

# Motor-pump groups

## Type ABAPG and ABHPG

**RE 51181**

Edition: 2015-02



- ▶ With pump type: PV7
  - Maximum pressure up to 160 bar
  - Max. volume flow: Up to 162.5 l/min
- ▶ Electric motor frame size 90S to 250M  
Efficiency class IE3

### Features

Electric energy is converted into hydraulic energy via the motor-pump groups.

They have been designed for hydrostatic drives in open circuits.

- ▶ Efficiency class IE3
- ▶ Electric motor design IM B5 (ABHPG) and/or IM B3/B5 (ABAPG)
- ▶ Pump fastened at the electric motor with rigid pump carrier and coupling
- ▶ Low operating noise
- ▶ Versatile possible applications on tank, base frame or separate installation
- ▶ Clear, maintenance-friendly set-up
- ▶ With vane pump PV7 (variable displacement pump)

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**Ordering code**

|    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |   |    |    |   |  |     |
|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|---|----|----|---|--|-----|
| 01 | 02 |    | 03 | 04 | 05 | 06 | 07 |   | 08 | 09 | 10 | 11 | 12 | 13 | 14 |   | 15 | 16 |   |  |     |
|    | -  | V7 | -  |    | M  |    | 0  | - | 16 | /  |    |    | 4  | 5  | 3  | 3 | /  | S  | E |  | HOY |

**Assembly**

|    |                       |       |
|----|-----------------------|-------|
| 01 | With motor design B35 | ABAPG |
|    | With motor design B5  | ABHPG |

**Pump type**

|    |                                                       |    |
|----|-------------------------------------------------------|----|
| 02 | Vane pump PV7 according to data sheet 10515 and 10522 | V7 |
|----|-------------------------------------------------------|----|

**Frame size/size**

|    |                                         |                   |
|----|-----------------------------------------|-------------------|
| 03 | 10 ... 118 cm <sup>3</sup> per rotation | 06-10 ... 100-118 |
|----|-----------------------------------------|-------------------|

**Seal material** (according to DIN ISO 1629)

|    |     |   |
|----|-----|---|
| 04 | NBR | M |
|----|-----|---|

**Controller type**

|    |                     |   |
|----|---------------------|---|
| 05 | Direct operated     | A |
|    | Pressure controller | C |

**Controller option**

|    |          |   |
|----|----------|---|
| 06 | Standard | 0 |
|----|----------|---|

**Zero stroke pressure range**

|    |         |    |
|----|---------|----|
| 07 | 160 bar | 16 |
|----|---------|----|

**Motor power**

|    |                   |              |
|----|-------------------|--------------|
| 08 | 1.1 kW... 55.0 kW | 1.1 ... 55.0 |
|----|-------------------|--------------|

**Rated voltage**

|    |                                 |    |
|----|---------------------------------|----|
| 09 | 230/400 V at 50 Hz (up to 3 kW) | CA |
|    | 400/690 V at 50 Hz (from 4 kW)  | CB |

**Number of pole pairs**

|    |        |   |
|----|--------|---|
| 10 | 4-pole | 4 |
|----|--------|---|

**Rated frequency**

|    |       |   |
|----|-------|---|
| 11 | 50 Hz | 5 |
|----|-------|---|

**Efficiency class**

|    |                               |   |
|----|-------------------------------|---|
| 12 | IE3 according to IEC 60034-30 | 3 |
|----|-------------------------------|---|

**Motor protection**

|    |                                         |   |
|----|-----------------------------------------|---|
| 13 | PTC resistor with 3 temperature sensors | 3 |
|----|-----------------------------------------|---|

**Pump carrier design**

|    |                             |   |
|----|-----------------------------|---|
| 14 | Rigid pump carrier AB 03337 | S |
|----|-----------------------------|---|

**Damping bearing design**

|    |                                      |   |
|----|--------------------------------------|---|
| 15 | Elastic damping bearing (only ABAPG) | E |
|----|--------------------------------------|---|

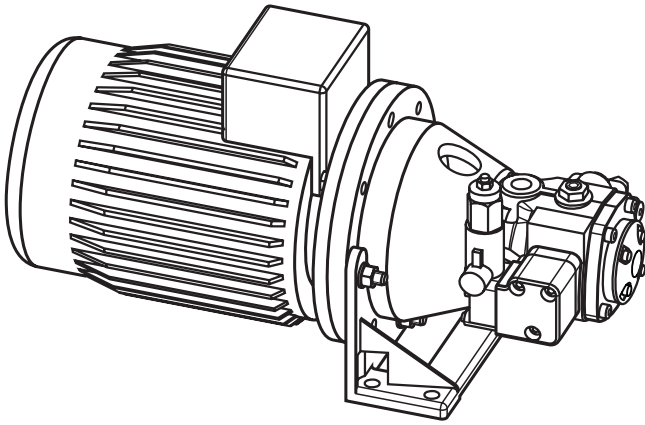
**Motor supplier**

|    |                          |     |
|----|--------------------------|-----|
| 16 | Hoyer Motors (preferred) | HOY |
|    | Siemens                  | SIE |

**Order example:****ABAPG-V7-63-71MA0-16/30.0CB4523/SE HOY**

## Set-up of the motor-pump group

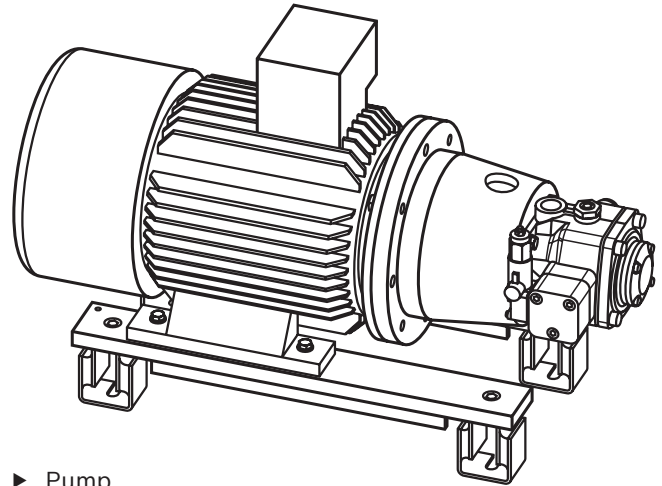
### ABHPG design



- ▶ Pump
- ▶ Electric motor
- ▶ Pump carrier (rigid)
- ▶ Coupling
- ▶ Pump base

The use of this design is recommended in confined spaces (e.g. on oil tanks) max. performance range 7.5 kW

### ABAPG design



- ▶ Pump
- ▶ Electric motor
- ▶ Pump carrier (rigid)
- ▶ Coupling
- ▶ Strips
- ▶ Damping bearing

Use of this design is particularly recommended for requirements on low noise levels min. performance range 5.5 kW

STEP-files for the respective modules available on request or at [www.boschrexroth.com/ics/abapg](http://www.boschrexroth.com/ics/abapg)

## The motor-pump group configurator at [www.boschrexroth.com/ics/abapg](http://www.boschrexroth.com/ics/abapg)

Motor-pump groups can be put together quickly and easily with the APAPG configurator: The standard types defined in the datasheet enables users and sales people without detailed knowledge to individually configure the central drive unit for aggregates. A practical, product-neutral kit

provides 3D data that can be immediately applied to applications. This saves time.

This is performed online by selecting the relevant product components or by specifying the operating conditions (flow rate, rated frequency, type of pump, operating pressure).

Thanks to the intuitive menu navigation, you are guided safely through the required configuration steps. Related features are clearly arranged on one page.

Motor-Pumpengruppe  
**ABxPG**

**Auslegungsdaten**

Betriebsdruck p  [bar] (min/max = 1/700) Suche ▶

Volumenstrom Q von  bis  [l/min] (min/max = 1/700)

Bemessungsfrequenz ☒ 50 Hz ☐ 60 Hz

Pumpenart ☒ Konstantpumpe ☐ Verstellpumpe

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**Produktinformationen**

- Beratungsanfrage
- Auswahl neu starten

**Projekt**

- Öffnen

**Konfiguration**

- Länderportfolio
- Auslegungsdaten
- Pumpe
- Motorbauform
- Farbgebung

Associated features are clearly displayed on the same page.

