



# Drive Controlled Pump

Energy-Efficient Hydraulic System Solutions



ENGINEERING YOUR SUCCESS.



## **WARNING – USER RESPONSIBILITY**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

## **Offer of Sale**

Please contact your Parker representation for a detailed "Offer of Sale".

Description	Page
<b>Drive Controlled Pump Systems</b>	
Introduction	4
System components	5
Ordering code	6
Dimensions	8
<b>Pumps</b>	
Vane pumps	20
Axial piston pumps	21
<b>Motors</b>	
Standard asynchronous motors	22
Synchronous servo motors	23
Compact synchronous servo motors	24
<b>AC Drive Controllers</b>	
AC30V	25

The Drive Controlled Pump system solutions from Parker are variable-speed hydraulic pump systems. They essentially consist of an AC drive unit (frequency controller and electronics), an asynchronous, synchronous servo or compact synchronous servo motor as well as a hydraulic pump. They enable the central, regulated hydraulic supply of all drives. Thus they provide the exact power that is required in the cycle at all times.

The controller continuously records target values for the volume flow and/or pressure of the machine control system and compares them to actual pressure value. The drive speed of the electric motor is regulated so that the pump provides the exact amount of oil required to achieve the target value.

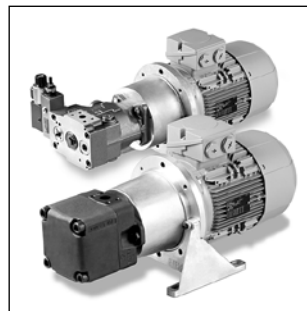
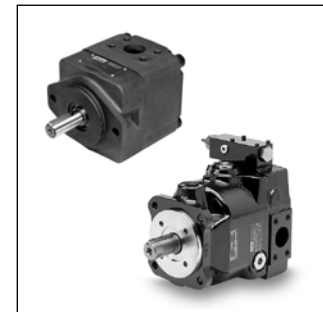
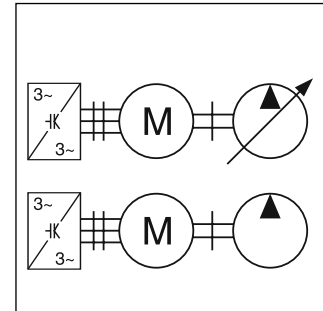
With the Drive Controlled Pump, Parker optionally employs vane pumps or axial piston pumps or combinations of both.

The vane pump represents the ideal basis for systems with fixed displacement pumps. Her minimum speed increases from zero proportional to pressure up to 300 rpm at maximum pressure. Thanks to the very wide range of speed up to 3000 rpm and the high operating pressures of up to 320 bar, this system solution can be tuned exactly to a customer's specific requirements. The robust double lip design makes the pump impervious to particle contamination and maintains a high degree of efficiency in the long term.

The axial piston pump is utilized if high peak pressures are introduced or if high pressures must be maintained for long periods. The housings increased rigidity ensures low vibration and therefore reduces the noise level. The reduced pressure and volume flow pulsation also reduces the load on the piping system.

**Features**

- Suitable for 400 V supply
- Change-over pressure/volume flow control
- Optimum dimensioning of all components using the Parker DriveCreator software
- Standard interfaces for simple conversion of conventional pump systems
- Dual pump systems for larger volume flow possible – also as combination of variable and fixed displacement pump systems
- High precision and dynamic operation for flow and pressure control
- High energy efficiency through optimum adjustment to cycle requirements
- Low noise emissions through optimized pump design and speed adjustment



**Recommended fluids**

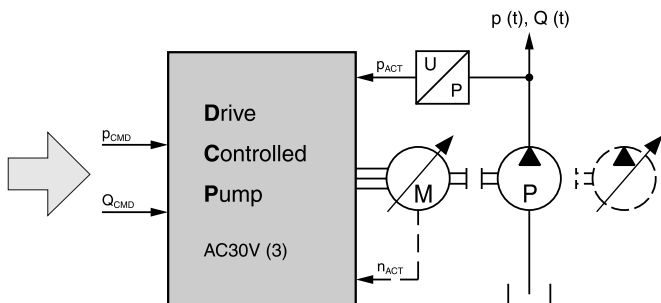
We recommend high-quality mineral hydraulic fluids: HLP oils as per DIN 51524. For general applications, the Bruggen value should be at least 30 N/mm<sup>2</sup>; 50 N/mm<sup>2</sup> for heavy-duty systems (measured as per DIN 51347-2).

Under normal conditions, the viscosity should be between 16 and 100 mm<sup>2</sup>/s (cSt). Maximum start-up viscosity is 800 mm<sup>2</sup>/s (cSt).

The fluid must have a purity in conformance with ISO 4406:1999. The filter elements must also conform to ISO standards. For systems with maximum service life: purity level 18/16/13 in accordance with ISO 4406:1999; otherwise, purity level 20/18/15 (19/17/14 for vane pumps) in accordance with ISO 4406:1999.

**Components of the drive-controlled pump system**

1. Motor
  - Asynchronous standard motor or
  - Synchronous servo motor, catalogue 192-061012 and 192-061013
  - Compact synchronous servo motor, catalogue 192-300108
2. Pump
  - Vane pump T7, catalogue HY29-0001, or
  - Axial piston pump PVplus, catalogue HY30-3245, or
  - Combination of vane pump and axial piston pump
  - Mounting accessories for motor pump assembly <sup>1)</sup>:
    - Coupling
    - Pump bellhousing
    - Pump flange
3. AC Drive Controller
  - AC30V, catalogue 192-300022
4. Accessories that may be required <sup>2)</sup>
  - Shield connection
  - Power cables
  - Sensor cables
  - Braking resistor
  - Mains filters
  - Pressure transducer



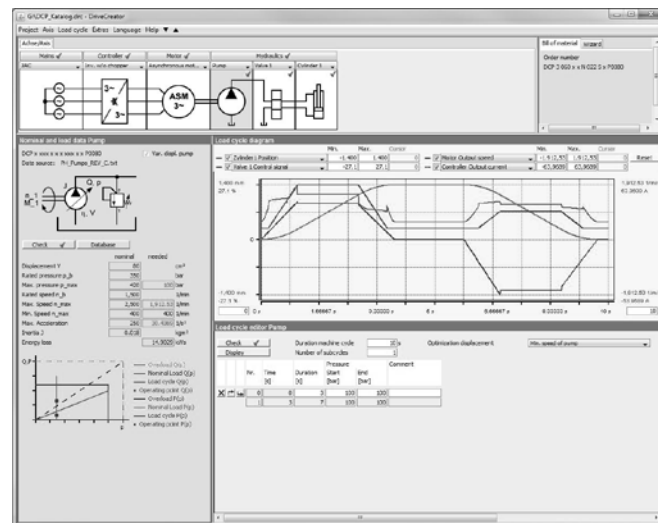
Further combinations in addition to those contained in this catalogue are available upon request. Detailed information on all Parker components can be found in the individual product catalogues (see above).

**Parker DriveCreator**

For optimum yet simple selection and dimensioning of the components Parker offers a unique software tool: the Parker DriveCreator.

Firstly, the cycle data (cylinder speed and load or pressure and volume flow) is entered. Subsequently, the optimum pump or combination of pumps is selected using this data, and then motor and drive suitable for the power consumption.

The Parker DriveCreator calculates the best combination of components possible with the highest degree of energy efficiency.

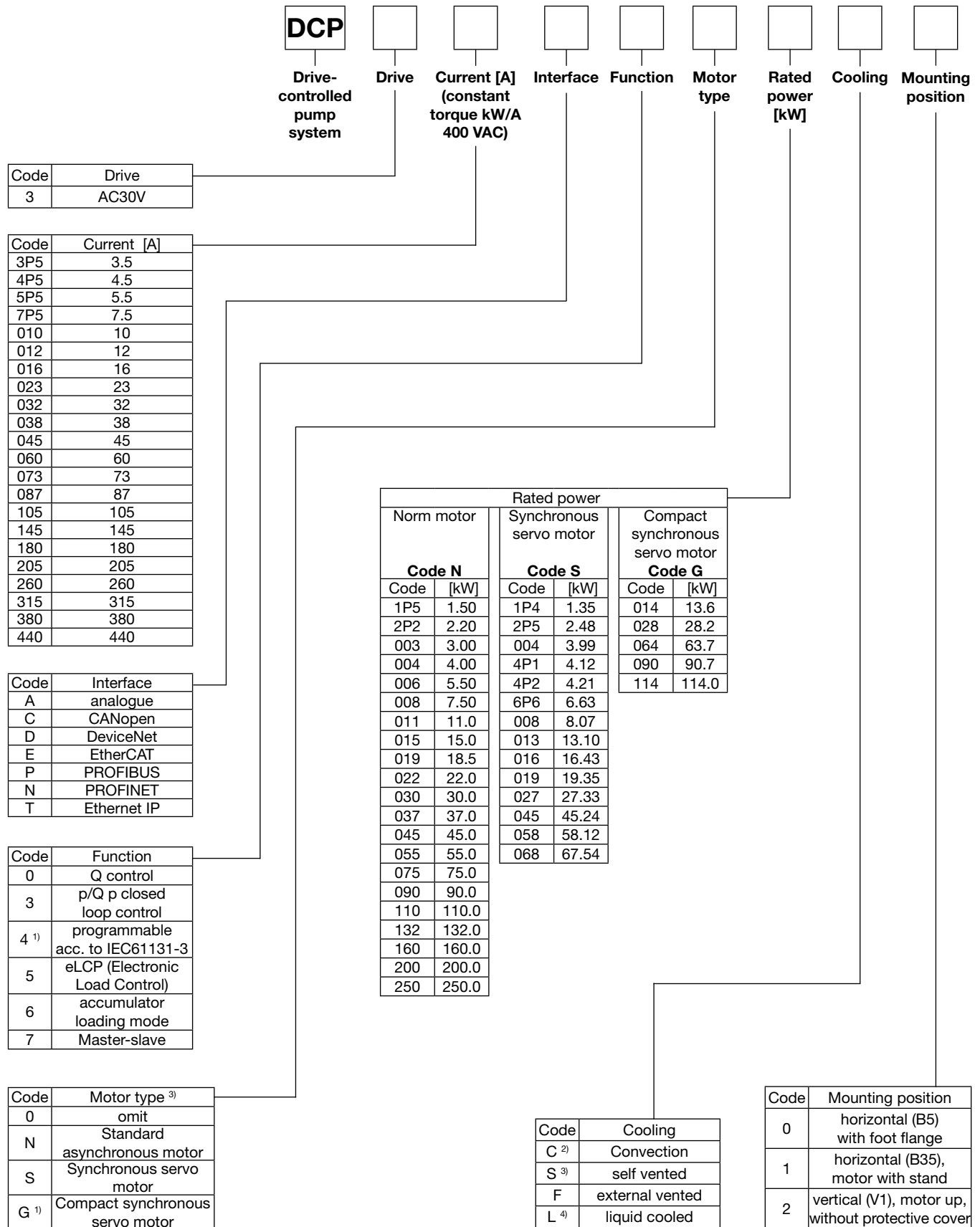


Access to this tool can be obtained via [www.parker.com/drivecontrolledpump](http://www.parker.com/drivecontrolledpump)

<sup>1)</sup> Dependent on the selected motor-pump combination.  
<sup>2)</sup> Not included in delivery.

