Model Code. Series 02. VT modular. Medium pressure. Valid from January 1, 2013.

Linde Hydraulics

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

		Basic Specification		Motor Control				Motor Features		Mounting Interfaces		
HMV-02	A2											
1	2	3	4	5	6	7	8	9	10	11	12	13

Item	Feature	Frame Size 55	75	105	135	165	210	280		Choice
1.	Type									HMV-02
2.	Model Code Release									A2
Basic Specification										
3.	Frame Size (Maximum Displacement Range)									
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	●	●	●	●	●	●	●		
Motor Control										
5.	Motor Control									
H100	H1: hydr. prop./ standard mounting	●	●	●	●	●	●	●		
H400	H4: hydr. prop./ Vmin = 0 / st. mounting	●	●	●	●	●	●			
E100	E1: electro-prop./ st. mounting (*y)	●	●	●	●	●	●	●		
E200	E2: e-two pos./ Vmin = 0/st. mounting (*y)	●	●	●	●	●	●	●		
E400	E4: e-prop./ Vmin = 0/st. mounting (*y)	●	●	●	●	●	●	●		
E600	E6: e-prop./ Vmin = 0/ st. mounting (*y)			●	●	●	●	●		
E1F0	E1F: electro-prop. /side-mounted (*z)			○	○					
E2F0	E2F: e-two pos./ Vmin = 0 / side-mounted (*y)			○	○					
E4F0	E4F: e-prop./ Vmin = 0 / side-mounted (*z)			○	○					
E6F0	E6F: e-prop./ Vmin = 0 / side-mounted (*z)			●	●					
H1P0	EH1P: hydraulic proportional / PCO (*y)		●	●	●	●				
H10C	H1-CA: hydraulic prop./ CA operation (*m)			●		●	●			
H1PC	EH1P-CA: hydr. prop./ PCO / CA oper. (*z)		●	●	●	●	●			
6.	Start of Control									
HA0	4,0 bar (H4)	●	●	●	●	●	●			
HF0	7,0 bar (H1; EH1P)	●	●	●	●	●	●	●		
HF5	7,5 bar (H1; EH1P; H1-CA; EH1P-CA)	●	●	●	●	●	●	●		
HH0	8,0 bar (H1; EH1P)	●	●	●	●	●	●	●		
HH5	8,5 bar (H1; EH1P)	●	●	●	●	●	●	●		
HK0	9,0 bar (H1; EH1P)	●	●	●	●	●	●	●		
HK5	9,5 bar (H1; H4; EH1P)	●	●	●	●	●	●	●		
000	not applic. (E1(F); E4(F); E6(F))	●	●	●	●	●	●	●		
7.	Control Solenoids									
A1	AMP / 12V	●	●	●	●	●	●	●		
A2	AMP / 24 V	●	●	●	●	●	●	●		
H1	DIN / 12 V	●	●	●	●	●	●	●		
H2	DIN / 24 V	●	●	●	●	●	●	●		
D1	D./12V (E1(F)); E2; E4(F); E6(F)); EH1P-CA)	●	●	●	●	●	●	●		
D2	D./24V (E1(F)); E2; E4(F); E6(F)); EH1P-CA)	●	●	●	●	●	●	●		

Item	Feature	Frame Size 55	75	105	135	165	210	280		Choice
00	not applicable (H1; H1-CA; H2)	●	●	●	●	●	●	●		
8.	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	w/o response orifices	●	●	●	●	●	●	●		
Motor Features										
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		●	●						
Mounting Interfaces										
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 theeth (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				●	●	●			

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

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

Motor PTO	Additions	Coating	Motor Setup			Processing Data	
14	15	16	17	18	19	20	21

Item	Feature	55	75	105	135	165	210	280		Choice
T33	16/32 - 33 teeth							●		
F40	shaft coupling flange size 4			●	●	●	●	●		
Motor PTO										
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						●	●		
E27	tandem unit: att. of a HMV210-02 (H1)/(*s)						●	●		
E33	tandem unit: att. of a HMV280-02 (H1)/(*s)							●		
U35	PTO speed sensor 35 impulses	●	●	●	●	●	●	●		
Additions										
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	●	●	●	●	●	●	●		
Coating										
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	●	●	●	●	●	●	●		
Motor Setup										
17.	**Minimum Displacement Setting**									
value	0 - 35 cc (numeric 3 digits)	●								
value	0 - 55 cc (numeric 3 digits)		●							
value	0 - 75 cc (numeric 3 digits)			●						
value	0 - 88 cc (numeric 3 digits)				●					
value	0 - 108 cc (numeric 3 digits)					●				
value	0 - 150 cc (numeric 3 digits)						●			
value	0 - 170 cc (numeric 3 digits)							●		
18.	**Pressure Override Setting (numeric 3 digits)**									
value	150-260 bar (EH1P; EH1P-CA only)		●	●	●	●	●			
999	not applicable	●	●	●	●	●	●	●		
19.	**Special Requirements**									
N	w/o special requirements (default)	●	●	●	●	●	●	●		
C	with special requirements	▲	▲	▲	▲	▲	▲	▲		

Item	Feature	55	75	105	135	165	210	280		Choice
Processing Data										
20.	**Customer Identification Number**									
value	numeric 6 digits (*1)									
21.	**Customer Part Number**									
value	alpha numeric / 11 digits maximum (*2)									

(*d) DIN porting only (see pos. 11.)
(*e) availability depends on controller type (see pos. 05.)
(*m) ISO metric porting only (see pos. 11.)
(*o) open loop operation only
(*p) radial service ports only (see pos. 14.)
(*s) second motor unit has to be specified separately
(*v) with blocked purge shuttle valve only (see pos. 10.)
(*y) solenoids with quadratic cross section
(*z) solenoids with round cross section
(*1) optional/for administrative purposes
(*2) optional/if field is used the customer part number will be printed on the nameplate

HMV-02

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

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

	Basic Specification				Controller Features					Motor Control		
HMR-02 -	A2 -			-						-			-
1	2	3	4		5	6	7	8	9	10	11	12