**ABxPG**

**Pumpe**

Auswahl ↩ ✕

**Pumpenart** ☒ Konstantpumpe ☐ Verstellpumpe

**Welle**

**Pumpenbauart**

**Flansch**

**Pumpentyp**

**Dichtung** ☒ HBR ☐ FKM

**Nenngroße**

**Druckanschluss**

**Reglertyp**

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**Produktinformationen**

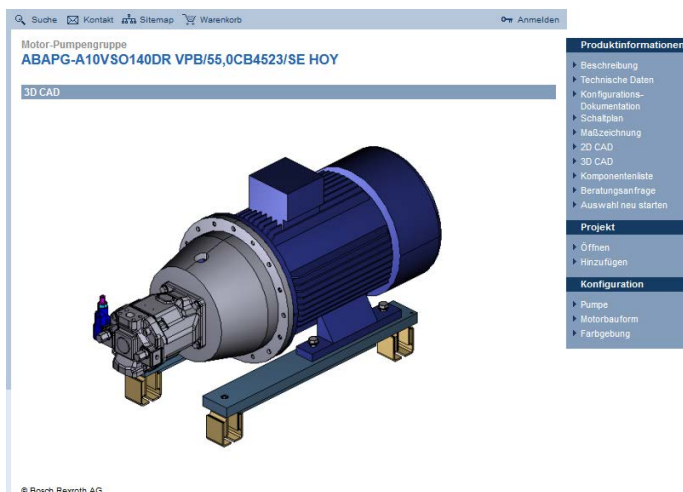
- Beratungsanfrage
- Auswahl neu starten

**Projekt**

- Öffnen

**Konfiguration**

- Pumpe
- Motorbauform
- Farbgebung



When the configuration is finished, you can have the complete configuration documentation sent to you via email including material list, circuit diagram, 2D drawing and 3D model (STEP). This is done by way of an automatic request to your local distributor who will promptly contact you and send you an offer.

**Technical data**

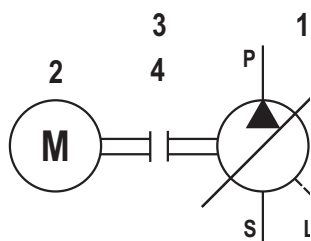
(For applications outside these parameters, please consult us!)

|                                                                                                                                                                                             |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Line connections                                                                                                                                                                            |                               |  |  |  | see Line connections table on page 13                                                                                                 |                   |                                                                                                                                                                      |  |  |
| Hydraulic fluid                                                                                                                                                                             |                               |  |  |  | Mineral oil HLP according to DIN 51524; part 2 e.g. with operating temperature 50 °C ISO VG46 DIN ISO 3448 (other fluids on request!) |                   |                                                                                                                                                                      |  |  |
| ▶ Please observe our provisions according to data sheet 90220.                                                                                                                              |                               |  |  |  | ▶ Different oil types must not be mixed as this might result in degradation and deterioration of the lubricity.                       |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
| ▶ According to the operating conditions, the fluid must be renewed at certain intervals.                                                                                                    |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
| Pump type                                                                                                                                                                                   |                               |  |  |  | PV7 frame size 6 according to data sheet 10522                                                                                        |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             |                               |  |  |  | PV7 frame size 10 ... 100 according to data sheet 10515                                                                               |                   |                                                                                                                                                                      |  |  |
| ▶ Direction of rotation                                                                                                                                                                     |                               |  |  |  | Clockwise                                                                                                                             |                   |                                                                                                                                                                      |  |  |
| Operating pressure, absolute                                                                                                                                                                |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
| ▶ Input                                                                                                                                                                                     |                               |  |  |  | $p_{\text{min-max}}$                                                                                                                  | bar               | 0.8 ... 2.5                                                                                                                                                          |  |  |
| ▶ Output                                                                                                                                                                                    |                               |  |  |  | $p_{\text{nom}}$                                                                                                                      | bar               | up to 160 (depending on the frame size)                                                                                                                              |  |  |
| ▶ Leakage port                                                                                                                                                                              |                               |  |  |  | $p_{\text{max}}$                                                                                                                      | bar               | 2                                                                                                                                                                    |  |  |
| Hydraulic fluid temperature range, observe viscosity range                                                                                                                                  |                               |  |  |  | $\vartheta$                                                                                                                           | °C                | −10 ... +70                                                                                                                                                          |  |  |
| ▶ $T_{\text{optimal}}$ with HLP 46 (DIN 51524)                                                                                                                                              |                               |  |  |  | $\vartheta$                                                                                                                           | °C                | +45 ... +55                                                                                                                                                          |  |  |
| ▶ $T_{\text{max}}$ in continuous operation                                                                                                                                                  |                               |  |  |  | $\vartheta$                                                                                                                           | °C                | < +65                                                                                                                                                                |  |  |
| For start-up at low temperatures a heating can be provided.<br>For cooling, you can either provide an oil/water or an oil/air cooler.<br>See data sheet 50125 (ABUKG) and 50112 (KOL/KOLP). |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             |                               |  |  |  |                                                                                                                                       |                   |                                                                                                                                                                      |  |  |
| Cleanliness classes according to ISO code                                                                                                                                                   |                               |  |  |  | Maximum admissible degree of pressure flow according to ISO 4406 (c) <sup>1)</sup>                                                    |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             |                               |  |  |  | Minimum purity class 19/16/13 with NG10 ... 25 and purity class 20/18/15 with NG14 ... NG150                                          |                   |                                                                                                                                                                      |  |  |
| Viscosity range                                                                                                                                                                             |                               |  |  |  | $\vartheta$                                                                                                                           | mm²/s             | 16 ... 160 optimal<br>Max. 200 in case of start-up in zero stroke operation.<br>Max. 800 in case of start-up in delivery operation.<br>(See data sheet 10515, 10522) |  |  |
| Electric motor                                                                                                                                                                              | ▶ Motor type                  |  |  |  | Three-phase asynchronous motor                                                                                                        |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             | ▶ Efficiency class            |  |  |  | IE3 according to IEC 60034-30                                                                                                         |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             | ▶ Number of pole pairs        |  |  |  | 4                                                                                                                                     |                   |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             | ▶ Voltage according to IEC 38 |  |  |  | $U$                                                                                                                                   | V                 | 230 / 400 at 50 Hz (CA) to 3 kW, 400 / 690 at 50 Hz (CB) from 4 kW                                                                                                   |  |  |
|                                                                                                                                                                                             | ▶ Speed                       |  |  |  | $n$                                                                                                                                   | min <sup>−1</sup> | 1450 at 50 Hz                                                                                                                                                        |  |  |
|                                                                                                                                                                                             | ▶ Protection class            |  |  |  | IP                                                                                                                                    | 55                |                                                                                                                                                                      |  |  |
|                                                                                                                                                                                             | ▶ Installation position       |  |  |  | horizontal                                                                                                                            |                   |                                                                                                                                                                      |  |  |
| Surface treatment                                                                                                                                                                           |                               |  |  |  | By default, all steel components and components are at least provided with temporary corrosion protection (e.g. for transport).       |                   |                                                                                                                                                                      |  |  |

<sup>1)</sup> The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the life cycle of the components.  
 For selecting the filters, see data sheet 51501.

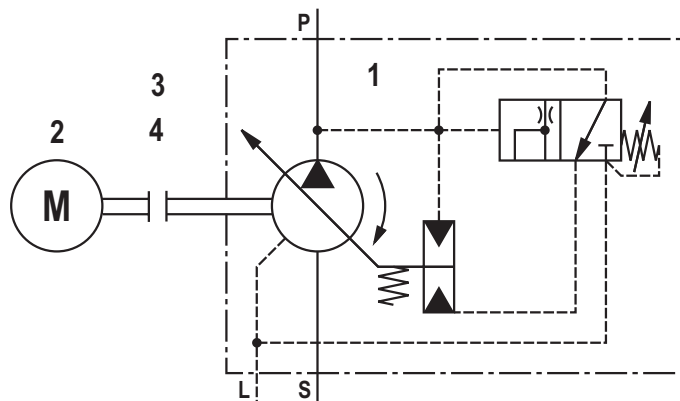
## Circuit diagrams

### Vane pump direct operated (frame size 6)



- 1** Vane pump PV7
- 2** Electric motor
- 3** Pump carrier (rigid)
- 4** Coupling

### Vane pump pilot operated (frame size 10-100)



- 1** Vane pump PV7
- 2** Electric motor
- 3** Pump carrier (rigid)
- 4** Coupling