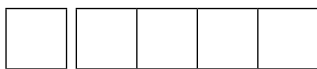
**Ordering Code**

**Drive Controlled Pump**



# Ordering Code

# Drive Controlled Pump



Pump type <sup>5)</sup>

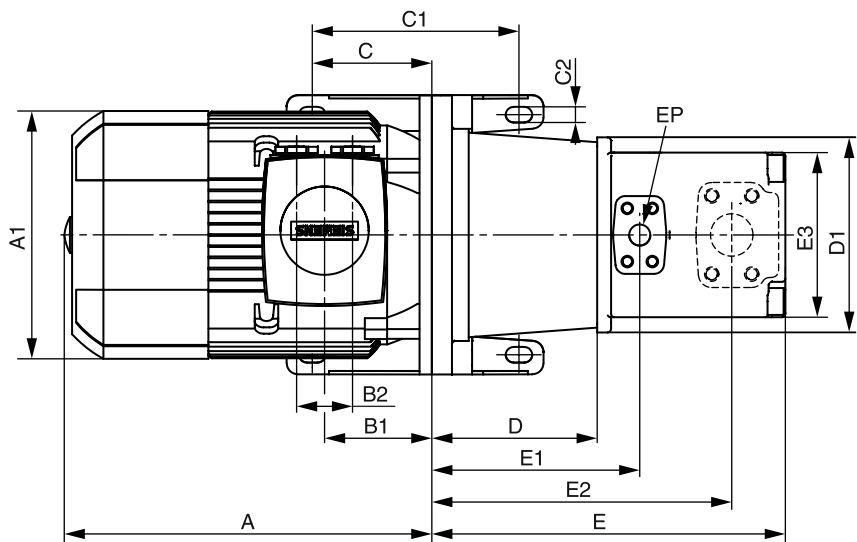
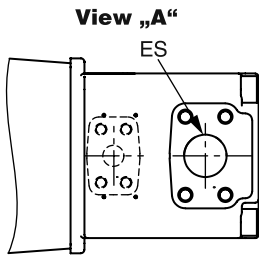
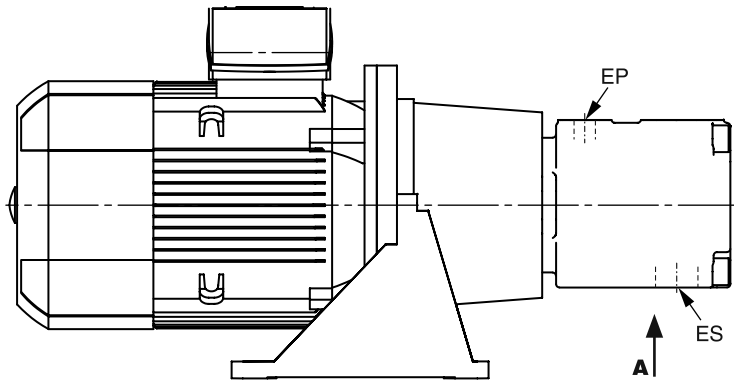
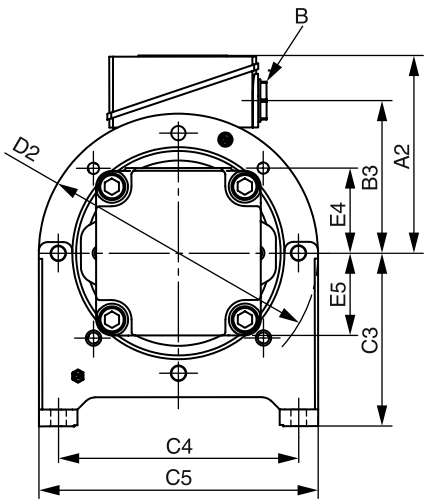
Vane pumps		Axial piston pumps		Double pump vane pumps				Double pump vane pumps			
T7A		PVplus		T7BB				T7EB			
Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]	Pump 1		Pump 2		Pump 1		Pump 2	
				Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]
A 0006	5,8	P 0016	16	J 03	9.8	03	9.8	M 42	132.3	03	9.8
A 0010	9,8	P 0020	20	J 04	12.8	04	12.8	M 45	142.4	04	12.8
A 0011	11,0	P 0023	23	J 05	15.9	05	15.9	M 50	158.5	05	15.9
A 0013	12,8	P 0028	28	J 06	19.8	06	19.8	M 52	164.8	06	19.8
A 0017	17,2	P 0032	32	J 07	22.5	07	22.5	M 54	171.0	07	22.5
A 0020	19,8	P 0040	40	J 08	24.9	08	24.9	M 57	183.3	08	24.9
A 0022	22,5	P 0046	46	J 09	28.0	09	28.0	M 62	196.7	09	28.0
A 0025	24,9	P 0063	63	J 10	31.8	10	31.8	M 66	213.3	10	31.8
<b>T7B</b>		P 0080	80	J 11	35.0	11	35.0	M 72	227.1	11	35.0
B 0009	28,0	P 0092	92	J 12	41.0	12	41.0			12	41.0
B 0010	31,8	P 0140	140	J 14	45.0	14	45.0			14	45.0
B 0011	35,0	P 0180	180	J 15	50.0	15	50.0			15	50.0
B 0012	41,0	P 0270	270								
B 0014	45,0	P 0360	360								
B 0015	50,0	<b>PVplus</b>									
<b>T7D</b>		Dual-displacement									
D 0017	55,0	O 0046	46	<b>Double pump vane pumps</b>		<b>Double pump vane pumps</b>		<b>Pump 1</b>		<b>Pump 2</b>	
D 0020	66,0	O 0092	92	<b>T7DB</b>				<b>T7ED</b>			
D 0022	70,3	O 0180	180	Pump 1		Pump 2		Pump 1		Pump 2	
D 0024	81,1			Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]
D 0028	90,0			K 17	55.0	03	9.8	N 42	132.3	17	55.0
D 0031	99,2			K 20	66.0	04	12.8	N 45	142.4	20	66.0
D 0035	113,4			K 22	70.3	05	15.9	N 50	158.5	22	70.3
D 0038	120,6			K 24	81.1	06	19.8	N 52	164.8	24	81.1
D 0042	137,5			K 28	90.0	07	22.5	N 54	171.0	28	90.0
<b>T7E</b>				K 31	99.2	08	24.9	N 57	183.3	31	99.2
E 0042	132,3			K 35	113.4	09	28.0	N 62	196.7	35	113.4
E 0045	142,4			K 38	120.6	10	31.8	N 66	213.3	38	120.6
E 0050	158,5			K 42	137.6	11	35.0	N 72	227.1	42	137.6
E 0052	164,8					12	41.0				
E 0054	171,0					14	45.0				
E 0057	183,3					15	50.0				
E 0062	196,7										
E 0066	213,3										
E 0072	227,1										
				<b>Double pump vane pumps</b>		<b>Double pump vane pumps</b>		<b>Pump 1</b>		<b>Pump 2</b>	
				<b>T7DD</b>				<b>T7EE</b>			
				Pump 1		Pump 2		Pump 1		Pump 2	
				Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]	Code	[cm <sup>3</sup> /U]
				L 17	55.0	17	55.0	Q 42	132.3	42	132.3
				L 20	66.0	20	66.0	Q 45	142.4	45	142.4
				L 22	70.3	22	70.3	Q 50	158.5	50	158.5
				L 24	81.1	24	81.1	Q 52	164.8	52	164.8
				L 28	90.0	28	90.0	Q 54	171.0	54	171.0
				L 31	99.2	31	99.2	Q 57	183.3	57	183.3
				L 35	113.4	35	113.4	Q 62	196.7	62	196.7
				L 38	120.6	38	120.6	Q 66	213.3	66	213.3
				L 42	137.6	42	137.6	Q 72	227.1	72	227.1

- 1) Option G only with cooling code L.
- 2) Not for standard asynchronous motors.
- 3) Synchronous servo motors on request.
- 4) Cooling code L only with motor code G.
- 5) Code build from letter and 4 digit number.

**Warning!**  
The torque of the second pump must not exceed the torque of the first pump!



**Vane pump with standard asynchronous motor**





**Dimensions**

**Drive Controlled Pump**

Motor code	Pump code	Motor size	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	C1 [mm]	C2 [mm]	C3 [mm]	C4 [mm]	C5 [mm]
1P5	A0006	90L	297	178	126	1 x M25 x 1.5	78.5	0	101.5	-20	60	11	112	180	210
2P2 - 003	A0006 - 11	100L	328.5	198	193	2 x M32 x 1.5	100.5	48	147	107.5	185	14	155	215	250
004	A0006 - 11	112M	347	222	195	2 x M32 x 1.5	100.5	48	150	107.5	185	14	155	215	250
006 - 008	A0010 - 25	132S/132M	426.5	262	214.5	2 x M32 x 1.5	115.5	48	169	130.5	225	14	185	265	300
008	B0009	132M	426.5	262	214.5	2 x M32 x 1.5	115.5	48	169	130.5	225	14	185	265	300
011	A0013 - 25	160M/160L	484	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
015	A0013 - 25	160M/160L	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
011	B0009 - 15	160M/160L	484	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
015	B0009 - 15	160M/160L	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
015	D0017	160L	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
019 - 022	B0009 - 15	180M/180L	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350
019 - 022	D0017 - 28	180M/180L	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350
030	B0010 - 15	200L	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400
030	D0020 - 38	200L	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400
037	D0017 - 42	225S	648	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
045	D0020 - 42	225M	708	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
055	D0024 - 42	250M	747	497	410	2 x M63 x 1.5	192	110	322	249	415	18	350	500	550
075	D0028 - 42	280S	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
090	D0042	280M	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550

