

# Häggglunds Drive Systems and Solutions



# The drive behind your success

**A Hägglunds hydraulic direct drive is a drive system beyond the ordinary. In far less space than other drives – and with far less weight and complexity – it delivers flexible, reliable power.**

**With a Hägglunds drive, your machine has unlimited access to high torque. Yet it's also protected from torque stresses. You get the power to do more, but with less strain, less wear and less maintenance.**

**Put simply, you get a drive that goes the distance. And behind it is a company that goes the distance with you.**

## POWERFUL SIMPLICITY

A Hägglunds direct drive system comprises a hydraulic motor and a flexibly placed drive unit, overseen by a control and monitoring system. This simple configuration withstands the challenges of virtually any application or environment. Mounted directly on the driven shaft, the compact motor supplies reliable power. The force and direction of the motor's rotation is determined by the fast-acting hydraulic pumps in the drive unit, while the control and monitoring system provides information and advanced functionality. Supporting these components is a wide range of valves and accessories, creating even greater flexibility in installation and operation.

## BENEFITS OF A HYDRAULIC DIRECT DRIVE

- ▶ Compact installation with the motor on the driven shaft
- ▶ Full torque throughout the speed range – without oversizing
- ▶ High starting torque that can be sustained indefinitely
- ▶ Robust design without gearbox or couplings
- ▶ Infinite variations within the speed range
- ▶ Smooth acceleration and deceleration
- ▶ Unlimited starts and stops without overheating
- ▶ Nearly instantaneous emergency stops
- ▶ Built-in protection against shock loads
- ▶ Perfect load sharing between multiple motors



**▲ From the bitter cold of Siberia to the blistering heat of Africa, Hägglunds direct drive systems withstand the challenges of any environment and any type of industry. The drive units can be supplied in a wide range of power levels and configurations, and are function-tested before delivery.**

# Your path to performance

# Strength through service



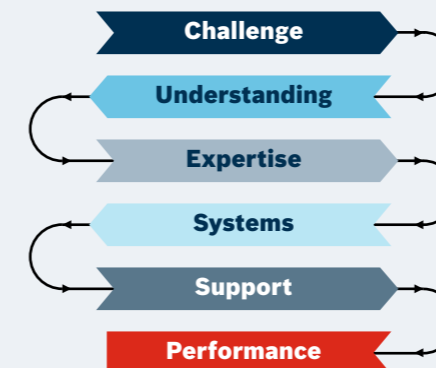
A Hägglunds solution is a total solution – of which the drive system itself is only one part. It's a complete answer to your needs, built as much on knowledge, experience and commitment as it is on drive technology.

It begins with listening, as we work to understand the nature of your challenge. Our vast experience gives us the insight required, but also the knowledge that every

challenge is unique. That's why we put all our skills, equipment and innovation to work in solving yours.

The drive you receive is built with quality, delivered with confidence and supported with dedication. What you experience is full peace of mind, supplied not just by our drive technology, but also by the people behind it.

### The journey



What makes your solution truly complete is the support you receive throughout your drive's life cycle. Everything needed to optimize performance – from original Hägglunds spare parts to expert field service and cutting-edge upgrades – is readily available through Bosch Rexroth's global organization. In a performance agreement, we can combine the right support and services for your specific needs. Together with our representative, you tailor the agreement that best matches your drive and performance criteria.

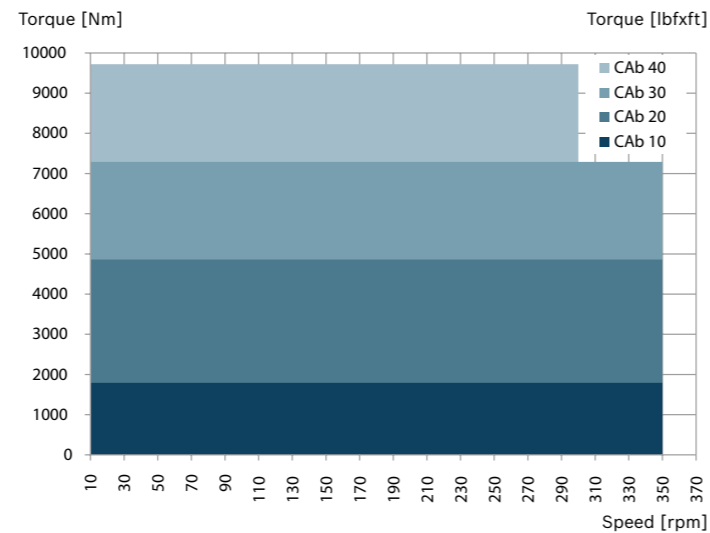
# Powerful performance

## The Hägglunds CAb motor – the perfect choice for applications that need a small but truly powerful motor.

The Hägglunds CAb motor with its extreme power density and high flexibility is the perfect choice for applications in need for a small but truly powerful motor. The motor has unmatched power density, with the unique ability to deliver full torque and full speed simultaneously. Perfect internal symmetry ensures consistent torque throughout the revolution, as well as a perfect balance of forces that minimizes noise and vibration.

Compared to competitor solutions, the CAb motor provides 10-15% more torque for the amount of energy put in. Fourteen configurations in small torque steps allow tight dimensioning and optimization in relation to the hydraulic system. From unique power density to high energy efficiency, the Hägglunds CAb motor means powerful benefits in industry and beyond.

### Wide operating range



## MOTOR DATA, HÄGGLUNDS CAB

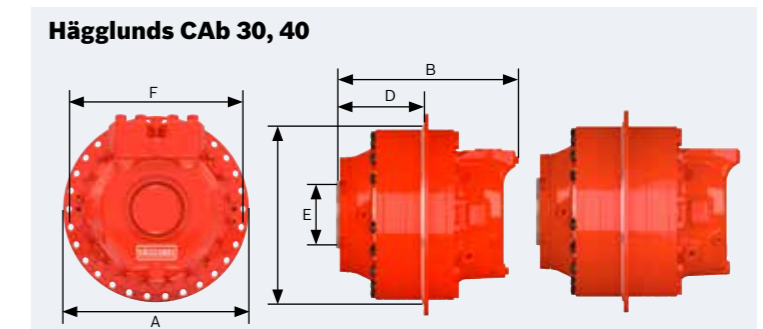
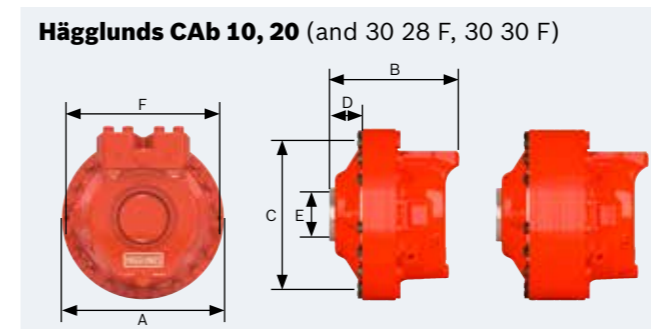
Motor type	Displacement (cm <sup>3</sup> /rev)	Specific torque (Nm/bar)	Max. speed (rpm)	Max. pressure (bar)	Max. torque (Nm) <sup>1)</sup>	Max. operating power (kW) <sup>2)</sup>
CAb 10 8	503	8	350	250	1 945	66
CAb 10	628	10	350	250	2 430	82
CAb 10 12,5	785	12.5	350	250	3 040	101
CAb 20 16	1 005	16	350	250	3 890	132
CAb 20 18	1 131	18	350	250	4 375	148
CAb 20	1 257	20	350	250	4 860	163
CAb 20 22,5	1 414	22.5	350	250	5 470	182
CAb 20 25	1 571	25	350	250	6 075	200
CAb 30 28	1 759	28	350	250	6 805	218
CAb 30	1 885	30	350	250	7 290	243
CAb 30 32,5	2 042	32.5	340	250	7 900	251
CAb 30 35	2 199	35	240	250	8 505	270
CAb 30 37,5	2 356	37.5	310	250	9 115	264
CAb 40	2 513	40	330	250	9 720	297

<sup>1)</sup> Calculated as: Metric = Ts x (250-2) x 0,98  
<sup>2)</sup> Flushing of the motorcase is required

## DIMENSIONS, MOTORS WITH SPLINES

Motor type	Ø A (mm)	B (mm)	Ø C (mm)	D (mm)	E (splines)	Ø F (mm)	Weight (kg)	Main Conn.	Drain Conn.
CAb 10	300	225	256	58	DIN 5480 N70x3x30x22	279	54	SAE 1 ¼"	G ¾"
CAb 20	300	265	256	58	DIN 5480 N70x3x30x22	279	70		
CAb 30	355 (300 <sup>1)</sup> )	317	315	152	DIN 5480 N100x3x30x32	333	90		
CAb 40	355	357	315	152	DIN 5480 N100x3x30x32	333	104		

<sup>1)</sup> Valid for Hägglunds CAb 30 28 F and CAb 30 30 F (front flange)



