

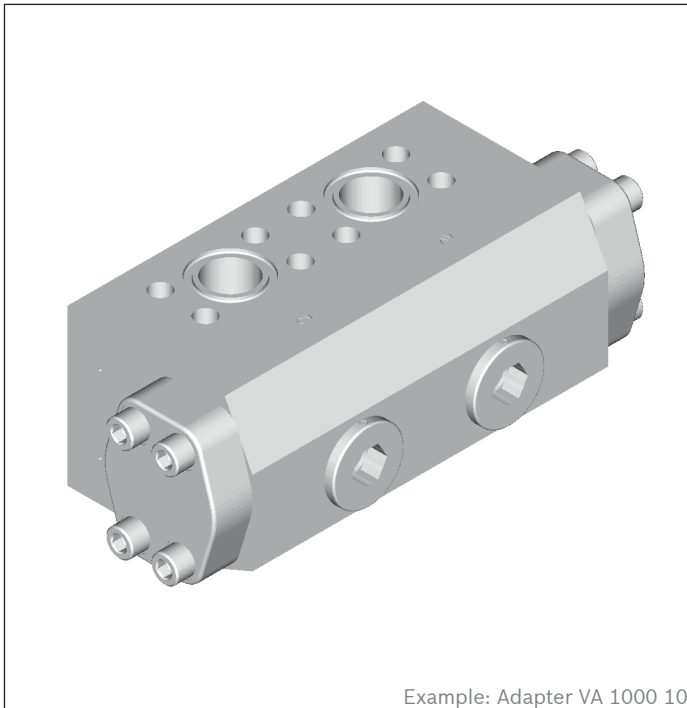
# Valve adapters

## Häggglunds VA 1000

**RE 15383**

Edition: 09.2017

Replaces: 12.2015



- ▶ Valid for Häggglunds motors CA, CB, CBM
- ▶ Maximum flow 1000 l/min (264 gpm)
- ▶ Maximum pressure 350 bar (5076 psi)

**Features**

- ▶ Compact and robust design
- ▶ Possibility to combine the valves and functions with each other
- ▶ Mounted directly on Häggglunds motors

**Contents**

1	Preface .....	2
2	Ordering code .....	3
3	Functional description .....	4
4	Technical data .....	4
4.1	General data .....	4
4.2	Häggglunds VA 1000 1 and VA 1000 2 .....	5
4.3	Häggglunds VA 1000 3 and VA 1000 6 .....	6
4.4	Häggglunds VA 1000 10, -11, -12, -13, -14 .....	7
4.5	Häggglunds VA 1000 15 .....	8
5	Combinations .....	9
5.1	Stack examples .....	9
5.2	Chart for choice of adapters for different combinations: motor -valve, -brake, -tandem .....	10
6	Required and additional documents .....	13




## 1 Preface

### Warning signs

In this manual you will find the following signs which indicate a potential hazard, which can or will cause personal injury or substantial property damage. Depending on the probability of the hazard, and how serious the injury or property damage could be, there are three levels of classification.

<b>Warning sign (warning triangle):</b>	Draws attention to the hazard
<b>Signal word:</b>	Identifies the degree of hazard
<b>Type of risk:</b>	Specifies the type or source of the hazard
<b>Consequences:</b>	Describes the consequences of non-compliance
<b>Precautions:</b>	Specifies how the hazard can be prevented

The signal words have the following meaning:

Warning sign, signal word	Meaning
 <b>DANGER</b>	Indicates a dangerous situation which will cause death or severe personal injuries if not avoided.
 <b>WARNING</b>	Indicates a dangerous situation which may cause death or severe personal injuries if not avoided.
 <b>CAUTION</b>	Indicates a dangerous situation which may cause minor or medium personal injuries if not avoided.
<b>NOTICE</b>	Material damage: the product or its environment could be damaged.

## 2 Ordering code

In order to identify Häggglunds equipment exactly, the following ordering code is used. These ordering codes should be stated in full in all correspondence e.g. when ordering spare parts.

Example: Adapter VA 1000 10:

<b>VA</b>	<b>1000</b>	<b>10</b>
01	02	03

01	<b>Valve adapter</b>	
		<b>VA</b>

02	<b>Maximum flow (l/min)</b>	
	1000	<b>1000</b>

03	<b>Version (See Table 10,Table 11,Table 12)</b>	
	1 Two speed motors CA and valve VTCA 600 for port A1, C1	<b>1</b>
	2 Two speed motors CA and valve VTCA 600 for port A2, C2	<b>2</b>
	3 Minimize total height for valve adapter combination (CA, CB)	<b>3</b>
	6 Minimize total height for valve adapter combination with BICA, MDA and tandem (CA)	<b>6</b>
	10 Included in valve VCBCA 1000, V4WCA 1000 and VFCCA 1000	<b>10</b>
	11 For valve VCBCA 480 in combination with MDA (CA)	<b>11</b>
	12 For valve COCB 1000 in combination with tandem and 4-port connection (CA)	<b>12</b>
	13 For valve VFWCB 600 in combination with tandem CA 100, 140, 210 and MDA	<b>13</b>
	14 For valve CTCA 1000 in combination with CB and for 4-port connection CA	<b>14</b>
	15 For CBM motor (From SAE 2" to SAE 1 1/4")	<b>15</b>

### 3 Functional description

A range of valve adapters are available as accessories to the range of Häggglunds valves and motors. All adapters are designed for a pressure level of 350 bar (5000 psi) and a minimal pressure drop.

Some adapters can be used with tandem mounted motors or where 4 ports are required for the flow. Some adapters is also necessary to provide clearance to some valve- and motor configurations.