Item	Feature	Frame Size 55	75	105	135	165	210	280	Choice
1.	Type								HMR-02
2.	Model Code Release								A2
Basic Specification									
3.	Frame Size (Maximum Displacement Range)								
075	75 cc		●						
105	105 cc			●					
135	135 cc				●				
165	165 cc					●			
210	210 cc						●		
280	280 cc							○	
4.	Rotation								
N	cw / ccw		●	●	●	●	●	●	
Controller Features									
5.	Motor Control								
P	pressure regulated		●	●	●	●	●	●	
6.	Regulating Pressure Selection								
S	highest service port pressure		●	●	●	●	●	●	
E	electrically switched		●	●	●	●	●	●	
G	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		●	●	●	●	●	●	
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		●	●	●	●	●	●	
99	w/o response orifices		●	●	●	●	●	●	

Item	Feature	Frame Size 55	75	105	135	165	210	280	Choice
Motor Control									
10.	Crossover Relief Valves Integrated (single-stage ...)								
25N	250 bar / sizes 75;165: (*l)		●	●	●	●			
27N	270 bar / sizes 75;165: (*l)		●	●	●	●			
30N	300 bar / sizes 75;165: (*l)		●	●	●	●			
33N	330 bar / sizes 75;165: (*l)		●	●	●	●			
35N	350 bar / sizes 75;165: (*l)		●	●	●	●			
42N	420 bar / 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		●	●	●	●			
Mounting Interfaces									
13.	Porting								
M	ISO 6149 metric		●		●	●	●	●	
D	DIN 3852		●	●	●				
14.	Mounting Flange								
S0	SAE J744 standard		●	●	●	●	●	●	
P0	plug-in (*d)			●	●				
15.	Drive shaft (S32 - T33: splined ANSI B92.1...)								
S32	12/24 - 14 theeth (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						●	●	
PTO									
16.	PTO & Service Ports Orientation								
R00	radial ports / without PTO		●	●	●	●	●	●	
L00	axial ports / without PTO		●	●	●	●			

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

HMR-02

Valid from January 1, 2013

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

Mounting Interfaces			PTO	Additions	Coating	Motor Setup			Processing Data	
13	14	15	16	17	18	19	20	21	22	23

Item	Feature	Frame Size							Choice
		55	75	105	135	165	210	280	
Additions									
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)					●	●	●	
000	w/o		●	●	●	●	●	●	
Coating									
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		●	●	●	●	●	●	
Motor Setup									
19.	**Minimum Displacement Setting**								
value	22 - 55 cc (numeric 3 digits)		●						
value	31 - 75 cc (numeric 3 digits)			●					
value	41 - 88 cc (numeric 3 digits)				●				
value	52 - 108 cc (numeric 3 digits)					●			
value	55 - 150 cc (numeric 3 digits)						●		
value	85 - 175 cc (numeric 3 digits)							●	
20.	**Pressure Override Setting**								
value	150 - 260 bar (numeric 3 digits)		●	●	●	●	●	●	
Special									
21.	**Special Requirements**								
N	w/o special requirements (default)		●	●	●	●	●	●	
C	with special requirements		▲	▲	▲	▲	▲	▲	
Processing Data									
22.	**Customer Identification Number**								
value	numeric 6 digits								
23.	**Customer Part Number**								
value	alpha numeric 11 digits maximum (2*)								

(*c) closed loop operation only
(*d) DIN porting only (see pos. 13.)
(*l) axial service ports only (see pos. 16.)
(*m) ISO metric porting only (see pos. 13.)
(*o) open loop operation only
(*p) radial 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.)
(*1) optional/for administrative purposes
(*2) optional/if field is used the customer part number will be printed on the nameplate

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

HMR-02

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

	Basic Specification			Motor Features				Mounting Interfaces			PTO	Additions	Coating		Processing Data	
HMF-02 -	A2 -	[ ]	[ ] -	[ ]	[ ]	[ ]	[ ] -	[ ]	[ ]	[ ] -	[ ] -	[ ] -	[ ] -	[ ] -	[ ] /	[ ]
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Item	Feature	Frame Size								Choice
		28	35	50	55	63	75	105	135	
1.	Type									HMF-02
2.	Model Code Release									A2
Basic Specification										
3.	Frame Size (Maximum Displacement Range)									
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	●	●	●	●	●	●	●	●	
Motor Features										
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-st. 90/230 bar (*d)/(*p)/(*q)	●	●	○	●	○	○	●	○	
09G	two-st. 90/250 bar (*d)/(*p)/(*q)	●	●	○	●	○	○	●	○	
09L	two-st. 90/280 bar (*d)/(*p)/(*q)	●	●	○	●	○	○	●	○	
11B	two-st. 110/230 bar (*d)/(*p)/(*q)	●	●	○	●	○	○	●	○	
11H	two-st. 110/280 bar (*d)/(*p)/(*q)	●	●	○	●	○	○	●	○	
11M	two-st. 110/310 bar (*d)/(*p)/(*q)	●	●	○	●		○	●	○	
14E	two-st. 140/280 bar (*d)/(*p)/(*q)	●	●	○	●	○	○	●	○	
18A	two-st. 180/280 bar (*d)/(*p)/(*q)	●	●	○	●	○	○	●	○	
20K	two-st. 200/380 bar (*d)/(*p)/(*q)	●	●	○	●		○	●	○	
000	without	●	●	●	●	●	●	●	●	
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	●	●	●	●	●	●	●	●	
D0	damped shuttle valve	●	●	●	●	●	●	●	●	
B0	shuttle valve blocked	●	●	●	●	●	●	●	●	
00	w/o purge devices	●	●	●	●	●	●	●	●	
8.	Speed Sensor in Motor Housing (Piston Counter)									
U07	7 impulses		●		●					
U09	9 impulses						●			
000	w/o	●	●	●	●	●	●	●	●	
Mounting Interfaces										
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 theeth (SAE J744 B-B)	●	●							
S32	12/24 - 14 theeth (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								●	
F40	shaft coupling flange size 4 (*f)			●	●	●	●	●	●	
PTO										
12.	PTO & Service Ports Orientation									
R00	radial ports / w/o PTO	●	●	●	●	●	●	●	●	
L00	axial ports / w/o PTO				●	●	●	●		
U35	r. p. /PTO speed sensor 35 impulses			●						
Additions										
13.	Attachments to Service Ports									
000	w/o	●	●	●	●	●	●	●	●	
Coating										
14.	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	●	●	●	●	●	●	●	●	
Special										
15.	Special Requirements									
N	w/o special requirements (default)	●	●	●	●	●	●	●	●	
C	with special requirements	▲	▲	▲	▲	▲	▲	▲	▲	
Processing Data										
16.	Customer Identification Number									
value	numeric 6 digits (*1)									
17.	Customer Part Number									
value	alpha numeric / 11 digits maximum (*2)									