# Power in a compact solution

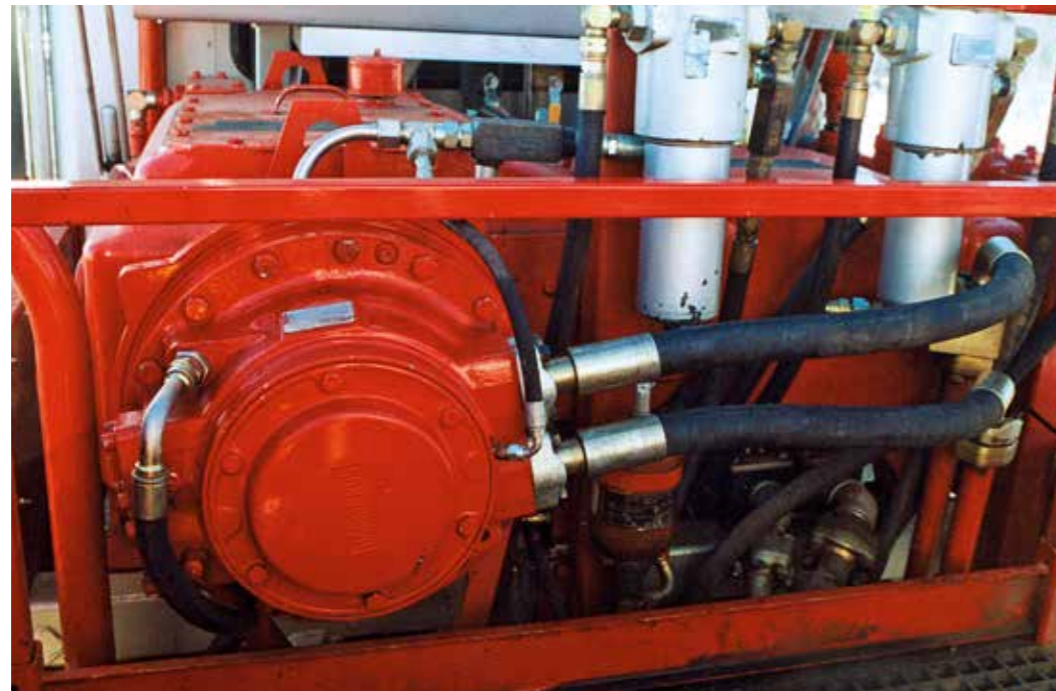
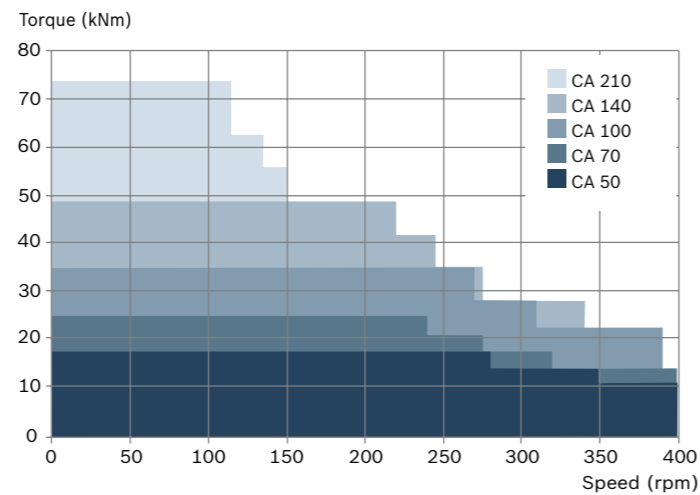
## The Hägglunds CA is a compact hydraulic motor for applications where size and weight are significant issues.

The Hägglunds CA motor was developed for a very specific purpose: to provide a tough and powerful solution for heavy-duty applications where size and weight are significant issues. The result is a really compact hydraulic drive with the same durability, excellent performance and reliability as other Hägglunds motors from Rexroth. With its small envelope size and lightweight, the Hägglunds CA has an excellent power to weight ratio.

Popular features of the Hägglunds CA motor are for example the numerous mounting options, the very useful through hole and the insensitivity to shock loads. When matched to your needs Hägglunds CA provides real competitive advantages in your plant operations. The benefits of using a Hägglunds CA motor are many.

### Wide operating range

Max intermittent torque and speed.



## MOTOR DATA, HÄGGLUNDS CA

Motor Type <sup>1)</sup>	Full displacement					Displacement shift				
	Displacement (cm <sup>3</sup> /rev)	Specific Torque (Nm/bar)	Rated Speed (rev/min) <sup>2)</sup>	Max Speed (rev/min)	Max Pressure (bar) <sup>3)</sup>	Displacement (cm <sup>3</sup> /rev)	Specific Torque (Nm/bar)	Rated Speed** (rev/min)	Max Speed (rev/min)	Ratio
CA 50 20	1 256	20	400	400	350	-	-	-	-	-
CA 50 25	1 570	25	350	400	350	-	-	-	-	-
CA 50 32	2 010	32	280	400	350	-	-	-	-	-
CA 50 40	2 512	40	230	350	350	-	-	-	-	-
CA 50	3 140	50	200	280	350	1 570	25	200	280	1:2
CA 70 40	2 512	40	270	400	350	-	-	-	-	-
CA 70 50	3 140	50	225	320	350	1 570	25	225	320	1:2
CA 70 60	3 771	60	195	275	350	1 886	30	195	275	1:2
CA 70	4 400	70	180	240	350	2 200	35	180	240	1:2
CA 100 40	2 512	40	390	400	350	-	-	-	-	-
CA 100 50	3 140	50	320	400	350	-	-	-	-	-
CA 100 64	4 020	64	260	390	350	-	-	-	-	-
CA 100 80	5 024	80	220	310	350	2 512	40	220	310	1:2
CA 100	6 280	100	190	270	350	3 140	50	190	270	1:2
CA 140 80	5 024	80	245	340	350	-	-	-	-	-
CA 140 100	6 280	100	205	275	350	3 140	50	205	275	1:2
CA 140 120	7 543	120	180	245	350	3 771	60	180	245	1:2
CA 140	8 800	140	170	220	350	4 400	70	170	220	1:2
CA 210 160	10 051	160	105	150	350	5 026	80	105	150	1:2
CA 210 180	11 314	180	100	135	350	5 675	90	100	135	1:2
CA 210	13 200	210	85	115	350	6 600	105	85	115	1:2

<sup>1)</sup> All motor types can be tandem mounted.  
<sup>2)</sup> Special considerations regarding charge pressure, cooling and choice of hydraulic system for speeds above rated.  
<sup>3)</sup> The motors are designed according to DNV-rules. Test pressure 420 bar/6000 psi. Peak/transient pressure 420 bar/6000 psi maximum, allowed to occur 10 000 times.  
 More options with different torques and speeds are available. This data covers the main sizes of our Hägglunds CA motors.

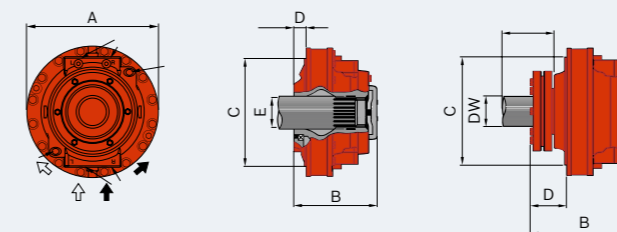
## DIMENSIONS, MOTORS WITH SPLINES

Motor Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg)	Main Conn.	Drain Conn.
CA 50	464	312.5	390	46.5	N120x5x30x22x9H	175	SAE 1 1/4 "	BSP 3/4 "
CA 70	495	312.5	435	46.5	N120x5x30x22x9H	205	SAE 1 1/4 "	BSP 3/4 "
CA 100	560	399.5	470	135.5	N140x5x30x26x9H	265	SAE 1 1/4 "	BSP 3/4 "
CA 140	600	399.5	510	135	N140x5x30x26x9H	305	SAE 1 1/4 "	BSP 3/4 "
CA 210	600	501	510	156.5	N150x5x30x28x9H	395	SAE 1 1/4 "	BSP 3/4 "

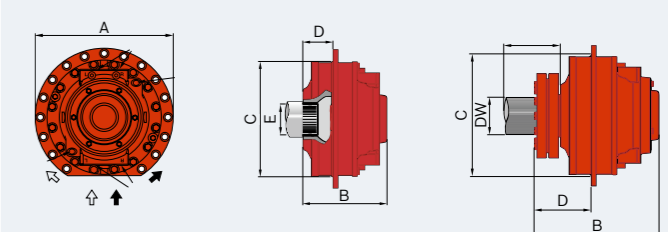
## DIMENSIONS, MOTORS WITH SHRINK DISC COUPLING

Motor Type	A (mm)	B (mm)	C (mm)	D (mm)	DW (mm)	Weight (kg)	Main Conn.	Drain Conn.
CA 50	464	404.5	390	126	120	203	SAE 1 1/4 "	BSP 3/4 "
CA 70	495	404.5	435	126	120	232	SAE 1 1/4 "	BSP 3/4 "
CA 100	560	505	470	229	140	310	SAE 1 1/4 "	BSP 3/4 "
CA 140	600	505	510	229	140	347	SAE 1 1/4 "	BSP 3/4 "
CA 210	600	644.5	510	288	160	456	SAE 1 1/4 "	BSP 3/4 "

### Hägglunds CA 50, CA 70



### Hägglunds CA 100, CA 140, CA 210



# Power to be flexible

## Serving heavy-duty applications in numerous ways, the compact Hägglunds CB shows that size is no measure of versatility.

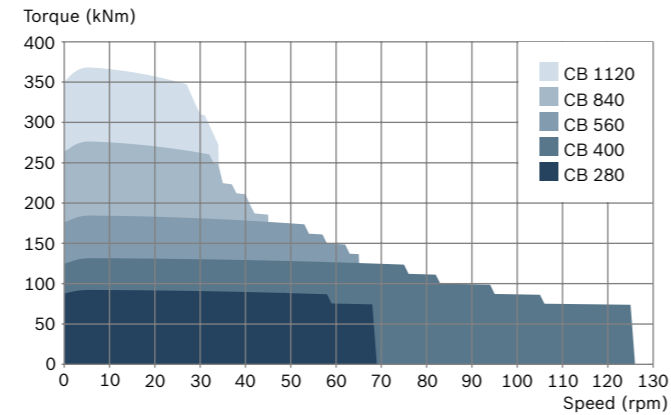
The Hägglunds CB range is suitable for many heavy-duty applications such as shredders, feeders and roll mills. Some of its many benefits are the space saving design and the versatile mounting possibilities.

The wide range of sizes and displacements enables optimisation of the drive system when selecting the motor and the hydraulic pump combinations. The hole through the motor is another advantage, which can be very useful in some applications, for instance in drilling and boring.

The motor reacts quickly and the heavy duty design can take shock loads and stop instantly when required. Hägglunds CB is truly a tough, economical and reliable drive.

### Wide operating range

Max intermittent torque and speed.



Valid at high pressure 350 bar and charge pressure 15 bar.