Selection of an adapter for a given valve and motor combination, or a combination of two valves, is shown in *chapter 5 Combinations, page 9*

The tables are based on standard adapter including 4-port connection. If 4-port connection is not needed a minimized adapter block height is available.

The adapters are all delivered with the necessary bolts, washers and o-rings to install the valve or the combination of valves indicated.

## 4 Technical data

### 4.1 General data

	Metric	US
<b>Mechanical specification</b>		
Maximum Operating Pressure	350 bar	5 076 psi
Maximum Flow	1000 l/min	264 gpm
<b>Weight</b>		
VA 1000 1, -2	9 kg	19.8
VA 1000 3	8 kg	17.6
VA 1000 6	12 kg	26.5
VA 1000 10	24 kg	52.9
VA 1000 11, -12, -13, -14	27 kg	60.0
VA 1000 15	30 kg	66.1
<b>Surface treatment</b>		
VA 1000 1, -2, -15	Zinc plated and passivated (Cr3)	
VA 1000 3, -6, -10, -11, -12, -13, -14	Black-oxide DIN 50938	

4.2 Hägglands VA 1000 1 and VA 1000 2

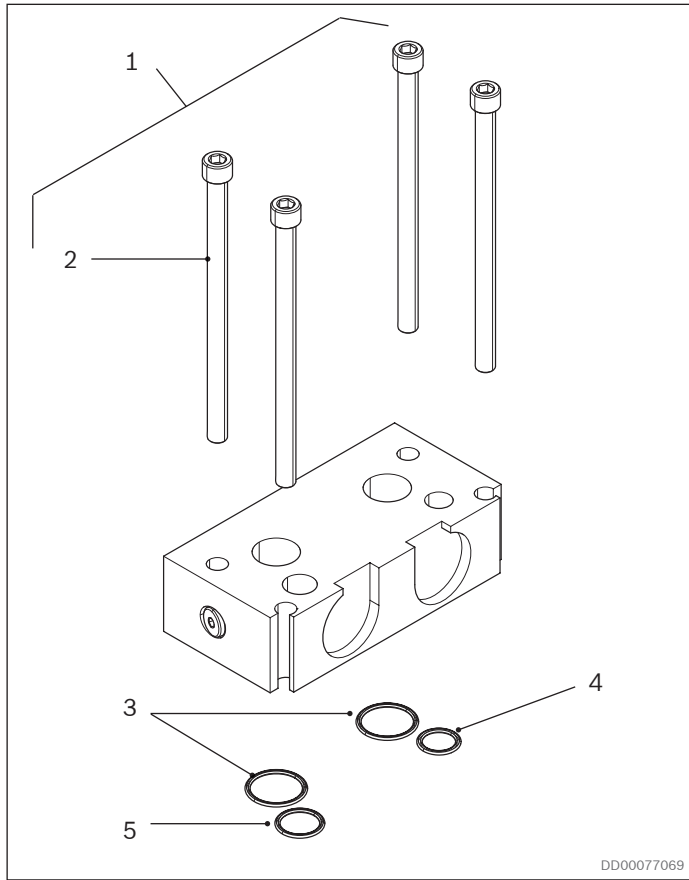


Fig. 1: Valve adapter VA 1000 1

Table 1: Material VA 1000 1 and VA 1000 2

Pos	Material ID	Description	Qty
1	R939002291	Adapter VA 1000 1 (pos 2-5 included)	1
	R939002292	Adapter VA 1000 2 (pos 2-5 included)	
2		Socket head cap screw 1/2 UNC x 178 (7")	4
		Tightening torque 131Nm (97 lbf ft)	
3		O-RING 64X2.62-FPM 70	2
4		O-RING 23,47x2,62 FPM 70	1
5		O-RING 59X2 62 FPM 70	1

