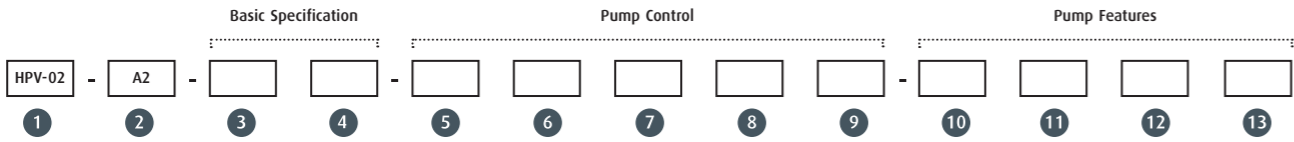


Model Code. Series 02.  
Version A2.  
Valid from October 1, 2010.

Linde Hydraulics

*Linde*

# Model Code. HPV-02 Closed Loop (CL) Variable Displacement Pumps



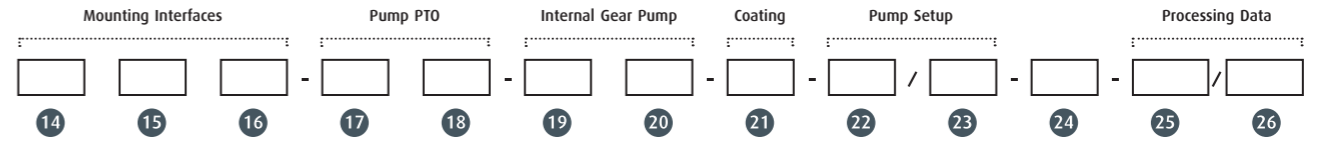
Item	Feature	Frame Size						Choice	
		55	75	105	135	165	210	280	
1.	Type							HPV-02	
2.	Type Code Release							A2	
<b>Basic Specification</b>									
3.	Frame Size (Maximum Displacement Range)								
055	55 cc (28 - 55 cc)	●							
075	75 cc (55 - 75 cc)		●						
105	105 cc (75 - 105 cc)			●					
135	135 cc (105 - 135 cc)				●				
165	165 cc (135 - 165 cc)					●			
210	210 cc (165 - 210 cc)						●		
280	280 cc (210 - 280 cc)							●	
4.	Rotation								
R	cw	●	●	●	●	●	●	●	
L	ccw	●	●	●	●	●	●	●	
<b>Pump Control</b>									
5.	Pump Controller								
M100	M1: mechanical hydraulic	●	●	●	●	●	●	●	
H100	H1: hydraulic proportional	●	●	●	●	●	●	●	
H1P0	H1P: hydraulic proportional / PCO	●	●	●	●	●	●	●	
E100	E1: electro-proportional	●	●	●	●	●	●	●	
E1P0	E1P: electro-proportional / PCO	●	●	●	●	●	●	●	
E200	E2: electro-proportional / shut-off	●	●	●	●	○	●	●	
E500	E5: electric three position	●	●	●	●	●	●	●	
CA00	CA: speed rel. hydr. mech. (*d)/(*r)	▲	▲	▲	▲				
6.	Additional Controller Feature Specification								
M05	M1 control lever position 24°	●	●	●	●	●	●	●	
M11	M1 control lever position 90°	●	●	●	●	●	●	●	
M15	M1 control lever position 133°	●	●	●	●	●	●	●	
M16	M1 control lever position 144°	●	●	●	●	●	●	●	
M20	M1 control lever position 188°	●	●	●	●	●	●	●	
M22	M1 control lever position 210°	●	●	●	●	●	●	●	
M24	M1 control lever position 232°	●	●	●	●	●	●	●	
E2N	E2 standard destroying speed	●	●	●	●	○	●	●	
E2F	E2 accelerated destroying speed	●	●	●	●	○	●	●	
E2H	E2 quickest destroying speed	●	●	●	●	○	●	●	
000	not applic. (H1; H1P; E1; E1P; E5; CA)	●	●	●	●	●	●	●	
7.	Control Pressure Range Hydraulic and Electric Controls								
A	4-10 bar	●	●	●	●	●	●	●	
B	4-16 bar	●	●	●	●	●	●	●	
0	not applicable (M1)	●	●	●	●	●	●	●	
8.	Control Solenoids								
A1	AMP / 12V	●	●	●	●	●	●	●	
A2	AMP / 24 V	●	●	●	●	●	●	●	
H1	DIN / 12 V	●	●	●	●	●	●	●	
H2	DIN / 24 V	●	●	●	●	●	●	●	

Item	Feature	Frame Size						Choice	
		55	75	105	135	165	210	280	
D1	Deutsch / 12V	○	○	○	○	○	○	○	
D1	Deutsch / 24V	○	○	○	○	○	○	○	
00	not applicable (M1; H1; H1P)	●	●	●	●	●	●	●	
9.	Response Orifices								
06	0,6 mm	●	●	●	●	●	●	●	
07	0,7 mm	●	●	●	●	●	●	●	
08	0,8 mm	●	●	●	●	●	●	●	
09	0,9 mm	●	●	●	●	●	●	●	
10	1,0 mm	●	●	●	●	●	●	●	
11	1,1 mm	●	●	●	●	●	●	●	
12	1,2 mm	●	●	●	●	●	●	●	
13	1,3 mm	●	●	●	●	●	●	●	
14	1,4 mm	●	●	●	●	●	●	●	
15	1,5 mm	●	●	●	●	●	●	●	
18	1,8 mm	●	●	●	●	●	●	●	
21	2,1 mm	●	●	●	●	●	●	●	
99	without response orifices	●	●	●	●	●	●	●	
<b>Pump Features</b>									
10.	System Relief Valves								
150	150 bar	●	●	●	●	●	●	●	
200	200 bar	●	●	●	●	●	●	●	
250	250 bar	●	●	●	●	●	●	●	
285	285 bar	●	●	●	●	●	●	●	
300	300 bar	●	●	●	●	●	●	●	
305	305 bar	●	●	●	●	●	●	●	
350	350 bar	●	●	●	●	●	●	●	
360	360 bar	●	●	●	●	●	●	●	
380	380 bar	●	●	●	●	●	●	●	
400	400 bar	●	●	●	●	●	●	●	
420	420 bar	●	●	●	●	●	●	●	
11.	Charge Relief Valve								
19	19 bar	●	●	●	●	●	●	●	
20	20 bar	●	●	●	●	●	●	●	
22	22,5 bar	●	●	●	●	●	●	●	
23	23 bar	●	●	●	●	●	●	●	
24	24 bar	●	●	●	●	●	●	●	
29	29 bar	●	●	●	●	●	●	●	
00	purge orifice	●	●	●	●	●	●	●	
12.	Filter Configuration								
F	filter flange with filter cartridge	●	●	●	●	●	●	●	
E	90° charge port flange	●	●	●	●	●	●	●	
D	straight charge port flange	●	●	●	●	●	●	●	
13.	Swash Angle Sensor								
S	with swash angle sensor	●	●	●	●	●	●	●	
0	w/o swash angle sensor	●	●	●	●	●	●	●	