## MOTOR DATA, MAXIMUM OPERATING POWER, HÄGGLUNDS CB

Motor Type	Displacement (cm <sup>3</sup> /rev)	Specific Torque (Nm/bar)	Max Speed (rev/min) <sup>1)</sup>	Max Pressure (bar) <sup>2)</sup>	Max Torque (kNm) <sup>3)</sup>
CB 280 240	15 100	240	68	350	79
CB 280	17 600	280	58	350	92
CB 400 240	15 100	240	125	350	79
CB 400 280	17 600	280	105	350	92
CB 400 320	20 100	320	94	350	110
CB 400 360	22 600	360	82	350	120
CB 400	25 100	400	75	350	130
CB 400 440	27 600	440	65	320 <sup>4)</sup>	131
CB 400 480	30 200	480	62	290 <sup>4)</sup>	129
CB 400 520	32 700	520	57	270 <sup>4)</sup>	130
CB 400 560	35 200	560	53	250 <sup>4)</sup>	129
CB 560 440	27 600	440	65	350	140
CB 560 480	30 200	480	62	350	160
CB 560 520	32 700	520	57	350	170
CB 560	35 200	560	53	350	180
CB 840 600	37 700	600	45	350	200
CB 840 640	40 200	640	41	350	210
CB 840 680	42 700	680	40	350	220
CB 840 720	45 200	720	37	350	240
CB 840 760	47 800	760	34	350	250
CB 840 800	50 300	800	34	350	260
CB 840	52 800	840	32	350	280
CB 1120 880	55 300	880	34	350	290
CB 1120 920	57 800	920	33	350	300
CB 1120 960	60 300	960	32	350	315
CB 1120 1000	62 800	1 000	31	350	330
CB 1120 1040	65 300	1 040	29	350	340
CB 1120 1080	67 900	1 080	28	350	355
CB 1120	70 400	1 120	27	350	370

<sup>1)</sup> Special considerations regarding charge pressure, cooling and choice of hydraulic system for speed above rated.

<sup>2)</sup> The motors are designed according to DNV-rules. Test pressure 420 bar/6000 psi. Peak/transient pressure 420 bar/6000 psi maximum, allowed to occur 10 000 times.

<sup>3)</sup> Calculated as  $T = T_s \times (350-15) \times 0.98$ .

<sup>4)</sup> **Note!** Max pressure <350 bar.

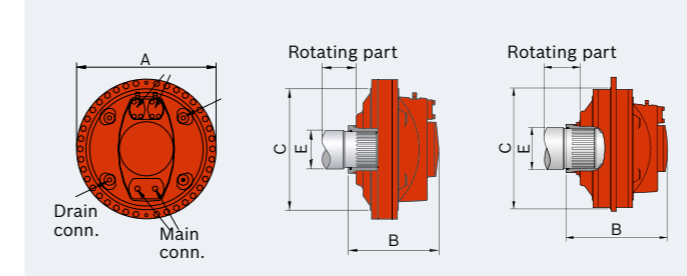
## DIMENSIONS, MOTORS WITH SPLINES

Motor Type	A (mm)	B (mm)	C (mm)	E (mm)	Weight (kg)	Main Conn.	Drain Conn.
CB 280	782	494	680	N200x5x30x38x9H	705	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"
CB 400	782	612	680	N200x5x30x38x9H	1 060	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"
CB 560	940	662	800	N260x5x30x50x9H	1 115	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"
CB 840	940	780	800	N260x5x30x50x9H	1 445	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"
CB 1120	940	897	800	N260x5x30x50x9H	1 770	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"

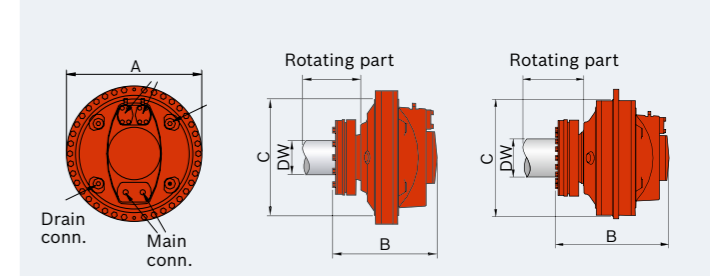
## DIMENSIONS, MOTORS WITH HOLLOW SHAFT, SHRINK DISC COUPLING

Motor Type	A (mm)	B (mm)	C (mm)	DW (mm)	Weight (kg)	Main Conn.	Drain Conn.
CB 280	782	603	680	180	800	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"
CB 400	782	729	680	200	1 160	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"
CB 560	940	756	800	260	1 290	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"
CB 840	940	874	800	260	1 620	SAE 1 1/4" and 1 1/2"	BSP 1 1/4"

### Hägglunds CB, splines



### Hägglunds CB, shrink disc coupling

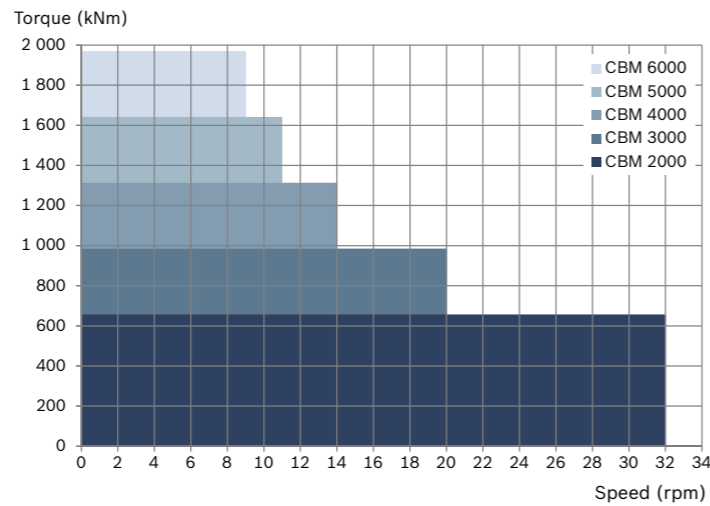


# Empowering possibilities

## The Hägglunds CBm does more with less – and lets you do the same.

When it comes to production, everyone wants more. But these days there's less of everything else: from available time to the energy and resources for the job. With the Hägglunds CBm direct drive from Bosch Rexroth, the equation is easier to solve. The Hägglunds CBm packs 50% more torque into a motor that's smaller and 50% lighter than its predecessor. That gives it the world's highest torque-to-weight ratio. Even so, it has all the advantages you'd expect from a direct drive. Full torque from zero, protection from shock loads and four-quadrant operation are part of the same small package. Put simply, the Hägglunds CBm does more with less – and lets you do the same. From industry to offshore, you can handle more work with less space, less energy and less weight on the driven shaft. That means greater productivity with a smaller footprint. And that's an ingenious solution.

Wide operating range



## MOTOR DATA, HÄGGLUNDS CBM

Motor type	Displacement (cm <sup>3</sup> /rev)	Specific torque (Nm/bar)	Max. speed (rpm)	Max. pressure (bar) <sup>1)</sup>	Max. torque (kNm) <sup>2)</sup>
CBm 2000 1000	63 108	1 000	70	350	328
CBm 2000 1200	75 832	1 200	58	350	394
CBm 2000 1400	88 301	1 400	48	350	460
CBm 2000 1600	100 770	1 600	41	350	525
CBm 2000 1800	113 748	1 800	36	350 <sup>3)</sup>	591
CBm 2000	126 726	2 000	32	350 <sup>3)</sup>	657
CBm 3000 2200	138 686	2 200	29	350	722
CBm 3000 2400	151 155	2 400	26	350	788
CBm 3000 2600	164 133	2 600	24	350 <sup>3)</sup>	854
CBm 3000 2800	177 111	2 800	22	350 <sup>3)</sup>	919
CBm 3000	190 089	3 000	20	350 <sup>3)</sup>	985
CBm 4000 3200	201 540	3 200	18	350	1 051
CBm 4000 3400	214 518	3 400	17	350	1 116
CBm 4000 3600	227 496	3 600	16	350	1 182
CBm 4000 3800	240 474	3 800	15	350	1 248
CBm 4000	253 452	4 000	14	350	1 313
CBm 5000 4600	290 859	4 600	12	350	1 510
CBm 5000	316 815	5 000	11	350	1 642
CBm 6000 5600	354 222	5 600	9	350	1 838
CBm 6000	380 178	6 000	9	350	1 970

<sup>1)</sup> The motors are designed according to DNV-rules. Test pressure 420 bar/6 000 psi. Peak/transient pressure 420 bar/6 000 psi maximum, allowed to occur 10 000 times.

<sup>2)</sup> Calculated as:  $T = T_s \times (350-15) \times 0.98$ .

<sup>3)</sup> Max pressure <350 bar.



**DIMENSIONS, MOTORS WITH SPLINES**

Motor type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)	Main conn.	Drain conn.
CBm 2000	1 460	855	1 300	416	-	N360x8x30x44x9H	4 100	SAE 2"	G 1 1/4" and 2"
CBm 3000	1 460	965	1 300	409	-	N440x8x30x54x9H	5 000	SAE 2"	G 1 1/4" and 2"
CBm 4000	1 460	1 083	1 300	527	-	N440x8x30x54x9H	5 800	SAE 2"	G 1 1/4" and 2"
CBm 5000	1 460	1 201	1 300	526.5	270	N460x8x30x56x9H	6 700	SAE 2"	G 1 1/4" and 2"
CBm 6000	1 460	1 320	1 300	526.5	270	N460x8x30x56x9H	7 500	SAE 2"	G 1 1/4" and 2"

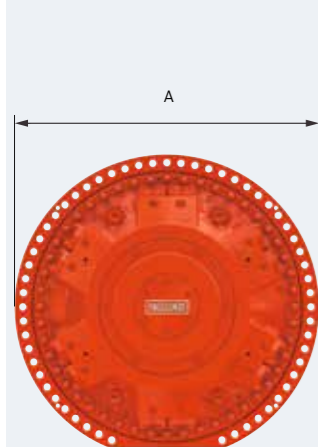
**DIMENSIONS, MOTOR WITH SHRINK DISC COUPLING**

Motor type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg)	Main conn.	Drain conn.
CBm 2000 C	1 460	1 072	720	620	360		SAE 2"	G 1 1/4" and 2"
CBm 2000 E	1 460	1 018	690	576	340		SAE 2"	G 1 1/4" and 2"
CBm 3000	1 460	1 190	720	620	360		SAE 2"	G 1 1/4" and 2"

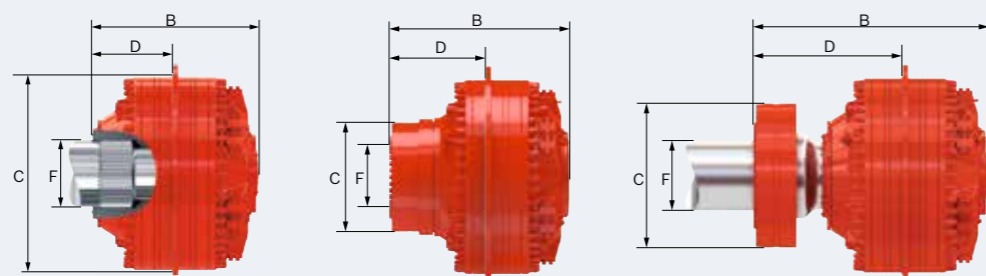
**DIMENSIONS, MOTOR WITH COUPLING ADAPTER**