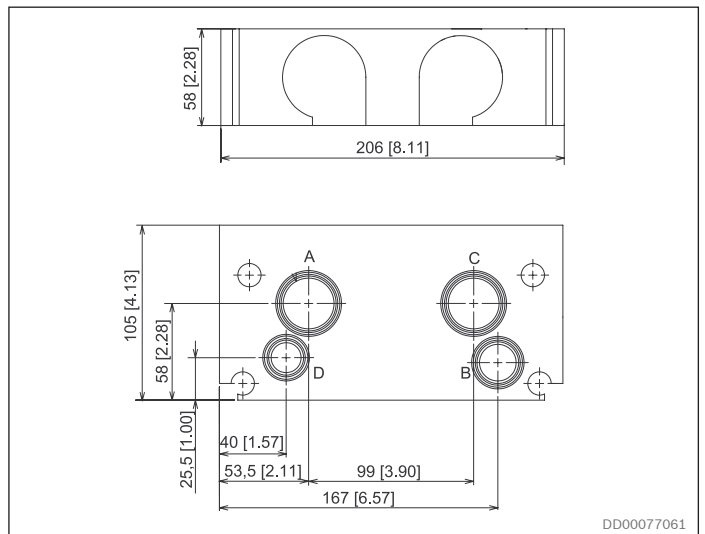


Fig. 4: Dimensions VA 1000 1

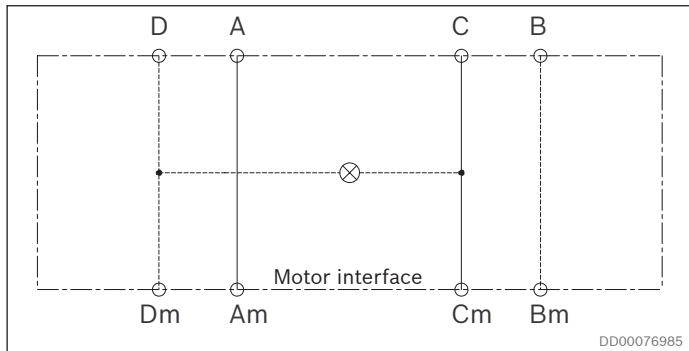


Fig. 2: Hydraulic diagram VA 1000 1

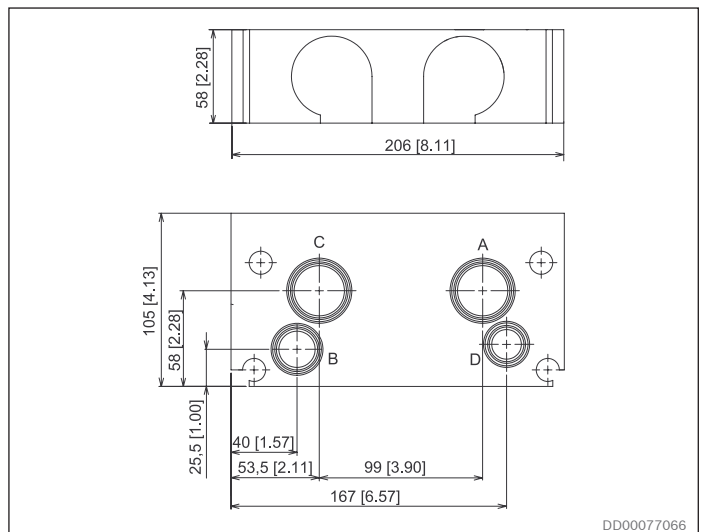


Fig. 5: Dimensions VA 1000 2

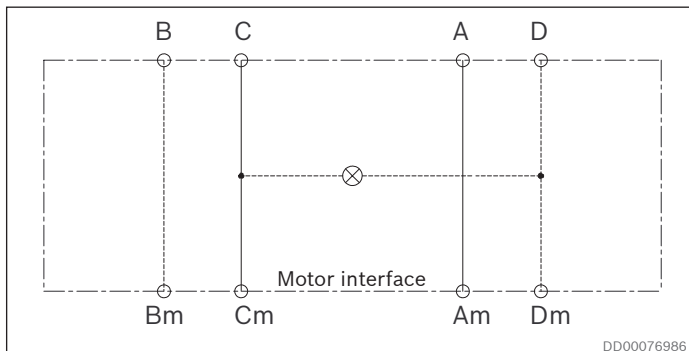


Fig. 3: Hydraulic diagram VA 1000 2

Table 2: Hydraulic port

Ports	Description	Port diameter
Am, Cm	Main motor port	Ø 30.5 mm (1.20")
A, C	Main system port	Ø 30.5 mm (1.20")
B	Main system port	Ø 22 mm (0.87")
D	Drain port	Ø 18 mm (0.71")

4.3 Hägglunds VA 1000 3 and VA 1000 6

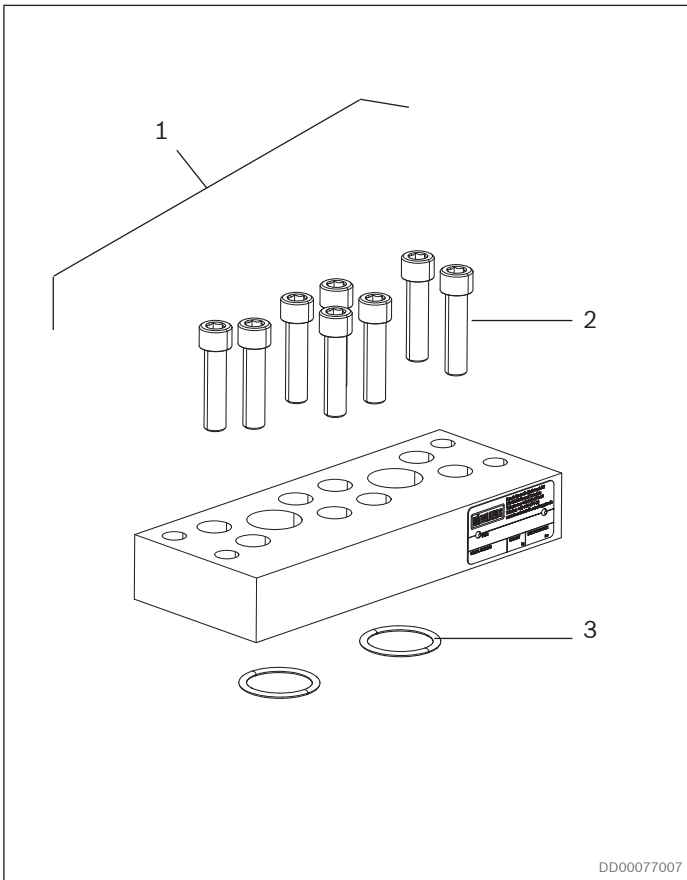


Fig. 6: Valve adapter VA 1000 3

Table 3: Material VA 1000 3

Pos	Material ID	Description	Qty
1	R939000018	Valve adapter Hägglunds VA 1000 3 (pos 2 and 3 included)	1
2		Socket head cap screw, 1/2 UNC x 50.8 (2") Tightening torque 131Nm (97 lbf ft)	8
3		O-ring 40,87x3,53-NBR 90	2

Table 4: Material VA 1000 6

Pos	Material ID	Description	Qty
1	R939000019	Valve adapter Hägglunds VA 1000 6 (pos 2 and 3 included)	1
2		Socket head cap screw, 1/2 UNC x 76.2 (3") Tightening torque 131Nm (97 lbf ft)	8
3		O-ring 40,87x3,53-NBR 90	2