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

(*d) DIN porting only (see pos. 09.) • (*f) based on companion flange acc. to SAE J1946 Type A-120x8x10
(*m) ISO metric porting only (see pos. 09.) • (*o) open loop operation only
(*p) radial service ports only (see pos. 12.) • (*q) without purging devices only (see pos. 06. & 07.)
(*v) with blocked purge shuttle valve only (see pos. 07.) • (*1) optional/for administrative purposes
(*2) optional/if field is used the customer part number will be printed on the nameplate

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

		Basic Specification			Motor Features		Mounting Interfaces			PTO	Additions	Coating	Motor Setup		Processing Data	
HMA-02	- A2	-		-		-			-	-	-	-	-		/	
1	2	3	4		5	6	7	8	9	10	11	12	13	14	15	16

Item	Feature	Frame Size							Choice
		55	75	105	135	165	210	280	
1.	Type								HMA-02
2.	Model Code Release								A2
Basic Specification									
3.	Frame Size (Maximum Displacement Range)								
165	165 cc					●			
210	210 cc						●		
4.	Rotation								
N	cw / ccw					●	●		
Motor Features									
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)					●	●		
6.	Purge Shuttle Valve								
N0	standard shuttle valve					●	●		
D0	damped shuttle valve					●	●		
Mounting Interfaces									
7.	Porting								
M	ISO 6149 metric					●	●		
8.	Mounting Flange								
S0	SAE J744 standard					●	●		
9.	Drive shaft (S44 - 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					●	●		
F40	shaft coupling flange size 4						●		
PTO									
10.	PTO & Service Ports Orientation								
R00	radial ports / without PTO					●	●		
Additions									
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					●	●		
Coating									
12.	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					●	●		
Motor Setup									
13.	Displacement Setting								
value	135 - 165 cc (numeric 3 digits)					●			
value	165 - 210 cc (numeric 3 digits)						●		
Special									
14.	Special Requirements								
N	w/o special requirements (default)					●	●		
C	with special requirements					▲	▲		
Processing Data									
15.	Customer Identification Number								
value	numeric 6 digits (*1)								
16.	Customer Part Number								
value	alpha numeric / 11 digits maximum (*2)								

(*o) open loop operation only
(*p) radial service ports only (see pos. 10.)
(*1) optional/for administrative purposes
(*2) optional/ if field is used the customer part number will be printed on the nameplate

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

HMA-02

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

			Basic Specification			Pump Control				Pump Features		Mounting Interfaces		
HPR-02	-	A2	-			-					-			-
1	2		3	4		5	6	7	8	9		10	11	12

Item	Feature	Frame Size 55	75	105	135	165	210	280		Choice
1.	Type									HPR-02
2.	Model Code Release									A2
Basic Specification										
3.	Frame Size (Maximum Displacement Range)									
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	●	●	●	●	●	●			
Pump Control										
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	rem. power uprating (default for TL2; ETP)			●	●		●	●		
Z2	rem. pow. up- & downrating (TL2; ETP only)			●	●		●	●		
00	not applicable (LP; H1L; E1L; LEP)	●	●	●	●	●	●	●		
8.	Control Solenoids									
A1	AMP / 12 V (availability dep. on ctrl. type)	●	●	●	●	●	●	○		
A2	AMP / 24 V (availability dep. on ctrl. type)	●	●	●	●	●	●	●		
H1	DIN / 12 V	●	●	●	●	●	●	○		
H2	DIN / 24 V (availability dep. on ctrl. type)	●	●	●	●	●	●	○		
D1	Deutsch / 12 V	○	○	○	○	○	○	○		
D2	Deutsch / 24 V	○	○	○	○	○	○	○		
00	not applicable (LP; H1L; TL2)	●	●	●	●	●	●	●		
Pump Features										
9.	Noise Optimization Devices									
S	with SPU primary noise reduction (sizes 55-105: (*r))	●	●	●	●	●	●	●		
0	w/o additional noise optimization devices	●	●	●	●	●	●			