## Standard program incl. preferred types ABHPG-PV7

| Frequency                  | 50 Hz<br>1450 min <sup>-1</sup> |                            | 50 Hz<br>1450 min <sup>-1</sup> | Electric<br>motor size | ABHPG material no.<br>(Motor B5) |                   |            |                   |
|----------------------------|---------------------------------|----------------------------|---------------------------------|------------------------|----------------------------------|-------------------|------------|-------------------|
| Pump                       | q <sub>V</sub> max<br>in l/min  | p <sub>max</sub><br>in bar | Power<br>in kW                  |                        | HOY                              | MKZ <sup>1)</sup> | SIE        | MKZ <sup>1)</sup> |
| PV7-1X/6-<br>10RA01MA0-10  | 13.8                            | 38                         | 1.10                            | 90S                    | R901397390                       | A3                | R901397415 | A3                |
|                            |                                 | 52                         | 1.50                            | 90L                    | R901397391                       | A3                | R901397416 | A3                |
|                            |                                 | 79                         | 2.20                            | 100L                   | R901397392                       | A3                | R901397417 | A3                |
|                            |                                 | 100                        | 3.00                            | 100L                   | R901397393                       | A3                | R901397418 | A3                |
| PV7-1X/10-<br>14RE01MC0-16 | 19.3                            | 36                         | 1.50                            | 90L                    | R901397394                       | A3                | R901397419 | A3                |
|                            |                                 | 53                         | 2.20                            | 100L                   | R901397395                       | A3                | R901397420 | A3                |
|                            |                                 | 74                         | 3.00                            | 100L                   | R901397396                       | A2                | R901397421 | A3                |
|                            |                                 | 100                        | 4.00                            | 112M                   | R901397397                       | A2                | R901397422 | A3                |
|                            |                                 | 137                        | 5.50                            | 132S                   | R901397398                       | A3                | R901397423 | A3                |
|                            |                                 | 160                        | 7.50                            | 132M                   | R901397399                       | A3                | R901397424 | A3                |
| PV7-1X/16-<br>20RE01MC0-16 | 27.6                            | 30                         | 2.20                            | 100L                   | R901397401                       | A3                | R901397425 | A3                |
|                            |                                 | 44                         | 3.00                            | 100L                   | R901397402                       | A3                | R901397426 | A3                |
|                            |                                 | 59                         | 4.00                            | 112M                   | R901397403                       | A3                | R901397427 | A3                |
|                            |                                 | 85                         | 5.50                            | 132S                   | R901397404                       | A2                | R901397430 | A3                |
|                            |                                 | 118                        | 7.50                            | 132M                   | R901397405                       | A3                | R901397431 | A3                |
| PV7-1X/25-<br>30RE01MC0-16 | 41.3                            | 28                         | 3.00                            | 100L                   | R901397406                       | A3                | R901397432 | A3                |
|                            |                                 | 40                         | 4.00                            | 112M                   | R901397407                       | A3                | R901397433 | A3                |
|                            |                                 | 59                         | 5.50                            | 132S                   | R901397408                       | A2                | R901397434 | A3                |
|                            |                                 | 83                         | 7.50                            | 132M                   | R901397409                       | A2                | R901397435 | A3                |
| PV7-1X/40-<br>45RE37MC0-16 | 62.0                            | 28                         | 4.00                            | 112M                   | R901397410                       | A3                | R901397436 | A3                |
|                            |                                 | 39                         | 5.50                            | 132S                   | R901397411                       | A2                | R901397437 | A3                |
|                            |                                 | 55                         | 7.50                            | 132M                   | R901397412                       | A3                | R901397438 | A3                |
| PV7-1X/63-<br>71RE07MC0-16 | 97.8                            | 25                         | 5.50                            | 132S                   | R901397413                       | A3                | R901397439 | A3                |
|                            |                                 | 33                         | 7.50                            | 132M                   | R901397414                       | A3                | R901397440 | A3                |

<sup>1)</sup> MKZ = material mark

A2 = preferred delivery range

A3 = Standard delivery range dimensions see page 9... 12

## Standard program incl. preferred types ABAPG-PV7

| Frequency                    | 50 Hz<br>1450 min <sup>-1</sup> |                      | 50 Hz<br>1450 min <sup>-1</sup> | Electric<br>motor size | ABAPG material no.<br>(Motor B5) |                   |            |                   |
|------------------------------|---------------------------------|----------------------|---------------------------------|------------------------|----------------------------------|-------------------|------------|-------------------|
| Pump                         | $q_{V \max}$<br>in l/min        | $p_{\max}$<br>in bar | Power<br>in kW                  |                        | HOY                              | MKZ <sup>1)</sup> | SIE        | MKZ <sup>1)</sup> |
| PV7-1X/10-<br>14RE01MC0-16   | 19.3                            | 137                  | 5.50                            | 132S                   | R901397844                       | A3                | R901397920 | A3                |
|                              |                                 | 160                  | 7.50                            | 132M                   | R901397846                       | A3                | R901397921 | A3                |
| PV7-1X/16-<br>20RE01MC0-16   | 27.6                            | 85                   | 5.50                            | 132S                   | R901397847                       | A2                | R901397922 | A3                |
|                              |                                 | 118                  | 7.50                            | 132M                   | R901397848                       | A3                | R901397923 | A3                |
|                              |                                 | 160                  | 11.00                           | 160M                   | R901397849                       | A3                | R901397924 | A3                |
| PV7-1X/25-<br>30RE01MC0-16   | 41.3                            | 59                   | 5.50                            | 132S                   | R901397850                       | A2                | R901397925 | A3                |
|                              |                                 | 83                   | 7.50                            | 132M                   | R901397852                       | A2                | R901397926 | A3                |
|                              |                                 | 128                  | 11.00                           | 160M                   | R901397853                       | A3                | R901397927 | A3                |
|                              |                                 | 160                  | 15.00                           | 160L                   | R901397854                       | A3                | R901397928 | A3                |
| PV7-1X/40-<br>45RE37MC0-16   | 62.0                            | 39                   | 5.50                            | 132S                   | R901397855                       | A2                | R901397929 | A3                |
|                              |                                 | 55                   | 7.50                            | 132M                   | R901397856                       | A3                | R901397930 | A3                |
|                              |                                 | 79                   | 11.00                           | 160M                   | R901397858                       | A2                | R901397931 | A3                |
|                              |                                 | 110                  | 15.00                           | 160L                   | R901397859                       | A3                | R901397932 | A3                |
|                              |                                 | 136                  | 18.50                           | 180M                   | R901397860                       | A3                | R901397933 | A3                |
|                              |                                 | 160                  | 22.00                           | 180L                   | R901397862                       | A3                | R901397934 | A3                |
| PV7-1X/63-<br>71RE07MC0-16   | 97.8                            | 25                   | 5.50                            | 132S                   | R901397863                       | A3                | R901397935 | A3                |
|                              |                                 | 33                   | 7.50                            | 132M                   | R901397864                       | A3                | R901397936 | A3                |
|                              |                                 | 50                   | 11.00                           | 160M                   | R901397865                       | A3                | R901397937 | A3                |
|                              |                                 | 70                   | 15.00                           | 160L                   | R901397907                       | A3                | R901397938 | A3                |
|                              |                                 | 86                   | 18.50                           | 180M                   | R901397908                       | A3                | R901397939 | A3                |
|                              |                                 | 104                  | 22.00                           | 180L                   | R901397909                       | A3                | R901397940 | A3                |
|                              |                                 | 144                  | 30.00                           | 200L                   | R901397910                       | A3                | R901397941 | A3                |
|                              |                                 | 160                  | 37.00                           | 225S                   | R901397911                       | A3                | R901397942 | A3                |
| PV7-1X/100-<br>118RE07MC0-16 | 162.5                           | 30                   | 11.00                           | 160M                   | R901397912                       | A3                | R901397943 | A3                |
|                              |                                 | 43                   | 15.00                           | 160L                   | R901397913                       | A3                | R901397944 | A3                |
|                              |                                 | 54                   | 18.50                           | 180M                   | R901397914                       | A2                | R901397945 | A3                |
|                              |                                 | 65                   | 22.00                           | 180L                   | R901397915                       | A3                | R901397946 | A3                |
|                              |                                 | 89                   | 30.00                           | 200L                   | R901397916                       | A3                | R901397947 | A3                |
|                              |                                 | 110                  | 37.00                           | 225S                   | R901397917                       | A3                | R901397948 | A3                |
|                              |                                 | 137                  | 45.00                           | 225M                   | R901397918                       | A3                | R901397949 | A3                |
|                              |                                 | 160                  | 55.00                           | 250M                   | R901397919                       | A3                | R901397950 | A3                |