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering

- (\*r) cw rotation only (see pos. 4.)
- (\*d) DIN porting only (see pos. 14.)
- (\*m) ISO metric porting only (see pos. 14.)
- (\*t) recommended if HPV/R-02 unit is attached to PTO (see pos. 18.)
- (\*u) required if second unit is attached to PTO (see pos. 18.)
- (\*s) second HPV/R-02 unit has to be specified separately

# Model Code. HPV-02 Closed Loop (CL) Variable Displacement Pumps



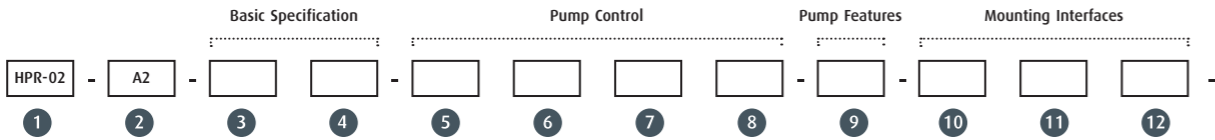
Item	Feature	Frame Size						Choice	
		55	75	105	135	165	210	280	
<b>Mounting Interfaces</b>									
14.	Porting								
M	ISO 6149 metric	●	●	●	●	●	●	●	
D	DIN 3852	●	●	●	●	●	●	●	
15.	Mounting Flange								
S0	SAE J744 standard	●	●	●	●	●	●	●	
S1	SAE J744 / additional threads (*u)	●	●	●	●	●	●	●	
S2	SAE J744 / additional holes (*u)	●	●	●	●	●	●	●	
16.	Drive Shaft (splined ANSI B92.1...)								
S32	12/24 - 14 teeth (SAE J744 C)	●	●	●	●	●	●	●	
S38	12/24 - 17 teeth (SAE J744 C-C)	●	●	●	●	●	●	●	
S44	8/16 - 13 teeth (SAE J744 D&E)	●	●	●	●	●	●	●	
S50	8/16 - 15 teeth (SAE J744 F)	●	●	●	●	●	●	●	
T21	16/32 - 21 teeth (*t)	●	●	●	●	●	●	●	
T23	16/32 - 23 teeth (*t)	●	●	●	●	●	●	●	
T27	16/32 - 27 teeth (*t)	●	●	●	●	●	●	●	
T33	16/32 - 33 teeth (*t)	●	●	●	●	●	●	●	
<b>Pump PTO</b>									
17.	PTO Through Drive Configuration								
A00	SAE J744 A w/o shaft coupl. (default)	●	●	●	●	●	●	●	
A09	SAE J744 A/ANSI B92.1 16/32-9t	●	●	●	●	●	●	●	
A11	SAE J744 A/ANSI B92.1 16/32-11t	●	●	●	●	●	●	●	
A13	SAE J744 A/ANSI B92.1 16/32-13t	●	●	●	●	●	●	●	
B00	SAE J744 B w/o shaft coupling	●	●	●	●	●	●	●	
B13	SAE J744 B/ANSI B92.1 16/32-13t	●	●	●	●	●	●	●	
B15	SAE J744 B/ANSI B92.1 16/32-15t	●	●	●	●	●	●	●	
C00	SAE J744 C w/o shaft coupling	●	●	●	●	●	●	●	
C14	SAE J744 C/ANSI B92.1 12/24-14t	●	●	●	●	●	●	●	
C21	SAE J744 C/ANSI B92.1 16/32-21t	●	●	●	●	●	●	●	
C23	SAE J744 C/ANSI B92.1 16/32-23t	●	●	●	●	●	●	●	
D00	SAE J744 D w/o shaft coupling	●	●	●	●	●	●	●	
D13	SAE J744 D/ANSI B92.1 8/16-13t	●	●	●	●	●	●	●	
D17	SAE J744 D/ANSI B92.1 12/24-17t	●	●	●	●	●	●	●	
D27	SAE J744 D/ANSI B92.1 16/32-27t	●	●	●	●	●	●	●	
E00	SAE J744 E w/o shaft coupling	●	●	●	●	●	●	●	
E27	SAE J744 E/ANSI B92.1 16/32-27t	●	●	●	●	●	●	●	
E33	SAE J744 E/ANSI B92.1 16/32-33t	●	●	●	●	●	●	●	
GPO	for Linde gear pumps (see 18.)	●	●	●	●	●	●	●	
18.	PTO Through Drive Attachment								
A16	internal gear pump 16 cc	●	●	●	●	●	●	●	
A22	internal gear pump 22,5 cc	●	●	●	●	●	●	●	
B32	internal gear pump 16+16 cc	●	●	●	●	●	●	●	
B38	internal gear pump 16+22,5 cc	●	●	●	●	●	●	●	
C38	internal gear pump 22,5+16 cc	●	●	●	●	●	●	●	
C45	internal gear pump 22,5+22,5 cc	●	●	●	●	●	●	●	

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering

- (\*r) cw rotation only (see pos. 4.)
- (\*d) DIN porting only (see pos. 14.)
- (\*m) ISO metric porting only (see pos. 14.)
- (\*t) recommended if HPV/R-02 unit is attached to PTO (see pos. 18.)
- (\*u) required if second unit is attached to PTO (see pos. 18.)
- (\*s) second HPV/R-02 unit has to be specified separately

Item	Feature	Frame Size						Choice	
		55	75	105	135	165	210	280	
G31	external gear pump 31 cc (*r)	●	●	●	●	●	●	●	
G38	external gear pump 38 cc	●	●	●	●	●	●	●	
G44	external gear pump 44 cc (*r)	●	●	●	●	●	●	●	
T05	HPV/R 55-02 mount. prep. (*s)	●	●	●	●	●	●	●	
T07	HPV/R 75-02 mount. prep. (*s)	●	●	●	●	●	●	●	
T10	HPV/R 105-02 mount. prep. (*s)	●	●	●	●	●	●	●	
T13	HPV/R 135-02 mount. prep. (*s)	●	●	●	●	●	●	●	
T16	HPV/R 165-02 mount. prep. (*s)	●	●	●	●	●	●	●	
T21	HPV/R 210-02 mount. prep. (*s)</								