Item	Feature	Frame Size 55	75	105	135	165	210	280		Choice
Mounting Interfaces										
10.	Porting									
M	ISO 6149 metric	●	●	●	●	●	●	●		
D	DIN 3852	●	●	●	●					
11.	Mounting Flange									
S0	SAE J744 standard (size 105: LP;H1L;E1L only)	●	●	●	●		●	●		
S1	SAE J744 / additional threads (sizes 105;135: (*u))			●	●					
S2	SAE J744 / additional holes					●				
M0	ISO 30119-2 metric (TL2;ETP;LEP only)/(*m)			●				●		
P0	plug-in (LP;H1L;E11L only)/(size 105: (*d))			●	●					
B3	bell housing SAE 3 (LP;H1L;E1L only)/(size 105: (*d))			●	●					
B4	bell housing SAE 4 (LP;H1L;E1L only)/(size 105: (*d))			●	●					
12.	Drive Shaft (S32 - T27: splined ANSI B92.1...)									
S32	12/24-14t (SAE C)/(size 105: (*w))	●	●	●						
S38	12/24-17t (SAE C-C)			●	●					
S44	8/16-13t (SAE D&E)				●	●				
S50	8/16-15t (SAE J744 F)/(sizes 210; 280: (*t))						●	●		
T21	16/32-21t (*t)		●							
T23	16/32-23t (*t)			●						
T27	16/32-27t (*t)				●	●	●			
P40	keyed ISO3019-2/40 mm (metric flange only (pos. 11))			●						
P60	keyed ISO3019-2/60 mm							●		
Pump PTO										
13.	PTO Through Drive Configuration (A00 - E27: SAE J744 ...)									
A00	A without shaft coupling (default)	●	●	●	●	●	●	●		
A09	A / ANSI B92.1 16/32 - 9t (A)	●	●	●	●	●	●			
A11	A / ANSI B92.1 16/32 - 11t						●			
A13	A / ANSI B92.1 16/32 - 13t			●	●		●	●		
B00	B without shaft coupling	●	●	●	●	●	●	●		
B13	B / ANSI B92.1 16/32 - 13t (B)	●	●	●	●	●	●	●		
B15	B / ANSI B92.1 16/32 - 15t (B-B)	●	●	●	●			●		
C00	C without shaft coupling	●	●	●	●	●	●	●		
C14	C / ANSI B92.1 12/24 - 14t (C)	●	●	●	●	●	●	●		
C21	C / ANSI B92.1 16/32 - 21t		●	●	●		●			
C23	C / ANSI B92.1 16/32 - 23t			●	●	●	●			
D00	D without shaft coupling				●	●	●	●		
D13	D / ANSI B92.1 8/16 - 13t (D)				●					
D17	D / ANSI B92.1 12/24 - 17t				●					
D27	D / ANSI B92.1 16/32 - 27t				●	●	●			

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

HPR-02

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

Pump PTO		Internal Gear Pump		Coating	Pump Setup						Processing Data	
13	14	15	16	17	18	19	20	21	22	23	24	25

Item	Feature	55	75	105	135	165	210	280		Choice
E00	E without shaft coupling						●	●		
E27	E / ANSI B92.1 16/32 - 27t						●			
GP0	for Linde gear pump attachment	●	●	●	●	●	●	●		
14.	**PTO Through Drive Attachment**									
A16	internal gear pump 16 cc	●	●	●	●					
A22	internal gear pump 22,5 cc	●	●	●	●					
B32	int. g. pump tandem 16+16 cc	●	●	●	●					
B38	int. g. pump tandem 16+22,5 cc	●	●	●	●					
C38	int. g. pump tandem 22,5+16 cc	●	●	●	●					
C45	int. g. pump tandem 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 tandem 22,5+22,5 cc (*r)				●	●	●	●		
T05	HPV/R 55-02 mounting prep.(*s)	●	●	●	●	●	●	●		
T07	HPV/R 75-02 mounting prep. (*s)		●	●	●	●	●	●		
T10	HPV/R 105-02 mounting prep. (*s)			●	●	●	●	●		
T13	HPV/R 135-02 mounting prep. (*s)				●	●	●			
T16	HPV/R 165-02 mounting prep. (*s)					●				
T21	HPV/R 210-02 mounting prep. (*s)						●	●		
000	w/o	●	●	●	●	●	●	●		
Internal Gear Pump										
15.	**Gear Pump Supply**									
E	external supply port on first gear pump att.	●	●	●	●	●	●	●		
0	w/o gear pump	●	●	●	●	●	●	●		
16.	**PTO Through Drive on Internal Gear Pump (A09 - C14: SAE J744 ...)**									
A09	A / ANSI B92.1 16/32 - 9t (A) (default)	●	●	●	●					
B00	B without shaft coupling	●	●	●	●					
B13	B / ANSI B92.1 16/32 - 13t (B)	●	●	●	●					
B15	B / ANSI B92.1 16/32 - 15t (B-B)	●	●	●	●					
C00	C without shaft coupling			●	●					
C14	C / ANSI B92.1 12/24 - 14t (C)			●	●					
000	w/o int. gear pump (single pump)	●	●	●	●	●	●	●		
Coating										
17.	**Coating**									
R00	anti rust conservation oil (default)	●	●	●	●	●	●	●		
P01	primer RAL 3009 oxide red	●	●	●	●	●	●	●		
P03	primer blue	●	●	●	●	●	●	●		
V03	primer + coating RAL 9005 black	●	●	●	●	●	●	●		
V25	primer + coating RAL 7043 grey	●	●	●	●	●	●	●		
Pump Setup										
18.	**Maximum Displacement Setting**									
value	num. 3 digits, setting range see pos. 03	●	●	●	●	●	●	●		

Item	Feature	55	75	105	135	165	210	280		Choice
19.	**Operating Speed**									
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)							●		
20.	**LS Differential Pressure Setting**									
value	16 - 30 bar (numeric 2 digits)	●	●	●	●	●	●	●		
99	not applicable (ETP)	●	●	●	●	●	●	●		
21.	**Pressure Cut-Off Setting**									
value	125 - 420 bar (numeric 3 digits)	●	●	●	●	●	●	●		
999	not applicable (H1L; E1L; TL2)	●	●	●	●	●	●	●		
22.	**Power Limiter Setting**									
value	007 - 085 kW (numeric 3 digits) (*p)/(*q)		●							
value	009 - 106 kW (numeric 3 digits) (*p)/(*q)			●						
value	012 - 136 kW (numeric 3 digits) (*p)/(*q)				●					
value	024 - 184 kW (numeric 3 digits) (*p)/(*q)						●			
value	032 - 221 kW (numeric 3 digits) (*p)/(*q)							●		
999	not applicable (LP; H1L; E1L; LEP)	●	●	●	●	●	●	●		
Special										
23.	**Special Requirements**									
N	w/o special requirements (default)	●	●	●	●	●	●	●		
C	with special requirements	▲	▲	▲	▲	▲	▲	▲		
Processing Data										
24.	**Customer Identification Number**									
value	numeric 6 digits (*1)									
25.	**Customer Part Number**									
value	alpha numeric / 11 digits maximum									