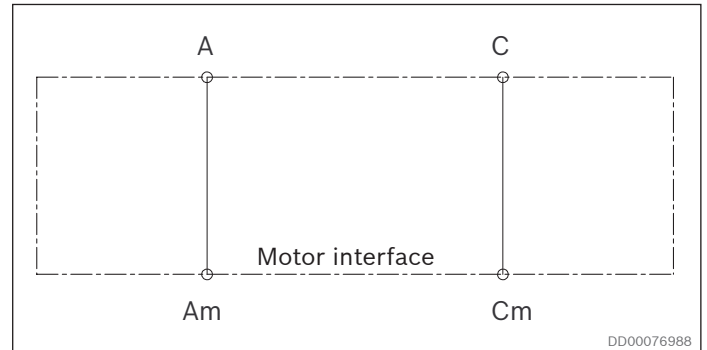


Fig. 7: Hydraulic diagram VA 1000 3 and VA 1000 6

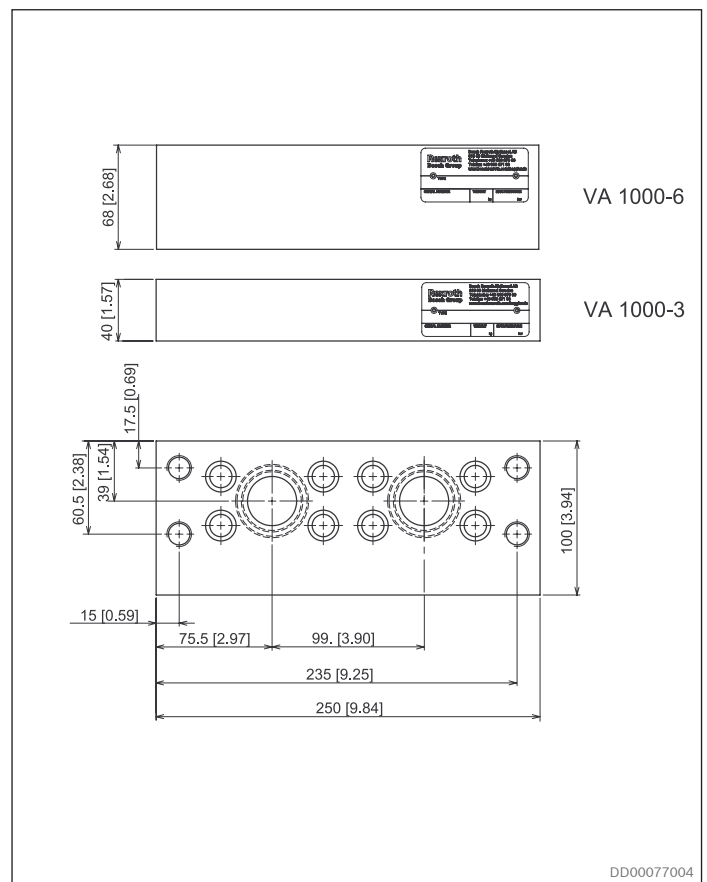


Fig. 8: Dimensions VA 1000 3, -6

Table 5: Hydraulic ports

Port	Description	Port diameter
Am, Cm	Main motor port	Ø 32 mm (1.26")
A, C	Main system port	Ø 32 mm (1.26")

