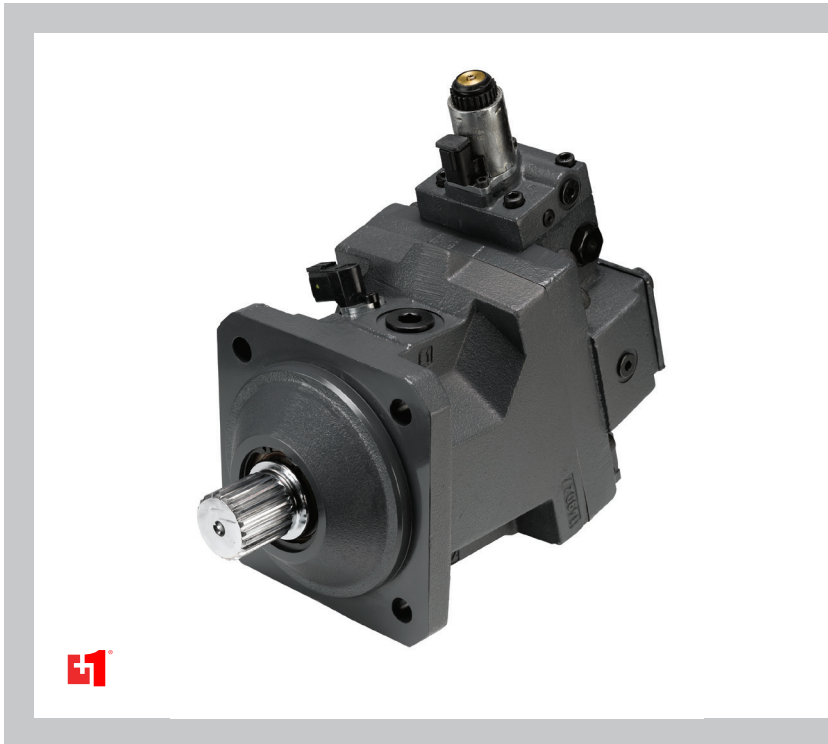




Product Line Overview

H1 Bent Axis Variable Displacement Motors

Size 060/080/110/160/210/250



H1 variable displacement motors are bent axis design, incorporating spherical pistons. These motors are designed primarily to be combined with other products in closed circuit systems to transfer and control hydraulic power.

Series H1 motors have a large maximum/minimum displacement ratio of 5:1 and high output speed capabilities. The expanded function of zero degree capability, coupled with a high performance 32 degree maximum angle, creates opportunities to easily improve the machine performance for:

- Wheel assist on the steering axle of high inertia machines (i.e. combines)
- Off-highway machines requiring Anti Slip Control (i.e. Ag. sprayer).
- Multi-motor applications requiring optimized work and transport modes (i.e. wheel loader, Ag sprayer) utilizing the zero degree position for maximum transport speed.
- Improved machine (i.e. single drum roller) gradeability through precise Anti Slip Control.

Technical specifications

Motor	Displacement				Rated speed vs displacement			Max speed vs displacement			Max working pressure*		Max pressure		Mounting flange / Weight dry					
	Max.		Min.		32	6	0	32	6	0	bar	[psi]	bar	[psi]	SAE		DIN		Cartridge	
	cm ³	[in ³]	cm ³	[in ³]											min ⁻¹ [rpm]	min ⁻¹ [rpm]	min ⁻¹ [rpm]	kg	[lb]	kg
H1B 060	60	[3.66]	12	[0.73]	3600	5900	6600	4500	7250	7950	450	[6527]	480	[6960]	29.8	[65.8]	28.3	[62.5]	26.9	[58.4]
H1B 080	80	[4.88]	16	[0.98]	3200	5300	5950	4100	6600	7200	450	[6527]	480	[6960]	34.8	[76.9]	34.4	[76.9]	33.0	[72.8]
H1B 110	110	[6.71]	22	[1.34]	2900	4800	5350	3700	5950	6500	450	[6527]	480	[6960]	48.8	[107.8]	45.0	[99.4]	41.8	[92.3]
H1B 160	160	[9.76]	32	[1.95]	2600	4250	4750	3300	5250	5750	450	[6527]	480	[6960]	61.9	[136.5]	59.3	[130.7]	54.7	[120.6]
H1B 210	210	[12.81]	42	[2.56]	2350	3850	4300	3000	4800	5250	450	[6527]	480	[6960]	81.0	[178.6]	75.0	[165.3]	-	-
H1B 250	250	[15.25]	50	[3.05]	2200	3650	4050	2800	4500	4900	450	[6527]	480	[6960]	87.7	[193.3]	-	-	-	-

* Applied pressures above maximum working pressure requires Danfoss application approval.