# Model Code. HPR-02 Open Loop (OL) Variable Displacement Pumps



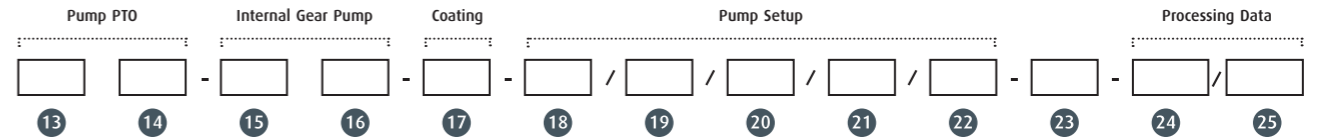
Item	Feature	Frame Size	Choice
		55 75 105 135 165 210 280	
1.	Type		HPR-02
2.	Type Code Release		A2
<b>Basic Specification</b>			
3.	Frame Size		
055	55 cc (35 - 55 cc)	●	
075	75 cc (50 - 75 cc)	●	
105	105 cc (75 - 105 cc)	●	
135	135 cc (105 - 135 cc)	●	
165	165 cc (135 - 165 cc)	●	
210	210 cc (160 - 210 cc)	●	
280	280 cc (210 - 280 cc)	●	
4.	Rotation		
R	cw	●	
L	ccw	●	
<b>Pump Control</b>			
5.	Pump Controller		
LP00	LP: LS / pressure cut-off	●	
H1L0	H1L: LS / hydraulic override (*m)	●	
E1L0	E1L: LS / electric override (*m)	●	
TL20	TL2: LS / power limiter (*m)/(*r)	●	
ETP0	ETP: elec.-prop./power lim./PCO (*m)/(*r)	●	
LEP0	LEP: LS/elec. stroke lim./PCO (*m)/(*r)	●	
6.	Pressure Limiter Remote Control		
D	disabled (ETP; LEP only)	●	
R	enabled (ETP; LEP only)	●	
0	not applicable (LP; H1L; E1L; TL2)	●	
7.	Power Limiter Remote Control		
Z1	power uprating (TL2; ETP only)	●	
Z2	power up- & downrat. (TL2; ETP only)	●	
00	not applicable (LP; H1L; E1L; TL2)	●	
8.	Control Solenoids		
A1	AMP / 12V	●	○
A2	AMP / 24 V	●	○
H1	DIN / 12 V	●	○
H2	DIN / 24 V	●	○
D1	Deutsch / 12V	○	○
D1	Deutsch / 24V	○	○
00	not applicable (LP; H1L; TL2)	●	
<b>Pump Features</b>			
9.	Noise Optimization Devices		
S	with SPU primary noise reduction	●	
0	w/o add. noise optimization dev.	●	
<b>Mounting Interfaces</b>			
10.	Porting		
M	ISO 6149 metric	●	

Item	Feature	Frame Size	Choice
		55 75 105 135 165 210 280	
D	DIN 3852	●	
<b>11. Mounting Flange</b>			
S0	SAE J744 standard	●	
S1	SAE J744 / additional threads (*u)	●	
S2	SAE J744 / additional holes (*u)	●	
M0	ISO 30119-2 metric (*m)	●	
P0	plug-in (size 105: (*d))	●	
B3	bell housing SAE 3 (size 105: (*d))	●	
B4	bell housing SAE 4 (size 105: (*d))	●	
<b>12. Drive Shaft (S32 - T27: splined ANSI B92.1...)</b>			
S32	12/24 - 14 teeth (SAE J744 C)	●	
S38	12/24 - 17 teeth (SAE J744 C-C)	●	
S44	8/16 - 13 teeth (SAE J744 D&E)	●	
S50	8/16 - 15 teeth (SAE J744 F)	●	
T21	16/32 - 21 teeth (*t)	●	
T23	16/32 - 23 teeth (*t)	●	
T27	16/32 - 27 teeth (*t)	●	
P40	keyed ISO3019-2 / 40 mm	●	
P60	keyed ISO3019-2 / 60 mm	●	
<b>Pump PTO</b>			
<b>13. PTO Through Drive Configuration (A00 - E33: SAE J744 ...)</b>			
A00	A w/o shaft coupling (default)	●	
A09	A / ANSI B92.1 16/32 - 9 teeth (A)	●	
A11	A / ANSI B92.1 16/32 - 11 teeth	●	
A13	A / ANSI B92.1 16/32 - 13 teeth	●	
B00	B w/o shaft coupling	●	
B13	B / ANSI B92.1 16/32 - 13 t. (B)	●	
B15	B / ANSI B92.1 16/32 - 15 t. (B-B)	●	
C00	C w/o shaft coupling	●	
C14	C / ANSI B92.1 12/24 - 14 t. (C)	●	
C21	C / ANSI B92.1 16/32 - 21 teeth	●	
C23	C / ANSI B92.1 16/32 - 23 teeth	●	
D00	D w/o shaft coupling	●	
D13	D / ANSI B92.1 8/16 - 13 teeth (D)	●	
D17	D / ANSI B92.1 12/24 - 17 teeth	●	
D27	D / ANSI B92.1 16/32 - 27 teeth	●	
E00	E w/o shaft coupling	●	
E27	E / ANSI B92.1 16/32 - 27 teeth	●	
E33	E / ANSI B92.1 16/32 - 33 teeth	●	
GP0	for Linde gear pump attachment	●	
<b>14. PTO Through Drive Attachment</b>			
A16	internal gear pump 16 cc	●	
A22	internal gear pump 22,5 cc	●	
B32	internal gear pump 16+16 cc	●	
B38	internal gear pump 16+22,5 cc	●	

preferred option  
● available option  
○ option in preparation  
▲ separate specification required  
consult application engineering

(\*r) cw rotation only (see pos. 4.)  
 (\*d) DIN porting only (see pos. 10.)  
 (\*m) ISO metric porting only (see pos. 10.)  
 (\*t) recommended if HPV/R-02 unit is att. to PTO (see pos. 14.)  
 (\*u) required if HPV/R-02 unit is attached to PTO (see pos. 14.)  
 (\*s) second HPV/R-02 unit has to be specified separately