4.4 Hägglands VA 1000 10, -11, -12, -13, -14

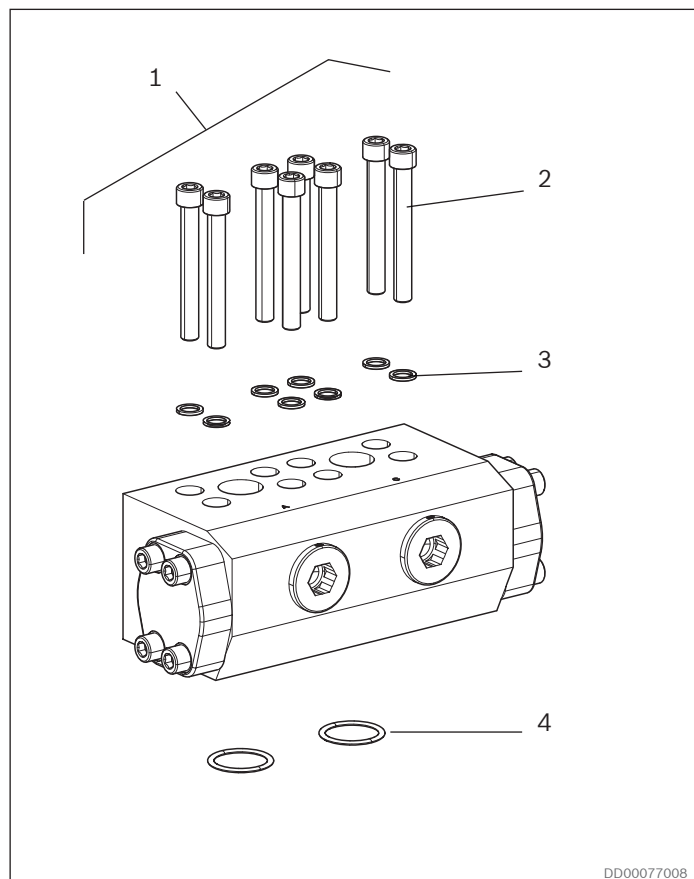


Fig. 9: Valve adapter VA 1000 10, -11, 12, -13, -14

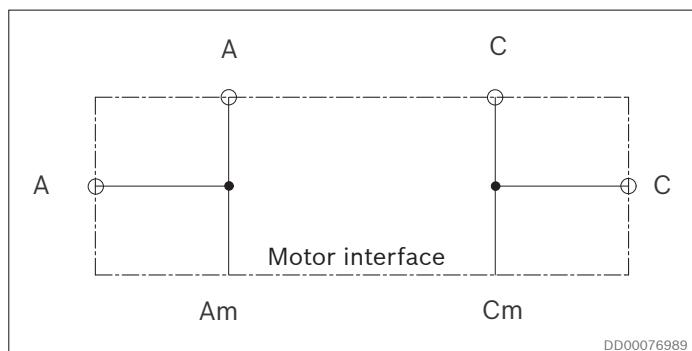


Fig. 10: Hydraulic diagram VA 1000 10, -11, 12, -13, -14

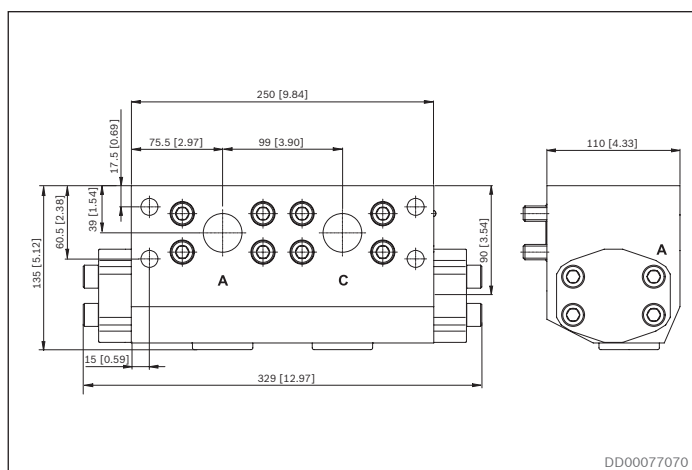


Fig. 11: Dimensions VA 1000 10, -11, 12, -13, -14

Table 7: Hydraulic ports

Port	Description	Port diameter
Am, Cm	Main motor port	SAE 1 1/4" <sup>1)</sup>
A, C	Main system port	SAE 1 1/4" <sup>1)</sup>

<sup>1)</sup> J518C, Code 62, 414 Bar (6000 psi)

Table 6: Material VA 1000 10

Pos	Material ID	Description	Qty [pcs]				
			VA 1000 10	VA 1000 11	VA 1000 12	VA 1000 13	VA 1000 14
1	See „Qty“	Valve adapter Hägglands VA 1000 10-14 (pos 2 to 4 included)	R939000347	R939000348	R939000349	R939000350	R939054724
2		Socket head cap screw, 1/2 UNC x 102 (4") Tightening torque 131Nm (97 lbf ft)	8				
2		1/2 UNC x 214 (8 7/16") Tightening torque 131Nm (97 lbf ft)		8			
2		1/2 UNC x 311 (12 1/4") Tightening torque 131Nm (97 lbf ft)			8		
2		1/2 UNC x 249 (9 13/16") Tightening torque 131Nm (97 lbf ft)				8	
2		5/8 UNC x 360 (14 3/16") Tightening torque 259Nm (191 lbf ft)					8
3		Washer 19/13,5 T=2	8	8	8	8	8
4		O-ring 40.87 x 3,53 NBR 90	2	2	2	2	2

4.5 Hägglunds VA 1000 15

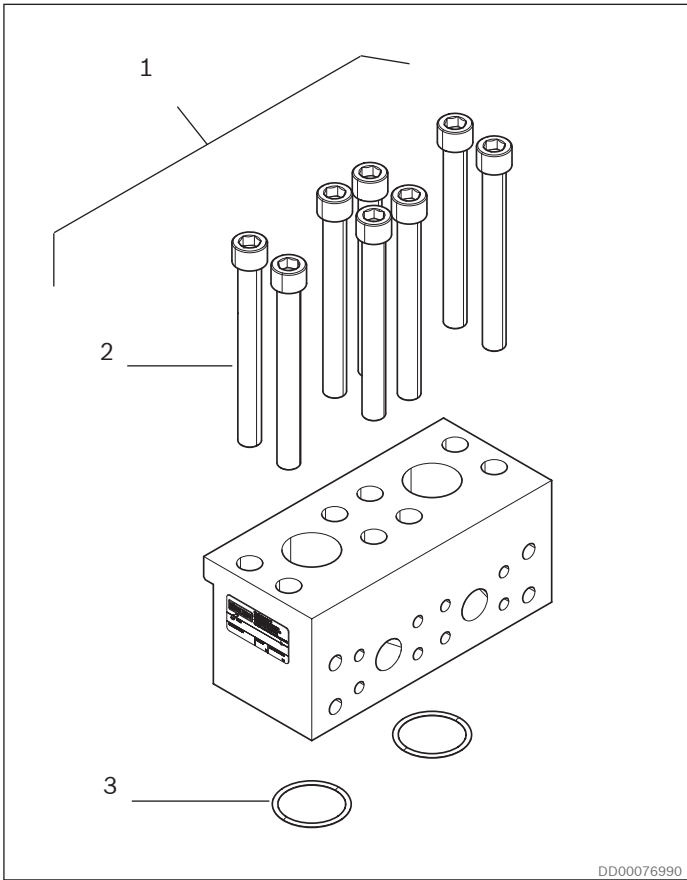


Fig. 12: Valve adapter VA 1000 15

Table 8: Material VA 1000 15

Pos	Material ID	Description	Qty
1	R939011952	Valve adapter Hägglunds VA 1000 15 (pos 2 and 3 included)	1
2		Socket head cap screw, 3/4 UNC x 178 (7")	8
3		O-ring 56,74x3,53 NBR 90	2