Motor type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)	Main conn.	Drain conn.
CBm 2000	1 460	1 211	720	773	-	360	4 850	SAE 2"	G 1 1/4" and 2"
CBm 3000	1 460	1 419	950	863	-	460	6 600	SAE 2"	G 1 1/4" and 2"
CBm 4000	1 460	1 537	950	981	-	460	7 450	SAE 2"	G 1 1/4" and 2"
CBm 5000	1 460	1 739	1 180	1 030	270	480	9 700	SAE 2"	G 1 1/4" and 2"
CBm 6000	1 460	1 857	1 180	1 030	270	480	10 500	SAE 2"	G 1 1/4" and 2"

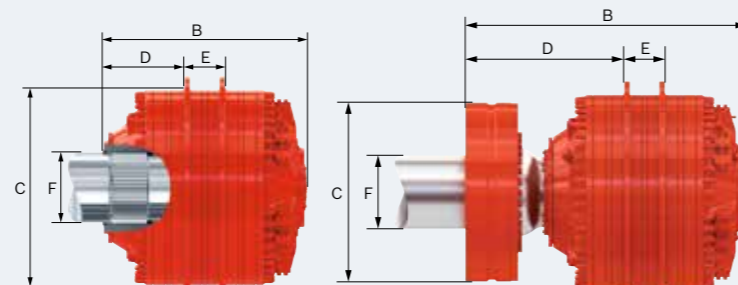
**CBm 2000-6000**



**CBm 2000, 3000 and 4000**



**CBm 5000, 6000**



▲ The biggest and the smallest  
- Hägglunds CBm and Hägglunds CAb



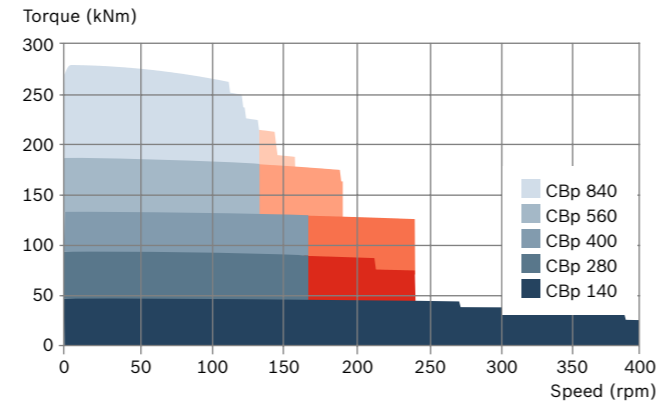
# Powerful opportunities

## The Hägglunds CBp motor range for higher power.

The Hägglunds CBp motor series is a truly powerful motor range. It has all the attractive characteristics of the Hägglunds direct drive hydraulic motors. It is compact, with low weight and immensely powerful. In fact, the most powerful Hägglunds motor (power per kilo) ever. This motor can operate continuously at high power. It can be flange-mounted or torque arm mounted and all of the motors are fitted with splines and have through-holes. This motor range opens new opportunities for drive solutions in new applications, because this motor can drive at higher speeds with increased efficiency.

### Wide operating range

Max intermittent torque and speed.



## MOTOR DATA, HÄGGLUNDS CBP

Motor Type	Displacement (cm <sup>3</sup> /rev)	Specific Torque (Nm/bar)	Rated Speed (rev/min)	Max Speed (rev/min)	Max Pressure (bar)
CBp 140 80	5 024	80	320	400	350
CBp 140 100	6 280	100	270	390	350
CBp 140 120	7 543	120	230	320	350
CBp 140	8 800	140	210	275	350
CBp 280 160	10 100	160	170	170	350
CBp 280 200	12 600	200	170	170	350
CBp 280 240	15 100	240	170	170	350
CBp 280	17 600	280	150	170	350
CBp 400 240	15 100	240	170	170	350
CBp 400 280	17 600	280	170	170	350
CBp 400 320	20 100	320	170	170	350
CBp 400 360	22 600	360	170	170	350
CBp 400	25 100	400	170	170	350
CBp 560 440	27 600	440	135	135	350
CBp 560 480	30 200	480	135	135	350
CBp 560 520	32 700	520	135	135	350
CBp 560	35 200	560	135	135	350
CBp 840 600	37 700	600	110	135	350
CBp 840 640	40 200	640	100	135	350
CBp 840 680	42 700	680	100	135	350
CBp 840 720	45 200	720	95	135	350
CBp 840 760	47 800	760	90	125	350
CBp 840 800	50 300	800	85	120	350
CBp 840	52 800	840	80	115	350

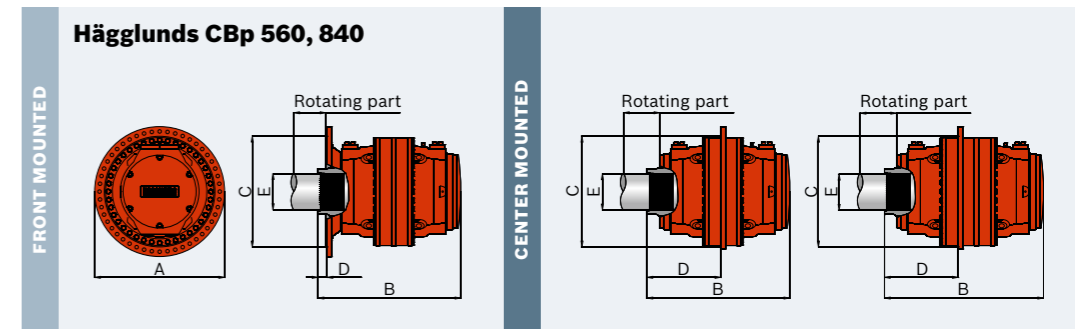
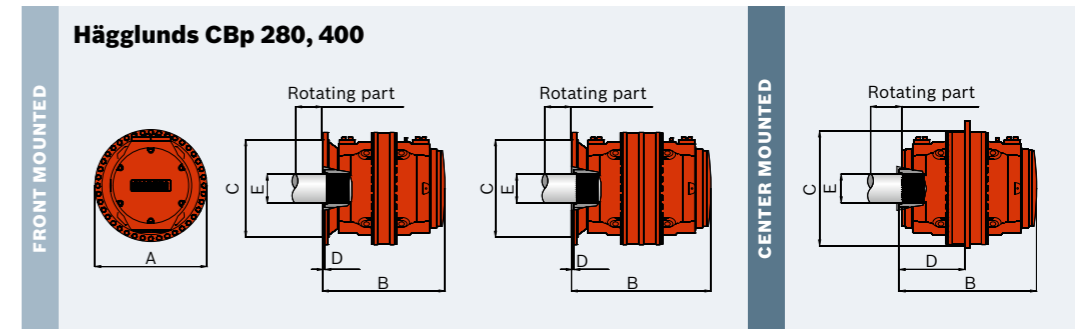
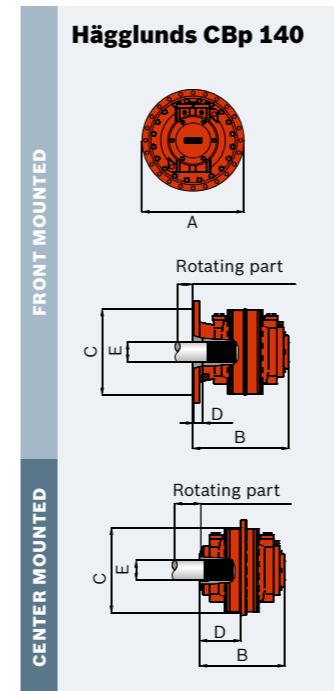
## DIMENSIONS, MOTORS WITH SPLINES FOR FRONT MOUNTING

Motor Type	A (mm)	B (mm)	C (mm)	D (mm)	E
CBp 140	600	570	510	54	N120x5x30x22x9H
CBp 280	782	869	680	11.6	N200x5x30x38x9H
CBp 400	782	987	680	11.6	N200x5x30x38x9H
CBp 560	940	1 047	800	65.4	N260x5x30x50x9H

## DIMENSIONS, MOTORS WITH SPLINES FOR CENTER MOUNTING

Motor Type	A (mm)	B (mm)	C (mm)	D (mm)	E
CBp 140	600	511	510	246	N120x5x30x22x9H
CBp 400	940	969	800	457	N200x5x30x38x9H
CBp 560	940	1 046	800	534	N260x5x30x50x9H
CBp 840	940	1 165	800	534	N260x5x30x50x9H

Tandem mounting possible. Contact your local sales representative for more information.



# The original powerhouse

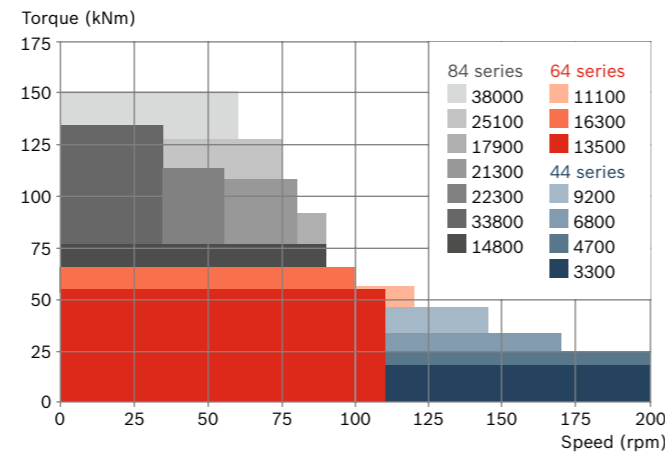
## The Hägglunds VI was first engineered to bring unparalleled performance, reliability and control to marine applications.

The Hägglunds VI was the first Hägglunds hydraulic motor to leave the assembly line. It was originally designed to bring performance, reliability and control to marine applications. The same features have however also proven valuable in the industrial field; e.g. Pulp & Paper and the Mining Industry.

In marine applications, particularly with tough winches, the Hägglunds VI motor is known to provide the best available control of torque (line pull) regardless of speed. This reduces maintenance costs and increases productivity by reducing the risk of snagging or equipment breakdowns. True free-wheeling and a very low moment of inertia are some other features that has made the Hägglunds VI so popular in even the most demanding environments.

