

# Hydrostatic Pump Repair

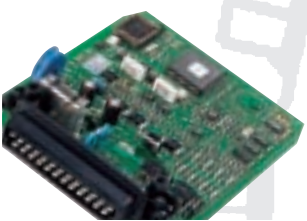
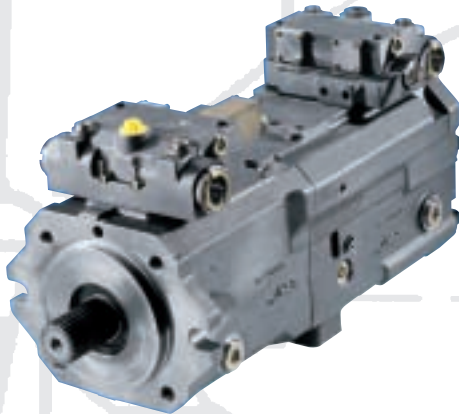
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**EDITION V**

MODEL CODES



*Linde*

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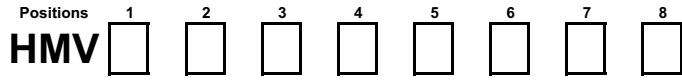
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# Model Code for HMV -02 Series Variable Displacement Motors



Example:

HMV 210 E1 M 1 H I E F

FRAME SIZE						
55	75	105	135	135D	165	210
●	-	-	-	-	-	-
-	●	-	-	-	-	-
-	-	●	-	-	-	-
-	-	-	●	-	-	-
-	-	-	-	●	-	-
-	-	-	-	-	●	-
-	-	-	-	-	-	●

## 1 DISPLACEMENT

- 055 - 54.8 cc/r (3.35 cir)
- 075 - 75.9 cc/r (4.63 cir)
- 105 - 105 cc/r (6.41 cir)
- 135 - 135.6 cc/r (8.27 cir)
- 135D - 2x135.6 cc/r (2x8.27 cir)
- 165 - 165 cc/r (10.07 cir)
- 210 - 210 cc/r (12.81 cir)

●	●	●	●	●	●	●
●	●	●	●	●	●	●
○	○	○	○	○	○	○
●	●	●	●	●	●	●
●	●	●	●	●	●	●
○	○	○	○	○	○	○
○	○	○	○	-	○	○
○	○	○	○	-	○	○

## 2 CONTROL TYPE

- E1 - Electric Infinitely Variable Control.
- E2 - Electric Two Position Control. (2-Speed)
- E4 - Electric Infinitely Variable (E1) w/ Zero Displacement.
- H1 - Hydraulic Infinitely Variable Control.
- H2 - Hydraulic Two Position Control. (2-Speed)
- H4 - Hydraulic Infinitely Variable (H1) w/ Zero Displacement.
- EH1P - H1 Control w/ Pressure Override, & Electric Displacement Override. (Hydraulic Override Available.)
- EH1PB - H1 Control w/ Pressure Override, Electric Displ. Override & Electric Brake Pressure Shut off. (Hyd. Avail.)

NOTE: E1, E2, H1, and H2 require an external servo supply pressure.

●	●	●	●	○	●	●
○	○	○	○	○	○	○
-	-	-	-	●	-	-
○	○	○	○	○	○	○

## 3 CONTROL RANGE

- L - 8-14 bar (116-203 psi)
- M - 10-16 bar (145-232 psi)
- N - 4-16 bar (58-232 psi)
- X - Not Applicable (E2 and H2 Controls, Pos. 2)

Must Specify w/ Electric Controls.						
●	●	●	●	●	●	●
●	●	●	●	●	●	●
○	○	○	○	○	○	○

## 4 VOLTAGE

- 1 - 12 Volt DC (E1, E2, E4, EH1P, & EH1PB Controls Only.)
- 2 - 24 Volt DC (E1, E2, E4, EH1P, & EH1PB Controls Only.)
- X - Not Applicable (H1, H2, or H4 Controls, Pos. 2)

Must Specify w/ Electric Controls.						
○	○	○	○	○	○	○
●	●	●	●	●	●	●
○	○	○	○	○	○	○

## 5 CONNECTOR TYPE

- A - AMP Junior-Timer (E1, E2, E4, EH1P, & EH1PB Controls Only.)
- H - Hirschmann (E1, E2, E4, EH1P, & EH1PB Controls Only.)
- X - Not Applicable (H1, H2, or H4 Controls, Pos. 2)

●	●	●	●	-	-	-
▲	▲	▲	○	●	●	●

## 6 PORTING

- D - Metric Straight Thread Flat Face Port (DIN 3852)
- I - Metric Straight Thread O-Ring Port (ISO 6149)

NOTE: High Pressure Work Ports "A" and "B" are SAE Code 62 with Metric Threads (ISO 6162).