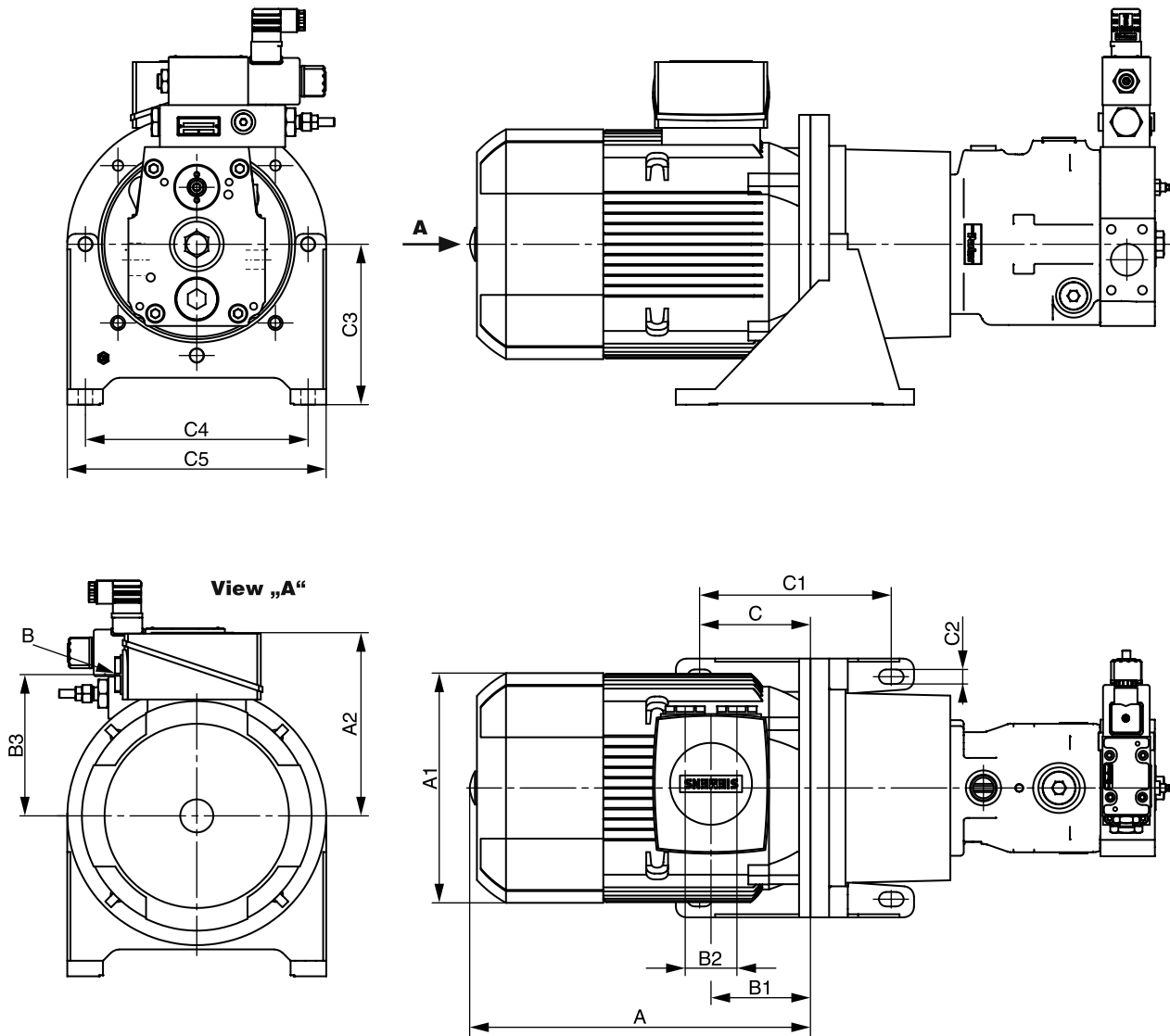
Motor code	D [mm]	D1 [mm]	D2 [mm]	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	E4 [mm]	E5 [mm]	EP	ES
1P5	110	145	200	248.5	226.3	148.2	110	68	63.5	3/4" BSPP	1 1/4" BSPP
2P2 - 003	124	124	250	262.5	240.3	162.2	110	68	63.5	3/4" BSPP	1 1/4" BSPP
004	124	124	250	262.5	240.3	162.2	110	68	63.5	3/4" BSPP	1 1/4" BSPP
006 - 008	144	205	300	282.5	260.3	182.2	110	68	63.5	3/4" BSPP	1 1/4" BSPP
008	168	220	300	336.5	206.1	250.3	140	76.2	76.2	1" ; 4x M10 x 19 deep	1 1/2" ; 4x M12 x 22.4 deep
011 - 015	188	225	350	326.5	304.3	226.2	110	68	63.5	3/4" BSPP	1 1/4" BSPP
011 - 015	188	225	350	326.5	304.3	226.2	110	68	63.5	3/4" BSPP	1 1/4" BSPP
011 - 015	204	225	350	372.5	242.1	286.3	140	76.2	76.2	1" ; 4x M10 x 19 deep	1 1/2" ; 4x M12 x 22.4 deep
011 - 015	204	225	350	372.5	242.1	286.3	140	76.2	76.2	1" ; 4x M10 x 19 deep	1 1/2" ; 4x M12 x 22.4 deep
015	228	248	350	412.9	266.1	315.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep
019 - 022	204	225	350	372.5	242.1	286.3	140	76.2	76.2	1" ; 4x M10 x 19 deep	1 1/2" ; 4x M12 x 22.4 deep
019 - 022	228	248	350	412.9	266.1	315.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep
030	204	230	400	372.5	242.1	286.3	140	76.2	76.2	1" ; 4x M10 x 19 deep	1 1/2" ; 4x M12 x 22.4 deep
030	228	279	400	412.9	266.1	315.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep
037	262	315	450	446.9	300.1	349.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep
045	262	315	450	446.9	300.1	349.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep
055	265	360	550	449.9	303.1	352.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep
075	265	360	550	449.9	303.1	352.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep
090	265	360	550	449.9	303.1	352.4	147.4	82.6	82.6	1 1/4" ; 4x M12 x 22.3 deep	2 1/2" ; 4x M12 x 23.9 deep

Pump type T7E (see ordering code) on request

1) Pressure port, BSPP or SAE 4-hole flange - J518 - ISO 6162-1  
 2) Suction port, BSPP or SAE 4-hole flange - J518 - ISO 6162-1



**Axial piston pump with standard asynchronous motor**



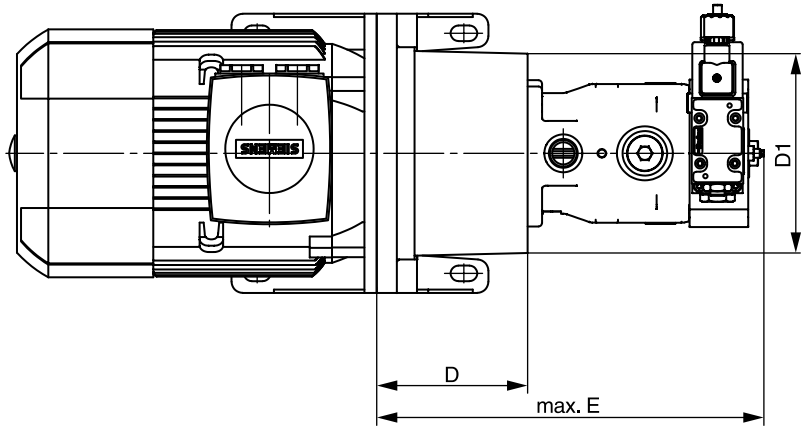
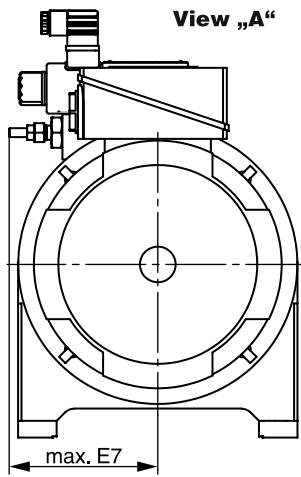
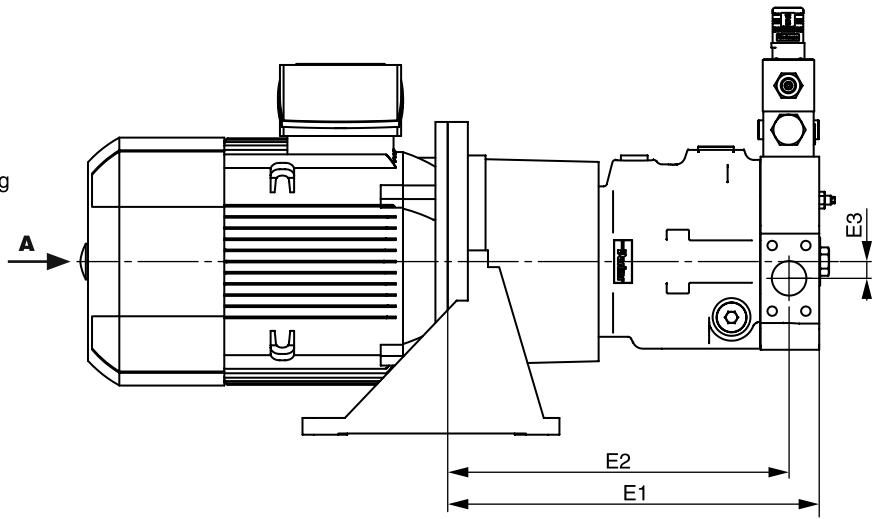
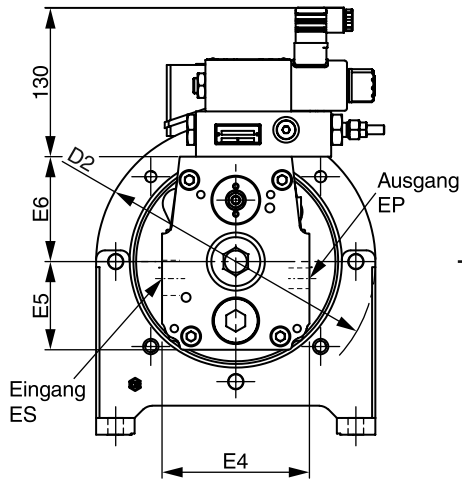
Motor code	Pump code	Motor size	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	C1 [mm]	C2 [mm]	C3 [mm]	C4 [mm]	C5 [mm]
004	P0016	112M	347	222	195	2 x M32 x 1.5	100.5	48	150	107.5	185	14	155	215	250
006 / 008	P0016 - 28	132S / 132M	426,5	262	214.5	2 x M32 x 1.5	115.5	48	169	130.5	225	14	185	265	300
011	P0016 - 28	160M / 160L	484	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
015	P0016 - 28	160M / 160L	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
011	P0032 - 46	160M / 160L	484	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
015	P0032 - 46	160M / 160L	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350
019 / 022	P0020 - 28	180M / 180L	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350
019 / 022	P0032 - 46	180M / 180L	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350
019 / 022	P0063 / 80	180M / 180L	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350
030	P0028	200L	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400
030	P0032 - 46	200L	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400
030	P0063 - 92	200L	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400
037	P0040 - 46	225S	648	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
037	P0063 - 92	225S	648	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
037	P0140	225S	648	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
045	P0046	225M	708	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
045	P0063 - 92	225M	708	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
045	P0140 - 180	225M	708	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450
055	P0063 - 092	250M	747	497	410	2 x M63 x 1.5	192	110	322	249	415	18	350	500	550
055	P0140 - 180	250M	747	497	410	2 x M63 x 1.5	192	110	322	249	415	18	350	500	550
075	P0080 - 092	280S	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
075	P0140 - 180	280S	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
075	P0270	280S	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
090	P0092	280M	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
090	P0140 - 180	280M	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
090	P0270	280M	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
090	P0360	280M	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550
110	P0140 - 180	315S	912	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
110	P0270	315S	912	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
110	P0360	315S	912	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
132	P0140 - 180	315M	1077	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
132	P0270	315M	1077	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
132	P0360	315M	1077	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
160	P0180	315L	1077	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
160	P0270	315L	1077	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
160	P0360	315L	1077	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
200 - 250	P0270	315L	1232	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660
200 - 250	P0360	315L	1232	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660