### Wide operating range

Max intermittent torque and speed.



## MOTOR DATA, HÄGGLUNDS VI

Motor Type	Full displacement					Displacement shift				Ratio
	Displacement (cm <sup>3</sup> /rev)	Specific Torque (Nm/bar)	Rated Speed* (rev/min)	Max Speed (rev/min)	Max Pressure (bar) <sup>2)</sup>	Displacement (cm <sup>3</sup> /rev)	Specific Torque (Nm/bar)	Rated Speed (rev/min) <sup>1)</sup>	Max Speed (rev/min)	
44-03300	3 325	53	100	200	320	1 662	26	100	200	1:2
44-04700	4 710	75	100	200	320	2 356	37	100	200	1:2
44-06800	6 790	108	90	170	320	3 393	54	90	170	1:2
44-09200	9 240	147	80	145	320	4 618	74	80	145	1:2
64-11100	11 080	176	70	120	320	5 542	88	70	120	1:2
64-13500	13 499	215	60	110	250	6 750	107	60	110	1:2
64-16300	16 340	260	50	100	250	8 171	130	50	100	1:2
84-14800	14 840	236	55	90	320	-	-	-	-	-
84-17900	17 961	286	55	85	320	-	-	-	-	-
84-21300	21 375	340	55	80	320	-	-	-	-	-
84-25100	25 090	399	55	75	320	-	-	-	-	-
84-38000	38 000	605	40	60	250	-	-	-	-	-
84-22300	22 300	355	55	55	320	11 150	177	60	85	1:2
84-33800	33 780	538	35	35	250	16 889	269	50	70	1:2
84-25100	25 090	399	40	55	250	8 362	133	45	75	1:3
84-38000	38 000	605	25	35	250	12 667	202	35	60	1:3
84-25100	25 090	399	40	55	250	16 724	266	45	75	2:3
84-38000	38 000	605	25	35	250	25 334	403	35	60	2:3

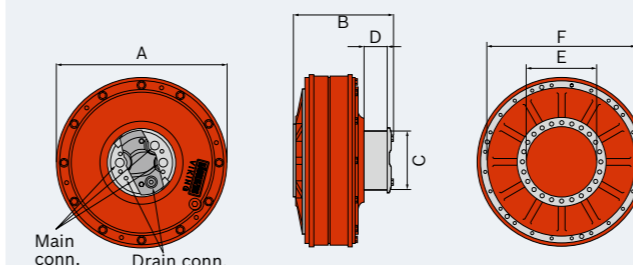
<sup>1)</sup> Special considerations regarding charge pressure, cooling and choice of hydraulic systems for speed above rated.

<sup>2)</sup> 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.

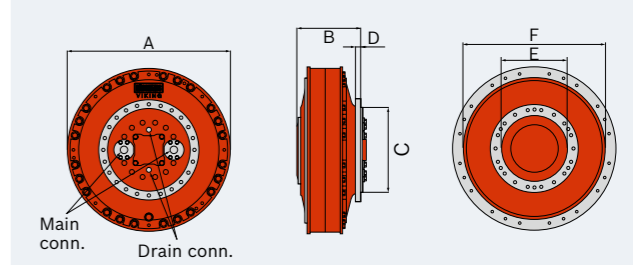
## DIMENSIONS

Motor Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)	Main Conn.	Drain Conn.	Mounting
44-series	769	440	260	100	320	676	520	BSP 1 1/4"	BSP 3/4"	Key joint
64-series	858	451	260	100	390	766	750	BSP 1 1/4"	BSP 3/4"	Key joint
84-series	1 100	449	560	71	440	955	1 550	SAE 2"	BSP 1"	Screw/Flange

### Hägglunds VI, series 44 and 64



### Hägglunds VI, series 84





## Few components – many combinations

### Wide drive unit range for total reliability.

Our drive units are easy to install and are fully function tested before delivery. With our proven, modularized solutions we give you maximized uptime and quick and easy maintenance. We can also offer you a quick delivery and high delivery precision.

Our monitoring and control system (Hägglunds Spider) delivers excellent controllability to the drive system. With a Hägglunds drive unit to match your motors you have the same high quality throughout the entire drive system.

# Hägglunds DUc

## FEATURES

- ▶ Compact design – small space required, vertical assembly
- ▶ Well proven technical solution
- ▶ Short delivery time for the basic range of the compact DUc
- ▶ Equipped with Hägglunds advanced control system.

## OPTIONS

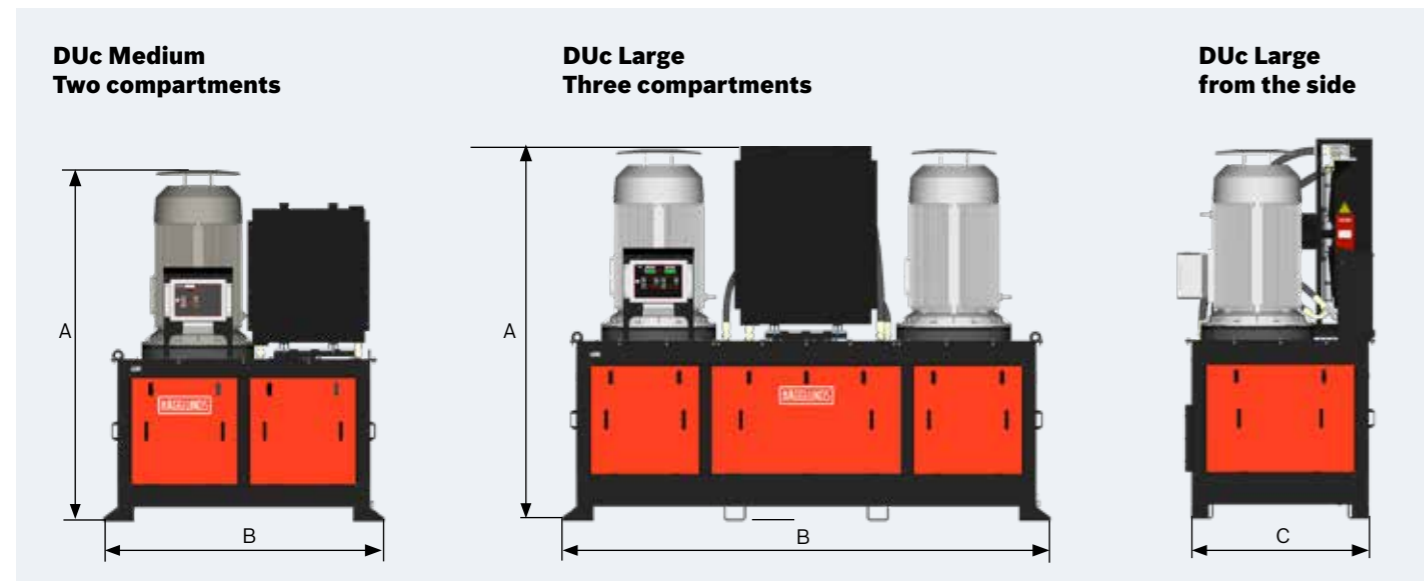
- ▶ Auxiliary hydraulic circuit, for example: flushing of hydraulic motor, cylinder functions.
- ▶ Predictive maintenance with Hägglunds CMP

## DIMENSIONS

Frame size	Pump setup	Pump size	Electric motor (kW)	A Max. (mm)	B (mm)	C (mm)
Medium Two compartments	Single	SP40–SP180	11–132	2 220	1 800	1 000
	Tandem	SP40–SP180	22–200	2 940		
Large Two compartments	Single	SP250–SP750	55–500	2 900	2 000	1 250
	Tandem	SP250–SP355	75–315	3 200		
Large Three compartments	Single	SP250–SP750	55–500	3 000	3 410	1 250
	Tandem	SP250–SP500	75–500	3 500		

## SPECIFIED TECHNICAL FEATURES

- ▶ Panels for sealed off hydraulic compartment
- ▶ Hägglunds Spider control system
- ▶ Axial piston pump with electro hydraulic control
- ▶ Totally closed IE3, IP55 squirrel cage, 4-pole electrical motor
- ▶ Accumulator for shock loads
- ▶ Stainless steel oil tank with level gauge, combined level and temperature transmitter, breather, drain valve and suction line valve with switch
- ▶ Oil dip pan can handle the entire tank volume



# Hägglunds DUe

## COMBINATIONS OF PUMP AND ELECTRIC MOTOR – HÄGGLUNDS DUe

	Electric motor (kW)	Pump SP																		
		Single					Tandem													
		40	71	125	180	250	355	500	750	125	180	125	250	250	355	250	355	500		
Small (S)	22		■																	
	30		■	■																
	37		■	■																
	45		■	■	■															
	55		■	■	■															
Medium (M)	75			■	■															
	90			■	■	■														
	110				■	■	■													
	132				■	■	■	■												
	160				■	■	■	■	■											
	200					■	■	■	■	■										
	250						■	■	■	■	■									
	315							■	■	■	■	■								
	355								■	■	■	■	■							
	400									■	■	■	■	■						
Large (L)	500										■	■	■	■	■					