(*d) DIN porting only (see pos. 10.)
(*e) availability depends on controller type (see pos. 05.)
(*m) ISO metric porting only (see pos. 10.)
(*p) max. power setting at max. displacement/max speed/250 bar
(*q) min. power setting at max. displacement/min speed/ 60 bar (sizes 210/280: 80 bar)
(*r) cw rotation only (see pos. 04.)
(*s) second HPV/R-02 unit has to be specified separately
(*t) recommended if HPV/R-02 unit is attached to PTO (see pos. 14.)
(*u) required for PTO flange size C (see pos. 14.)
(*w) not for tandem units (see pos. 14.)
(*1) optional/for administrative purposes
(*2) optional/if field is used the customer part number will be printed on the nameplate

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

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

		Basic Specification			Pump Control					Pump Features				
HPV-02	- A2	-		-						-				-
1	2	3	4		5	6	7	8	9	10	11	12	13	

Item	Feature	55	75	105	135	165	210	280		Choice
1.	Type									HPV-02
2.	Model Code Release									A2
Basic Specification										
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	●	●	●	●	●	●	●		
Pump Control										
5.	Pump Controller									
M100	M1: mechanical hydraulic	●	●	●	●	●	●	●		
H100	H1: hydraulic proportional	●	●	●	●	●	●	●		
H1P0	H1P: hydraulic prop./ PCO (*p)	●	●	●	●	●	●	●		
E100	E1: electro-proportional (*y)	●	●	●	●	●	●	●		
E1P0	E1P: electro-prop./ PCO (*p)/(*y)	●	●	●	●	●	●	●		
E1T0	E1T: el.-prop./ TCO (*c)/(*p)/(*y)	▲								
E200	E2: electro-prop. / shut-off (*z)	●	●	●	●	●	●	●		
E500	E5: electric three position (*y)	●	●	●	●	●	●	●		
CA00	CA: speed rel. hydr. mechanical (*c)/(*p)/(*r)/(*z)	▲	▲	▲	▲					
CAF0	CAF: speed rel. hydr. mechanical (*c)/(*m)/(*p)/(*z)					▲	▲	▲		
6.	Additional Controller Feature Specification									
M05	M1 control lever position 24°	●	●	●	●	●	●	●		
M11	M1 cont. lev. pos. 90° (default for M1)	●	●	●	●	●	●	●		
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 destroking speed	●	●	●	●	●	●	●		
E2F	E2 accelerated destroking speed	●	●	●	●					
E2H	E2 quickest destroking speed	●	●	●	●	●	●	●		
000	not applic. (H1; H1P; E1; E1P;E1T; E5; CA; CAF)	●	●	●	●	●	●	●		
7.	Control Pressure Range Hydraulic and Electric Controls									
A	4-10 bar	●	●	●	●	●	●	●		
B	4-16 bar (not for E5)	●	●	●	●	●	●	●		
0	not applicable (M1; CA; CAF)	●	●	●	●	●	●	●		

Item	Feature	55	75	105	135	165	210	280		Choice
8.	Control Solenoids									
A1	AMP / 12V	●	●	●	●	●	●	●		
A2	AMP / 24 V	●	●	●	●	●	●	●		
H1	DIN / 12 V	●	●	●	●	●	●	●		
H2	DIN / 24 V	●	●	●	●	●	●	●		
D1	Deutsch / 12V (E1; E1P; E2; CA) (*z)	●	●	●	●	●	●	●		
D2	Deutsch / 24V (E1; E1P; E2; CA) (*z)	●	●	●	●	●	●	●		
00	not applicable (H1; H1P; M1)	●	●	●	●	●	●	●		
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	●	●	●	●	●	●	●		
Pump Features										
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									
17	17,5 bar (CA ctrl. only; CA def. see pos.05)	▲	▲	▲	▲					
19	19 bar	●	●	●						
20	20 bar				●	●	●	●		
22	22,5 bar	●	●	●						
23	23 bar				●	●	●	●		
24	24 bar	●	●	●						
00	purge orifice	●	●	●	●	●	●	●		
12.	Filter Configuration									

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

HPV-02

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

Mounting Interfaces				Pump PTO		Internal Gear Pump		Coating	Pump Setup			Processing Data	
[ ]	[ ]	[ ]	-	[ ]	[ ]	-	[ ]	[ ] -	[ ]	/ [ ]	- [ ]	- [ ]	/ [ ]
14	15	16	17	18	19		20	21	22	23	24	25	26

Item	Feature	Frame Size 55	75	105	135	165	210	280		Choice
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 (*m)		●	●	●		●	●		
0	w/o swash angle sensor	●	●	●	●	●	●	●		
Mounting Interfaces										
14.	**Porting**									
M	ISO 6149 metric	●	●	●	●	●	●	●		
D	DIN 3852	●	●	●	●					
15.	**Mounting Flange**									
S0	SAE J744 standard (size 135: (*d))	●	●	●	●		●	●		
S1	SAE J744/add. threads (sizes 105;135: (*u))		●	●	●					
S2	SAE J744 / additional holes (sizes 135; 165: (*u) / size 135: (*d))				●	●				
16.	**Drive Shaft (splined ANSI B92.1...)**									
S32	12/24-14t (SAE C)/(size 105: (*w))	●	●	●						
S38	12/24-17t (SAE C-C)			●	●					
S44	8/16-13t (SAE D&E)				●	●				
S50	8/16-15t (SAE J744 F)/(sizes 210; 280: (*t))						●	●		
T21	16/32-21t (*t)	●	●							
T23	16/32-23t (*t)			●						
T27	16/32-27t (*t)				●	●	●			
T33	16/32-33t (*t)							●		
F40	shaft coupling flange size 4 (*f)	●	●	●	●	●	●	●		
Pump PTO										
17.	**PTO Through Drive Configuration (SAE J744 ...)**									
A00	A w/o shaft coupling (default)	●	●	●	●	●	●	●		
A09	A / ANSI B92.1 16/32 - 9t (A)	●	●	●	●					
A11	A / ANSI B92.1 16/32 - 11t	●		●						
A13	A / ANSI B92.1 16/32 - 13t				●	●				
B00	B w/o shaft coupling	●	●	●	●	●	●	●		
B13	B / ANSI B92.1 16/32 - 13t (B)	●	●	●	●	●	●	●		
B15	B / ANSI B92.1 16/32 - 15t (B-B)	●	●	●	●		●	●		
C00	C w/o shaft coupling	●	●	●	●	●	●	●		
C14	C / ANSI B92.1 12/24 - 14t (C)	●	●	●	●	●	●	●		
C21	C / ANSI B92.1 16/32 - 21t	●	●	●	●					
C23	C / ANSI B92.1 16/32 - 23t			●	●		●			
D00	D w/o shaft coupling				●	●	●			
D13	D / ANSI B92.1 8/16 - 13t (D)						●			
D17	D / ANSI B92.1 12/24 - 17t				●					
D27	D / ANSI B92.1 16/32 - 27t				●	●	●			
E00	E w/o shaft coupling						●			
E27	E / ANSI B92.1 16/32 - 27t						●	●		