# Model Code. HPR-02 Open Loop (OL) Variable Displacement Pumps



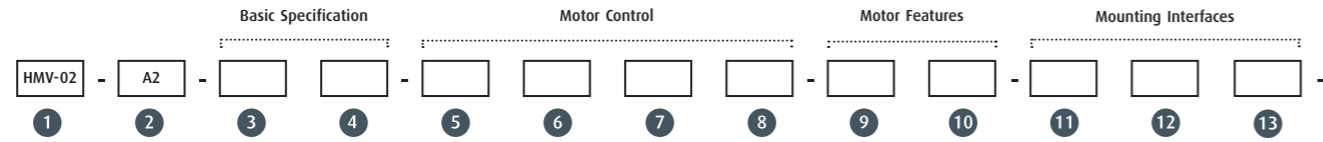
Item	Feature	Frame Size	Choice
		55 75 105 135 165 210 280	
C38	internal gear pump 22,5+16 cc	●	
C45	internal gear pump 22,5+22,5 cc	●	
G31	external gear pump 31 cc (*r)	●	
G38	external gear pump 38 cc	●	
G44	external gear pump 44 cc (*r)	●	
H45	ext. gear pump 22,5+22,5 cc (cw rot. only)	●	
T05	HPV/R 55-02 mount. prep. (*s)	●	
T07	HPV/R 75-02 mount. prep. (*s)	●	
T10	HPV/R 105-02 mount. prep. (*s)	●	
T13	HPV/R 135-02 mount. prep. (*s)	●	
T21	HPV/R 210-02 mount. prep. (*s)	●	
T28	HPV/R 280-02 mount. prep. (*s)	●	
000	w/o	●	
<b>Internal Gear Pump</b>			
<b>15. Internal Gear Pump Supply</b>			
E	external supply port	●	
0	w/o internal gear pump	●	
<b>16. PTO Through Drive on Internal Gear Pump (A09 - C14: SAE J744 ...)</b>			
A09	A / ANSI B92.1 16/32 - 9 t. (A) (default)	●	
B00	B w/o shaft coupling	●	
B13	B / ANSI B92.1 16/32 - 13 t. (B)	●	
B15	B / ANSI B92.1 16/32 - 15 t. (B-B)	●	
C00	C w/o shaft coupling	●	
C14	C / ANSI B92.1 12/24 - 14 t. (C)	●	
000	w/o internal gear pump	●	
<b>Coating</b>			
<b>17. Coating</b>			
R00	anti rust conservation oil (default)	●	
P01	primer RAL 3009 oxide red	●	
P03	primer blue	●	
V03	primer + coating RAL 9005 black	●	
V04	primer + coating RAL 7043 grey	●	
<b>Pump Setup</b>			
<b>18. Maximum Displacement Setting</b>			
value	num. 3 digits, sett. range see pos 3.	●	
<b>19. Operating Speed</b>			
value	800 - 2.700 rpm (numeric 4 digits)	●	
value	800 - 2.600 rpm (numeric 4 digits)	●	
value	800 - 2.300 rpm (numeric 4 digits)	●	
value	800 - 2.100 rpm (numeric 4 digits)	●	
value	800 - 2.000 rpm (numeric 4 digits)	●	
value	800 - 1.800 rpm (numeric 4 digits)	●	
<b>20. LS Differential Pressure Setting</b>			
value	16 - 30 bar (numeric 2 digits)	●	
99	not applicable (ETP)	●	

preferred option  
● available option  
○ option in preparation  
▲ separate specification required  
consult application engineering

(\*r) cw rotation only (see pos. 4.)  
 (\*d) DIN porting only (see pos. 10.)  
 (\*m) ISO metric porting only (see pos. 10.)  
 (\*t) recommended if HPV/R-02 unit is att. to PTO (see pos. 14.)  
 (\*u) required if HPV/R-02 unit is attached to PTO (see pos. 14.)  
 (\*s) second HPV/R-02 unit has to be specified separately

Item	Feature	Frame Size	Choice
		55 75 105 135 165 210 280	
<b>21. Pressure Cut-Off Setting</b>			
value	125 - 420 bar (numeric 3 digits)	●	
999	not applicable (H1L; E1L; TL2)	●	
<b>22. Power Limiter Setting</b>			
value	35 - 105 kW (numeric 3 digits)	●	
value	44 - 135 kW (numeric 3 digits)	●	
value	60 - 175 kW (numeric 3 digits)	●	
value	70 - 210 kW (numeric 3 digits)	●	
999	not applicable (LP; H1L; E1L; LEP)	●	
<b>Special</b>			
<b>23. Special Requirements</b>			
N	w/o special requirements (default)	●	
C	with special requirements	▲	
<b>Processing Data</b>			
<b>24. Customer Identification Number</b>			
value	numeric 6 digits		
<b>25. Customer Part Number</b>			
value	alpha numeric 10 digits		

# Model Code. HMV-02 Variable Displacement Motors (OL & CL)



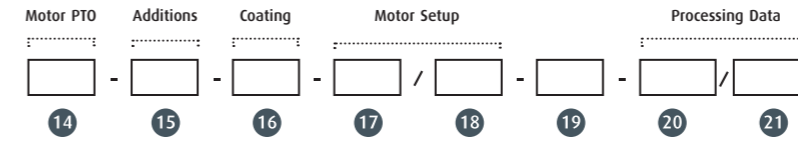
Item	Feature	Frame Size						Choice	
		55	75	105	135	165	210	280	
1.	Type							HMV-02	
2.	Type Code Release							A2	
<b>Basic Specification</b>									
3.	Frame Size								
055	55 cc	●							
075	75 cc		●						
105	105 cc			●					
135	135 cc				●				
165	165 cc					●			
210	210 cc						●		
280	280 cc							●	
4.	Rotation								
N	cw / ccw	●	●	●	●	●	●		
<b>Motor Control</b>									
5.	Motor Control								
H100	H1: hydr. prop./ standard mounting	●	●	●	●	●	●		
E100	E1: electro-prop./ standard mounting	●	●	●	●	●	●		
E200	E2: electric two pos. / standard mounting	●	●	●	●	●	●		
E400	E4: e-prop./ Vmin = 0 / standard mounting	●	●	●	●	●	●		
E600	E6: e-prop./ Vmin = 0 / standard mounting		●	●	●	●	●		
E1F0	E1F: electro-proportional / side-mounted		●						
E2F0	E2F: electric two position / side-mounted	●							
E4F0	E4F: e-prop./ Vmin = 0 / side-mounted		●	●					
E6F0	E6F: e-prop./ Vmin = 0 / side-mounted		●		●				
H1P0	EH1P: hydraulic proportional / PCO		●	●	●				
H1C0	H1-CA: hydraulic prop./ CA operation (*m)					●	●		
H1PC	EH1P-CA: hydr. prop./ PCO / CA operation					●	●		
6.	Start of Control								
Hf0	7,0 bar (H1; EH1P; EH1P-CA)	●	●	●	●	●	●		
Hf5	7,5 bar (H1; EH1P; H1-CA)	●	●	●	●	●	●		
Hh0	8,0 bar (H1; EH1P)	●	●	●	●	●	●		
Hh5	8,5 bar (H1; EH1P)	●	●	●	●	●	●		
Hk0	9,0 bar (H1; EH1P)	●	●	●	●	●	●		
Hk5	9,5 bar (H1; EH1P)	●	●	●	●	●	●		
000	not applic. (E1(F); E2(F); E4(F); E6(F))	●	●	●	●	●	●		
7.	Control Solenoids								
A1	AMP / 12V	●	●	●	●	●	●		
A2	AMP / 24 V	●	●	●	●	●	●		
H1	DIN / 12 V	●	●	●	●	●	●		
H2	DIN / 24 V	●	●	●	●	●	●		
D1	Deutsch / 12V	○	○	○	○	○	○		
D1	Deutsch / 24V	○	○	○	○	○	○		
00	not applicable (H1; H1-CA; H2)	●	●	●	●	●	●		
8.	Response Orifices								
06	0,6 mm	●	●	●	●	●	●		