High pressure ports are available in axial port design (shown on the drawings) or radial port design.

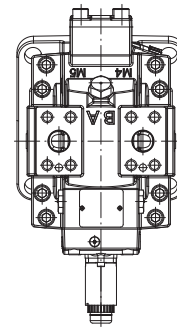
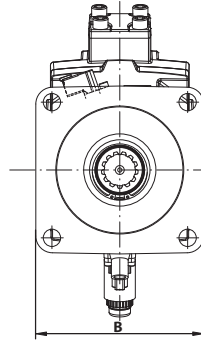
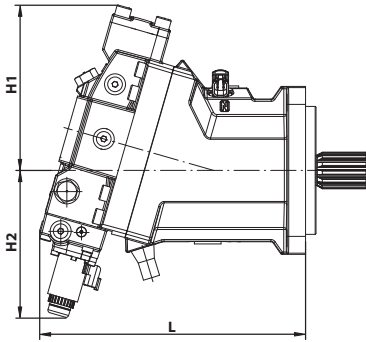
Related technical literature below is available at: www.Danfoss.com

Description	Order number
H1B Bent Axis Variable Displacement Motors, Technical Information	11037153
Speed and Temperature Sensor, Technical Information	11046759
Electric Two-Position Control (E1, E2), Product Electrical Installation	11051223
Electric Two-Position Control (F1, F2), Product Electrical Installation	L1315682
Electric Two-Position Control (T1,T2), Product Electrical Installation	11051222
Electric Proportional Pressure Compensator OverRide (P1, P2), Product Electrical Installation	11051224
Electric Proportional Control (M1, M2, K1, K2), Product Electrical Installation	11051228
Electric Proportional Control (L1, L2), Product Electrical Installation	11051232
H1B Bent Axis Variable Displacement Motors, Service Manual	11024924

SAE flange design dimensions

Control option L

mm [in]

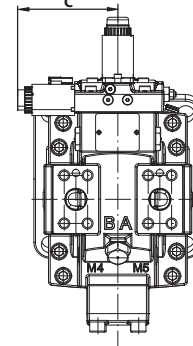
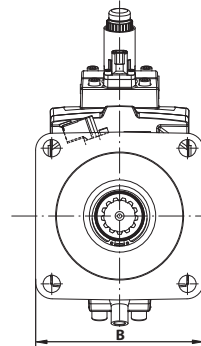
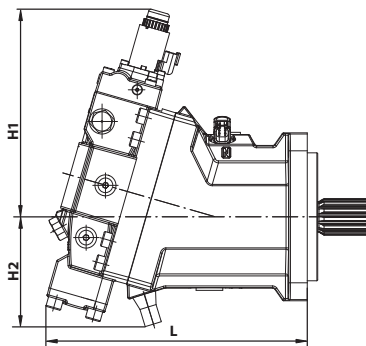


P301 274

Frame Size	L	H2	H1	B
60	272 [10.7]	165 [6.5]	168 [6.6]	142 [5.6]
80	290 [11.4]	171 [6.7]	180 [7.1]	142 [5.6]
110	316 [12.4]	175 [6.9]	197 [7.8]	200 [7.8]
160	344 [13.5]	184 [7.2]	220 [8.7]	200 [7.8]
210	369 [14.5]	191 [7.5]	233 [9.2]	260 [10.2]
250	387 [15.3]	197 [7.8]	239 [9.4]	260 [10.2]