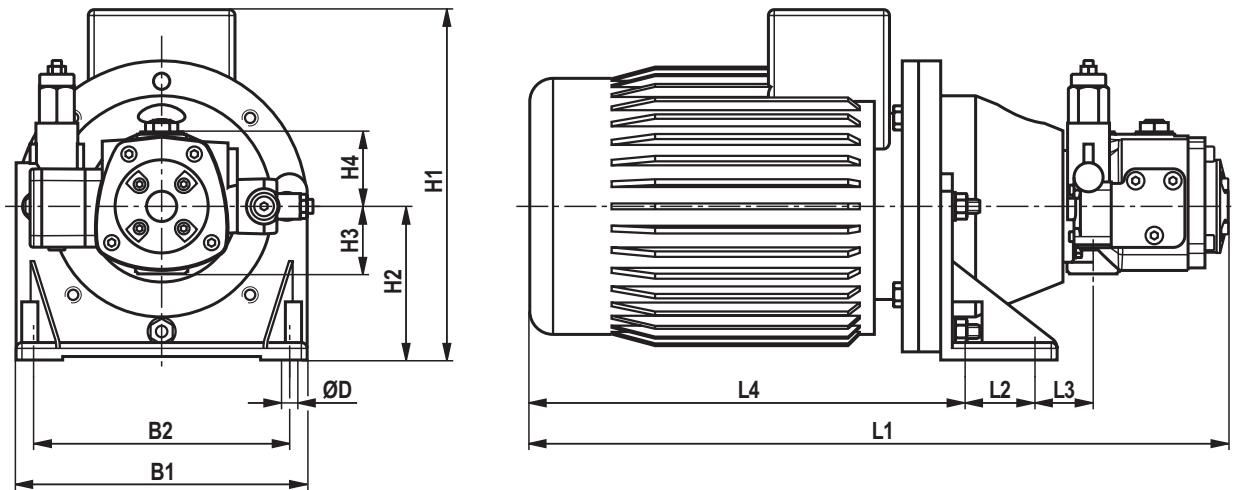
<sup>1)</sup> MKZ = material mark

A2 = preferred delivery range

A3 = Standard delivery range dimensions see page 9 ... 12

### Dimensions: Type ABHPG-V7 (motor supplier HOYER-MOTORS)

(dimensions in mm)

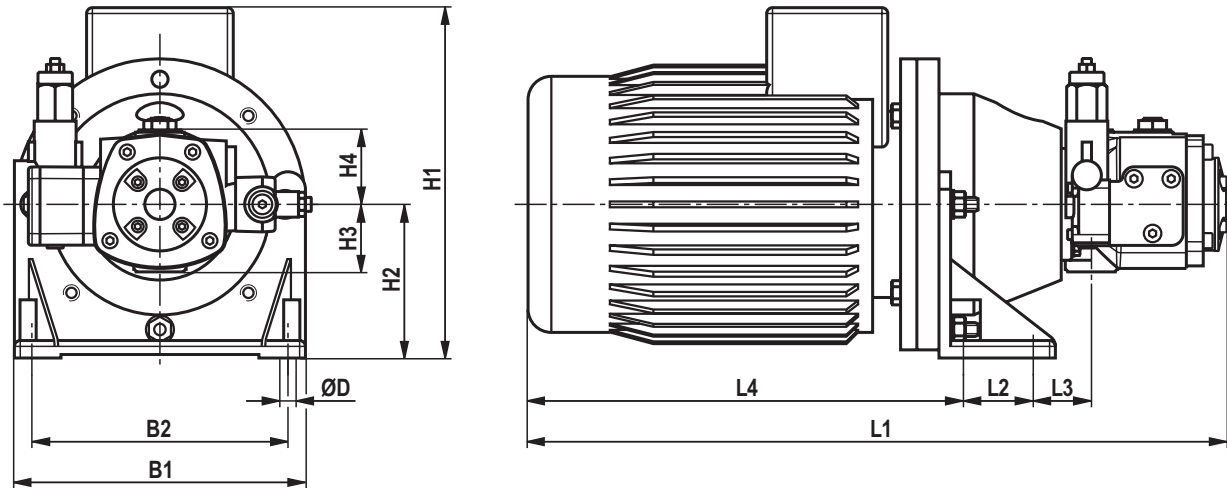


#### ABHPG-V7 with motor supplier HOYER-MOTORS

| Pump      | E-motor         | Dimensions |     |    |     |     |      |      |     |    |      |     | Weight<br>in kg |
|-----------|-----------------|------------|-----|----|-----|-----|------|------|-----|----|------|-----|-----------------|
|           | kW / frame size | B1         | B2  | ØD | H1  | H2  | H3   | H4   | L1  | L2 | L3   | L4  |                 |
| PV7/6-10  | 1.1 / 90S       | 210        | 180 | 11 | 244 | 112 | 56.5 | 56.5 | 450 | 60 | 86.5 | 298 | 28              |
|           | 1.5 / 90L       | 210        | 180 | 11 | 244 | 112 | 56.5 | 56.5 | 478 | 60 | 86.5 | 325 | 31              |
|           | 2.2 / 100L      | 250        | 220 | 14 | 279 | 132 | 56.5 | 56.5 | 505 | 60 | 80.5 | 386 | 38              |
|           | 3.0 / 100L      | 250        | 220 | 14 | 279 | 132 | 56.5 | 56.5 | 505 | 60 | 80.5 | 386 | 41              |
| PV7/10-14 | 1.5 / 90L       | 210        | 180 | 11 | 244 | 112 | 58   | 64   | 485 | 60 | 88   | 325 | 35              |
|           | 2.2 / 100L      | 250        | 220 | 14 | 279 | 132 | 58   | 64   | 512 | 60 | 82   | 386 | 44              |
|           | 3.0 / 100L      | 250        | 220 | 14 | 279 | 132 | 58   | 64   | 512 | 60 | 82   | 386 | 47              |
|           | 4.0 / 112M      | 250        | 220 | 14 | 300 | 132 | 58   | 64   | 567 | 60 | 82   | 410 | 55              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 347 | 160 | 58   | 64   | 573 | 80 | 82   | 423 | 70              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 347 | 160 | 58   | 64   | 636 | 80 | 82   | 461 | 78              |
| PV7/16-20 | 2.2 / 100L      | 250        | 220 | 14 | 279 | 132 | 68   | 72   | 520 | 60 | 92   | 386 | 48              |
|           | 3.0 / 100L      | 250        | 220 | 14 | 279 | 132 | 68   | 72   | 520 | 60 | 92   | 386 | 51              |
|           | 4.0 / 112M      | 250        | 220 | 14 | 300 | 132 | 68   | 72   | 575 | 60 | 92   | 410 | 59              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 347 | 160 | 68   | 72   | 592 | 80 | 103  | 423 | 73              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 347 | 160 | 68   | 72   | 655 | 80 | 103  | 461 | 81              |
| PV7/25-30 | 3.0 / 100L      | 250        | 220 | 14 | 279 | 132 | 92   | 80   | 528 | 60 | 116  | 386 | 54              |
|           | 4.0 / 112M      | 250        | 220 | 14 | 300 | 132 | 92   | 80   | 583 | 60 | 116  | 410 | 62              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 347 | 160 | 92   | 80   | 600 | 80 | 127  | 423 | 76              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 347 | 160 | 92   | 80   | 663 | 80 | 127  | 461 | 84              |
| PV7/40-45 | 4.0 / 112M      | 250        | 220 | 14 | 300 | 132 | 89   | 94   | 597 | 60 | 113  | 410 | 73              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 347 | 160 | 89   | 94   | 627 | 80 | 137  | 423 | 87              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 347 | 160 | 89   | 94   | 690 | 80 | 137  | 461 | 95              |
| PV7/63-71 | 5.5 / 132S      | 300        | 260 | 14 | 347 | 160 | 105  | 100  | 633 | 80 | 153  | 423 | 90              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 347 | 160 | 105  | 100  | 696 | 80 | 153  | 461 | 98              |

### Dimensions: Type ABHPG-V7 (motor supplier SIEMENS)

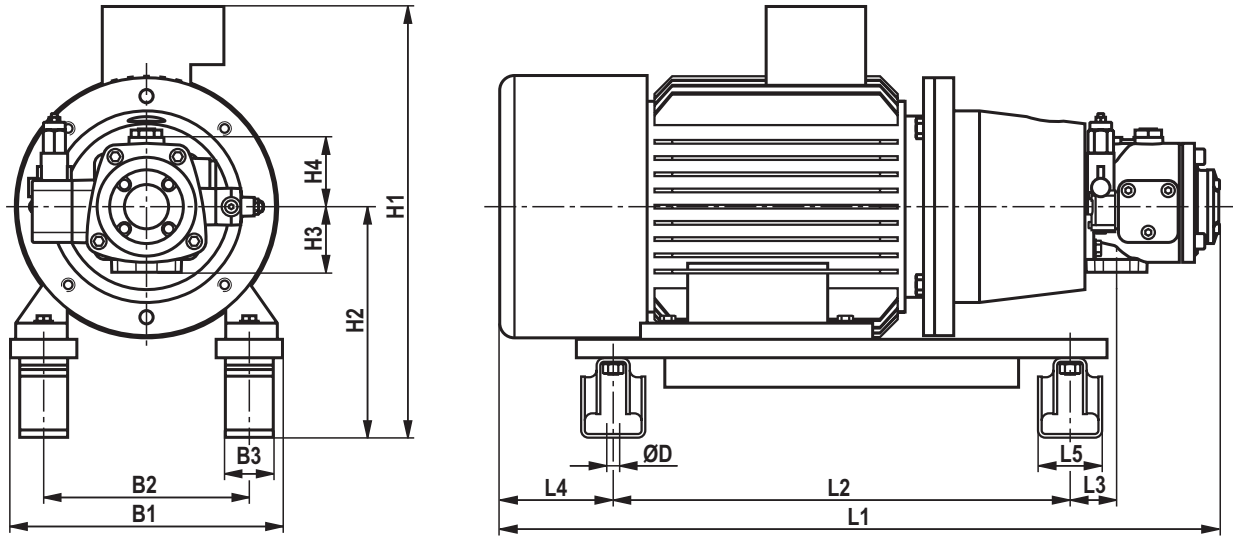
(dimensions in mm)