continuing next page 

**Dimensions**

**Drive Controlled Pump**

**Axial piston pump with standard asynchronous motor**



**Dimensions**

**Drive Controlled Pump**

Motor code	Pump code	D [mm]	D1 [mm]	D2 [mm]	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	E4 [mm]	E5 [mm]	E6 [mm]	E7 [mm]	EP (PN 400 bar)	ES
004	P0016	135	180	250	347	332.5	305.5	15	132	79	94	130	DN19 ; 4xM10x18 deep	DN32 ; PN 250 bar ; 4xM10x18 deep
006 / 008	P0016 - 28	155	205	300	367	352.5	325.5	15	132	79	94	130	DN19 ; 4xM10x18 deep	DN32 ; PN 250 bar ; 4xM10x18 deep
011 / 015	P0016 - 28	188	225	350	400	385.5	358.5	15	132	79	94	130	DN19 ; 4xM10x18 deep	DN32 ; PN 250 bar ; 4xM10x18 deep
011 / 015	P0032 - 46	204	225	350	452	431	401	17	160	97	112.5	130	DN25 ; 4xM12x18 deep	DN38 ; PN 200 bar ; 4xM12x18 deep
019 / 022	P0020 - 28	204	225	350	416	401.5	374.5	15	132	79	94	130	DN19 ; 4xM10x18 deep	DN32 ; PN 250 bar ; 4xM10x18 deep
019 / 022	P0032 - 46	204	225	350	452	431	401	17	160	97	112.5	130	DN25 ; 4xM12x18 deep	DN38 ; PN 200 bar ; 4xM12x18 deep
019 / 022	P0063 / 80	228	248	350	536	515	480	26	200	120	132	133	DN32 ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
030	P0028	204	230	400	416	401.5	374.5	15	132	79	94	130	DN19 ; 4xM10x18 deep	DN32 ; PN 250 bar ; 4xM10x18 deep
030	P0032 - 46	204	230	400	452	431	401	17	160	97	112.5	130	DN25 ; 4xM12x18 deep	DN38 ; PN 200 bar ; 4xM12x18 deep
030	P0063 - 92	228	279	400	536	515	480	26	200	120	132	133	DN32 ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
037	P0040 - 46	234	260	450	482	461	431	17	160	97	112.5	130	DN25 ; 4xM12x18 deep	DN38 ; PN 200 bar ; 4xM12x18 deep
037	P0063 - 92	262	315	450	570	549	514	26	200	120	132	133	DN32 ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
037	P0140	262	315	450	648	612	557 *)	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
045	P0046	234	260	450	482	461	431	17	160	97	112.5	130	DN25 ; 4xM12x18 deep	DN38 ; PN 200 bar ; 4xM12x18 deep
045	P0063 - 92	262	315	450	570	549	514	26	200	120	132	133	DN32 ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
045	P0140 - 180	262	315	450	648	612	557 *)	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
055	P0063 - 92	265	360	550	573	552	517	26	200	120	132	133	DN32 ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
055	P0140 - 180	265	360	550	651	615	560 *)	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
075	P0080 - 92	265	360	550	573	552	517	26	200	120	132	133	DN32 ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
075	P0140 - 180	265	360	550	651	615	560 *)	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
075	P0270	295	360	550	805	767.5	698	0	265	176	184	133	DN38 ; 4xM16x30 deep	DN89 ; PN 35 bar ; 4xM16x30 deep
090	P0092	265	360	550	573	552	517	26	200	120	132	133	DN32 ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
090	P0140 - 180	265	360	550	651	615	560 *)	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
090	P0270	295	360	550	805	767.5	698	0	265	176	184	133	DN38 ; 4xM16x30 deep	DN89 ; PN 35 bar ; 4xM16x30 deep
090	P0360	315	400	550	825	792	723	0	250	176	184	133	DN38 ; 4xM16x30 deep	DN102 ; PN 35 bar ; 4xM16x30 deep
110	P0140 - 180	310	410	660	696	660	605 *)	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
110	P0270	330	400	660	840	802.5	733	0	265	176	184	133	DN38 ; 4xM16x30 deep	DN89 ; PN 35 bar ; 4xM16x30 deep
110	P0360	330	400	660	840	807	738	0	250	176	184	133	DN38 ; 4xM16x30 deep	DN102 ; PN 35 bar ; 4xM16x30 deep
132	P0140 - 180	310	410	660	696	660	605 *)	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
132	P0270	310	410	660	696	660	605	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
132	P0360	330	400	660	840	802.5	733	0	265	176	184	133	DN38 ; 4xM16x30 deep	DN89 ; PN 35 bar ; 4xM16x30 deep
160	P0180	330	400	660	840	807	738 *)	0	250	176	184	133	DN38 ; 4xM16x30 deep	DN102 ; PN 35 bar ; 4xM16x30 deep
160	P0270	330	400	660	716	680	625	0	200	145	158	133	DN32 ; 4xM12x20 deep	DN64 ; PN 160 bar ; 4xM12x20 deep
160	P0360	330	400	660	840	802.5	733	0	265	176	184	133	DN38 ; 4xM16x30 deep	DN89 ; PN 35 bar ; 4xM16x30 deep
200 - 250	P0270	330	400	660	840	802.5	733	0	265	176	184	133	DN38 ; 4xM16x30 deep	DN89 ; PN 35 bar ; 4xM16x30 deep
200 - 250	P0360	330	400	660	840	807	738	0	250	176	184	133	DN38 ; 4xM16x30 deep	DN102 ; PN 35 bar ; 4xM16x30 deep

EP: Pressure port, flange acc. to ISO 6162

ES: Suction port, flange acc. to ISO 6162

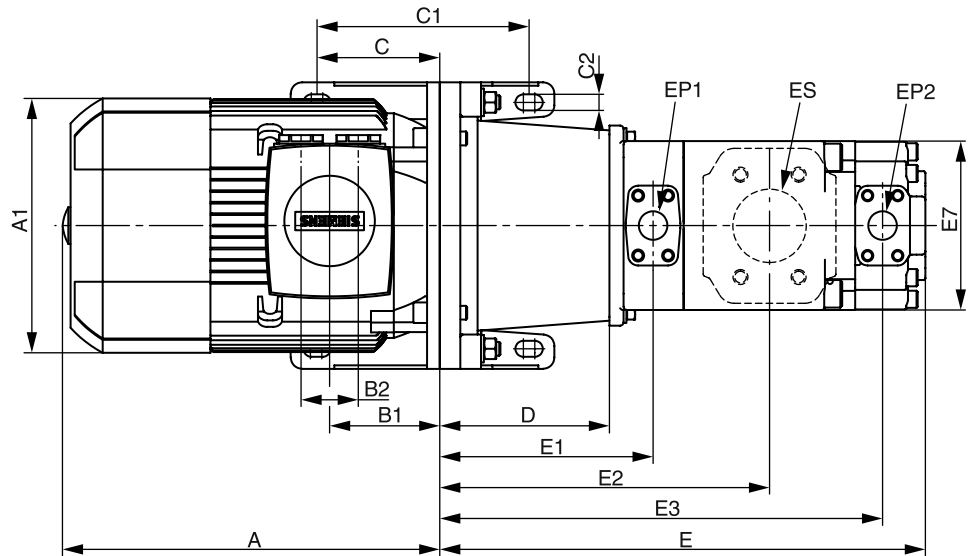
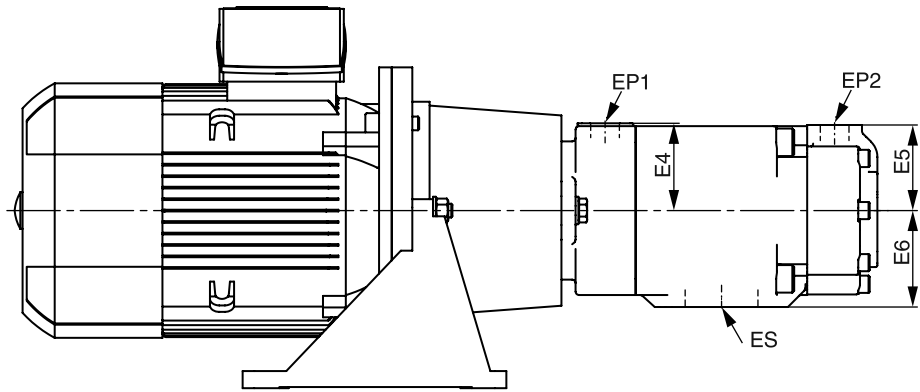
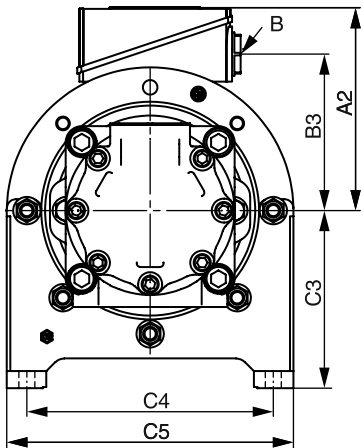
<sup>1)</sup> Dimension for suction port +10 mm



**Dimensions**

**Drive Controlled Pump**

**Double vane pump with standard asynchronous motor**



Motor code	Motor size	Pump code	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	C1 [mm]	C2 [mm]	C3 [mm]	C4 [mm]	C5 [mm]	D [mm]	D1 [mm]	D2 [mm]
004	112M	J****	347	222	195	2 x M32 x 1.5	100.5	48	150	107.5	185	14	155	215	250	148	166	250
006 - 008	132S/132M	J****	426.5	262	214.5	2 x M32 x 1.5	115.5	48	169	130.5	225	14	185	265	300	168	220	300
011	160M/160L	J****	484	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350	204	225	350
015	160M/160L	J****	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350	204	225	350
011	160M/160L	K****	484	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350	228	248	350
015	160M/160L	K****	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350	228	248	350
015	160L	L****	544	314	261	2 x M40 x 1.5	145	60	213	149	265	18	235	300	350	228	248	350
019 - 022	180M/180L	J****	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350	204	225	350
019 - 022	180M/180L	K****	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350	228	248	350
019 - 022	180M/180L	L****	558	356	286	2 x M40 x 1.5	155	60	234	149	265	18	235	300	350	228	248	350
030	200L	J****	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400	204	230	400
030	200L	K****	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400	228	279	400
030	200L	L****	636	396	315	2 x M50 x 1.5	164	85	259	174	300	18	260	350	400	228	279	400
037	225S	J****	648	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450	262	315	450
037	225S	K****	648	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450	262	315	450
037	225S	L****	648	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450	234	260	450
045	225M	J****	708	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450	262	315	450
045	225M	K****	708	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450	262	315	450
045	225M	L****	708	449	338	2 x M50 x 1.5	164	85	282	199	335	18	295	400	450	234	260	450
055	250M	J****	747	497	410	2 x M63 x 1.5	192	110	322	249	415	18	350	500	550	248	340	550
055	250M	K****	747	497	410	2 x M63 x 1.5	192	110	322	249	415	18	350	500	550	265	450	550
055	250M	L****	747	497	410	2 x M63 x 1.5	192	110	322	249	415	18	350	500	550	265	450	550
075	280S	J****	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550	265	450	550
075 - 090	280S/280M	K****	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550	265	450	550
075 - 090	280S/280M	L****	820	551	433	2 x M63 x 1.5	210	110	345	249	415	18	350	500	550	265	360	550
110	315S	K****	912	616	515	2 x M63 x 1.5	238	110	404	249	415	18	350	500	550	265	450	550
110	315S	L****	912	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660	310	410	660
132 - 160	315M/315L	L****	1077	616	515	2 x M63 x 1.5	238	110	404	298.5	495	22	380	600	660	310	410	660