Control Option M

Control Option K

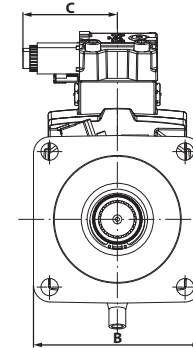
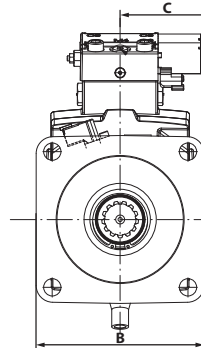
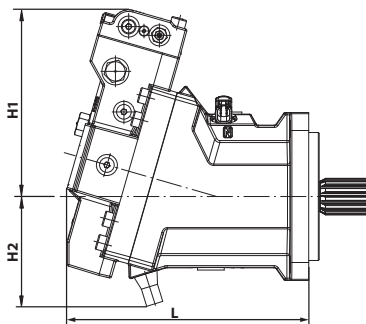


P301 275

Frame Size	L	H2	H1	B	C
60	265 [10.4]	115 [4.5]	224 [8.8]	142 [5.6]	119 [4.7]
80	283 [11.1]	119 [4.7]	236 [9.3]	142 [5.6]	119 [4.7]
110	311 [12.2]	131 [5.2]	247 [9.7]	200 [7.8]	119 [4.7]
160	340 [13.4]	138 [5.4]	265 [10.4]	200 [7.8]	119 [4.7]
210	364 [14.3]	146 [5.7]	279 [11.0]	260 [10.2]	119 [4.7]
250	382 [15.0]	152 [6.0]	290 [11.4]	260 [10.2]	119 [4.7]

Control Option E, T and P

Control Option F

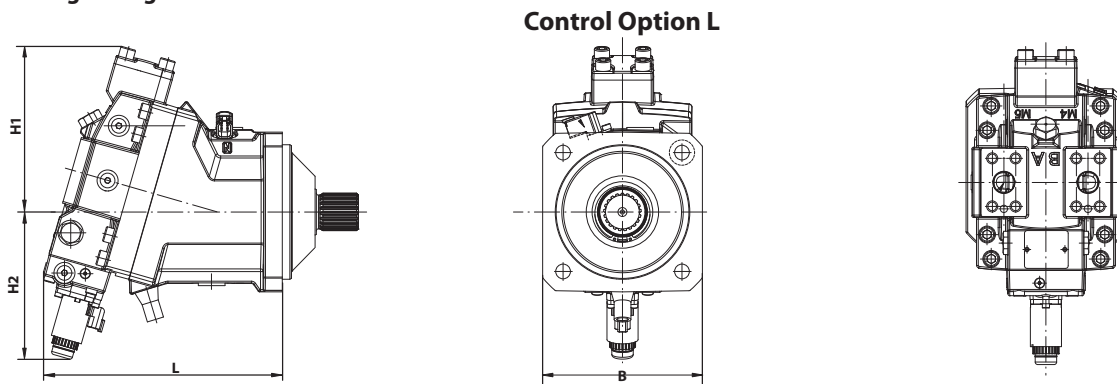


P301 276

Frame Size	L	H2	H1	B	C
60	219 [8.6]	115 [4.5]	192 [7.6]	142 [5.6]	113 [4.5]
80	237 [9.3]	119 [4.7]	205 [8.1]	142 [5.6]	113 [4.5]
110	256 [10.1]	131 [5.2]	222 [8.7]	200 [7.8]	113 [4.5]
160	315 [12.4]	138 [5.4]	241 [9.5]	200 [7.8]	113 [4.5]
210	341 [13.4]	145 [5.7]	258 [10.2]	260 [10.2]	113 [4.5]
250	359 [14.1]	152 [6.0]	267 [10.5]	260 [10.2]	113 [4.5]