#### ABHPG-V7 with motor supplier SIEMENS

| Pump      | E-motor         | Dimensions |     |    |     |     |      |      |       |    |      |       | Weight<br>in kg |
|-----------|-----------------|------------|-----|----|-----|-----|------|------|-------|----|------|-------|-----------------|
|           | kW / frame size | B1         | B2  | ØD | H1  | H2  | H3   | H4   | L1    | L2 | L3   | L4    |                 |
| PV7/6-10  | 1.1 / 90S       | 210        | 180 | 11 | 240 | 112 | 56.5 | 56.5 | 438   | 60 | 86.5 | 291   | 28              |
|           | 1.5 / 90L       | 210        | 180 | 11 | 232 | 112 | 56.5 | 56.5 | 519   | 60 | 86.5 | 372   | 25              |
|           | 2.2 / 100L      | 250        | 220 | 14 | 269 | 132 | 56.5 | 56.5 | 547.5 | 60 | 80.5 | 406.5 | 41              |
|           | 3.0 / 100L      | 250        | 220 | 14 | 268 | 132 | 56.5 | 56.5 | 576.5 | 60 | 80.5 | 435.5 | 41              |
| PV7/10-14 | 1.5 / 90L       | 210        | 180 | 11 | 232 | 112 | 58   | 64   | 526   | 60 | 88   | 372   | 35              |
|           | 2.2 / 100L      | 250        | 220 | 14 | 269 | 132 | 58   | 64   | 554.5 | 60 | 82   | 406.5 | 47              |
|           | 3.0 / 100L      | 250        | 220 | 14 | 268 | 132 | 58   | 64   | 583.5 | 60 | 82   | 435.5 | 47              |
|           | 4.0 / 112M      | 250        | 220 | 14 | 310 | 132 | 58   | 64   | 612   | 60 | 82   | 464   | 51              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 359 | 160 | 58   | 64   | 707   | 80 | 82   | 539   | 84              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 359 | 160 | 58   | 64   | 707   | 80 | 82   | 539   | 84              |
| PV7/16-20 | 2.2 / 100L      | 250        | 220 | 14 | 269 | 132 | 68   | 72   | 562.5 | 60 | 92   | 406.5 | 51              |
|           | 3.0 / 100L      | 250        | 220 | 14 | 268 | 132 | 68   | 72   | 591.5 | 60 | 92   | 435.5 | 51              |
|           | 4.0 / 112M      | 250        | 220 | 14 | 310 | 132 | 68   | 72   | 620   | 60 | 92   | 464   | 55              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 359 | 160 | 68   | 72   | 726   | 80 | 103  | 539   | 87              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 359 | 160 | 68   | 72   | 726   | 80 | 103  | 539   | 87              |
| PV7/25-30 | 3.0 / 100L      | 250        | 220 | 14 | 368 | 132 | 92   | 80   | 599.5 | 60 | 116  | 435.5 | 54              |
|           | 4.0 / 112M      | 250        | 220 | 14 | 310 | 132 | 92   | 80   | 628   | 60 | 116  | 464   | 58              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 359 | 160 | 92   | 80   | 734   | 80 | 127  | 539   | 90              |
|           | 7.5 / 132M      | 300        | 260 | 14 | 359 | 160 | 92   | 80   | 734   | 80 | 127  | 539   | 90              |
| PV7/40-45 | 4.0 / 112M      | 250        | 220 | 14 | 310 | 132 | 89   | 94   | 642   | 60 | 113  | 464   | 69              |
|           | 5.5 / 132S      | 300        | 260 | 14 | 359 | 160 | 89   | 94   | 761   | 80 | 137  | 539   | 101             |
|           | 7.5 / 132M      | 300        | 260 | 14 | 359 | 160 | 89   | 94   | 761   | 80 | 137  | 539   | 101             |
| PV7/63-71 | 5.5 / 132S      | 300        | 260 | 14 | 359 | 160 | 105  | 100  | 767   | 80 | 153  | 539   | 104             |
|           | 7.5 / 132M      | 300        | 260 | 14 | 359 | 160 | 105  | 100  | 767   | 80 | 153  | 539   | 104             |