Item	Feature	Frame Size 55	75	105	135	165	210	280		Choice
E33	E / ANSI B92.1 16/32 - 33t							●		
GP0	for Linde gear pump attachment	●	●	●	●	●	●	●		
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	●	●	●	●		●	●		
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)						●	●		
T28	HPV/R 280-02 mount. prep. (*s)							●		
000	w/o	●	●	●	●	●	●	●		
Internal Gear Pump										
19.	**Gear Pump Supply**									
E	ext. supp. port on 1. gear pump attached	●	●	●	●	●	●	●		
G	int. supp. through fl. on 1. gear pump att.	●	●	●	●					
0	w/o gear pump	●	●	●	●	●	●	●		
20.	**PTO Through Drive on Gear Pump (A09 - C14: SAE J744 ...)**									
A09	A/ANSI B92.1 16/32 - 9t (A) def.	●	●	●	●		●	●		
B00	B without shaft coupling	●	●	●	●					
B13	B/ANSI B92.1 16/32 - 13t (B)	●	●	●	●					
B15	B/ANSI B92.1 16/32 - 15t (B-B)	●	●	●	●					
C00	C without shaft coupling	●	●	●	●					
C14	C/ANSI B92.1 12/24 - 14t (C)	●	●	●	●					
000	without PTO on gear pump	●	●	●	●	●	●	●		
Coating										
21.	**Coating**									
R00	anti rust conservation oil (default)	●	●	●	●	●	●	●		
P01	primer RAL 3009 oxide red	●	●	●	●	●	●	●		
P03	primer blue	●	●	●	●	●	●	●		
V03	primer + coating RAL 9005 black	●	●	●	●	●	●	●		
V25	primer + coating RAL 7043 grey	●	●	●	●	●	●	●		
Pump Setup										
22.	**Maximum Displacement Setting (P)**									
value	28 - 45 cc (numeric 3 digits)	●								
value	46 - 55 cc (numeric 3 digits)	●								

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

HPV-02

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

Item	Feature	Frame Size								Choice
		55	75	105	135	165	210	280		
value	55 - 65 cc (numeric 3 digits)		●							
value	66 - 75 cc (numeric 3 digits)		●							
value	75 - 90 cc (numeric 3 digits)			●						
value	91 - 105 cc (numeric 3 digits)			●						
value	105 - 120 cc (numeric 3 digits)				●					
value	121 - 135 cc (numeric 3 digits)				●					
value	135 - 150 cc (numeric 3 digits)					●				
value	151 - 165 cc (numeric 3 digits)					●				
value	166 - 190 cc (numeric 3 digits)						●			
value	191 - 210 cc (numeric 3 digits)						●			
value	210 - 280 cc (numeric 3 digits)							●		
23.	**Maximum Displacement Setting (S)**									
value	num. 3 digits, sett. range see pos.22	●	●	●	●	●	●	●		
Special										
24.	**Special Requirements**									
N	w/o special requirements (default)	●	●	●	●	●	●	●		
C	special requirements (additional clear text specification required)	▲	▲	▲	▲	▲	▲	▲		
Processing Data										
25.	**Customer Identification Number**									
value	numeric 6 digits (*1)									
26.	**Customer Part Number**									
value	alpha numeric / 11 digits maximum (*2)									

(*c) always set option C in pos. 24.
(*d) DIN porting only (see pos. 14.)
(*e) availability depends on controller type (see pos. 05.)
(*f) based on companion flange acc. to SAE J1946 Type A - 120x8x10
(*m) ISO metric porting only (see pos. 14.)
(*p) 250 bar minimum system relief valve setting (see pos. 10.)
(*r) cw rotation only (see pos. 04.)
(*s) second HPV/R-02 unit has to be specified separately
(*t) recommended if HPV/R-02 unit is attached to PTO (see pos. 18.)
(*u) required for PTO flange equal or larger than size C (see pos. 18.)
(*w) not for tandem units (see pos. 18.)
(*y) solenoids with quadratic cross section if not Deutsch solenoids (see pos. 08.)
(*z) solenoids with round cross section
(*1) optional/for administrative purposes
(*2) optional/if field is used the customer part number will be printed on the nameplate

preferred option
● available option
○ option in preparation
▲ separate specification required
consult Linde Hydraulics