Motor code	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	E4 [mm]	E5 [mm]	E6 [mm]	E7 [mm]	EP1	EP2	ES
004	410.4	186.1	287.7	386.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
006 - 008	430.4	206.1	307.7	406.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
011	466.4	242.1	343.7	442.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
015	466.4	242.1	343.7	442.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
011	514	266.1	380.4	489.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
015	514	266.1	380.4	489.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
015	575.7	266.3	414.6	548.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
019 - 022	466.4	242.1	343.7	442.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
019 - 022	514	266.1	380.4	489.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
019 - 022	575.7	266.3	414.6	548.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
030	466.4	242.1	343.7	442.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
030	514	266.1	380.4	489.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
030	575.7	266.3	414.6	548.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
037	524.4	300.1	401.7	500.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
037	548	300.1	414.4	523.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
037	581.7	272.3	420.6	554.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
045	524.4	300.1	401.7	500.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
045	548	300.1	414.4	523.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
045	581.7	272.3	420.6	554.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
055	510.4	286.1	387.7	486.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
055	551	303.1	417.4	526.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
055	612.7	303.3	451.6	585.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
075	527.4	303.1	404.7	503.3	76.2	74.7	84.1	140	1"; 4x M10 x 19 deep	1"; 4x M10 x 19 deep	2 1/2"; 4x M12x 22.4 deep
075 - 090	551	303.1	417.4	526.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
075 - 090	612.7	303.3	451.6	585.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
110	551	303.1	417.4	526.9	82.6	74.7	88.9	182	1 1/4"; 4x M12 x 22.3 deep	1"; 4x M10 x 19 deep	3"; 4x M16 x 28.4 deep
110	657.7	348.3	496.6	630.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep
132 - 160	657.7	348.3	496.6	630.8	101.6	101.6	114.9	182	1 1/4"; 4x M12 x 22.3 deep	1 1/4"; 4x M12 x 24 deep	4"; 4x M16 x 30 deep

Pump types T7EB, T7ED and T7EE (see ordering code) on request

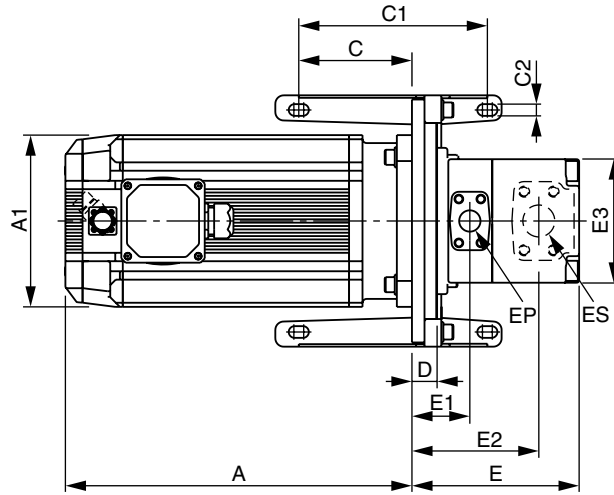
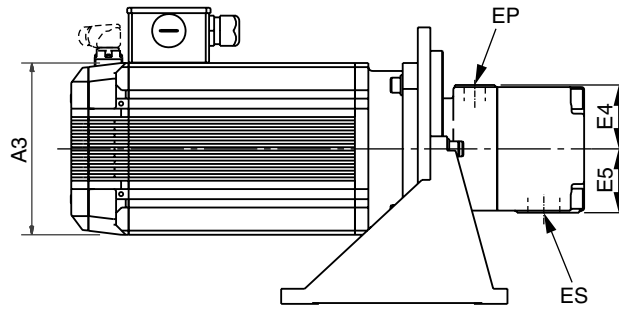
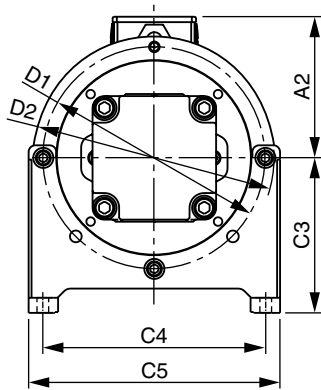
EP\* : Pressure ports, SAE 4-hole flange - J518 - ISO 6162-1

ES : Suction ports, SAE 4-hole flange - J518 - ISO 6162-1

# Dimensions

## Drive Controlled Pump

### Vane pump with synchronous motor



Motor code	Motor size	Pump code	A [mm]	A1 [mm]	A2 [mm]	A3 [mm]	C [mm]	C1 [mm]	C2 [mm]	C3 [mm]	C4 [mm]	C5 [mm]	D [mm]	D1 [mm]	D2 [mm]
004 - 6P6	MH 145	A0006 - A0013	292 - 416	145	125	145	125	185	14	155	215	250	30	215	240
4P2 - 019	MH 205	A0006 - A0025	239 - 480	205	172	205	125	185	14	155	215	250	30	215	240
006 - 019	MH 205	B0009 - B0011	306 - 480	205	172	205	150	225	14	185	265	300	30	265	290
027 - 045	MH 265	A0017 - A0025	340 - 447	265	229	265	150	225	14	185	265	300	30	265	290
027 - 058	MH 265	B0009 - B0015	340 - 554	265	229	265	150	225	14	185	265	300	30	265	290
027 - 068	MH 265	D0017 - D0042	340 - 661	265	229	265	150	225	14	185	265	300	30	265	325

Motor code	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	E4 [mm]	E5 [mm]	EP	ES
004 - 6P6	168.5	68.2	146.3	110	68	63.5	1 1/4" BSPP	3/4" BSPP
4P2 - 019	168.5	68.2	146.3	110	68	63.5	1 1/4" BSPP	3/4" BSPP
006 - 019	198.5	112.3	68.1	140	76.2	76.2	1 1/2" ; 4x M12 x 22.4 deep	1" ; 4x M10 x 19 deep
027 - 045	168.5	68.2	146.3	110	68	63.5	1 1/4" BSPP	3/4" BSPP
027 - 058	198.5	112.3	68.1	140	76.2	76.2	1 1/2" ; 4x M12 x 22.4 deep	1" ; 4x M10 x 19 deep
027 - 068	214.9	117.4	68.1	147.4	82.6	82.6	2 1/2" ; 4x M12 x 23.9 deep	1 1/4" ; 4x M12 x 22.3 deep

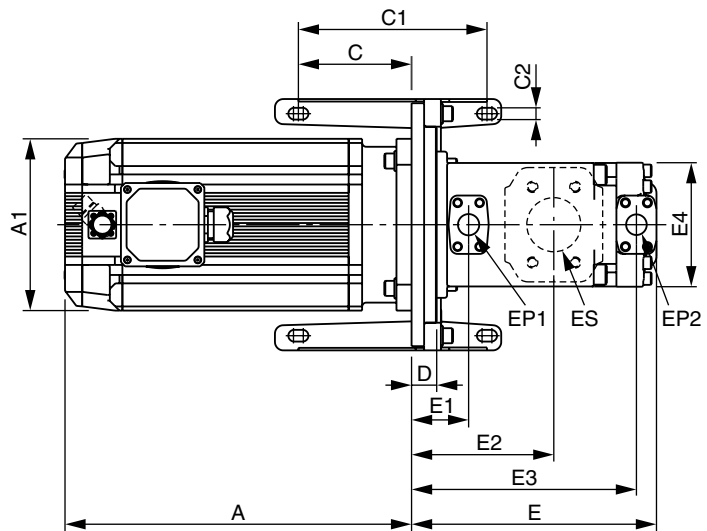
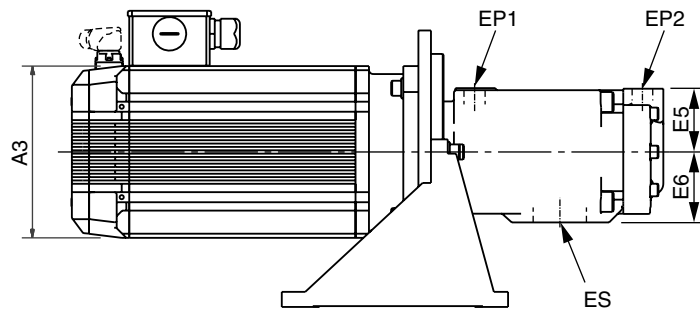
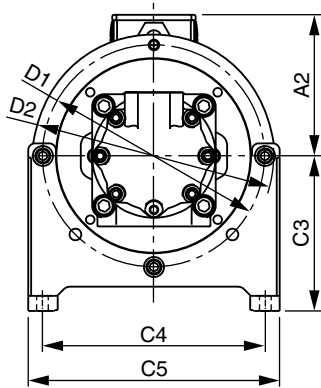
Motor code	Motor size	A [mm]
1P4	MH 145	200
2P5	MH 145	231
004	MH 145	292
4P1	MH 145	354
4P2	MH 205	239
6P6	MH 145	416
008	MH 205	273

Motor code	Motor size	A [mm]
013	MH 205	342
016	MH 205	411
019	MH 205	480
027	MH 265	340
045	MH 265	447
058	MH 265	554
068	MH 265	661

EP: Pressure ports, BSPP or SAE 4-hole flange - J518 - ISO/DIS6162-1  
 ES: Suction ports, BSPP or SAE 4-hole flange - J518 - ISO/DIS6162-1