**Dimensions: Type ABAPG-V7 (motor supplier HOYER-MOTORS)**  
(dimensions in mm)

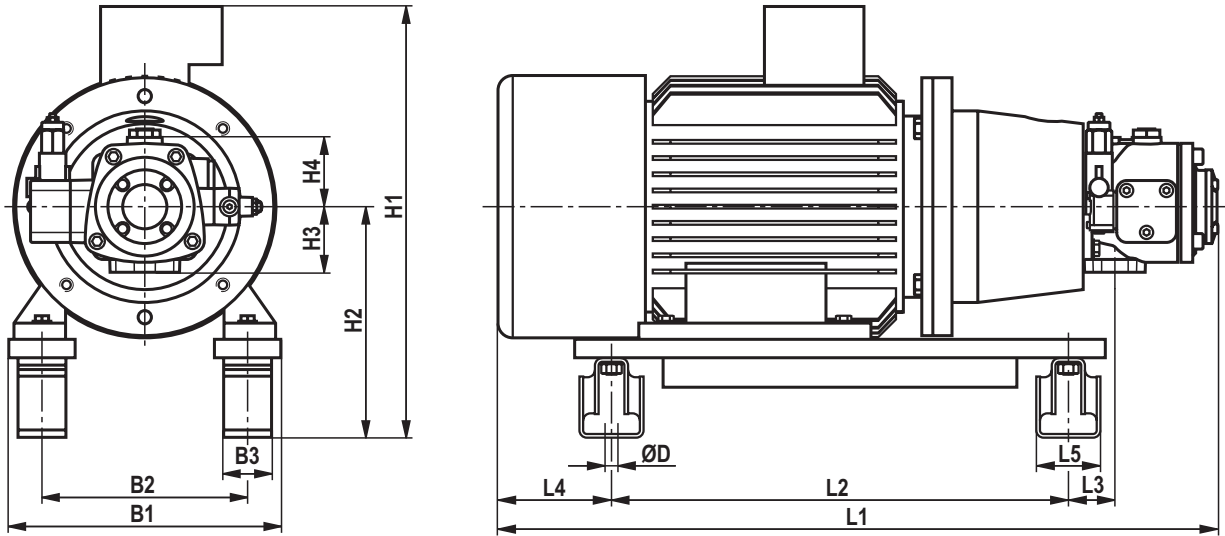


**ABAPG-V7 with motor supplier HOYER-MOTORS**

| Pump        | E-motor         | Dimensions |     |    |      |     |     |     |     |        |     |      |     |       | Weight<br>in kg |
|-------------|-----------------|------------|-----|----|------|-----|-----|-----|-----|--------|-----|------|-----|-------|-----------------|
|             | kW / frame size | B1         | B2  | B3 | ØD   | H1  | H2  | H3  | H4  | L1     | L2  | L3   | L4  | L5    |                 |
| PV7/10-14   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 422 | 235 | 58  | 64  | 658    | 480 | -6   | 78  | 80    | 89              |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 422 | 235 | 58  | 64  | 721    | 480 | -6   | 141 | 55    | 97              |
| PV7/16-20   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 422 | 235 | 68  | 72  | 685    | 480 | 16   | 78  | 80    | 91              |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 422 | 235 | 68  | 72  | 748    | 480 | 16   | 141 | 55    | 99              |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 539 | 263 | 68  | 72  | 866    | 580 | 59   | 107 | 74    | 191             |
| PV7/25-30   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 422 | 235 | 92  | 80  | 697    | 480 | 17   | 78  | 80    | 95              |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 422 | 235 | 92  | 80  | 760    | 480 | 17   | 141 | 55    | 103             |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 539 | 263 | 92  | 80  | 878    | 580 | 60   | 107 | 74    | 195             |
|             | 15.0 / 160L     | 350        | 254 | 50 | 13.5 | 539 | 263 | 92  | 80  | 937    | 580 | 60   | 162 | 63    | 205             |
| PV7/40-45   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 422 | 235 | 89  | 94  | 720    | 480 | 35   | 78  | 80    | 103             |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 422 | 235 | 89  | 94  | 783    | 480 | 35   | 141 | 55    | 111             |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 539 | 63  | 89  | 94  | 888    | 580 | 65   | 107 | 74    | 204             |
|             | 15.0 / 160L     | 350        | 254 | 50 | 13.5 | 539 | 263 | 89  | 94  | 947    | 580 | 65   | 162 | 63    | 214             |
|             | 18.5 / 180M     | 369        | 279 | 65 | 17.5 | 605 | 313 | 89  | 94  | 976.5  | 620 | 63   | 154 | 72.5  | 262             |
|             | 22.0 / 180L     | 369        | 279 | 65 | 17.5 | 627 | 313 | 89  | 94  | 1016.5 | 620 | 63   | 194 | 70.5  | 277             |
| PV7/63-71   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 422 | 235 | 105 | 100 | 744    | 480 | 43   | 78  | 80    | 106             |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 422 | 235 | 105 | 100 | 807    | 480 | 43   | 141 | 55    | 114             |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 539 | 263 | 105 | 100 | 912    | 580 | 73   | 107 | 74    | 210             |
|             | 15.0 / 160L     | 350        | 254 | 50 | 13.5 | 539 | 263 | 105 | 100 | 971    | 580 | 73   | 162 | 63    | 220             |
|             | 18.5 / 180M     | 369        | 279 | 65 | 17.5 | 605 | 313 | 105 | 100 | 1000.5 | 620 | 71   | 154 | 72.5  | 265             |
|             | 22.0 / 180L     | 369        | 279 | 65 | 17.5 | 627 | 313 | 105 | 100 | 1040.5 | 620 | 71   | 194 | 70.5  | 280             |
|             | 30.0 / 200L     | 418        | 318 | 80 | 17.5 | 673 | 360 | 105 | 100 | 1064   | 700 | 38   | 177 | 99    | 369             |
|             | 37.0 / 225S     | 456        | 356 | 80 | 17.5 | 721 | 385 | 105 | 100 | 1117.5 | 800 | -6   | 166 | 107.5 | 421             |
| PV7/100-118 | 11.0 / 160M     | 350        | 254 | 65 | 17.5 | 539 | 293 | 126 | 111 | 967    | 580 | 107  | 107 | 74    | 234             |
|             | 15.0 / 160L     | 350        | 254 | 65 | 17.5 | 539 | 293 | 126 | 111 | 1026   | 580 | 107  | 162 | 63    | 244             |
|             | 18.5 / 180M     | 369        | 279 | 65 | 17.5 | 605 | 313 | 126 | 111 | 1055.5 | 620 | 105  | 154 | 72.5  | 289             |
|             | 22.0 / 180L     | 369        | 279 | 65 | 17.5 | 627 | 313 | 126 | 111 | 1095.5 | 620 | 105  | 194 | 70.5  | 307             |
|             | 30.0 / 200L     | 418        | 318 | 80 | 17.5 | 673 | 360 | 126 | 111 | 1119   | 700 | 71.5 | 177 | 99    | 393             |
|             | 37.0 / 225S     | 456        | 356 | 80 | 17.5 | 721 | 385 | 126 | 111 | 1176.5 | 800 | 31.5 | 166 | 107.5 | 445             |
|             | 45.0 / 225M     | 456        | 356 | 80 | 17.5 | 721 | 385 | 126 | 111 | 1206.5 | 800 | 31.5 | 196 | 102.5 | 475             |
|             | 55.0 / 250M     | 550        | 406 | 80 | 17.5 | 794 | 420 | 126 | 111 | 1276   | 850 | 52.5 | 198 | 94    | 588             |

2D-drawing and 3D-model (STEP) available at <http://www.boschrexroth.com/ics/abapg>

### Dimensions: Type ABAHPG-V7 (motor supplier SIEMENS) (dimensions in mm)



#### ABAPG-V7 with motor supplier SIEMENS

| Pump        | E-motor         | Dimensions |     |    |      |     |     |     |     |        |     |      |     |       | Weight<br>in kg |
|-------------|-----------------|------------|-----|----|------|-----|-----|-----|-----|--------|-----|------|-----|-------|-----------------|
|             | kW / frame size | B1         | B2  | B3 | ØD   | H1  | H2  | H3  | H4  | L1     | L2  | L3   | L4  | L5    |                 |
| PV7/10-14   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 437 | 235 | 58  | 64  | 728    | 480 | -6   | 81  | 129   | 103             |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 437 | 235 | 58  | 64  | 728    | 480 | -6   | 81  | 129   | 103             |
| PV7/16-20   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 437 | 235 | 68  | 72  | 755    | 480 | 16   | 81  | 129   | 105             |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 437 | 235 | 68  | 72  | 755    | 480 | 16   | 81  | 129   | 105             |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 500 | 263 | 68  | 72  | 863    | 580 | 59   | 96  | 79    | 133             |
| PV7/25-30   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 437 | 235 | 92  | 80  | 767    | 480 | 17   | 81  | 129   | 109             |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 437 | 235 | 92  | 80  | 767    | 480 | 17   | 81  | 129   | 109             |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 500 | 263 | 92  | 80  | 875    | 580 | 60   | 96  | 79    | 137             |
|             | 15.0 / 160L     | 350        | 254 | 50 | 13.5 | 500 | 263 | 92  | 80  | 935    | 580 | 60   | 96  | 139   | 154             |
| PV7/40-45   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 437 | 235 | 89  | 94  | 790    | 480 | 35   | 81  | 129   | 117             |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 437 | 235 | 89  | 94  | 790    | 480 | 35   | 81  | 129   | 117             |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 500 | 63  | 89  | 94  | 885    | 580 | 65   | 96  | 79    | 146             |
|             | 15.0 / 160L     | 350        | 254 | 50 | 13.5 | 500 | 263 | 89  | 94  | 945    | 580 | 65   | 96  | 139   | 163             |
|             | 18.5 / 180M     | 369        | 279 | 65 | 17.5 | 575 | 313 | 89  | 94  | 949    | 620 | 63   | 123 | 86    | 237             |
|             | 22.0 / 180L     | 369        | 279 | 65 | 17.5 | 575 | 313 | 89  | 94  | 979    | 620 | 63   | 174 | 65    | 242             |
| PV7/63-71   | 5.5 / 132S      | 300        | 216 | 50 | 13.5 | 437 | 235 | 105 | 100 | 814    | 480 | 43   | 81  | 129   | 120             |
|             | 7.5 / 132M      | 300        | 216 | 50 | 13.5 | 437 | 235 | 105 | 100 | 814    | 480 | 43   | 81  | 129   | 120             |
|             | 11.0 / 160M     | 350        | 254 | 50 | 13.5 | 500 | 263 | 105 | 100 | 909    | 580 | 73   | 96  | 79    | 152             |
|             | 15.0 / 160L     | 350        | 254 | 50 | 13.5 | 500 | 263 | 105 | 100 | 969    | 580 | 73   | 96  | 139   | 169             |
|             | 18.5 / 180M     | 369        | 279 | 65 | 17.5 | 575 | 313 | 105 | 100 | 973    | 620 | 71   | 123 | 86    | 240             |
|             | 22.0 / 180L     | 369        | 279 | 65 | 17.5 | 575 | 313 | 105 | 100 | 1003   | 620 | 71   | 174 | 65    | 245             |
|             | 30.0 / 200L     | 418        | 318 | 80 | 17.5 | 660 | 360 | 105 | 100 | 1057.5 | 700 | 38   | 127 | 132.5 | 334             |
|             | 37.0 / 225S     | 456        | 356 | 80 | 17.5 | 713 | 385 | 105 | 100 | 1075   | 800 | -6   | 140 | 74    | 391             |
| PV7/100-118 | 11.0 / 160M     | 350        | 254 | 65 | 17.5 | 530 | 293 | 126 | 111 | 964    | 580 | 107  | 96  | 87    | 176             |
|             | 15.0 / 160L     | 350        | 254 | 65 | 17.5 | 530 | 293 | 126 | 111 | 1024   | 580 | 107  | 96  | 139   | 193             |
|             | 18.5 / 180M     | 369        | 279 | 65 | 17.5 | 575 | 313 | 126 | 111 | 1028   | 620 | 105  | 123 | 86    | 264             |
|             | 22.0 / 180L     | 369        | 279 | 65 | 17.5 | 575 | 313 | 126 | 111 | 1058   | 620 | 105  | 174 | 65    | 272             |
|             | 30.0 / 200L     | 418        | 318 | 80 | 17.5 | 660 | 360 | 126 | 111 | 1112.5 | 700 | 71.5 | 127 | 132.5 | 358             |
|             | 37.0 / 225S     | 456        | 356 | 80 | 17.5 | 713 | 385 | 126 | 111 | 1130   | 800 | 31.5 | 140 | 74    | 415             |
|             | 45.0 / 225M     | 456        | 356 | 80 | 17.5 | 713 | 385 | 126 | 111 | 1212   | 800 | 31.5 | 200 | 99    | 450             |
|             | 55.0 / 250M     | 550        | 406 | 80 | 17.5 | 812 | 420 | 126 | 111 | 1254   | 850 | 52.5 | 234 | 36    | 587             |