Model Code. VT Modular

Type	Product	Feature
1. Base Plates and Make-up Module		
VT4-S-01/H	VT4 Base plate	hydraulically piloted
VT1-S-01/H	VT1 Base plate	hydraulically piloted
TV-02	Make-up module for VT4 base plate	with pressurization for T and K ports (pre-charge springs for T and K to select: 3, 5, 7, 9 bar)
2. IF32 Infrastructure Modules		
IF32-03	IF32 Module for sub plate mounted valve	hydraulically piloted
IF32-02	IF32 Module for sub plate mounted valve with P port	hydraulically piloted
IF32-10	IF32 Adaptor plate IF32 - SW18	
IF32-01	IF32 Cover plate	
IF32-04	IF32 Relief module for VT1 base plate	
3. VW CF25 Sub plate mounted Valves (PRV/MUV=Combined Pressure Relief Valve/Make-up Valve)		
	VW18 with adaptor plate to CF25	incl. 2 pcs. off PRV/ MUV
	VW25 CF25	incl. 2 pcs. off PRV/ MUV
	VW30 CF25	incl. 2 pcs. off PRV/ MUV
Price Reductions for Reduction of Functions		
-	per VW side: MUV instead of PRV/MUV	make-up valve instead of combined PRV/MUV
-	per VW side: plug instead of PRV/MUV	plug instead of combined PRV/MUV
-	both VW sides: MUVs instead of PRV/MUVs	make-up valves instead of combined PRV/MUVs
-	both VW sides: plugs instead of PRV/MUVs	plugs instead of combined PRV/MUVs
4. Plates and Accessories for CF25 Valves		
CF25-01	CF25 Intermediate plate LS cut-off	cut-off of LSA , LSB or LSA & LSB
CF25-04	CF25 Intermediate plate for regeneration	
CF25-10	CF25 Cover plate	
CF25-05	CF25 Restrictor orifice: 10 mm or 15 mm	for inserting into TA or TB spot face of the CF25 interface of the base plate or of the IF32 infrastructure module
5. SW18 Sandwich Valves		
VW18-SW18-02	VW18 SW18, hydraulically piloted	incl. 2 pcs. off PRV/ MUV
Price Reductions for Reduction of Functions		
-	per VW side: MUV instead of PRV/MUV	make-up valve instead of combined PRV/MUV
-	per VW side: plug instead of PRV/MUV	plug instead of combined PRV/MUV
-	both VW sides: MUVs instead of PRV/MUVs	make-up valves instead of combined PRV/MUVs
-	both VW sides: plugs instead of PRV/MUVs	plugs instead of combined PRV/MUVs
6. SW18 Plates		
SW18-01	SW18 Intermediate plate LS cut-off	cut-off of LSA , LSB or LSA & LSB
VW SW18-01	SW18 Cover plate	
7. Work Port - Mounted Plates		
AP 0,75	tank bypass plate 0,75"	for mounting to the work ports of valves size 18, 3/4"
AP 1,00	tank bypass plate 1,00"	for mounting to the work ports of valves size 25, 1"
8. Pilot Valve bar VD7S		
VD7S-01	VD7S Inlet module	supply pressure relief, LS switch-off, supply pressure switch-off
VD7S-03	VD7S Pressure reducing module	with 2 off pressure reducing valves/pilots
VD7S-02	VD7S End module	
PVB cpl. Assy.	assembly parts (tie rods, nuts etc...)	
9. Surface Treatment		
-	conservation + anti-corrosion fluid	
-	primer 1K RAL 3009 oxide red	VT1 manifold valve plate *)
-	primer 1K RAL 3009 oxide red	VT4 manifold valve plate *)
-	option: primer + painting 2K RAL 7024 grey	VT1 manifold valve plate *)
-	option: primer + painting 2K RAL 7024 grey	VT4 manifold valve plate *)

Only for ordering of ready-configured and ready-assembled complete VT1 manifold plates, VT4 manifold plates and VD7S pilot valve bars; not for the ordering of single components.

*): 1) primer and painting ONLY for ready-assembled VT1 or VT4 manifold plates, not for single components
2) For primer/painting: max. allowed width W=680 mm (s. data sheet "VT modular") of the VT1 or VT4 manifold plate

Model Code. Medium Pressure. Preferred Configurations 420

Type	Feature	Part No.	3D-Model-No.	Model Code																																							
				/	/	/	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Frame Size 49																																											
420-49	R, LS, rear ports	2251 000 2500	A-3215-002_R1	L	H	Y	A	D	U	0	4	9	R	0	5	A	C	3	0	B	4	3	1	4	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-49	R, LS, side ports, w/o PTO	2251 000 2501	A-3215-004_R1	L	H	Y	A	D	U	0	4	9	R	0	5	A	D	3	0	B	4	3	1	4	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-49	R, LS, side ports, w/ "A" PTO	2251 000 2502	A-3215-014_R1	L	H	Y	A	D	U	0	4	9	R	0	5	A	D	3	0	B	4	3	1	4	0	0	0	0	2	A	B	2	0	0	0	A	N	B
420-49	R, PCO, rear ports	2251 000 2503	A-3216-002_R1	L	H	Y	A	D	U	0	4	9	R	0	5	A	C	3	0	C	4	3	0	0	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-49	R, PCO, side ports, w/o PTO	2251 000 2504	A-3216-004_R1	L	H	Y	A	D	U	0	4	9	R	0	5	A	D	3	0	C	4	3	0	0	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-49	R, PCO, side ports, w/ "A" PTO	2251 000 2505	A-3216-014-R1	L	H	Y	A	D	U	0	4	9	R	0	5	A	D	3	0	C	4	3	0	0	0	0	0	0	2	A	B	2	0	0	0	A	N	B
Frame Size 62																																											
420-62	R, LS, rear ports	2251 000 2506	A-3215-002_R1	L	H	Y	A	D	U	0	6	2	R	0	8	A	C	3	0	B	4	3	1	4	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-62	R, LS, side ports, w/o PTO	2251 000 2507	A-3215-004_R1	L	H	Y	A	D	U	0	6	2	R	0	8	A	D	3	0	B	4	3	1	4	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-62	R, LS, side ports, w/ "A" PTO	2251 000 2508	A-3215-014_R1	L	H	Y	A	D	U	0	6	2	R	0	8	A	D	3	0	B	4	3	1	4	0	0	0	0	2	A	B	2	0	0	0	A	N	B
420-62	R, PCO, rear ports	2251 000 2509	A-3216-002_R1	L	H	Y	A	D	U	0	6	2	R	0	8	A	C	3	0	C	4	3	0	0	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-62	R, PCO, side ports, w/o PTO	2251 000 2510	A-3216-004_R1	L	H	Y	A	D	U	0	6	2	R	0	8	A	D	3	0	C	4	3	0	0	0	0	0	0	2	0	0	2	0	0	0	A	N	B
420-62	R, PCO, side ports, w/ "A" PTO	2251 000 2511	A-3216-014-R1	L	H	Y	A	D	U	0	6	2	R	0	8	A	D	3	0	C	4	3	0	0	0	0	0	0	2	A	B	2	0	0	0	A	N	B
Frame Size 80																																											
420-80	R, LS, TC, side ports, w/ "A" PTO	2251 000 2512	A-3365-007_R1	L	H	Y	A	D	U	0	8	0	R	3	2	A	D	3	0	J	2	8	1	4	A	L	0	0	1	A	B	5	0	0	0	A	N	B

