous duty, please contact your Hägglunds Drives representative.

Installation

Examples for Viking motors

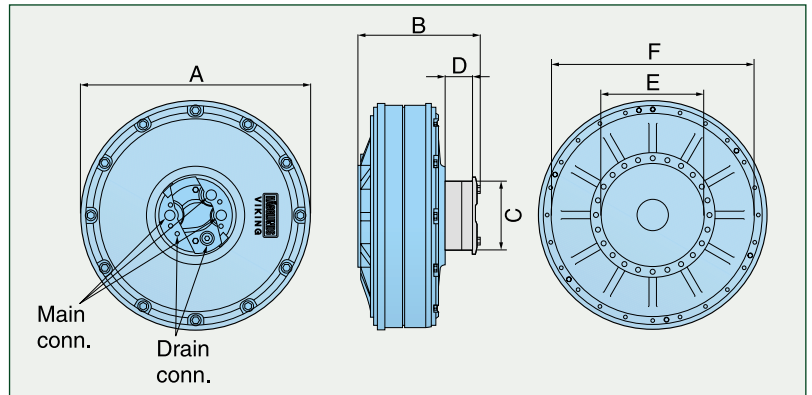


Shaft mounted with shrink disc, coupling and torque arm.

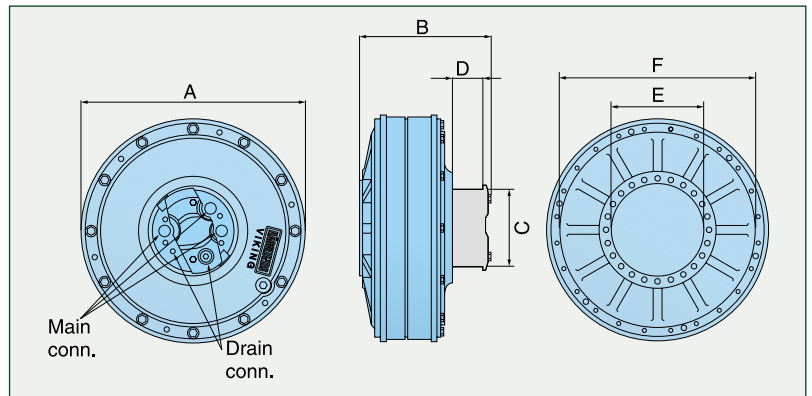
Winch drive with brake.

Dimensions

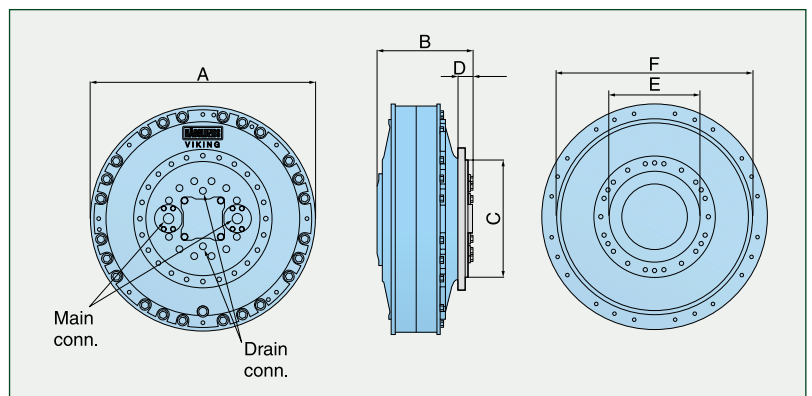
Viking series 44



Viking series 64



Viking series 84

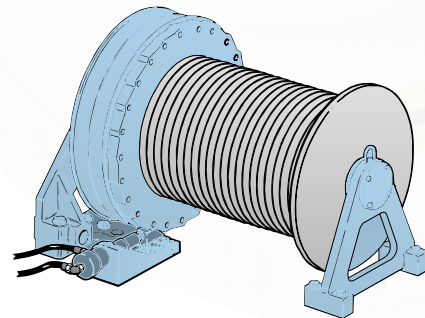
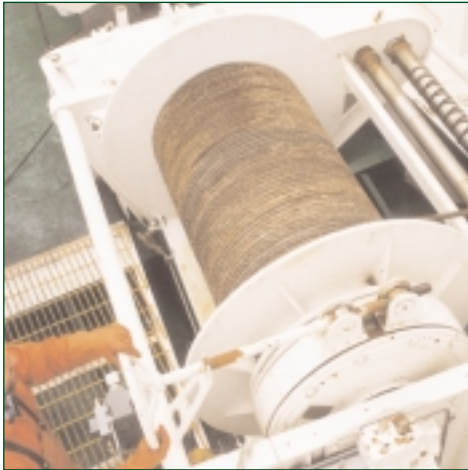


MOTOR-TYPES	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)
Series 44	778	438	260	100	320	676	520
Series 64	866	450	260	100	390	766	750
Series 84	1110	450	681	71	440	955	1550

The diagram above only covers basic motor types. The dimensions are the same for all related options with smaller displacement.

Accessories

A compact and efficient design can be achieved by using Häggglunds Drives standard accessories program.