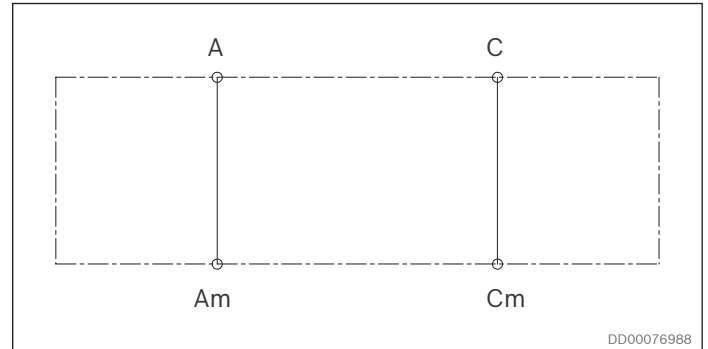


Fig. 13: Hydraulic diagram VA 1000 15

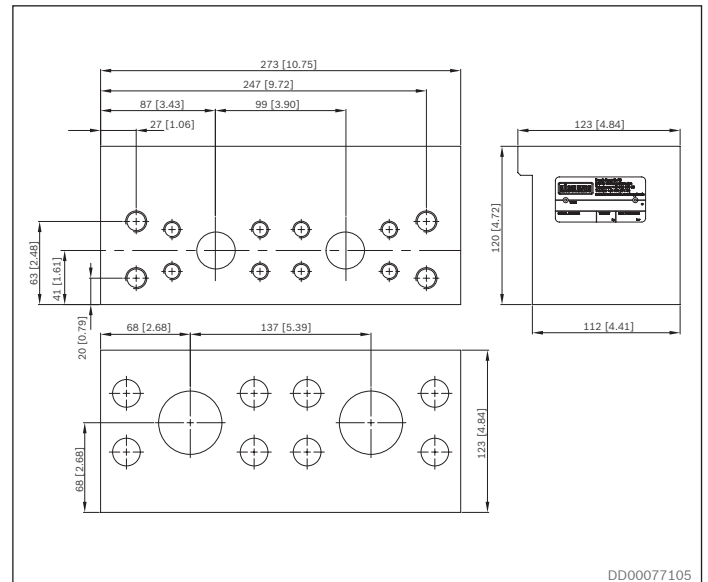


Fig. 14: Dimensions VA 1000 15

Table 9: Hydraulic ports

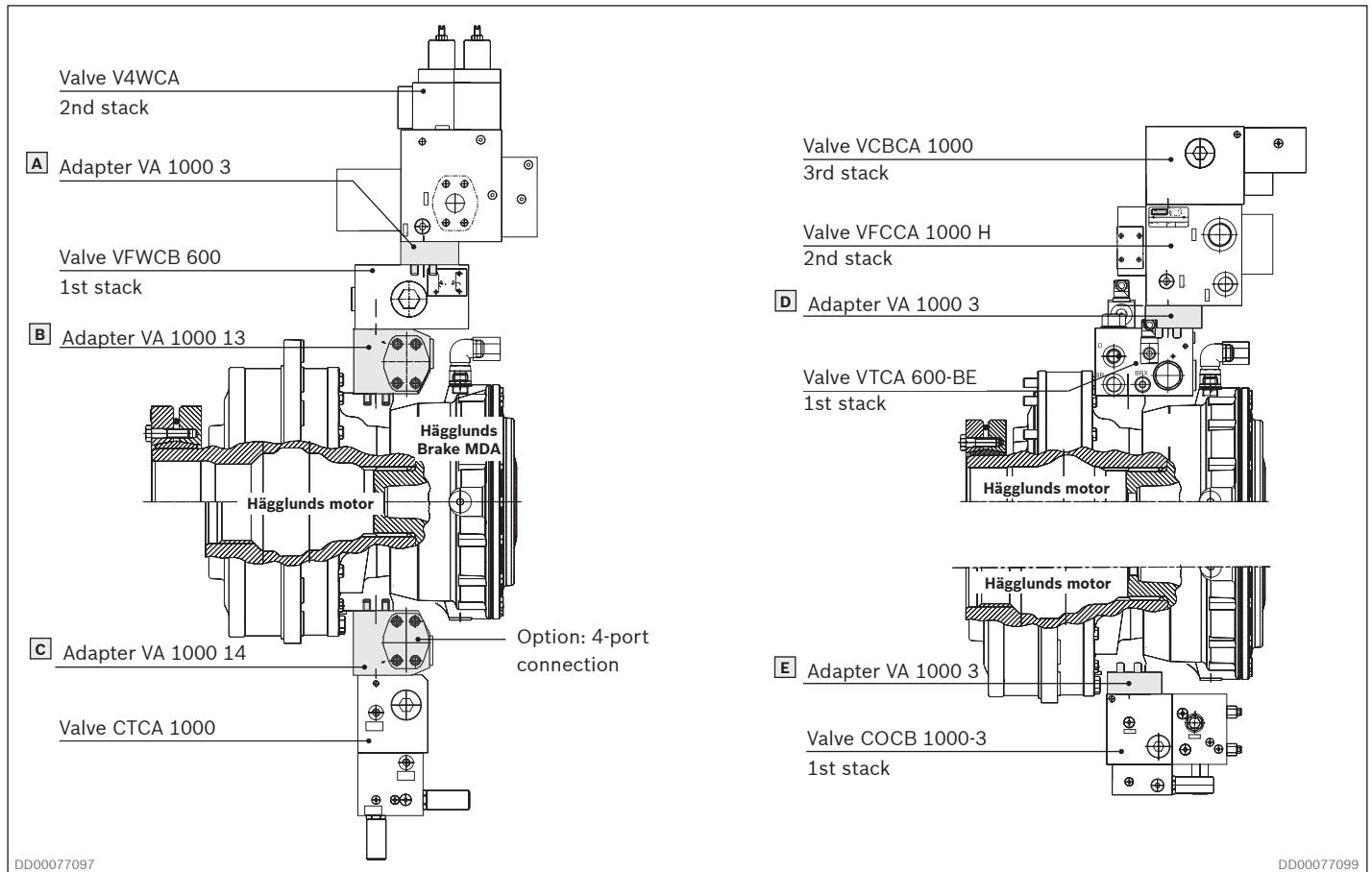
Port	Description	Port diameter
Am, Cm	Main motor connection	SAE 2" <sup>1)</sup>
A, C	Main system connection	SAE 1 1/4" <sup>1)</sup>