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering

Item	Feature	Frame Size						Choice	
		55	75	105	135	165	210	280	
07	0,7 mm	●	●	●	●	●	●	●	
08	0,8 mm	●	●	●	●	●	●	●	
09	0,9 mm	●	●	●	●	●	●	●	
10	1,0 mm	●	●	●	●	●	●	●	
11	1,1 mm	●	●	●	●	●	●	●	
12	1,2 mm	●	●	●	●	●	●	●	
13	1,3 mm	●	●	●	●	●	●	●	
14	1,4 mm	●	●	●	●	●	●	●	
15	1,5 mm	●	●	●	●	●	●	●	
18	1,8 mm	●	●	●	●	●	●	●	
21	2,1 mm	●	●	●	●	●	●	●	
99	w/o response orifices	●	●	●	●	●	●	●	
<b>Motor Features</b>									
9.	Purge Relief Valve								
N10	10 bar standard purge flow	●	●	●	●	●	●		
N14	14 bar standard purge flow	●	●	●	●	●	●		
R10	10 bar reduced purge flow	●	●	●	●	●	●		
R14	14 bar reduced purge flow	●	●	●	●	●	●		
H10	10 bar increased purge flow	●	●	●	●	●	●		
Q06	flow controlled 6 l/min (*o)	●	●	●	●	●	●		
B00	blank plug inst. of relief valve (*v)	●	●	●	●	●	●		
000	w/o purge devices	●	●						
10.	Purge Shuttle Valve								
N0	standard shuttle valve	●	●	●	●	●	●		
D0	damped shuttle valve	●	●	●	●	●	●		
B0	shuttle valve blocked	●	●	●	●	●	●		
00	w/o purge devices	●	●						
<b>Mounting Interfaces</b>									
11.	Porting								
M	ISO 6149 metric		●	●	●	●	●		
D	DIN 3852	●	●	●	●	●	●		
12.	Mounting Flange								
S0	SAE J744 standard	●	●	●	●	●	●		
P0	plug-in (*d)	●	●						
13.	Drive shaft (S32 - T33: splined ANSI B92.1...)								
S32	12/24 - 14 teeth (SAE J744 C)	●	●	●					
S44	8/16 - 13 teeth (SAE J744 D&E)				●	●			
S50	8/16 - 15 teeth (SAE J744 F)						●	●	
T21	16/32 - 21 teeth	●	●						
T23	16/32 - 23 teeth			●					
T27	16/32 - 27 teeth				●	●			
T33	16/32 - 33 teeth						●		
F40	shaft coupling flange size 4						●	●	

- (\*d) DIN porting only (see pos. 11.)
- (\*m) ISO metric porting only (see pos. 11.)
- (\*o) open loop operation only
- (\*p) radial service ports only (see pos. 14.)
- (\*v) with blocked purge shuttle valve only (see pos. 10.)

# Model Code. HMV-02 Variable Displacement Motors (OL & CL)

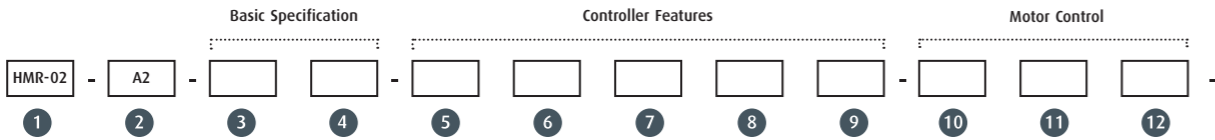


Item	Feature	Frame Size						Choice	
		55	75	105	135	165	210	280	
<b>Motor PTO</b>									
14.	PTO & Service Ports Orientation (S19 - U35: radial ports ...)								
R00	radial ports / without PTO	●	●	●	●	●	●		
L00	axial ports / without PTO			●	●	●	●		
S19	splined PTO shaft ANSI B92.1 16/32 - 19 t.			●					
S21	splined PTO shaft ANSI B92.1 16/32 - 21 t.				●				
S22	splined PTO shaft ANSI B92.1 16/32 - 22 t.					●			
S24	splined PTO shaft ANSI B92.1 16/32 - 24 t.						●		
S27	splined PTO shaft ANSI B92.1 16/32 - 27 t.							●	
F40	PTO shaft coupling flange size 4						●	●	
U35	PTO speed sensor 35 impulses	●	●	●	●	●	●		
<b>Additions</b>									
15.	Attachments to Service Ports								
P25	crossover relief block 250 bar (*p)					●	●		
P30	crossover relief block 300 bar (*p)					●	●		
P38	crossover relief block 380 bar (*p)					●	●		
P42	crossover relief block 420 bar (*p)					●	●		
000	w/o	●	●	●	●	●	●		
<b>Coating</b>									
16.	Coating								
R00	anti rust conservation oil (default)	●	●	●	●	●	●		
P01	primer RAL 3009 oxide red	●	●	●	●	●	●		
P03	primer blue	●	●	●	●	●	●		
V03	primer + coating RAL 9005 black	●	●	●	●	●	●		
V04	primer + coating RAL 7043 grey	●	●	●	●	●	●		
<b>Motor Setup</b>									
17.	Minimum Displacement Setting								
value	0 - 35 cc (numeric 3 digits)	●							
value	0 - 75 cc (numeric 3 digits)		●						
value	0 - 85 cc (numeric 3 digits)			●					
value	0 - 135 cc (numeric 3 digits)				●				
value	0 - 108 cc (numeric 3 digits)					●			
value	0 - 150 cc (numeric 3 digits)						●		
value	0 - 280 cc (numeric 3 digits)							●	
18.	Pressure Override Setting (numeric 3 digits)								
value	190-260 bar (EH1P; EH1P-CA only)		●	●	●	●			
999	not applicable	●	●	●	●	●			
19.	Special Requirements								
N	w/o special requirements (default)	●	●	●	●	●	●		
C	with special requirements	▲	▲	▲	▲	▲	▲		
<b>Processing Data</b>									
20.	Customer Identification Number								
value	numeric 6 digits								
21.	Customer Part Number								
value	alpha numeric 10 digits								