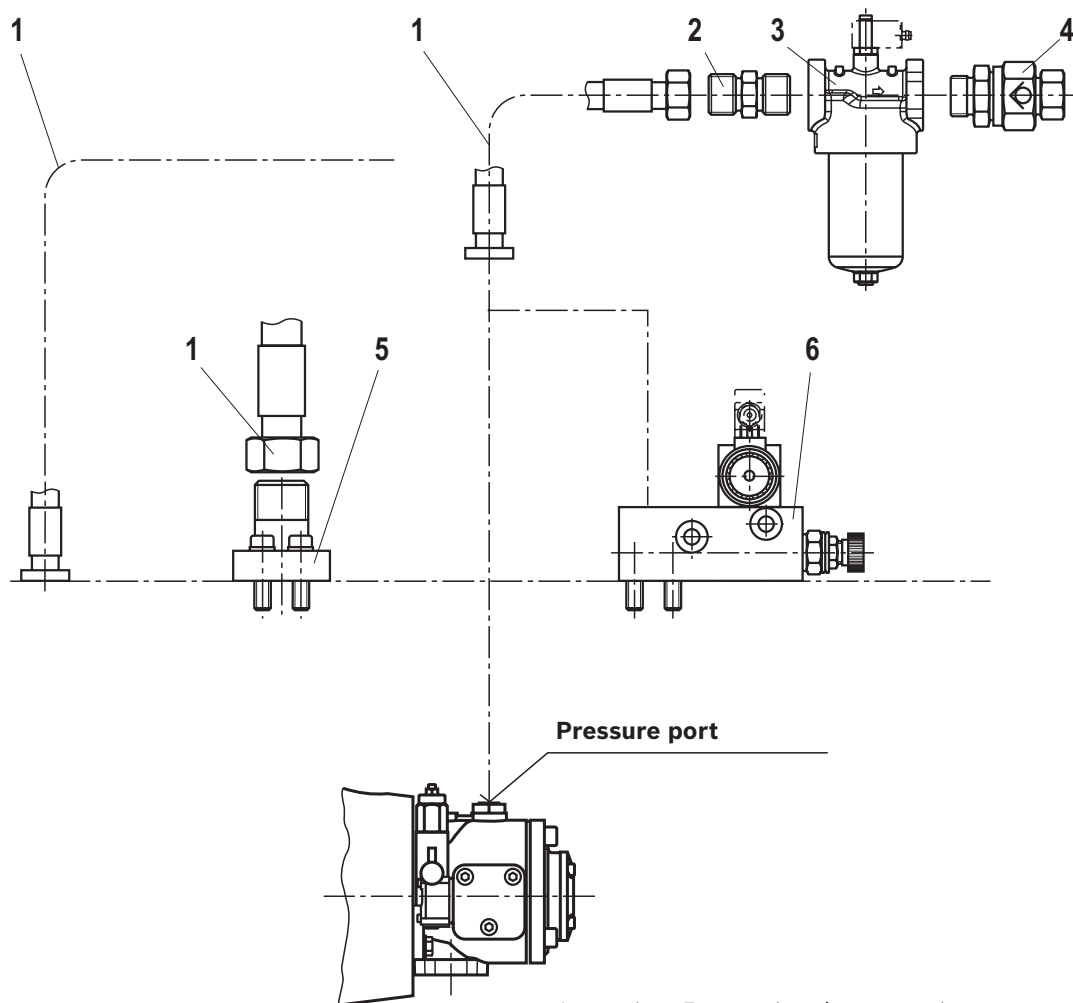
2D-drawing and 3D-model (STEP) available at <http://www.boschrexroth.com/ics/abapg>

## Line connections

| Pump type             | Line connections                        |                                         |                                  |
|-----------------------|-----------------------------------------|-----------------------------------------|----------------------------------|
|                       | Pressure connection<br>P                | Suction port<br>S                       | Leakage oil connection<br>L / L1 |
| <b>PV7-1X/6-10</b>    | ISO 228/1 G 3/8                         | ISO 228/1 G 1/2                         | ISO 228/1 G 1/4                  |
| <b>PV7-1X/10-14</b>   | ISO 228/1 G 1/2                         | ISO 228/1 G 1                           | ISO 228/1 G 1/4                  |
| <b>PV7-1X/16-20</b>   | ISO 228/1 G 3/4                         | ISO 228/1 G 1 1/4                       | ISO 228/1 G 3/8                  |
| <b>PV7-1X/25-30</b>   | ISO 228/1 G 1                           | ISO 228/1 G 1 1/2                       | ISO 228/1 G 3/8                  |
| <b>PV7-1X/40-45</b>   | ISO 228/1 G 1                           | DIN ISO 6162-1 SAE 1 1/2" <sup>1)</sup> | ISO 228/1 G 1/2                  |
| <b>PV7-1X/63-71</b>   | DIN ISO 6162-2 SAE 1 1/4" <sup>1)</sup> | DIN ISO 6162-1 SAE 2" <sup>1)</sup>     | ISO 228/1 G 1/2                  |
| <b>PV7-1X/100-118</b> | DIN ISO 6162-2 SAE 1 1/2" <sup>1)</sup> | DIN ISO 6162-1 SAE 2 1/2" <sup>1)</sup> | ISO 228/1 G 3/4                  |

<sup>1)</sup> Standard pressure SAE flange figure with metric mounting screws

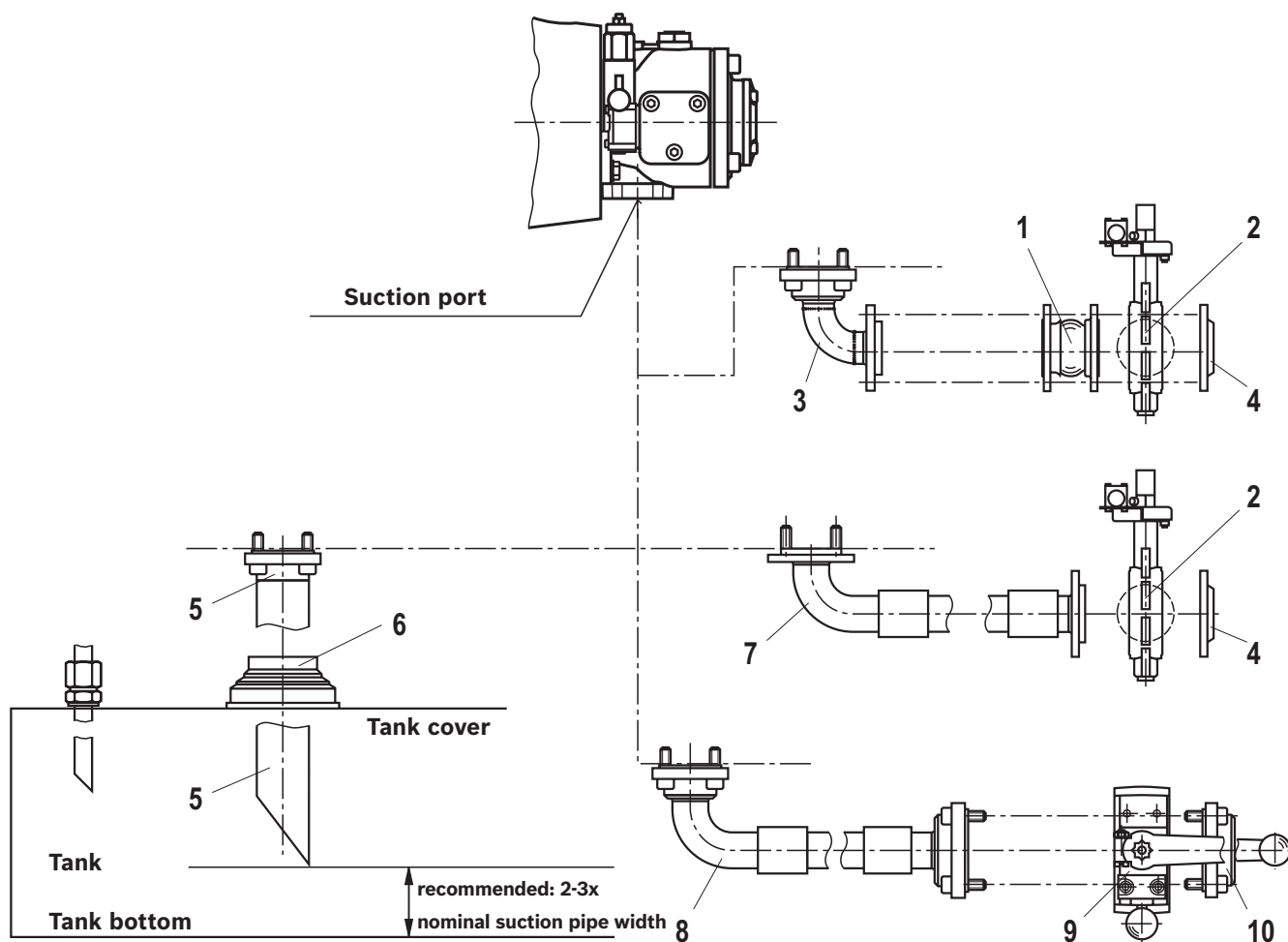
## Optional accessories at the pressure connection



- 1 Hose line AB 02314, AB 02316
- 2 Fitting AB 02012
- 3 In-line filter data sheet 51421; 51422
- 4 Check valve AB 02112
- 5 SAE flange AB 02214
- 6 Intermediate flange only necessary for size 63 and 100

Items 1 to 5 as optional accessories upon request.  
Hydraulic start-up aid pump safety block according to data sheet 25891 (only for size 63 and 100, intermediate flange might be necessary) or pump with controller option 5 (K plate). All figures are examples.