DIN flange design dimensions

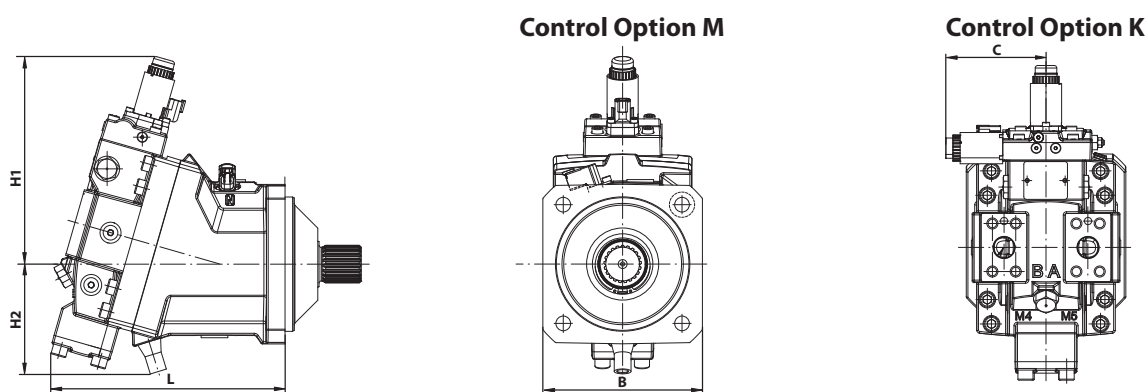
mm [in]



Control Option L

P301 277

Frame Size	L	H2	H1	B
60	248 [9.8]	165 [6.5]	168 [6.6]	150 [5.9]
80	266 [10.5]	171 [6.7]	180 [7.1]	165 [6.5]
110	284 [11.2]	175 [6.9]	197 [7.8]	190 [7.8]
160	312 [12.3]	184 [7.2]	220 [8.7]	212 [8.3]
210	337 [13.3]	191 [7.5]	233 [9.1]	236 [9.3]

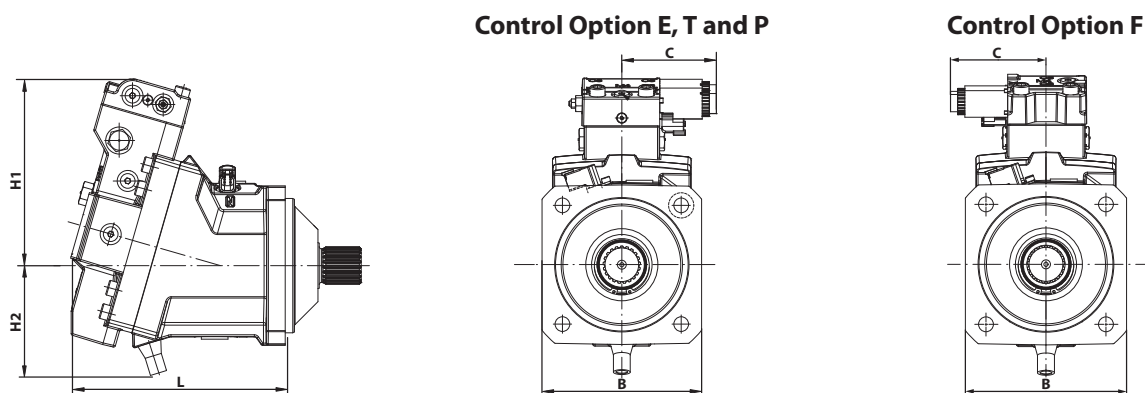


Control Option M

Control Option K

P301 278

Frame Size	L	H2	H1	B	C
60	240 [9.5]	115 [4.5]	224 [8.8]	150 [5.9]	119 [4.7]
80	259 [10.2]	119 [4.7]	236 [9.3]	165 [6.5]	119 [4.7]
110	278 [11.0]	131 [5.2]	247 [9.7]	190 [7.8]	119 [4.7]
160	308 [12.1]	138 [5.4]	265 [10.4]	212 [8.3]	119 [4.7]
210	332 [13.1]	146 [5.7]	279 [11.0]	236 [9.3]	119 [4.7]



Control Option E, T and P

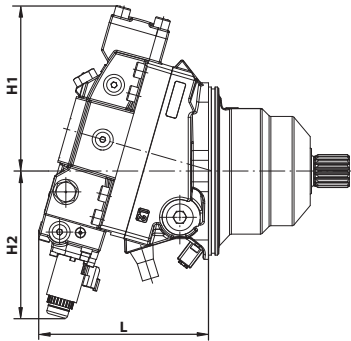
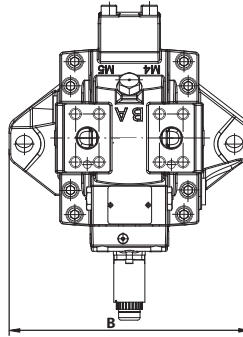
Control Option F