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering

- (\*d) DIN porting only (see pos. 11.)
- (\*m) ISO metric porting only (see pos. 11.)
- (\*o) open loop operation only
- (\*p) radial service ports only (see pos. 14.)
- (\*v) with blocked purge shuttle valve only (see pos. 10.)

# Model Code. HMR-02 Regulated Variable Displacement Motors (OL+CL)

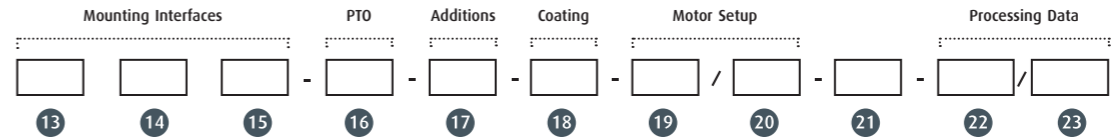


Item	Feature	Frame Size					Choice
		75	105	135	165	210	
1.	Type						HMR-02
2.	Type Code Release						A2
<b>Basic Specification</b>							
3.	Frame Size						
075	75 cc	●					
105	105 cc		●				
135	135 cc			●			
165	165 cc				●		
210	210 cc					●	
280	280 cc						●
4.	Rotation						
N	cw / ccw	●	●	●	●	●	
<b>Controller Features</b>							
5.	Motor Controller						
P	pressure regulated	●	●	●	●	●	
6.	Regulating Pressure Selection						
S	highest service port pressure	●	●	●	●	●	
E	electrically switched (*c)	●	●	●	●	●	
B	through brake valve (*o)		○	○	○	○	
7.	Displacement Override						
E	electric (*c)	●	●	●	●	●	
H	hydraulic high pressure (*o)	●	●	●	●	●	
L	hydraulic low pressure (*o)	●	●	●	●	●	
0	w/o	●	●	●	●	●	
8.	Control Solenoids						
A1	AMP / 12V	●	●	●	●	●	
A2	AMP / 24 V	●	●	●	●	●	
H1	DIN / 12 V	●	●	●	●	●	
H2	DIN / 24 V	●	●	●	●	●	
D1	Deutsch / 12V	○	○	○	○	○	
D1	Deutsch / 24V	○	○	○	○	○	
00	not applicable	●	●	●	●	●	
9.	Response Orifices						
06	0,6 mm	●	●	●	●	●	
07	0,7 mm	●	●	●	●	●	
08	0,8 mm	●	●	●	●	●	
09	0,9 mm	●	●	●	●	●	
10	1,0 mm	●	●	●	●	●	
11	1,1 mm	●	●	●	●	●	
12	1,2 mm	●	●	●	●	●	
13	1,3 mm	●	●	●	●	●	
14	1,4 mm	●	●	●	●	●	
15	1,5 mm	●	●	●	●	●	
18	1,8 mm	●	●	●	●	●	
21	2,1 mm	●	●	●	●	●	

Item	Feature	Frame Size					Choice
		75	105	135	165	210	
99	w/o response orifices	●	●	●	●	●	●
<b>Motor Control</b>							
10.	Crossover Relief Valves Integrated (single-stage ...)						
25N	250 bar (*q) / f. sizes 75;165: (*l)	●	●	●	●		
27N	270 bar (*q) / f. sizes 75;165: (*l)	●	●	●	●		
30N	300 bar (*q) / f. sizes 75;165: (*l)	●	●	●	●		
33N	330 bar (*q) / f. sizes 75;165: (*l)	●	●	●	●		
35N	350 bar (*q) / f. sizes 75;165: (*l)	●	●	●	●		
42N	420 bar (*q) / f. sizes 75;165: (*l)	●	●	●	●		
000	w/o	●	●	●	●	●	●
11.	Purge Relief Valve						
N10	10 bar standard purge flow	●	●	●	●	●	
N14	14 bar standard purge flow	●	●	●	●	●	
R10	10 bar reduced purge flow	●	●	●	●	●	
R14	14 bar reduced purge flow	●	●	●	●	●	
H10	10 bar increased purge flow	●	●	●	●	●	
Q06	flow controlled 6 l/min (*o)	●	●	●	●	●	
B00	blank plug instead of relief valve (*v)	●	●	●	●	●	
000	w/o purge devices	●	●	●	●	●	
12.	Purge Shuttle Valve						
N0	standard shuttle valve	●	●	●	●	●	
D0	damped shuttle valve	●	●	●	●	●	
B0	shuttle valve blocked	●	●	●	●	●	
00	w/o purge devices	●	●	●	●	●	
<b>Mounting Interfaces</b>							
13.	Porting						
M	ISO 6149 metric		●	●	●	●	
D	DIN 3852	●	●	●	●	●	
14.	Mounting Flange						
S0	SAE J744 standard	●	●	●	●	●	
P0	plug-in (*d)		●				
15.	Drive shaft (S32 - T27: splined ANSI B92.1...)						
S32	12/24 - 14 teeth (SAE J744 C)	●	●				
S44	8/16 - 13 teeth (SAE J744 D&E)		●	●			
S50	8/16 - 15 teeth (SAE J744 F)				●	●	
T21	16/32 - 21 teeth	●					
T23	16/32 - 23 teeth		●				
T27	16/32 - 27 teeth			●	●	●	
T33	16/32 - 33 teeth					●	
F40	shaft coupling flange size 4					●	●
<b>PTO</b>							
16.	PTO & Service Ports Orientation (S21 - U35: radial ports ...)						
R00	radial ports / without PTO	●	●	●	●	●	
L00	axial ports / without PTO	●	●	●	●	●	
S21	spl. PTO shaft ANSI B92.1 16/32 - 21 t.		●				

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering
- (\*d) DIN porting only (see pos. 13.)
- (\*m) ISO metric porting only (see pos. 13.)
- (\*o) open loop operation only
- (\*c) closed loop operation only
- (\*b) regulating pressure selection through brake valve required (see pos. 6.)
- (\*p) radial service ports only (see pos. 16.)
- (\*l) axial service ports only (see pos. 16.)
- (\*q) without purging devices only (see pos. 11. & 12.)
- (\*v) with blocked purge shuttle valve only (see pos. 12.)