420

Model Code. Medium Pressure. Features for New Configurations 420

Code	Feature	Choice
Pos. 1/2/3		
Code Title		
ADU	pressure compensated/pressure flow compensated open circuit piston pump	
Pos. 4/5/6		
Displacement		
041	41,0 cc/rev [2.50 cui/rev]	
049	49,2 cc/rev [3.00 cui/rev]	
062	62,3 cc/rev [3.80 cui/rev]	
080	80,0 cc/rev [4.88 cui/rev]	
Pos. 8/9		
Front Mounting & Input Shaft		
08	2 bolt B (SAE J744-101-2) with 15 tooth 16/32 spline (ANSI B92.1-1996 mod.) shaft extension 46 [1.81]	
35	2 bolt B (SAE J744-101-2) with 14 tooth 12/24 spline (ANSI B92.1-1996 mod.) shaft extension 55,5 [2.19]	
32	2/4 bolt C (SAE J744-127-2/4) with 14 tooth 12/24 spline (ANSI B92.1-1996 mod.) shaft extension 55,5 [2.19]	
Pos. 13		
Diagnostic Pressure Ports		
2	M14 x 1.5 metric o-ring ports - suction and pressure ports - plugged (rear ports only)	
Pos. 14		
Controller Type		
J	pressure and flow compensator with torque control and M12 x 1.5 metric o-ring load sense port left side	
K	pressure compensator with torque control	
Pos. 21/22		
Control Special Features		
0N	bleed down orifice and 12 V DC destroke manifold with deutsch connector and diode	
0D	12 V destroke manifold with 61 cm [24 in] flying leads top mounting	
0G	24 VDC destroke manifold with DIN connector top mounting	
0H	bleed down orifice and 24 V DC destroke manifold with DIN connector top mounting	
0K	12 VDC destroke manifold with DIN connector top mounting	
0A	bleed down orifice	
Pos. 23		
Maximum Displacement Option		
external manual stroke adjustment set at ...		
2	maximum	
3	114.3-121.9 l/min [30.2-32.2 gal/min] (62.3 cc/rev [3.80 cui/rev] limited to 45,4 cc/rev [2.77 cui/rev])	
4	124.8-131.7 l/min [32.8-34.8 gal/min] (62.3 cc/rev [3.80 cui/rev] limited to 49.2 cc/rev [3.00 cui/rev])	
5	85,6-93,1 l/min [22.6-24.6 gal/min] (62,3 cc/rev [3.80 cui/rev] limited to 32,4 cc/rev [2.10 cui/rev])	

Code	Feature	Choice
6	152,2-159,7 l/min [40.2-42.2 gal/min] (62,3 cc/rev [3.80 cui/rev] limited to 60 cc/rev [3.66 cui/rev])	
7	115,5-123 l/min [30.5-32.5 gal/min] (49.2 cc/rev [3.00 cui/rev] limited to 45 cc/rev [2.75 cui/rev])	
8	72,3-79,9 l/min [19.1-21.1 gal/min] (41 cc/rev [2.50 cui/rev] limited to 31,6 cc/rev [1.93 cui/rev])	
9	129,1-138,2 l/min [28.4-30.4 gal/min] (49,2 cc/rev [3.00 cui/rev] limited to 42 cc/rev [2.56 cui/rev])	
A	104,8-112,4 l/min [27.7-29.7 gal/min] (49,2 cc/rev [3.00 cui/rev] limited to 41 cc/rev [2.50 cui/rev])	
F	155-170 l/min [41.0-45.0 gal/min] (80 cc/rev [4.88 cui/rev] limited to 74 cc/rev [4.52 cui/rev])	
G	63,2-70,8 l/min [16.7-18.7 gal/min] (41 cc/rev [2.50 cui/rev] limited to 28 cc/rev [1.71 cui/rev])	
H	62,0 -68,0 l/min [16.4-18.0 gal/min] (49.2 cc/rev [3.00 cui/rev] limited to 24.6 cc/rev [1.50 cui/rev])	
J	33.69-37.47 l/min [8.9-9.9 gal/min] (41cc/rev [2.50 cui/rev] limited to 14.76 cc/rev [0.9 cui/rev])	
displacement internally limited to ...		
B	90% of maximum	
C	93% of maximum	
D	87% of maximum	
E	79% of maximum	
Pos. 24/25		
Auxiliary (rear) Mount & Output Shaft (Dual SAE J744 flange...)		
AF	101-2 (2 bolt B); 26t 32/64 spline output shaft (coupler and aux. mount o-ring not included)	
AC	101-2 (2 bolt B); accepts 13t 16/32 spline with 41,2 [1.62] extension (coupler and aux. mount o-ring included)	
AD	101-2 (2 bolt B); accepts 15t 16/32 spline with 46 [1.81] extension (coupler and aux. mount o-ring included)	
AA	82-2 (2 bolt A); accepts 9t 16/32 spline with 31,7 [1.25] shaft ext. (no coupler required, aux. mount o-ring included)	
AB	82-2 (2 bolt A); accepts 11t 16/32 spline with 31,7 [1.25] shaft extension (coupler and aux. mount o-ring included)	
AE	82-2 (2 bolt A); accepts 9t 16/32 spline with 31,7 [1.25] shaft extension (coupler and aux. mount o-ring included)	
AG	82-2 (2 bolt A); accepts 13t 16/32 spline with 41,2 [1.62] shaft ext. (no coupler required, aux. mount o-ring included)	
Pos. 27/28		
Pump Special Features		
AG	swash position sensor and shaft speed sensor	
AB	swash position sensor	
AC	shaft speed sensor	
AA	auxiliary mounting cover plate	
Pos. 29/30		
Paint		
AN	primer red	

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LHY.Model Code.01/13.e

Turning Power into Motion.

Linde Hydraulics