P301 279

Frame Size	L	H2	H1	B	C
60	219 [8.6]	115 [4.5]	192 [7.6]	150 [5.9]	113 [4.5]
80	237 [9.3]	119 [4.7]	205 [8.1]	165 [6.5]	113 [4.5]
110	256 [10.1]	131 [5.2]	222 [8.7]	190 [7.8]	113 [4.5]
160	286 [11.1]	138 [5.4]	241 [9.5]	212 [8.3]	113 [4.5]
210	309 [12.1]	146 [5.7]	258 [10.2]	236 [9.3]	113 [4.5]

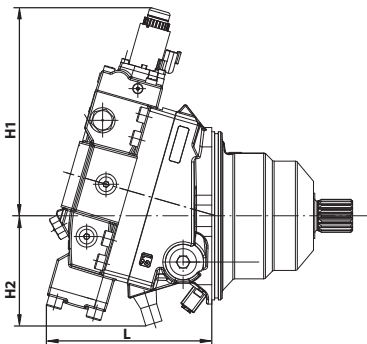
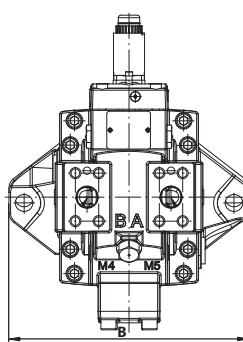
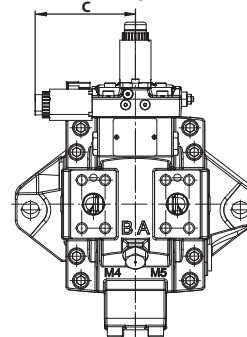
Cartridge flange design dimensions

mm [in]


Control Option L


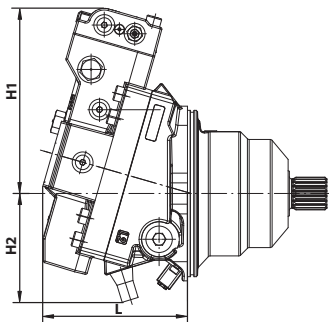
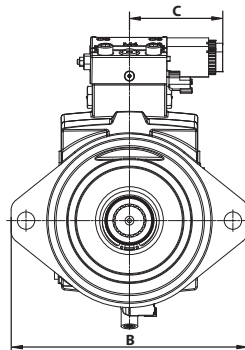
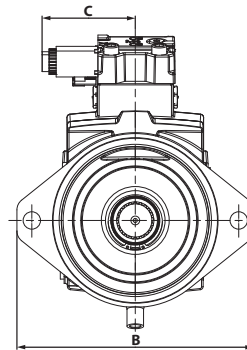
P301 280

Frame Size	L	H2	H1	B
60	188 [7.4]	165 [6.5]	168 [6.6]	235 [9.3]
80	188 [7.4]	171 [6.7]	180 [7.1]	260 [10.2]
110	202 [8.0]	175 [6.9]	197 [7.8]	286 [11.3]
160	230 [9.1]	184 [7.2]	220 [8.7]	286 [11.3]


Control Option M

Control Option K


P301 281

Frame Size	L	H2	H1	B	C
60	181 [7.1]	115 [4.5]	224 [8.8]	235 [9.3]	119 [4.7]
80	181 [7.1]	119 [4.7]	236 [9.3]	260 [10.2]	119 [4.7]
110	196 [7.7]	131 [5.2]	247 [9.7]	286 [11.3]	119 [4.7]
160	226 [8.9]	138 [5.4]	265 [10.4]	286 [11.3]	119 [4.7]


Control Option E, T and P

Control Option F


P301 282

Frame Size	L	H2	H1	B	C
60	159 [6.3]	115 [4.5]	192 [7.6]	235 [9.3]	113 [4.5]
80	159 [6.3]	119 [4.7]	205 [8.1]	260 [10.2]	113 [4.5]
110	174 [6.9]	131 [5.2]	222 [8.7]	286 [11.3]	113 [4.5]
160	201 [7.9]	138 [5.4]	241 [9.5]	286 [11.3]	113 [4.5]

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