# Model Code. HMR-02 Regulated Variable Displacement Motors (OL+CL)



Item	Feature	Frame Size					Choice
		75	105	135	165	210	
U35	PTO speed sensor 35 impulses		●				
<b>Additions</b>							
17.	Attachments to Service Ports						
P25	crossover relief block 250 bar (*p)			●	●	●	
P30	crossover relief block 300 bar (*p)			●	●	●	
P38	crossover relief block 380 bar (*p)			●	●	●	
P42	crossover relief block 420 bar (*p)			●	●	●	
BM0	prop. brake valve (wheel. appl.) (*o)/(*b)		○	○	○	○	
000	w/o	●	●	●	●	●	●
<b>Coating</b>							
18.	Coating						
R00	anti rust conservation oil (default)	●	●	●	●	●	
P01	primer RAL 3009 oxide red	●	●	●	●	●	
P03	primer blue	●	●	●	●	●	
V03	primer + coating RAL 9005 black	●	●	●	●	●	
V04	primer + coating RAL 7043 grey	●	●	●	●	●	
<b>Motor Setup</b>							
19.	Minimum Displacement Setting						
value	22 - 55 cc (numeric 3 digits)	●					
value	0 - 75 cc (numeric 3 digits)		●				
value	0 - 85 cc (numeric 3 digits)			●			
value	52 - 100 cc (numeric 3 digits)				●		
value	0 - 210 cc (numeric 3 digits)					●	
value	0 - 280 cc (numeric 3 digits)						●
20.	Pressure Override Setting						
value	190 - 260 bar (numeric 3 digits)	●	●	●	●	●	
<b>Special</b>							
21.	Special Requirements						
N	w/o special requirements (default)	●	●	●	●	●	
C	with special requirements	▲	▲	▲	▲	▲	
<b>Processing Data</b>							
22.	Customer Identification Number						
value	numeric 6 digits						
23.	Customer Part Number						
value	alpha numeric 10 digits						

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering
- (\*d) DIN porting only (see pos. 13.)
- (\*m) ISO metric porting only (see pos. 13.)
- (\*o) open loop operation only
- (\*c) closed loop operation only
- (\*b) regulating pressure selection through brake valve required (see pos. 6.)
- (\*p) radial service ports only (see pos. 16.)
- (\*l) axial service ports only (see pos. 16.)
- (\*q) without purging devices only (see pos. 11. & 12.)
- (\*v) with blocked purge shuttle valve only (see pos. 12.)

# Model Code. HMF-02 Fixed Displacement Motors (OL+CL)



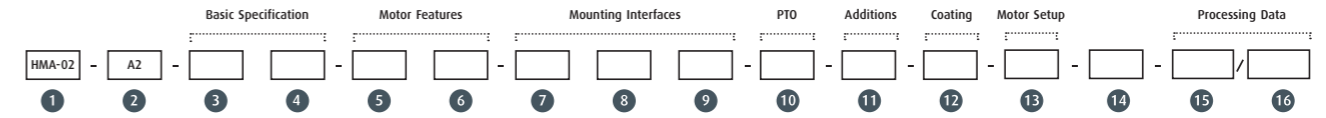
Item	Feature	Frame Size						Choice
		28	35	50	63	75	105	
1.	Type							HMF-02
2.	Type Code Release							A2
<b>Basic Specification</b>								
3.	Frame Size							
028	28 cc	●						
035	35 cc		●					
050	50 cc			●				
055	55 cc				●			
063	63 cc					●		
075	75 cc						●	
105	105 cc						●	
135	135 cc						●	
4.	Rotation							
N	cw / ccw	●	●	●	●	●	●	
<b>Motor Features</b>								
5.	Crossover Relief Valves Integrated							
21N	single-stage 210 bar (*p)/(*q)	●	●	●	●	●	●	
23N	single-stage 230 bar (*p)/(*q)	●	●	●	●	●	●	
25N	single-stage 250 bar (*p)/(*q)	●	●	●	●	●	●	
27N	single stage 270 bar (*p)/(*q)	●	●	●	●	●	●	
30N	single-stage 300 bar (*p)/(*q)	●	●	●	●	●	●	
33N	single stage 330 bar (*p)/(*q)	●	●	●	●	●	●	
35N	single-stage 350 bar (*p)/(*q)	●	●	●	●	●	●	
42N	single-stage 420 bar (*p)/(*q)	●	●	●	●	●	●	
09E	two-stage 90/230 bar (*p)/(*q)	●	●	●	●	●	●	
09G	two-stage 90/250 bar (*p)/(*q)	●	●	●	●	●	●	
09L	two-stage 90/280 bar (*p)/(*q)	●	●	●	●	●	●	
11B	two-stage 110/230 bar (*p)/(*q)	●	●	●	●	●	●	
11H	two-stage 110/280 bar (*p)/(*q)	●	●	●	●	●	●	
11M	two-stage 110/310 bar (*p)/(*q)	●	●	●	●	●	●	
14E	two-stage 140/280 bar (*p)/(*q)	●	●	●	●	●	●	
18A	two-stage 180/280 bar (*p)/(*q)	●	●	●	●	●	●	
20K	two-stage 200/380 bar (*p)/(*q)	●	●	●	●	●	●	
000	w/o	●	●	●	●	●	●	
6.	Purge Relief Valve							
N10	10 bar standard purge flow	●	●	●	●	●	●	
N14	14 bar standard purge flow	●	●	●	●	●	●	
R10	10 bar reduced purge flow	●	●	●	●	●	●	
R14	14 bar reduced purge flow	●	●	●	●	●	●	
H10	10 bar increased purge flow	●	●	●	●	●	●	
Q06	flow controlled 6 l/min (*o)	●	●	●	●	●	●	
B00	blank plug instead of relief valve (*v)	●	●	●	●	●	●	
000	w/o purge devices	●	●	●	●	●	●	
7.	Purge Shuttle Valve							
N0	standard shuttle valve	●	●	●	●	●	●	