■ Pre-defined combinations

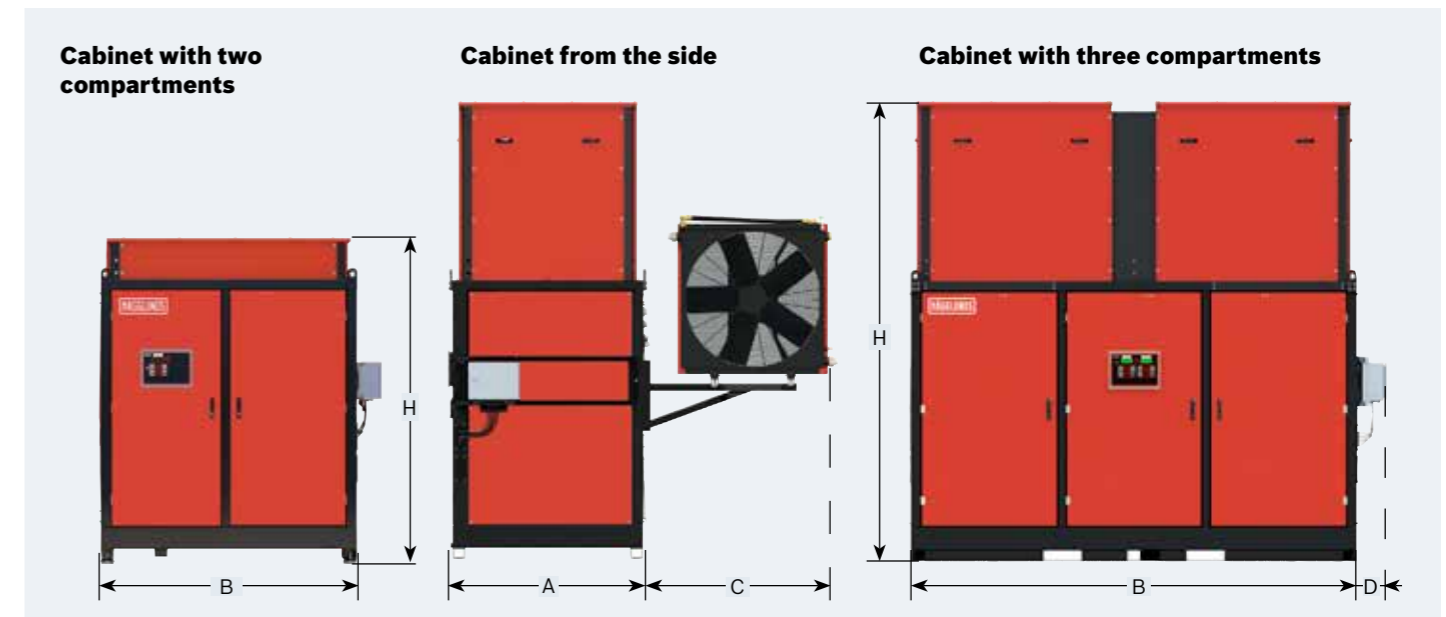
## BASIC DIMENSIONS – HÄGGLUNDS DUe

Dim mm	Type <sup>1)</sup>	DUEs2	DUEs3	DUEm2	DUEm3	DUEl2	DUEl3
H <sup>3)</sup>		2 220	2 220	2 520-3 500	2 520-3 500	2 820-4 200	2 820-4 200
B		1 820	2 720	2 000	3 000	2 190	3 500
A		1 225	1 225	1 500	1 500	1 500	1 500
C <sup>4)</sup>	Air-oil	1 199	1 428	1 310	1 640	1 503	1 640
	Water-oil	470	470	470	470	470	470
D <sup>2)</sup>		250	250	250	250	250	250

<sup>1)</sup> Cabinet designations with an S represent frame size small, M represent frame size medium and L represent frame size large. The number at the end of the cabinet designations represents two or three compartment frame.  
<sup>2)</sup> The control unit (Spider) can be placed on either side of the cabinet.  
<sup>3)</sup> The height of the drive unit varies due to the different pump/motor combinations available.  
<sup>4)</sup> Based on general size

## FEATURES

- ▶ Modular system – many possible combinations of oil flow and installed power.
- ▶ Can be positioned close to the machine or in any convenient location.
- ▶ Can easily be equipped with any of Hägglunds advanced control systems.
- ▶ Sound insulated cabinet.
- ▶ Small space required.
- ▶ Very easy to install and maintain.



# Hägglunds PAC/PBC

## COMBINATIONS OF PUMP AND ELECTRIC MOTOR – HÄGGLUNDS PAC (DRIVE UNIT FOR US STANDARDS)

	Electric motor hp (kW)	Pump SP																		
		Single							Tandem											
		40	71	125	180	250	355	500	750	40	71	125	180	250	250	355	355	500	500	500
Small (S)	15 (11)	■																		
	20 (15)	■																		
	25 (19)	■	■																	
	30 (23)	■	■	■					■											
	40 (30)	■	■	■					■	■										
	50 (38)		■	■	■				■	■										
	60 (45)		■	■	■				■	■										
	75 (56)		■	■	■				■	■										
Medium (M)	100 (75)		■	■	■				■											
	125 (94)			■	■	■	■		■	■	■	■								
	150 (113)				■	■	■	■		■	■	■	■	■	■					
	200 (150)				■	■	■	■		■	■	■	■	■	■	■	■			
	250 (188)					■	■	■		■	■	■	■	■	■	■	■	■		
	300 (225)						■	■	■		■	■	■	■	■	■	■	■	■	■
	350 (263)						■	■	■		■	■	■	■	■	■	■	■	■	■
Large (L)	400 (300)									■	■	■	■	■	■	■	■	■	■	
	450 (338)										■	■	■	■	■	■	■	■	■	
	500 (375)											■	■	■	■	■	■	■	■	
Extra Large (XL)	600 (450)												■	■	■	■	■	■	■	
	700 (525)													■	■	■	■	■	■	
	800 (600)														■	■	■	■	■	

■ Pre-defined combinations

More options available, see datasheet.

### FEATURES

- ▶ Many combination of flow capacity and installed power sizes available
- ▶ Can be positioned close to the machine or in any convenient location.
- ▶ Can easily be equipped with any of Hägglunds advanced control systems.
- ▶ Sound insulated cabinet.
- ▶ Small space required.
- ▶ Very easy to install and maintain.
- ▶ Can be installed outdoor without a need for a building.
- ▶ Proven performance and technical support.

### DATA – HÄGGLUNDS PBC (SAME AS PAC, BUT WITH LOWER HEIGHT AND WITHOUT PANELS)

Type	Max Installed Power (kW)	Max Oil Flow (l/min) <sup>1)</sup>	Max Pressure (bar)	Weight (kg)
PBC 202	112	409	350	1 951
PBC 203	2x93	2x409 <sup>2)</sup>	350	2 586
PBC 402	373	893	350	3 039
PBC 603	2x373	2x893	350	3 901

<sup>1)</sup> 1785 rpm.

<sup>2)</sup> Only one set of electric motor/pump is permitted to operate. The other set serves as stand by.

## BASIC DIMENSIONS – HÄGGLUNDS PAC

Type <sup>1)</sup>	PAC-202 (S)	PAC-203 (S)	PAC-402 (M)	PAC-602 (M)	PAC-603 (M)	PAC-803 (M)	PAC-1003 (L)	PAC-1203 (XL)	PAC-1603 (XL)
H <sup>2)</sup>	93 (2 362) 97 (2 464)	93 (2 362)	106 (2 692) 124 (3 150)	116 (2 946) 128 (3 251)	106 (2 692) 126 (3 200)	118 (2 997) 136 (3 455)	118 (2 997) 136 (3 455)	125 (3 175) 161 (4 090)	125 (3 175) 161 (4 090)
B	55 (1 397)	83 (2 108)	66 (1 676)	69 (1 753)	105 (2 667)	122 (3 099)	122 (3 099)	144 (3 658)	144 (3 658)
A	39 (991)	39 (991)	53 (1 346)	53 (1 346)	53 (1 346)	60 (1 524)	60 (1 524)	72 (1 829)	72 (1 829)
C <sup>3)</sup>	Water-oil	15 (381)	15 (381)	15 (381)	15 (381)	15 (381)	15 (381)	15 (381)	15 (381)
	Air-oil	32 (813)	37 (940)	37 (940)	45 (1 143)	45 (1 143)	R	R	R

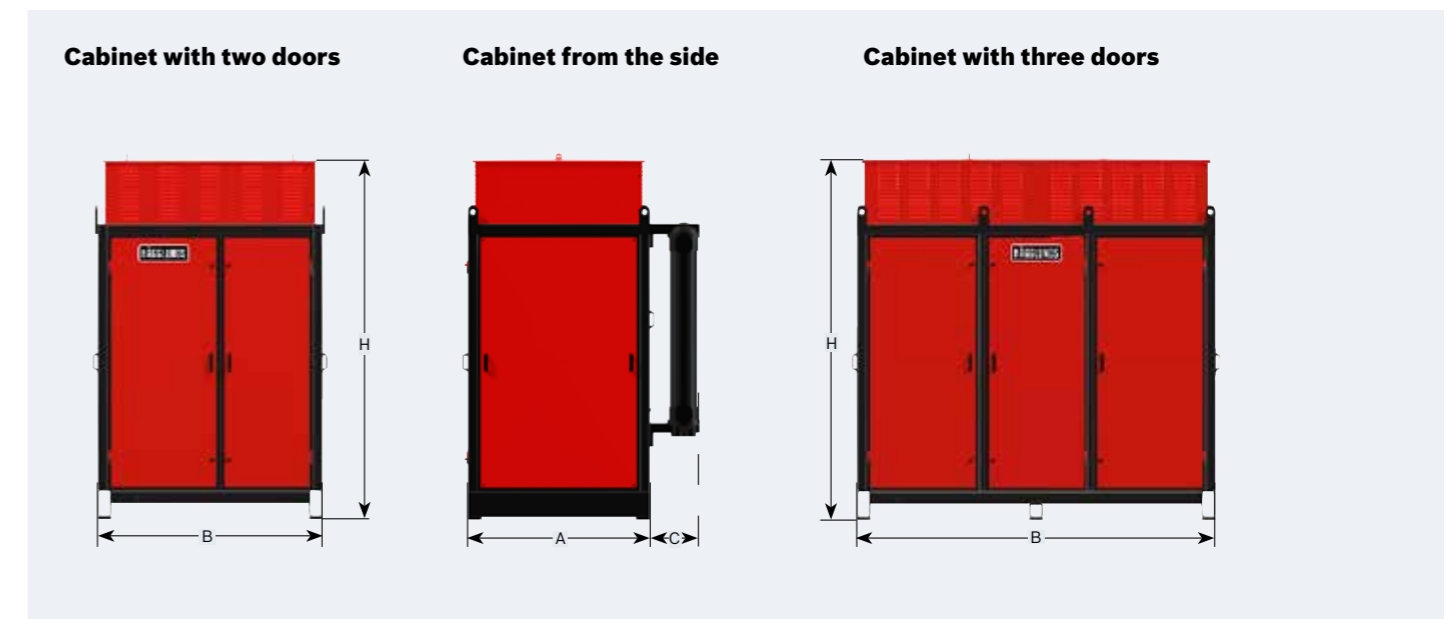
<sup>1)</sup> Cabinet designations ending with a 2, represent a two-door cabinet. Cabinet designations ending with a 3, represent a three-door cabinet.

Cabinet designations with an S, represent frame size small, M represent frame size medium, L represent frame size large, and XL represent frame size extra large.