<sup>1)</sup> J518C, Code 62, 414 Bar (6000 psi)

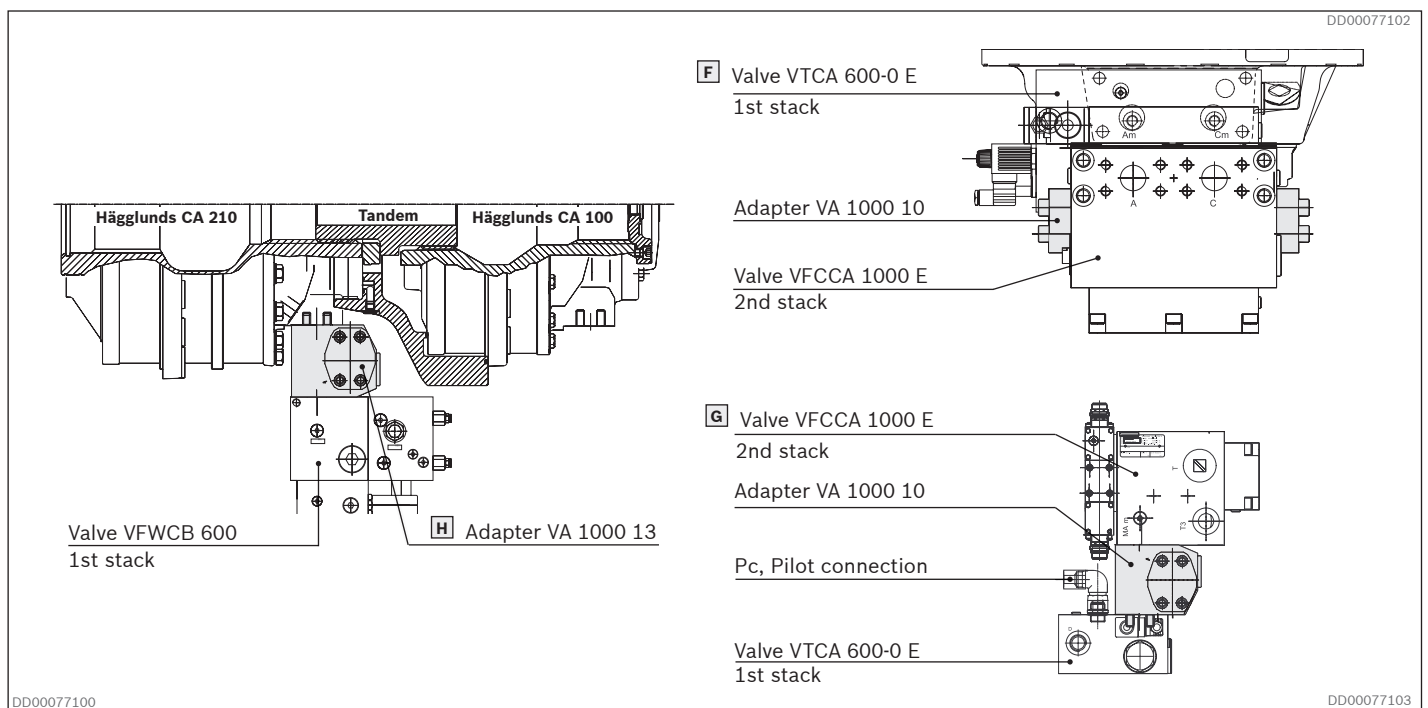


## 5 Combinations

### 5.1 Examples, stacked combinations



**Fig. 15: Stacked combinations valves and adapters with brake.** (Note: A, B, C, D see Table 10 and Table 12)



**Fig. 16: Stacked combinations valves and adapters on Häggglunds tandem and special case for VTCA 600** (Note: F and G see Table 10 and Table 12)