●	●	●	-	-	-	-
-	-	-	●	●	●	-
-	-	-	-	-	-	●
-	-	○	○	-	○	-

## 7 MOUNTING

- C - SAE C, 2-Bolt
- D - SAE D, 2-Bolt
- E - SAE E, 4-Bolt
- P - Plug-In

All Shafts are ANSI B92.1						
●	●	●	-	-	-	-
-	-	-	●	-	●	-
-	-	-	-	-	-	●
○	○	-	-	-	-	-
-	-	○	-	-	-	-
-	-	-	○	●	○	▲

## 8 SHAFT

- C - SAE C 14T, 12/24 dP
- D - SAE D 13T, 8/16 dP
- F - SAE F 15T, 8/16 dP
- H - ANSI 21T, 16/32 dP
- 23T, 16/32 dP
- 27T, 16/32 dP

# Model Code for HMV -02 Series Variable Displacement Motors

9  10  11  12  13  14  15  16  17  18

X 070 C 10 N X R X 2 X

S = \_\_\_\_\_  
 (Only when "S" is selected in pos. 18. Specify requirement(s). Otherwise omit "S =")

**18 SPECIALS**

X - None  
 S - Call out requirement in clear text or use specified code from factory.

FRAME SIZE						
55	75	105	135	135D	165	210
●	●	●	●	●	●	●
c	c	c	c	c	c	c

**17 PRODUCTION LEVEL**

2 - Assigned at Factory

●	●	●	●	●	●	●
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**16 COUNTER BALANCE VALVE**

X - Without Counter Balance Valve  
 T - Track Applications  
 W - Wheel Applications  
 H - Hoist Applications

DECCELERATION VALVE						
●	●	●	●	●	●	●
-	○	○	○	-	-	-
-	○	○	○	-	-	-
-	○	○	○	-	-	-

**15 PORT ORIENTATION**

A - Radial Ports (Side)  
 B - Axial Ports (Rear)

●	●	●	●	●	●	●
○	○	○	○	○	○	○

**14 CROSSOVER RELIEF**

X - Without High Pressure Crossover Relief  
 \_\_\_ - Specify setting in bar. (For P Only in Pos.11)

Specify Setting in BAR. (1 bar = 14.5 psi)

●	●	●	●	●	●	●
○	○	○	○	○	○	○

**13 PURGE FLOW**

N - Normal (Open Loop - ~4 lpm (~1 gpm),  
 Closed Loop - ~10 lpm (~2.6 gpm))  
 R - 50% Reduced (Closed Loop Only)  
 X - None. (Only applies when  
 "X - Without Purge Relief Valve" is selected in Pos. 12)

●	●	●	●	●	●	●
○	○	○	○	○	○	○
○	○	○	○	○	○	○

**12 PURGE RELIEF**

10 - 10 bar (145 psi) - (Closed Loop Only)  
 14 - 14 bar (203 psi) - (Closed Loop Only)  
 5 - 5 bar (73 psi) - (Open Loop)  
 X - Without Purge Relief Valve

●	●	●	●	●	●	●
○	○	○	○	○	○	○
●/○	●/○	●/○	●/○	●/○	●/○	●/○
○	○	○	○	○	○	○

**11 PURGE / FLUSHING**

B - Blocked  
 C - Closed Loop (Purge Relief - 10 bar)  
 O - Open Loop (Flow Control - 5 bar)  
 P - Plain (Without purge)  
 (Use with Cross Over Relief. Pos. 14)

○	○	○	○	○	○	○
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●

**10 MIN DISPLACEMENT**

\_\_\_ - Specify Setting in cc/rev.

1 cc/rev = 0.061 cir

●	●	●	●	●	●	●
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**9 MAX DISPLACEMENT**

X - Standard Setting. Unit Not Destroyed.  
 \_\_\_ - Specify Setting in cc/rev.

1 cc/rev = 0.061 cir

●	●	●	●	●	●	●
○	○	○	○	○	○	○

- = Standard
- = Option
- c = Special, Consult Factory
- = Not Available
- \* = With Restriction(s)
- ▲ = In Development. Consult Factory.