<sup>2)</sup> The height of the top cover varies due to the different pump/motor combinations available.

<sup>3)</sup> Based on general size.

R) Cooler will be remote mounted.



# Hägglunds DOB

## FEATURES

- ▶ Compact design
- ▶ Low power focus
- ▶ Variable flow with an open loop system
- ▶ Quick installation
- ▶ High delivery performance
- ▶ Function tested before delivery

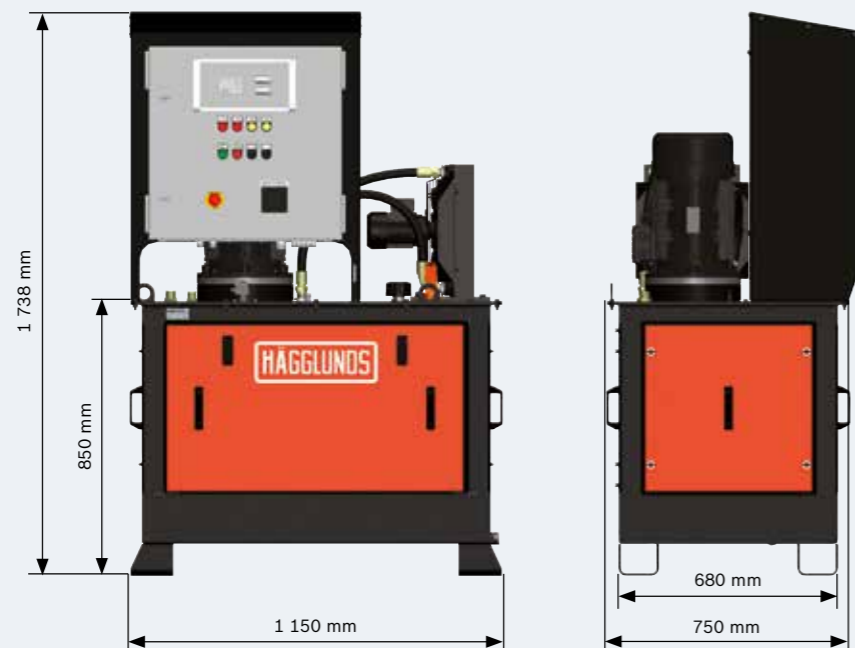
## TECHNICAL FEATURES

- ▶ Axial piston pump (open loop)
- ▶ VFD controlled electric motor
- ▶ Contamination protection
- ▶ Stainless steel oil tank
- ▶ Oil dip pan can handle tank volume
- ▶ Soft sealing system
- ▶ Motor/pump set mounted on rubber damper
- ▶ 10 micron single filters
- ▶ Speed controlled air blast cooler

## GENERAL DATA

Pump size	8.1 cc	10.6 cc
Max operation pressure		315 bar
Max flow	23 lpm	30 lpm
Charge pressure		1.5 bar
Main voltage	323-528 VAC, 47.5-63 Hz	
Max consumed current	24 A	32 A
Weight without oil		400 kg
Protection class		IP 54
Oil recommendation	Mineral oil, viscosity 46-100 cSt (Viscosity index minimum 100)	
Maximum admissible degree of contamination of the hydraulic fluid – cleanliness class according to ISO 4406		Class 20/18/15
Maximum height difference between motor and tank		3.5 m
Maximum inclination of drive unit		14°
Sound level		75 dB (A)

## DIMENSIONS



# Hägglunds DUp

Hägglunds DUp (Gemini) is a complete, flexible, module based drive unit designed for the most demanding requirements on a drive system. The Hägglunds DUp drive unit is configured with flexibility in mind and the modules can be placed where they are best suited, for operation and service. This drive unit consists of one or more pump modules, tank module and service modules. The DUp can continuously deliver high power at higher speed and still retains the traditional values of a Hägglunds drive unit; favourable low-speed high torque characteristics, drive control and reliability.

## HÄGGLUNDS DUP MODULES IN BRIEF:

### Hägglunds DUp pump module

The Hägglunds DUp drive unit can have of one or more pump modules with one pump each. They cater for installed power up to 500 kW per module.

### Hägglunds DUp service module

This module includes filter unit and cooler unit.

### Filter unit:

This unit includes filters. They filter the fluid for one or more pump units.



### Cooler unit:

The unit includes a water/oil cooler of bolted plate type

### Hägglunds DUp tank module

The tank module is equipped with a reservoir and instruments and can be placed in the most suitable position for operation and access. Flushing and charge pumps are connected in the end of the reservoir and supply the hydraulic fluid at low pressure.

# Hägglunds SP pump

The Hägglunds SP pump is designed to Hägglunds specifications to provide a neatly packaged pump with integral boost pump, electro-hydraulic displacement stroker and fast compensator to reduce pressure spikes on tough drives. Maximum volume adjustment screws and a displacement indicator are included. A double shaft seal arrangement is provided to eliminate leakage. The SP pump has low noise characteristics and is designed to give long trouble free life in line with Hägglunds drives systems generally.

The SP pump provides a very wide range of pump displacements including the ability to use tandem pumps. Tandem pumps enable one electric motor to load share two drives which can save space, improve efficiency and economy. The SP enables very good possibilities to optimize to the most efficient and appropriate drive selection.



## Hägglunds control systems

### HÄGGLUNDS SPIDER CONTROL SYSTEM

Hägglunds Spider, the monitoring and control system that delivers excellent controllability for the whole Hägglunds drive system.

The configuration of Hägglunds Spider is very flexible and the system can be adopted for various applications needs.



### HÄGGLUNDS ICP PUMP CONTROL

Hägglunds ICp, the driver card solution for the pump in your system.

Flexible configuration for the pump with options for swivel angle or pressure regulation.

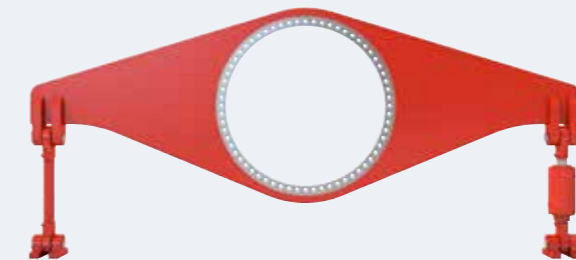


## Hägglunds accessories

A compact and efficient design can be achieved by means of our standard Hägglunds accessories program. These illustrations show some of our Hägglunds accessories. Kits for harsh environment are also available.



▲ Torque arms and brackets



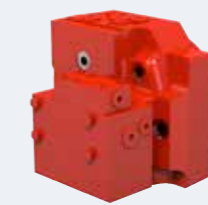
▲ Double ended torque arms



▲ Brakes for Hägglunds CA and Hägglunds CB motors



▲ Speed sensors and attachments



▲ Valves and manifolds for each series of Hägglunds motor



▲ Parking lock unit for Hägglunds VI motors



▲ Brake assemblies for Hägglunds VI motors



▲ Bearing brackets for Hägglunds VI motors



▲ Protective cover for Hägglunds VI motors

# Hägglunds valves

## Our wide range of Hägglunds valves increases your options or functionality, flexibility and reliability.

We have developed a wide range of valves to ease application and further improve the functionality of Hägglunds drive systems. They can be used for a wide range of drive applications and needs reducing your design time and with added security.

The valves are all of a robust, reliable design and can withstand the toughest environments and many of the valves can also be used in combination. The Hägglunds valves are obviously well matched with our Hägglunds drive systems and provide a neat and efficient way to achieve the control and flexibility you need.



## HÄGGLUNDS PRESSURE LIMITING VALVES

Valve	Size	Short description	Designed for	Max pressure (bar)	Flow capacity (lpm)	Weight (kgs)
COCA 300	20	Protects system main lines from damaging pressures	CA/CB	350	300	8
COCB 1000-1	40	Protects system main lines from damaging pressures	CA/CB	350	1 000	30
COCB 1000-3	40	Protects system main lines from damaging pressures includes an integrated purge circuit	CA/CB	350	1 000	33

## HÄGGLUNDS LOAD CONTROL VALVES

Valve	Size	Short description	Designed for	Max pressure (bar)	Flow capacity (lpm)	Weight (kgs)
VCBCA 480	32	Controls over running loads provided by a counterbalance function	CA/CB	350	480	20
VCBCA 1000	50/40	Controls over running loads provided by a counterbalance function	CA/CB	350	1 000	40
CTCA 1000	40/30	Controls winch rope load with a constant tension function	CA/CB	350	2 000	34

## HÄGGLUNDS MOTION CONTROL VALVES

Valve	Size	Short description	Designed for	Max pressure (bar)	Flow capacity (lpm)	Weight (kgs)
VTCA 600	30	Designed to shift displacement of a dual speed motor	CA	350	600	30
VFCCA 1000	40	Designed to put the motor in free circulation mode with the pistons running against the cam ring.	CA/CB	350	1 000	85
VFWCB 600	50	Designed to put the motor in free wheeling mode with the pistons retracted from the cam ring.	CA/CB	350	600	40
VFW	25	Designed to put a Hägglunds VI motor in free wheeling mode with the pistons retracted from the cam ring.	VI	350	800	56
V4WCA 1000	40	A proportional directional control valve with built-in counterbalance function	CA/CB	350	1 000	78

## HÄGGLUNDS INTEGRATED VALVE SOLUTIONS

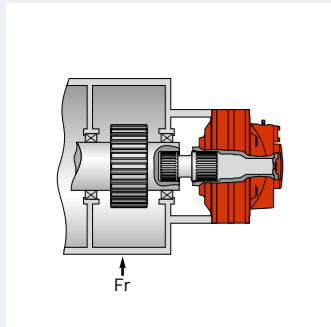
Valve	Size	Short description	Designed for	Max pressure (bar)	Flow capacity (lpm)	Weight (kgs)
V 46-O	25	An integrated winch valve for open hydraulic systems	VI	350	800	100
V 46-C	25	An integrated winch valve for closed hydraulic systems	VI	350	800	88



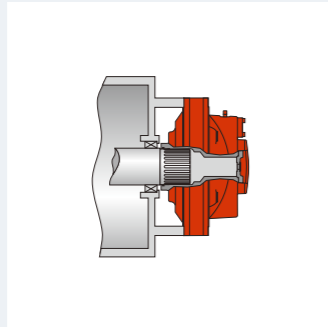
# Installation examples

## EXAMPLES FOR HÄGGLUNDS MOTORS, COMPACT SERIES

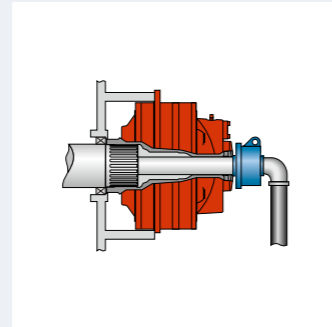
The tough hydraulic motors are weight and space saving and offers versatile mounting possibilities.