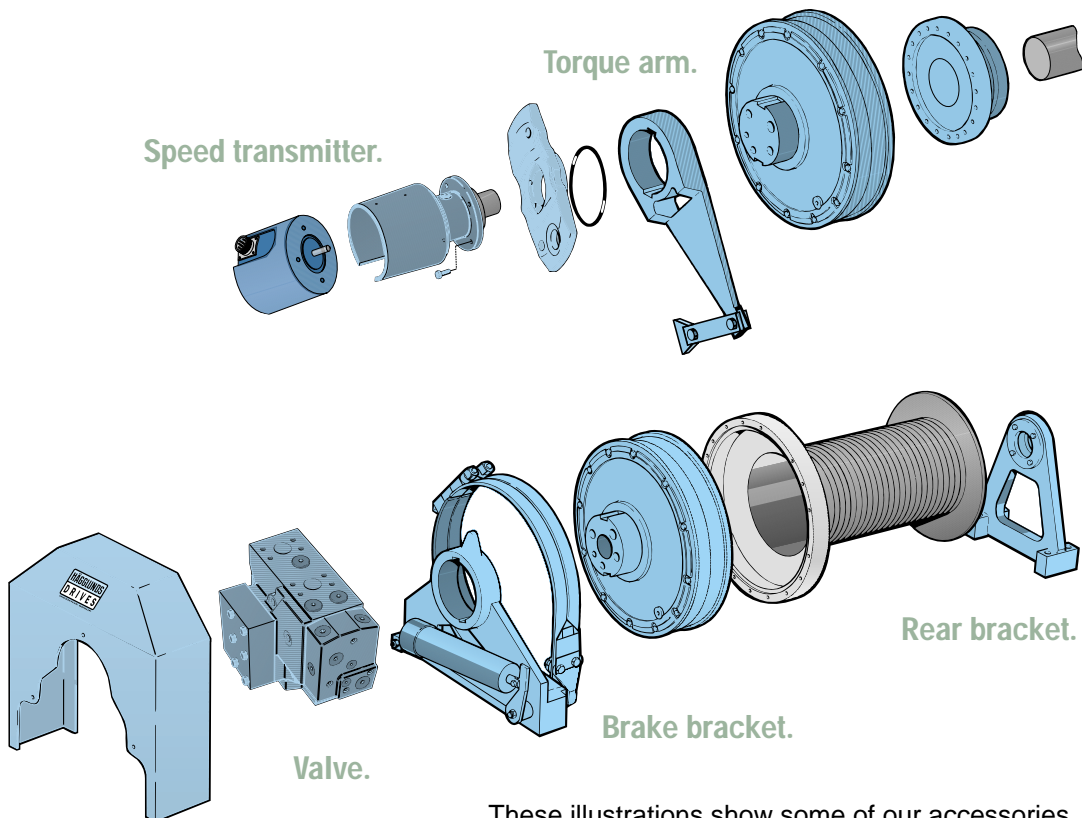


Parking lock unit.

Shaft coupling.

Torque arm.

Speed transmitter.



Rear bracket.

Brake bracket.

Valve.

Protective cover.

These illustrations show some of our accessories. Others, like free wheeling valves and kits for harsh environment, are also available.



Max Performance

We named our new mascot Max, and the reason for this is simple. Our drive is to improve your performance. To maximise your output. To deliver maximum reliability. To give you maximum peace of mind and to bring you maximum profits.

By the way, Max's last name is Häggglunds and you will meet him on our Web site.

Complete Drive Systems

We would like to provide a complete drive system to you. Perfectly matched to your needs. That includes piping, installation and commissioning. To provide for all your needs.

But of course you can buy our products separately, if you would like to.



Our products are designed to give direct hydraulic drive to many applications, eliminating the need of gearboxes. You achieve benefits of simplicity, saving space, improved control, reduced costs and gain high reliability with low maintenance in almost any environment.

Marathon

Marathon is a line of cam-ring motors with a rotating hollow shaft. Torque: up to 1 400 000 Nm. Speed range: up to 130 rpm.

It is the obvious choice for tough industrial applications and provides many years of reliable duty.

Viking

Viking is a line of cam-ring motors with a rotating housing. Torque: up to 151 000 Nm. Speed range: up to 200 rpm. The Viking motor offers the best tension control available, and is applied in many winch systems in marine and industrial applications.

Compact

Compact is a line of cam-ring motors with a rotating hollow shaft. Torque: up to 73 500 Nm. Speed range: up to 280 rpm. The Compact motor is a tough and powerful solution for many industrial and marine applications. It is compact, versatile and with unbeatable power to weight ratio.

Power Unit

A neat package designed to provide variable hydraulic oil flow to the motors. Low noise insulated weatherproof cabinet, easy maintenance and minimum floor space required. Many combinations of power, flow and control available.

Control Systems

Spider is a modern configurable micro-controller based drive control & monitoring system.

The MCA is an advanced PLC machine control system.

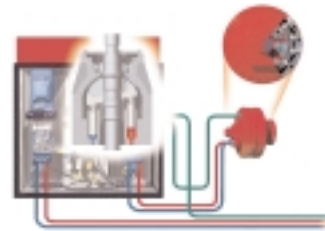
This is how it works

A complete drive system from Häggglunds comprises the drive motor with mounting accessories, a control system, a power

unit with electric motor, oil tank, pump, oil conditioning and instrumentation.

The pump is driven by the electric motor at constant speed. The oil flow to the drive motor from the axial piston pump is controlled electronically. Taking the pump swash-plate overcentre changes the direction of the drive.

The oil pressure forces the pistons radially outwards against the cam ring, creating the torque which is proportional to the



pressure applied. The motor cylinder block directly coupled to the shaft rotates the machine and the body is held by a torque arm or bracket.

The speed of the drive is directly related to the flow from the pump. Therefore, the power, speed and torque are easily controlled. This hydraulic closed loop system provides a highly dynamic four quadrant drive with driving and braking in forward and reverse.

The motor and the pump have a very low moment of inertia, which makes it possible to stop or reverse quickly. The extremely fast pump pressure control removes unwanted transients of stresses and strains on the machine.



Our Drive is your Performance.