**Double vane pump with synchronous servo motor**

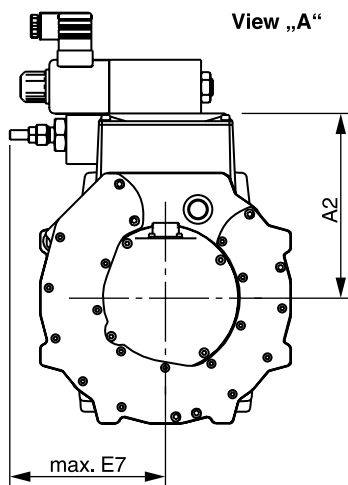
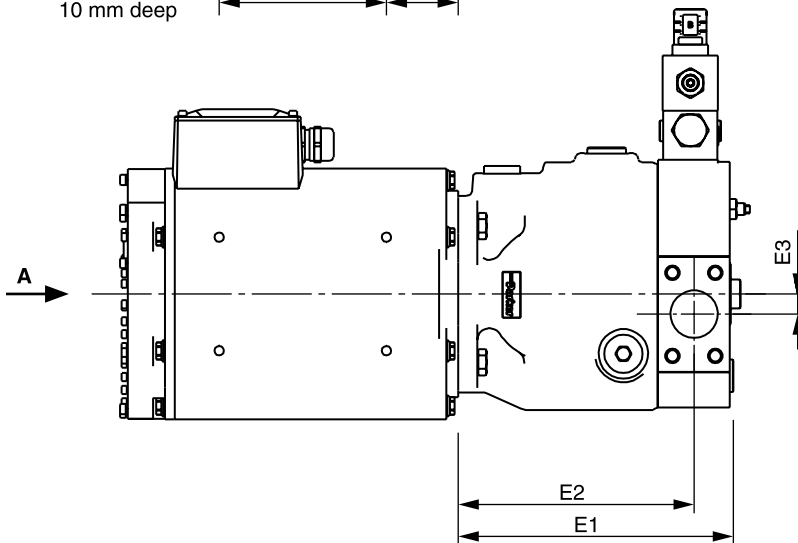
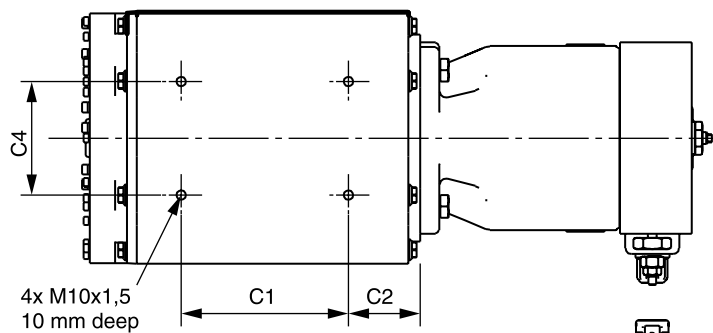
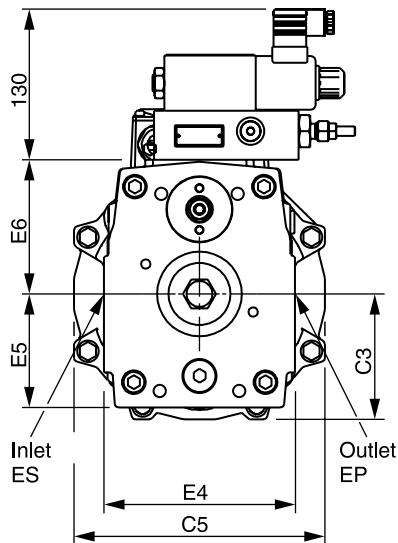


All dimensions on request

# Dimensions

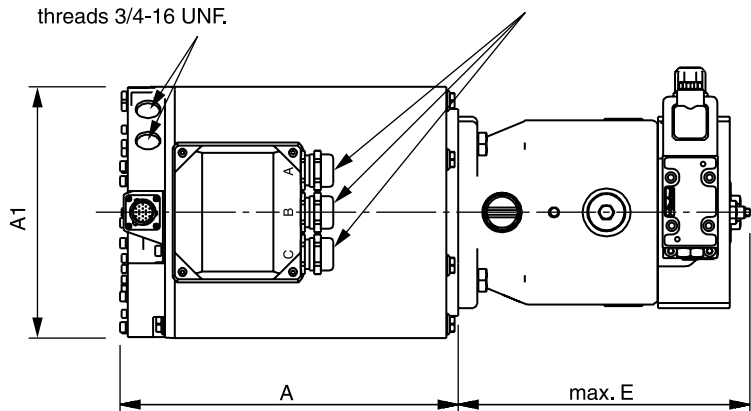
# Drive Controlled Pump

## Axial piston pump with compact synchronous servo motor



Inlet and outlet cooling  
2x 1/2" ORB-8 SAE J1926-1  
threads 3/4-16 UNF.

3x M25 glands for shielded cables.  
Cable outside available  $\varnothing 10$  mm to 18 m.



**Dimensions**

**Drive Controlled Pump**

Motor Code	Motor size	Pump code	A [mm]	A1 [mm]	A2 [mm]	C1 [mm]	C2 [mm]	C3 [mm]	C4 [mm]	C5 [mm]	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	E4 [mm]
014 - 114	GVM210	P0016 - P0028	235 - 585	210	156	90 - 440	60	105	95	210	212	197.5	170.5	15	132
014 - 114	GVM210	P0032 - P0046	236 - 585	210	156	90 - 440	60	105	95	210	248	227	197	17	160
014 - 114	GVM210	P0063 - P0092	237 - 585	210	156	90 - 440	60	105	95	210	308	287	252	26	200
014 - 114	GVM210	P0140 - P0180	on request												
014 - 114	GVM210	P0270	on request												
014 - 114	GVM210	P0360	on request												

Motor Code	Motor size	Pump code	E5 [mm]	E6 [mm]	E7 [mm]	EP	ES
014 - 114	GVM210	P0016 - P0028	79	94	130	DN19 ; PN 400 bar ; 4xM10x18 deep	DN32 ; PN 250 bar ; 4xM10x18 deep
014 - 114	GVM210	P0032 - P0046	97	112.5	130	DN25 ; PN 400 bar ; 4xM12x18 deep	DN38 ; PN 200 bar ; 4xM12x18 deep
014 - 114	GVM210	P0063 - P0092	120	132	133	DN32 ; PN 400 bar ; 4xM12x20 deep	DN51 ; PN 200 bar ; 4xM12x20 deep
014 - 114	GVM210	P0140 - P0180	on request				
014 - 114	GVM210	P0270	on request				
014 - 114	GVM210	P0360	on request				

Motor Code	Motor size	A [mm]	C1 [mm]
014	GVM210-50	235	90
028	GVM210-100	285	140
064	GVM210-200	385	240
090	GVM210-300	485	340
114	GVM210-400	585	440

EP: Pressure port, flange acc. to ISO 6162

ES: Suction port, flange acc. to ISO 6162

<sup>1)</sup> Dimension for suction port +10 mm

## Vane Pumps

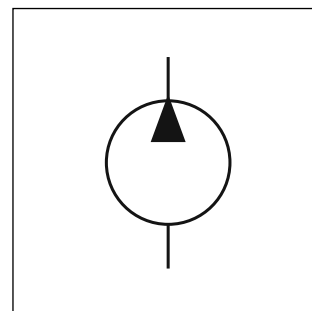
## Drive Controlled Pump

Parker vane pumps are especially suited to variable speed applications. They enable very quick changes in pressure at a very high flow rate reproducibility and at a low noise level. Their minimum speed increases from zero proportional to pressure up to 300 rpm at maximum pressure. High operating pressures of up to 320 bar and small dimensions reduce installation costs. Reduced pressure increases life-span.

The vane pump forms a compact unit in combination with flange and e-motor. The design with two opposing pressure chambers prevents lateral forces working on the drive shaft. The pump cartridge design is suitable for drop-in installation. It is particularly modification and service friendly. The wide range of designs (displacement, shaft, connections, etc.) offers the best preconditions for individual solutions tailored to a customer's requirements.

### Features

- High volumetric efficiency
- Low noise design
- High mechanical efficiency (generally over 94 %)
- Wide speed range (300–3000 rpm)
- Low pressure pulsation (±2 bar) reduces pipe noise
- Impervious to particle contamination thanks to the double lip design



### Temporary maximum pressure

The unit T7 can be operated briefly at higher pressures than the operating pressure recommended for continuous operation if the average pressure per time unit is lower than or equal to the pressure for continuous operation. The calculation formula for the temporary maximum pressure only applies when taking the other parameters into consideration – speed, operating fluid, viscosity and degree of contamination. For a total cycle duration of over 15 minutes, please get in contact with your Parker representative.

Example: B0010

Work cycle	4 mins at 320 bar
	1 mins at 35 bar
	5 mins at 160 bar

$$\frac{(4 \times 320) + (1 \times 35) + (5 \times 160)}{10} = 211.5 \text{ bar}$$

211.5 bar is lower than the operating pressure of 290 bar permitted for the continuous operation of B0010 with an HLP46 operating medium.

### Technical data

Pump code	Displacement [cm <sup>3</sup> /U]	min. speed <sup>1)</sup> [1/min]	max. speed [1/min]	Flow rate (1500 1/min. p 140 bar) [l/min]	max. operating pressure. permanent [bar]	max. operating pressure. temporary [bar]
A0006 - A0022	5.8 - 22.5	300	3000	7.0 - 31.5	275	300
A0025	24.9	300	3000	36	240	275
B0009 - B0010	28 - 31.8	300	3000	40.3 - 46	290	320 <sup>1)</sup>
B0011 - B0014	35 - 45	300	3000	50.8 - 65.8	275	300
B0015	50	300	2700	73.3	240	280
D0017 - D0031	55 - 99.2	300	3000	75.9 - 142.2	250	300
D0035 - D0038	113.4 - 120.6	300	3000	163.5 - 174.3	250	280
D0042	137.5	300	2700	199.6	230	260
E0042 - E0072	132.3 - 227.1	300	2200	132.3 - 227.1	210	240

Internal leakage depending on pressure, speed and pump cartridge. All values applying for standard mineral oil. For more information see catalogue HY29-0001.

<sup>1)</sup> Applies to max. operating pressure only.

<sup>2)</sup> Please consult Parker for applications over 300 bar.

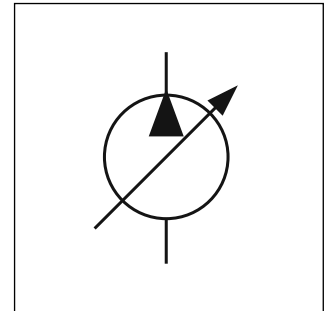
Parker axial piston pumps are particularly characterized by their low noise level based on low pulsation and a rigid housing. Drops in flow that are common when operating a positive displacement pump during the compression phase are reduced by employing a pre-compression volume. In this case, the low-pressure piston is brought to operating pressure prior to entry in the pressure kidney. As soon as the piston is in the pressure range, it connects the system and pre-compression volume and refills the oil required for compressing the next piston.

In addition to significant noise reduction, axial piston pumps offer further advantages such as high efficiency, since the holding down of the pistons works without springs and with a fixed recess. They are also installation and maintenance-friendly. The axial piston pumps feature a drive shaft for single and multiple pumps.

The optimized pump design allows to keep high operating pressures up to 350 bar even at near zero speed for a longer period.

**Features**

- Low noise
- Short control response times
- Service friendly
- High self-priming speed
- Compact design
- The drive for 100 % nominal torque



**Pressure-regulated pumps with proportional pilot valve**

The PVACRE..35-type proportional pilot valve is installed on the top of the controller. The electronic module PCD00A-400 which is required for operation is included in delivery.

This version enables a variable setting of the regulated pressure between 20 and 350 bar via an electrical signal.

**Dual-Displacement Pump**

Size 2 (46 ccm), 3 (92 ccm) and 4 (180 ccm) are also available as dual-displacement version. Minimum and maximum displacement volume can be mechanically and steplessly adjusted by two adjustment spindles. An on/off-valve is used for switching between the two displacement volumes.