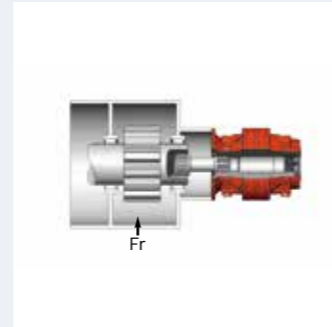
▲ Flange mounted motor with splines and high radial load from driven shaft.



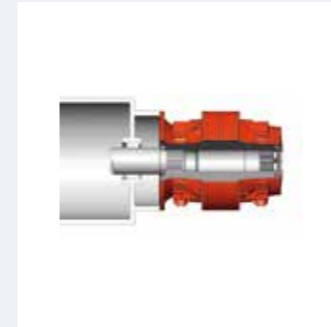
▲ Flange mounted motor with splines and low radial load from driven shaft.



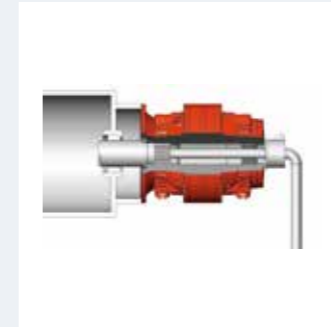
▲ Flange mounted motor with splines and through hole for cooling of driven machine.



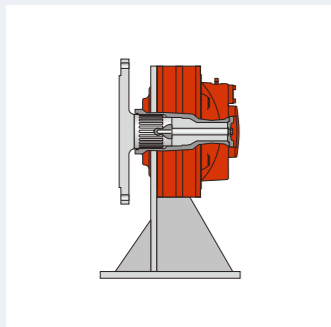
▲ Flange mounted motor with splines and high radial load from driven shaft.



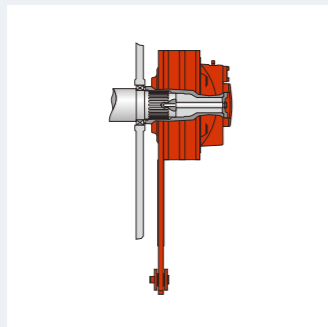
▲ Flange mounted motor with splines and low radial load from driven shaft.



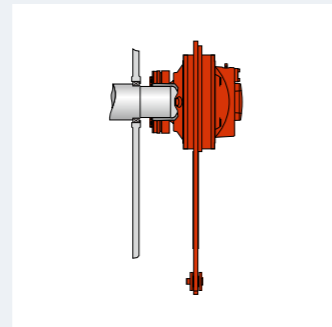
▲ Flange mounted motor with spline and through hole for cooling of driven machine.



▲ Bracket mounted motor with flange adapter.



▲ Torque arm mounted motor with splines.



▲ Torque arm mounted motor with shrink disc coupling.



▲ Torque arm mounted motor with splines.



▲ Torque arm mounted motor with shaft coupling.



▲ Bracket mounted motor with flange adapter.



▲ Bracket mounted motor with stub shaft.

# Hägglunds Original Service

## Experts in drive system service, worldwide and close by.

Hägglunds Original Service from Bosch Rexroth is the only true choice for service of your Hägglunds drive system. Ever since Hägglunds Drives became part of Bosch Rexroth, Rexroth has been the source for Hägglunds service, Hägglunds spare parts and Hägglunds drive system repairs. Only at Bosch Rexroth will you find the knowledge and insights that come from a half-century of servicing Hägglunds drive systems.

### Why choose Hägglunds Original Service?

High-performance drive systems need high-quality service. Bosch Rexroth is home to certified Hägglunds service specialists, whose expert training is specific to Hägglunds drive systems. Not only do they service Hägglunds motors, they take a complete drive system approach to securing your uptime.

Hägglunds service experts are supported by dedicated workshops with specialized tools and the latest technology. Everything needed to service, repair, modernize or upgrade Hägglunds drive systems is at their fingertips, including genuine Hägglunds spare parts direct from the factory.

### Serving you globally and locally

As a truly global company, Bosch Rexroth can maximize uptime and ensure drive system performance anywhere in the world. Hägglunds Original Service is available locally wherever you are, with everything from commissioning and repairs to preventive maintenance, field service and beyond.

## A FULL RANGE OF SERVICES FOR YOUR HÄGGLUNDS DRIVE SYSTEM

As the source of Hägglunds drive systems, only Bosch Rexroth can bring you the full range of Hägglunds service options, based on the latest knowledge and technology.

### Hägglunds field service

From inspections to preventive maintenance, Rexroth field service engineers are ready to meet your needs on site – wherever you happen to be. Our local Hägglunds service specialists have a complete understanding of your Hägglunds drive system, as well as your situation. With their unique training and equipment, they resolve your drive issues quickly and completely.

*Examples of our field service include start-up support, condition-based maintenance, fitness checks and emergency support.*

### Hägglunds drive repairs

The rugged design and leading-edge technology of Hägglunds products are the result of world-class workmanship. That same workmanship is found in the unique tools and processes used by Rexroth experts to repair Hägglunds motors and drive systems. Our skilled Hägglunds service specialists are factory-certified to repair Hägglunds products, which gives you solid assurance that the work will be done right.

*Our repair offering includes fixed-price repairs, preferred repair lead times, reman exchange, product upgrades and more.*

### Hägglunds spare parts

Only genuine Hägglunds spare parts deliver the same world-class performance as the Hägglunds drive systems you depend on. Our spare parts program, which can be combined with discounts and extended warranty options, gets Hägglunds parts to you quickly and reliably. Strategically located parts inventories, found at Rexroth service centers worldwide, ensure it.

*Beyond Hägglunds parts themselves, we can offer inventory management, dedicated spares and kits, and stocking of emergency units.*

### Extended Hägglunds services

Rexroth can also provide a wide range of other services related to the Hägglunds drives and drive systems, including:

#### ► Remote technical support

You can turn to our Hägglunds experts for support by phone, e-mail, etc. Support time can be arranged by the hour or incorporated into a Service Agreement.

#### ► Modernization

After a discussion of your needs, we can propose ways to upgrade your Hägglunds drive equipment and application, for example to reduce energy consumption or increase power density.

#### ► Customer training

We can provide you with customized training packages, focused on maintaining your Hägglunds drive and getting maximum performance from your system.



# Hägglunds Inside Intelligence

**You and your drive system can both do more with Bosch Rexroth expertise. By selecting a Hägglunds drive solution, you've already chosen wisely. And with Hägglunds Inside Intelligence, your choice becomes that much smarter.**

Hägglunds Inside Intelligence is a modern suite of products and services that connect you and your drive with Bosch Rexroth expertise. Through smart technology within your drive system – combined with mobile devices and interactive solutions – it puts our half-century of experience right in your hands.

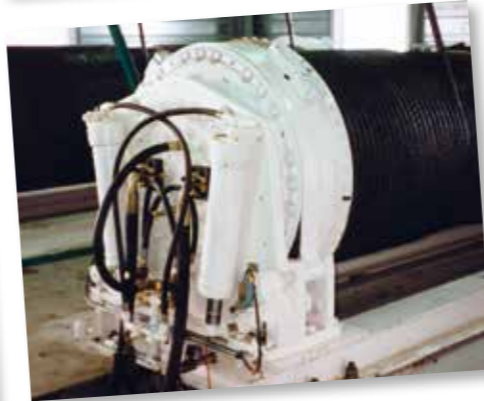
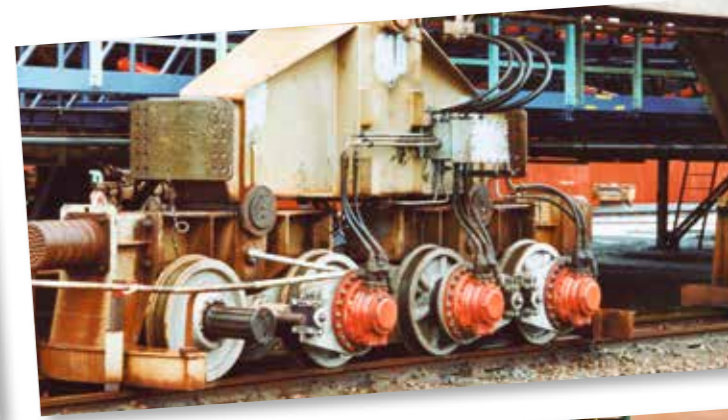
What matters isn't the technology, but the productivity and peace of mind you achieve. Through instant analysis, realtime advice and condition monitoring, as well as predictive maintenance and other forms of proactive support, we help you increase your drive utilization and lower your cost of ownership.

Hägglunds CM and Hägglunds CMp with ODIN, for instance, enable condition monitoring by establishing a link between your drive system and Bosch Rexroth expertise. Hägglunds CM provides entry-level monitoring and logging, while Hägglunds CMp with ODIN offers a machine health index, including historical data, trending and deeper analytics. The latter's secure and encrypted data communication lets us – or your own skilled engineers – look within your drive to optimize performance and initiate condition-based maintenance.

Using augmented reality, Hägglunds InSight Live connects Bosch Rexroth service experts with the local maintenance team on site. Through a mobile device or a pair of video goggles, our central service experts literally see what the onsite team sees. In real time, they can provide instruction and interact visually to guide service actions.

These are just a few examples from a growing portfolio of cutting-edge solutions. With Hägglunds Inside Intelligence, you have the tools to unlock the full potential of your Hägglunds drive system.





**Bosch Rexroth Mellansel AB**

SE-895 80 Mellansel, Sweden  
Phone: +46 (0)660-870 00  
hagglunds@boschrexroth.com  
www.boschrexroth.com/hagglunds

**Your local contact person can be found at:**

[www.boschrexroth.com/contact](http://www.boschrexroth.com/contact)

**Further information:**

[www.boschrexroth.com/hagglunds](http://www.boschrexroth.com/hagglunds)



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