## 5.2 Chart for choice of adapters for different combinations: motor -valve, -brake, -tandem

Table 10: Chart for CA motors

Valve closest to the motor. 1st stack	Option	Hägglunds CA standard motors	Hägglunds CA with tandem units at the back. Valve on the front motor. Hägglunds CA with brake MDA 14 with tandem mounting kit	Hägglunds CA with brake MDA 5/7/10	Hägglunds CA with brake BICA 13/24/37
<b>VTCA 600</b>		No need of adapter	VA 1000 1	No need of adapter	No need of adapter
<b>VCBCA 480</b>		No need of adapter	Not applicable	VA 1000 11	No need of adapter
<b>VCBCA 480 Used with Px and/or Cx ports</b>		No need of adapter	Not applicable	VA 1000 11	For <b>BICA 13</b> use: VA 1000 6,
<b>VCBCA 1000</b>		VA 1000 10 Included in valve	VA 1000 10 Included in valve	VA 1000 10 Included in valve	VA 1000 10 Included in valve
	Minimum height	VA 1000 3	VA 1000 10	VA 1000 10	VA 1000 6
<b>V4WCA 1000</b>		VA 1000 10 Included in valve	VA 1000 10 Included in valve	VA 1000 10 Included in valve	VA 1000 10 Included in valve
	Minimum height	For <b>CA 210</b> use: VA 1000 6	Not applicable	Not applicable	Not applicable
<b>VFCCA 1000</b>		VA 1000 10 Included in valve	VA 1000 10 Included in valve	VA 1000 10 Included in valve	VA 1000 10 Included in valve
	Minimum height	VA 1000 3	Not applicable	VA 1000 6	VA 1000 6
<b>VFWCB 600</b>		No need of adapter	<b>CA 50, 70</b> VA 1000 6 <b>CA 100, 140, 210</b> VA 1000 13 <b>H</b>	VA 1000 13 <b>B</b>	No need of adapter
<b>COCB 1000-1</b>		No need of adapter	No need of adapter	No need of adapter	No need of adapter
	4-port connection	VA 1000 12	VA 1000 12	VA 1000 12	VA 1000 12
<b>COCB 1000-3</b>		No need of adapter	VA 1000 12	VA 1000 3 <b>E</b>	No need of adapter
	4-port connection	VA 1000 12	VA 1000 12	VA 1000 12	VA 1000 12
<b>CTCA 1000</b>		No need of adapter	No need of adapter	No need of adapter	No need of adapter
	4-port connection	VA 1000 14	VA 1000 14	VA 1000 14 <b>C</b>	VA 1000 14
<b>COCA 300</b>		No need of adapter	No need of adapter	No need of adapter	No need of adapter
<b>COCA 300 used with S-port</b>	Minimum height	No need of adapter	VA 1000 6	VA 1000 3	No need of adapter

Table 11: Chart for CB and CBM motors

Valve closest to the motor. 1st stack	Option	Häggglunds CB	Häggglunds CBM
<b>VCBCA 480</b>		No need of adapter	Not applicable
<b>VCBCA 480 Used with Px and / or Cx ports</b>		No need of adapter	Not applicable
<b>VCBCA 1000</b>		VA 1000 10 Included in valve	VA 1000 10 Included in valve VA 1000 15 Not included in valve
	Minimum height	VA 1000 3	Not applicable
<b>V4WCA 1000</b>		VA 1000 10 <sup>1)</sup> Included in valve	VA 1000 10 Included in valve VA 1000 15 Not included in valve
	Minimum height	VA 1000 6 <sup>1)</sup>	Not applicable
<b>VFCCA 1000</b>		VA 1000 10 Included in valve	VA 1000 10 Included in valve VA 1000 15 Not included in valve
	Minimum height	VA 1000 3	Not applicable
<b>VFWCB 600</b>			VA 1000 15
<b>COCB 1000-1</b>		No need of adapte	VA 1000 15
	4-port connection	VA 1000 12	VA 1000 15 Use motor connections A1-A6, C1-C6
<b>COCB 1000-3</b>		No need of adapte	VA 1000 15
	4-port connection	VA 1000 12	Use motor connections A1-A6, C1-C6
<b>CTCA 1000</b>		No need of adapte	VA 1000 15
	4-port connection	VA 1000 14	VA 1000 15 Use motor connections A1-A6, C1-C6

<sup>1)</sup> Not available to Häggglunds CB when using mounting set for rotation speed sensor SMCB 3 (ATEX)

**Two or more valve combinations**

Applies to installations where more than one valve is mounted stacked together on a Hägglunds CA, CB, CBM.

**Note! Valve adapter VA 1000 10 is included in valves VFCCA 1000 x, V4WCA and VCBCA 1000, as standard**







**Table 12: Stacked valves**

	3rd in stack	VCBCA 1000 or V4WCA Add 4 x screw *)	VCBCA 1000 or V4WCA Add 4 x screw *)	None	None
	2nd in stack	VFCCA 1000 H	VFCCA 1000 E	V4WCA	VCBCA 1000
<b>1st in stack (Valve closest to the motor)</b>	<b>Option</b>				
<b>VTCA 600 0 H</b>	Minimum height	VA 1000 3	VA 1000 3	VA 1000 3	VA 1000 3
<b>VTCA 600 0 E</b>	Minimum height	VA 1000 3	VA 1000 10 <sup>2)</sup> <b>F</b> <b>G</b>	VA 1000 3	VA 1000 3
<b>VTCA 600 B E</b>	Minimum height	VA 1000 3 <b>D</b>	VA 1000 6	VA 1000 10 Included in valve V4W- CA	VA 1000 3
<b>VFWCB 600</b>	Minimum height	Not applicable	Not applicable	VA 1000 3 <b>A</b>	VA 1000 3

<sup>2)</sup> VA 1000 10 must be used for stacked valves VTCA 600 to give access to cabling and oil connections.

\*) ISO4762 - M16x320 - 12.9 Material id. R913022429

## 6 Required and additional documents

	<b>Title</b>	<b>Document no</b>	<b>Document type</b>
	VA 1000 1	078 3926	Dimension drawing
	VA 1000 2	078 3927	Dimension drawing
	VA 1000 3	078 3928	Dimension drawing
	VA 1000 6	078 3929	Dimension drawing
	VA 1000 10, -11, -12, -13, -14	141 0400	Dimension drawing
	VA 1000 15	041 0675	Dimension drawing

Documents at Bosch Rexroth Media Directory

\*) Documents only available at LHD extranet. Contact your Bosch Rexroth representative for information.





Bosch Rexroth AB  
895 80 Mellansel, Sweden  
Tel: +46 (0) 660 870 00  
Fax: +46 (0) 660 871 60  
documentation.mll@boschrexroth.se  
www.boschrexroth.com

The data specified above only serve to describe the product. As our products are constantly being further developed, no statements concerning a certain condition or suitability for certain application can be derived from our information. The information given does not release the user from the obligation of own judgement and verification. It must be remembered that our products are subject to a natural process of wear and aging.