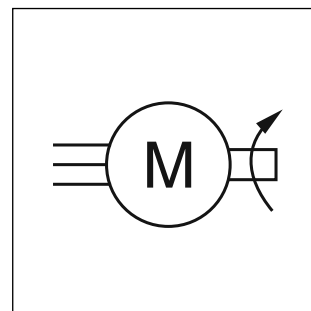
**Technical data**

Pump code	Displacement max. [cm <sup>3</sup> /U]	Flow rate (1500 1/min) [l/min]	Nominal pressure [bar]	Max. pressure p <sub>max</sub> 20 % of work cycle [bar]	Min. input pressure absolute [bar]	Max. speed at input pressure 1 bar absolute [1/min]
PV016	16	24	350	420	0.8	3000
PV020	20	30				3000
PV023	23	34.5				3000
PV028	28	42				3000
PV032	32	48				2800
PV040	40	60				2800
PV046	46	69				2800
PV063	63	94.5				2800
PV080	80	120				2500
PV092	92	138				2300
PV140	140	210				2400
PV180	180	270				2200
PV270	270	405				1800
PV360	360	540				1750

For more information see catalogue HY30-3245

The standard asynchronous motors are characterized by their versatility, robustness and high efficiency. They fulfill the IE3 efficiency standard (premium efficiency), and therefore allow large energy savings and conserve the environment. The design offers maximum flexibility and minimum cost when installing. The comparably low weight also has a positive effect on the overall weight of the assembly.

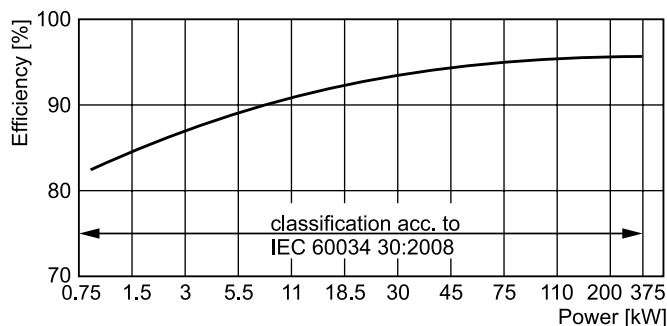
In principal, all motors can be operated on the drive at mains voltages of up to 460 V +10 %. Operating within a power range of 1.5 to 250 kW, the motors have been designed for all markets around the world. In order to achieve the best possible design, a mix of highly conductive materials is used in the rotor. The result is minimized rotor losses and excellent start-up performance.



**Features**

- Long life-span as a result of the simplicity and robustness of the components
- Thermistor motor protection included
- Longer motor life-span thanks to lower winding temperatures in terms of the rated load and power supply
- High overload reserves in continuous operation
- Low weight

**IE3 efficiency 4-pole 50 Hz**

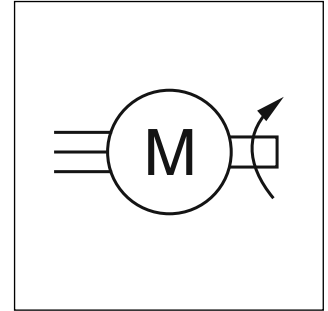


**Technical data** (nominal voltage 400 VAC / 50 Hz)

Code N	Rated power [kW]	Rated speed [1/min]	Efficiency factor	Rated current [A]	Rated torque [Nm]	Weight [kg]	Max. speed [1/min]	Max. torque [Nm]
1P5	1.5	1435	0.79	3.3	10	16	4200	34
2P2	2.2	1455	0.81	4.65	14	32	4200	46
003	3	1455	0.82	6.2	20	37	4200	62
004	4	1460	0.81	8.2	26	46	4200	83
006	5.5	1465	0.8	11.3	36	61	4200	104
008	7.5	1465	0.83	14.7	49	75	4200	142
011	11	1470	0.85	21	71	96	4200	198
015	15	1475	0.85	28	97	104	4200	291
019	18.5	1465	0.84	35	121	160	4200	411
022	22	1465	0.84	41.5	143	170	4200	500
030	30	1475	0.85	55	195	225	4200	604
037	37	1470	0.87	66	240	285	4500	720
045	45	1475	0.87	80	291	315	4500	902
055	55	1480	0.85	100	355	390	3700	1065
075	75	1485	0.87	132	482	560	3000	1397
090	90	1486	0.87	159	578	640	2600	1791
110	110	1490	0.86	195	705	750	2600	2115
132	132	1488	0.87	230	847	870	2600	2456
160	160	1488	0.87	280	1027	950	2600	3081
200	200	1490	0.87	350	1282	1120	2600	3974
250	250	1488	0.87	435	1605	1270	2600	5136

The MH series of high dynamic, brushless motors from Parker provides generously-sized mechanical components and low inertia. Thanks to the high quality of the Neodymium-Iron-Boron magnets and the encapsulation technique which is used to fasten them to the shaft, these motors can achieve high acceleration and withstand high overload without risking the demagnetization or detachment of the magnets.

Due to the many different shaft and flange sizes available for all models, a suitable motor can be selected for most customer requirements.



**Features**

- Protection class IP64
- Ambient temperature -10/+40 °C
- Rated torque 4.3 to 280 Nm
- High power density
- Lifetime-lubricated ball bearings
- Convection cooling, fan as option available

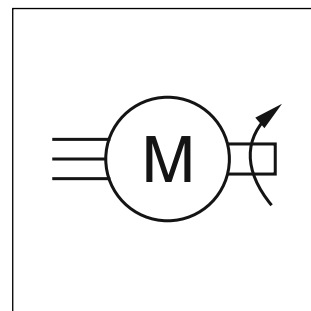
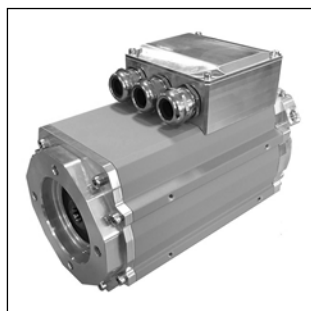
**Technical data**

Code	Rated power [kW]	Rated speed <sup>1)</sup> [1/min]	Rated current [A]	Rated torque [Nm]	Max. torque [Nm]	Torque constant kT [Nm/A]
1P4 C	1.3	3000	3.2	4.3	28	1.42
2P5 C	2.5	3000	4.8	7.8	49	1.70
004 C	3.9	3000	7.4	12.5	86	1.78
4P1 C	5.4	3000	10.1	17.3	117	1.80
6P6 C	6.7	3000	12.5	21.3	143	1.78
4P2 C	4.7	3000	9.1	15.0	69	1.74
008 C	8.1	3000	18.0	25.7	123	1.50
013 C	13.1	3000	26.8	41.7	222	1.63
016 C	16.4	3000	33.7	52.3	310	1.63
019 C	19.3	3000	39.7	61.6	398	1.63
027 C	27.3	3000	55.0	87.0	235	1.57
045 C	45.2	3000	92.0	144.0	451	1.57
058 C	58.1	3000	118.0	185.0	657	1.57
068 C	67.5	3000	137.0	215.0	857	1.57
1P4 F	1.8	3000	4.1	5.6	28	1.42
2P5 F	3.2	3000	6.3	10.3	49	1.70
004 F	5.2	3000	9.7	16.5	86	1.78
4P1 F	6.8	3000	13.1	21.5	117	1.80
6P6 F	8.6	3000	16.2	27.4	143	1.78
4P2 F	6.1	3000	11.7	19.3	69	1.74
008 F	10.5	3000	23.4	33.4	123	1.50
013 F	17.0	3000	34.9	54.2	222	1.63
016 F	21.4	3000	43.8	68.0	310	1.63
019 F	25.2	3000	51.6	80.1	398	1.63
027 F	35.5	3000	66.7	113.1	235	1.78
045 F	58.8	3000	110.4	187.2	451	1.78
058 F	75.6	3000	141.9	240.5	657	1.78
068 F	87.8	3000	164.9	279.5	857	1.78

For more information see catalogue 192-061012 and 192-061013.

<sup>1)</sup> 2000 1/min on request.

GVM motors are brushless synchronous servo motors with water or oil cooling system and resolver or encoder as speed sensor. The permanent magnet motors provide higher efficiency than induction motors of the same power range. The liquid cooling system improves the torque curve and enables a low-noise operation. A gore vent avoids condensation in case of sudden temperature variation or during storage at low temperature.



**Advantages**

- High power density
- Excellent speed characteristics
- High dynamics
- Low inertia moment
- High precision
- Very robust: shock-proof, vibration-proof, salt spray resistant

**Features**

- IP67 standard
- Ambient temperature -40/+40 °C
- Rated torque 50 to 460 Nm
- Lifetime-lubricated bearings
- Liquid cooling system: cooling media water, oil, HFC

**Technische Daten <sup>1)</sup>**

Water cooling with max. inlet temperature 25 °C

Code	Rated power [kW]	Rated speed [1/min]	Rated current [A]	Rated torque [Nm]	Max. torque [Nm]	Torque constant kT [Nm/A]	Cooling medium (p < 5 bar) [l/min]
014	13.6	2670	27.8	48.6	60	1.76	1.6
028	28.2	2450	59.5	110	142	1.86	3.1
064	63.7	2660	135	229	265	1.7	6.0
090	90.7	2510	193	345	395	1.79	8.3
114	114	2370	239	458	536	1.92	10.4

Oli cooling with max. inlet temperature 65 °C

Code	Rated power [kW]	Rated speed [1/min]	Rated current [A]	Rated torque [Nm]	Max. torque [Nm]	Torque constant kT [Nm/A]	Cooling medium (p < 5 bar) [l/min]
014	11.5	2870	21.6	38.1	60	1.78	2.2
028	24.0	2650	45.9	86.3	142	1.9	4.2
064	53.7	2870	103	179	265	1.75	8.0
090	76.5	2720	147	269	395	1.84	11.2
114	94.6	2530	182	358	536	1.98	13.8

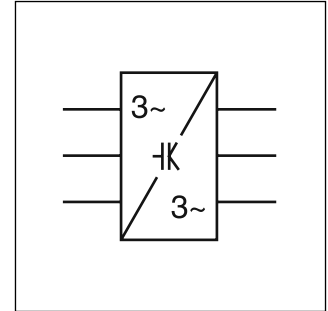
<sup>1)</sup> For other cooling media and cooling temperatures please contact Parker.



As a component of the Drive Controlled Pump, the AC30V series covers the entire spectrum of speed-regulated applications for asynchronous and synchronous motors. It has been designed to provide users the optimum control of pump applications with high dynamics and numerous options of control.

The AC30 has been designed with simplicity in mind, but this doesn't compromise its functionality. The flexible and modular design provides a wide range of communication options. E/A-modules can be added easily if required. Modules that are required for the Drive Controlled Pump are equipped ex works.

The setup of the Drive Controlled Pump can be done via graphical key pad or by using the pc software PDQ.