## Optional accessories at the suction port



- 1 Compensator DIN AB 02231
- 2 Shut-off valve DIN AB 02129
- 3 Flange bend SAE-DIN AB 02229
- 4 DIN flange AB 02204
- 5 Suction pipe AB 02303
- 6 Elastic pipe fitting AB 01203

- 7 Suction tube SAE-DIN AB 02315
- 8 Suction tube SAE-SAE AB 02315
- 9 Shut-off valve SAE (on request)
- 10 SAE flange AB 02215

Items 1 to 10 as optional accessories upon request.  
All figures are examples.

## Instructions for transport, installation, commissioning, operation and maintenance

### 1. General safety instructions

#### **⚠ WARNING!**

##### **Risk of injury and property damage due to improper handling of the product!**

If the module is not properly installed, used and maintained, personal injury and damage can occur to the module or system.

- ▶ Installation, adjustment, maintenance and repair of the module may only be performed by authorized, trained and qualified personnel.

Please note:

- ▶ The module may only be used in accordance with the data described in the product documentation!
- ▶ Unauthorized modifications or changes which affect the safety and proper function are not permitted!
- ▶ Existing protective devices must not be removed.
- ▶ The general safety and accident prevention regulations must be observed!

### 2. Transportation and storage

#### Transport

#### **⚠ WARNING!**

##### **Risks of injury caused by tumbling, falling or uncontrolled movement of the module!**

The module can lose its stability in cases of improper transport and thereby tip over, fall or move in an uncontrolled manner.

- ▶ Be aware of the module weight.
- ▶ Place the product on a suitable foundation/ ground.
- ▶ Before removing the existing auxiliary structure make additional suitable measures (e.g. by fasteners or with the help of cranes) for the adequate stability of the module.
- ▶ Only the intended attachment points should be used for fastening or lifting the unit (see Fig.).
- ▶ Modules are never to be attached or raised on the established components (pipes, hoses, control blocks, accumulator, etc.).
- ▶ Observe the maximum load-bearing capacity of the attachment devices and floor conveyors.
- ▶ Ensure that no unauthorized persons are within the danger zone.
- ▶ The module must not be raised on the fan cover of the motor.
- ▶ The eye bolts of the motor must not be used for lifting the module. They are only intended for lifting the motor without additional attachments.
- ▶ Auxiliary eyelets e.g. on fan covers and cooler attachments, are also suitable for lifting the corresponding items must not be used for the transport of the module.



## Instructions for transport, installation, commissioning, operation and maintenance

### Storage

In general it is recommended that the modules are stored as follows until actual installation date:

- ▶ in the original packaging
- ▶ dry and dust-free
- ▶ at room temperature
- ▶ free of vibrations and oscillations
- ▶ protected from light and direct sunlight

### 3. Assembly and installation

- ▶ Position the module as indicated in the dimensions.
- ▶ Attach the product to the designated locations as specified in the dimensions .
- ▶ Always depressurize and deenergize the relevant plant part before assembling the module.
- ▶ Ground the module before connecting and establish equipotential bonding using an equalization strip.
- ▶ Always ensure absolute cleanliness.

### WARNING!

#### **Risk of death by electric shock! Working in the areas of live parts is extremely dangerous.**

Work at the electric system may only be performed by a specialized electrician. Electricians tools (VDE tools) are strictly required.

- ▶ Using a suitable measuring device, check before the beginning of the work whether parts of the system are still under residual voltage (e.g. with capacitors). Wait until they have discharged.

- ▶ Electrical wiring work must be performed by trained specialist personnel in accordance with local regulations!
- ▶ Before starting work, make sure that all electrical connections are switched off and cannot be switched back on again. This also applies to auxiliary circuits such as space heaters.
- ▶ The connections must be made such that a continuous and safe electrical connection is ensured. This applies equally to power and ground connections.
- ▶ Wiring diagrams for the power and accessory connections (e.g. PTC thermistors, heating) are located in the terminal box.
- ▶ Make sure that the terminal box is clean and dry.
- ▶ Unused cable entry glands must be closed off.
- ▶ Check the terminal box seal before refitting.

## Instructions for transport, installation, commissioning, operation and maintenance

### 4. Commissioning

- ▶ Before initial operation the pump must be vented and primed in order to protect internal components from damage.
- ▶ When commissioning or re-commissioning machinery or a system, you should ensure that the tank, as well the suction line and the pressure line of the module are filled with oil according to the manufacturer's instructions and remain filled during operation.
- ▶ Check the direction of rotation of the motor.
- ▶ Ensure that the suction pressure does not fall below the specified minimum.



#### **Notice:**

#### **The module will be damaged by polluted oil!**

#### **Polluted oil could result in wear and malfunctions.**

In particular, foreign matter in the suction line such as welding globules and metallic swarf can damage the module.

- ▶ During commissioning, absolute cleanliness must be ensured.

- ▶ When connecting the measuring terminals ensure that no contaminants infiltrate the module.
- ▶ In order to guarantee functional safety, at least cleanliness class 20/18/15 in accordance with ISO 4406 is necessary. Brand-name hydraulic oils are recommended.



### **CAUTION!**

#### **Commissioning an incorrectly installed product!**

Risk of injury and damage to property!

- ▶ Make sure that all electrical and hydraulic connections

are either connected or closed.

- ▶ Only take a fully installed product with original accessories from Bosch Rexroth into operation.

### 5. Operation

The product is a module which does not require any settings or modifications during operation. As a result, this chapter of the instructions does not contain any information on adjustment options. Only use the

product within the performance range provided in the technical data. The machine manufacturer is responsible for the correct project planning of the module and its control.

### 6. Maintenance

#### **Maintenance**

- ▶ Only genuine spare parts from Bosch Rexroth are permitted.

#### **Cleaning and care**

- ▶ Always ensure absolute cleanliness when working at the product.
- ▶ Do not use high-pressure washers for cleaning.
- ▶ Tightly seal openings such as inspection holes with suitable protective devices and verify that all gaskets and seals on electrical connections are secure so that no detergent can penetrate into the product.
- ▶ Never use solvents or aggressive cleaning agents.
- ▶ Cleaning intervals depend on the degree of contamination occurring locally.

**Necessary and amending documentation**

|                                                                           |                        |         |
|---------------------------------------------------------------------------|------------------------|---------|
| ► Adjustable vane pump, pilot operated                                    | Data sheet             | 10515   |
| ► Vane pump, direct operated                                              | Data sheet             | 10522   |
| ► Pump safety block type DBA, DBAW                                        | Data sheet             | 25891   |
| ► Motor-pump groups -IE2- A10VSO series 31/52                             | Data sheet             | 51170   |
| ► Motor-pump groups -IE2- PV7                                             | Data sheet             | 51171   |
| ► Motor-pump groups -IE2- A4VSO series 10/30                              | Data sheet             | 51172   |
| ► Motor-pump groups -IE2- A10VSO series 32                                | Data sheet             | 51174   |
| ► Motor-pump groups -IE2- PGZ                                             | Data sheet             | 51175   |
| ► Motor-pump groups -IE3- A10VSO series 31/52                             | Data sheet             | 51180   |
| ► Motor-pump groups -IE3- PV7                                             | Data sheet             | 51181   |
| ► Motor-pump groups -IE3- A4VSO series 10/30                              | Data sheet             | 51182   |
| ► Motor-pump groups -IE3- A10VSO series 32                                | Data sheet             | 51184   |
| ► General Operating Instructions for Hydraulic Power Units and Assemblies | Operating instructions | 07009-B |

The documents are available in the Internet under [www.boschrexroth.com](http://www.boschrexroth.com) in the area of Training/Media/Media Directory or from your local distributor.