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering

Item	Feature	Frame Size						Choice
		28	35	50	63	75	105	
D0	damped shuttle valve	●	●	●	●	●	●	
B0	shuttle valve blocked	●	●	●	●	●	●	
00	w/o purge devices	●	●	●	●	●	●	
8.	Speed Sensor in Motor Housing							
U07	7 impulses		●		●			
U09	9 impulses					●		
000	w/o	●	●	●	●	●	●	
<b>Mounting Interfaces</b>								
9.	Porting							
M	ISO 6149 metric			●	●	●	●	
D	DIN 3852	●	●	●	●	●	●	
10.	Mounting Flange							
S0	SAE J744 standard	●	●	●	●	●	●	
11.	Drive shaft (S25 - T27: splined ANSI B92.1...)							
S25	16/32 - 15 teeth (SAE J744 B-B)	●	●					
S32	12/24 - 14 teeth (SAE J744 C)			●	●	●	●	
S44	8/16 - 13 teeth (SAE J744 D&E)						●	
T21	16/32 - 21 teeth			●	●	●	●	
T23	16/32 - 23 teeth						●	
T27	16/32 - 27 teeth						●	
<b>PTO</b>								
12.	PTO & Service Ports Orientation							
R00	radial ports / w/o PTO	●	●	●	●	●	●	
L00	axial ports / w/o PTO			●	●	●	●	
<b>Additions</b>								
13.	Attachments to Service Port							
000	w/o	●	●	●	●	●	●	
<b>Coating</b>								
14.	Attachments to Service Port							
R00	anti rust conservation oil (default)	●	●	●	●	●	●	
P01	primer RAL 3009 oxide red	●	●	●	●	●	●	
P03	primer blue	●	●	●	●	●	●	
V03	primer + coating RAL 9005 black	●	●	●	●	●	●	
V04	primer + coating RAL 7043 grey	●	●	●	●	●	●	
<b>Special</b>								
15.	Special Requirements							
N	w/o special requirements (default)	●	●	●	●	●	●	
C	with special requirements	▲	▲	▲	▲	▲	▲	
<b>Processing Data</b>								
16.	Customer Identification Number							
value	numeric 6 digits							
17.	Customer Part Number							
value	alpha numeric 10 digits							

- (\*o) open loop operation only
- (\*p) radial service ports only (see pos. 12.)
- (\*q) without purging devices only (see pos. 6. & 7.)
- (\*v) with blocked purge shuttle valve only (see pos. 7.)

# Model Code. HMA-02 Adjustable Fixed Displacement Motors (OL+CL)



Item	Feature	Frame Size						Choice
		55	75	105	135	165	210	
1.	Type							HMA-02
2.	Type Code Release							A2
<b>Basic Specification</b>								
3.	Frame Size							
165	165 cc				●			
210	210 cc					●		
4.	Rotation							
N	cw / ccw				●	●		
<b>Motor Features</b>								
5.	Purge Relief Valve							
N10	10 bar standard purge flow				●	●		
N14	14 bar standard purge flow				●	●		
R10	10 bar reduced purge flow				●	●		
R14	14 bar reduced purge flow				●	●		
H10	10 bar increased purge flow				●	●		
Q06	flow controlled 6 l/min (*o)				●	●		
B00	blank plug instead of relief valve (*v)				●	●		
6.	Purge Shuttle Valve							
N0	standard shuttle valve				●	●		
D0	damped shuttle valve				●	●		
B0	shuttle valve blocked				●	●		
<b>Mounting Interfaces</b>								
7.	Porting							
M	ISO 6149 metric				●	●		
8.	Mounting Flange							
S0	SAE J744 standard				●	●		
9.	Drive shaft (S32 - T27: splined ANSI B92.1...)							
S44	8/16 - 13 teeth (SAE J744 D&E)				●			
S50	8/16 - 15 teeth (SAE J744 F)					●		
T27	16/32 - 27 teeth				●	●		
<b>PTO</b>								
10.	PTO & Service Ports Orientation (S21 - U35: radial ports ...)							
R00	radial ports / without PTO				●	●		
<b>Additions</b>								
11.	Attachments to Service Ports							
P25	crossover relief block 250 bar (*p)				●	●		
P30	crossover relief block 300 bar (*p)				●	●		
P38	crossover relief block 380 bar (*p)				●	●		
P42	crossover relief block 420 bar (*p)				●	●		
000	w/o				●	●		
<b>Coating</b>								
12.	Coating							
R00	anti rust conservation oil (default)				●	●		
P01	primer RAL 3009 oxide red				●	●		
P03	primer blue				●	●		

- preferred option
- available option
- option in preparation
- ▲ separate specification required
- ⋮ consult application engineering

Item	Feature	Frame Size						Choice
		55	75	105	135	165	210	
V03	primer + coating RAL 9005 black					●	●	
V04	primer + coating RAL 7043 grey					●	●	
<b>Motor Setup</b>								
13.	Displacement Setting							
value	135 - 165 cc (numeric 3 digits)					●		
value	165 - 210 cc (numeric 3 digits)						●	
<b>Special</b>								
14.	Special Requirements							
N	w/o special requirements (default)					●	●	
C	with special requirements					▲	▲	
<b>Processing Data</b>								
15.	Customer Identification Number							
value	numeric 6 digits							
16.	Customer Part Number							
value	alpha numeric 10 digits							

- (\*o) open loop operation only
- (\*p) radial service ports only (see pos. 10.)
- (\*v) with blocked purge shuttle valve only (see pos. 6.)

# Linde Hydraulics. How to reach us.

Internet [www.linde-hydraulics.com](http://www.linde-hydraulics.com)

Phone +49.60 21.99-42 01  
+49.60 21.99-0 switchboard

Fax +49.60 21.99-42 02  
+49.60 21.99-42 30

E-Mail [info@linde-hydraulics.com](mailto:info@linde-hydraulics.com)

Mail Linde Material Handling GmbH  
Linde Hydraulics

Grossostheimer Str. 198  
63741 Aschaffenburg

P.O. Box 100136  
63701 Aschaffenburg

IHY.Model Code.A2.10/10.e

Turning Power into Motion.



Linde Hydraulics, Grossostheimer Str. 198, 63741 Aschaffenburg, Germany  
phone +49.60 21.99-42 01, fax +49.60 21.99-42 02, [www.linde-hydraulics.com](http://www.linde-hydraulics.com)