**Features**

- Integrated hydraulic functions
- Graphical key pad
- Integrated web server
- Sensorless vector control
- Safety torque off
- Software tool for configuration, commissioning, optimisation, programming and maintenance
- Fieldbus communication with open standards:
  - CANopen
  - DeviceNet
  - PROFIBUS
  - PROFINET
  - EtherCAT
  - Ethernet IP

The following operation modes are available:

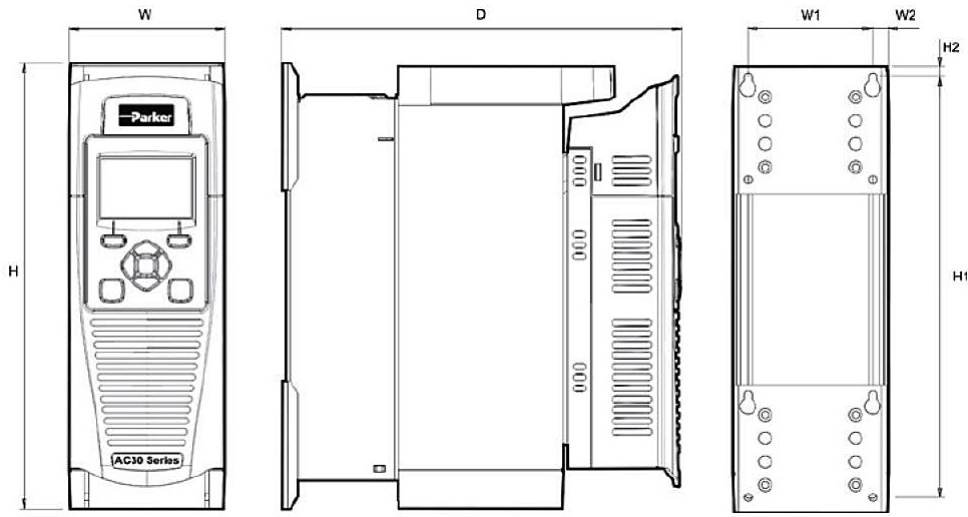
- Flow control
- Pressure control <sup>1)</sup>
- Alternating flow rate / pressure control (P/Q) <sup>1)</sup>
- eLCP (electronic load control) <sup>1)</sup>
- Accumulator charging mode <sup>1)</sup>
- Master-slave operation of several Drive Controlled Pumps

**Technical data**

Electrical Characteristics		
Rated Input Voltage	[V]	3 x 380...480 ±10 %
Input Frequency	[Hz]	45...65
Maximum Switching Frequency	[kHz]	4...12 max. (acc. derate output)
Overload: Heavy Duty	[%]	150 for 60 s, 180 for 3 s
Overload: Normal Duty	[%]	110 for 60 s, 180 for 3 s heavy duty FLC
Output Frequencies	[Hz]	0...500 at 4 kHz switching frequency
	[Hz]	0...1000 at 8 kHz switching frequency
	[Hz]	0...1500 at 12 kHz switching frequency
Environmental Characteristics		
Operating Temperature	[°C]	0...+40 (normal duty), 0...+45 (heavy duty) 0...+50 (derate output)
Operating Humidity, max	[%]	85 bei 40 °C
Protection class		IP 20
Altitude	[m]	1000 over NN, derate output by 1 % per 100 m to max. 2000 m
Atmosphere		Non-flammable, non-corrosive and dust free
Climatic conditions		Class 3k3, as defined by EN60721-3-3

<sup>1)</sup> Pressure transducer is required (not included in delivery).

**Dimensions**

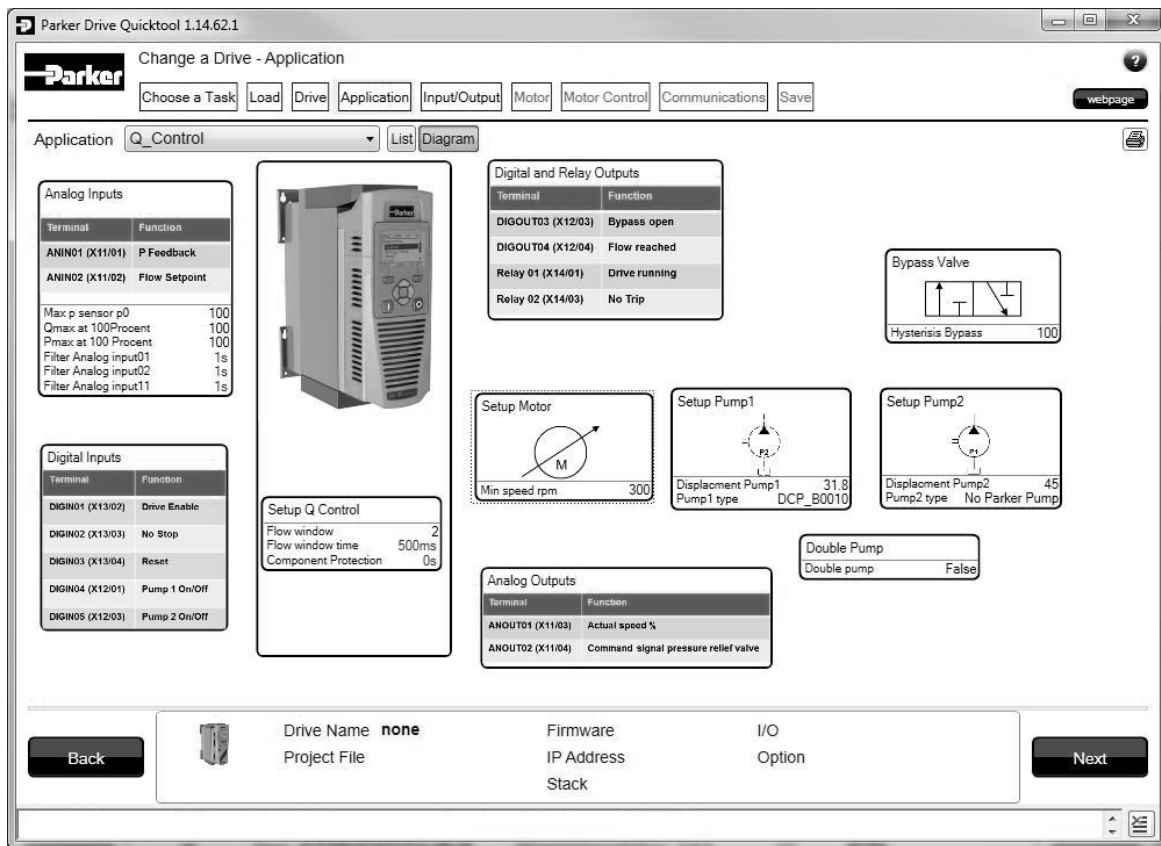


Code	Model	Weight [kg]	Dimensions [mm]							Fixings
			H	H1	H2	W	W1	W2	D	
3P5 - 012	Frame D	4.5	286	270	6.5	100	80	10.0	255	Slot 4.5 mm wide. Use M4 fixings
016 - 023	Frame E	6.8	333	320	6.5	125	100	12.5	255	
032 - 038	Frame F	10.0	383	370	6.5	150	125	12.5	255	
045 - 073	Frame G	22.3	480	465	7.25	220	190	13.0	287	Slot 5.0 mm wide. Use M5 fixings
087 - 145	Frame H	42.8	670	650	10.0	260	220	20.0	316	Slot 6.8 mm wide. Use M6 fixings
180 - 260	Frame J	89.0	800	780	10.0	330	285	23.0	374	Slot 9.0 mm wide. Use M8 fixings
315 - 440	Frame K	125.0	1310	1282	15.0	400	280	60.0	457	Use M10 fixings

**Commissioning Software**

For the commissioning of the AC30V, Parker offers a simple-to-use software tool for programming, monitoring and diagnostics of the AC drives from Parker with the

aid of a graphical user interface. This enables the user to easily create, parameterize and configure user-defined applications.



The AC30V drive can easily be configured and put into operation via graphical key pad or by using the pc software PDQ.

- Select operation mode
- Select the pump via ordering code
- Enter pressure sensor parameters
- Enter motor data provided on the motor rating plate
- Setting of the pressure regulator
- Save/clone the configuration settings via optional SD card is possible

Drive Controlled Pump units consisting of motor and pump are directly ready-for-use since motor and pump parameters are already set ex works.

The following settings for programming functions are possible:

- Accumulator charging mode
- eLCP (electronic load control)
- Analogue setpoint selection for volume flow and/or pressure
- Setpoint selection for volume flow and/or pressure via CANopen/DeviceNet/PROFIBUS DP/PROFINET etc.

The following diagnostics functions are available:

- Current pressure, volume flow and performance values are on constant display
- Reading or setting digital inputs and outputs
- Graphical presentation with zoom and save functions

For more information see catalogue 190-490323

# Parker Worldwide

## Europe, Middle East, Africa

### AE – United Arab Emirates,

Dubai  
Tel: +971 4 8127100

### AT – Austria, St. Florian

Tel: +43 (0)7224 66201

### AZ – Azerbaijan, Baku

Tel: +994 50 2233 458

### BE/NL/LU – Benelux,

Hendrik Ido Ambacht  
Tel: +31 (0)541 585 000

### BY – Belarus, Minsk

Tel: +48 (0)22 573 24 00

### CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00

### CZ – Czech Republic,

Prague  
Tel: +420 284 083 111

### DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0

### DK – Denmark, Ballerup

Tel: +45 43 56 04 00

### ES – Spain, Madrid

Tel: +34 902 330 001

### FI – Finland, Vantaa

Tel: +358 (0)20 753 2500

### FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25

### GR – Greece

Tel: +30 69 44 52 78 25

### HU – Hungary, Budaörs

Tel: +36 23 885 470

### IE – Ireland, Dublin

Tel: +353 (0)1 466 6370

### IL – Israel

Tel: +39 02 45 19 21

### IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21

### KZ – Kazakhstan, Almaty

Tel: +7 7273 561 000

### NO – Norway, Asker

Tel: +47 66 75 34 00

### PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00

### PT – Portugal

Tel: +351 22 999 7360

### RO – Romania, Bucharest

Tel: +40 21 252 1382

### RU – Russia, Moscow

Tel: +7 495 645-2156

### SE – Sweden, Borås

Tel: +46 (0)8 59 79 50 00

### SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650

### TR – Turkey, Istanbul

Tel: +90 216 4997081

### UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878

### ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700

## North America

### CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

### US – USA, Cleveland

Tel: +1 216 896 3000

## Asia Pacific

### AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

### CN – China, Shanghai

Tel: +86 21 2899 5000

### HK – Hong Kong

Tel: +852 2428 8008

### IN – India, Mumbai

Tel: +91 22 6513 7081-85

### JP – Japan, Tokyo

Tel: +81 (0)3 6408 3901

### KR – South Korea, Seoul

Tel: +82 2 559 0400

### MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

### NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

### SG – Singapore

Tel: +65 6887 6300

### TH – Thailand, Bangkok

Tel: +662 186 7000

### TW – Taiwan, Taipei

Tel: +886 2 2298 8987

## South America

### AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

### BR – Brazil, Sao Jose dos Campos

Tel: +55 080 0727 5374

### CL – Chile, Santiago

Tel: +56 22 303 9640

### MX – Mexico, Toluca

Tel: +52 72 2275 4200



### EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

### US Product Information Centre

Toll-free number: 1-800-27 27 537

[www.parker.com](http://www.parker.com)

Your local authorized Parker distributor