

Torque arms

# Häggglunds TC A, DTCA, DTCB, DTCBM



## VALID FOR:

- Häggglunds Atom, CA, Quantum, CBp, CBm

## FEATURES

- Easy mounting i.e. no alignment problems, couplings and bed plates are eliminated.
- Fast mounting of motor to driven shaft.
- Robust torque-transmitting.
- Controlled external forces on driven shaft.
- Space saving. i.e. close mounting to the driven machine.
- Take up radial and axial movements on driven shaft.
- Reduction of external force on driven shaft with double ended torque arm type DTC.
- As option: Electrical isolated articulated connection to avoid current from passing through the hydraulic motor.
- As option: Heavy duty designed articulated connection.

Contents

1	<b>Preface.....</b>	<b>2</b>
2	<b>Ordering code .....</b>	<b>3</b>
2.1	Single ended torque arm TC A.....	3
2.2	Double ended torque arm DTC .....	4
3	<b>Functional description .....</b>	<b>6</b>
3.1	Single ended torque arm .....	6
3.2	Double ended torque arm .....	7
4	<b>Technical data .....</b>	<b>8</b>
4.1	General data.....	8
4.2	Painting system .....	9
5	<b>Dimensions/interface.....</b>	<b>10</b>
5.1	TC A .....	10
5.2	DTC .....	12
5.3	Electrical isolated articulated connection.....	14
5.4	Heavy duty designed articulated connection.....	15
6	<b>External forces.....</b>	<b>16</b>
7	<b>Installation .....</b>	<b>20</b>
7.1	Single ended torque arm .....	20
7.2	Double ended torque arm .....	21
8	<b>Required and additional documents .....</b>	<b>22</b>




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 if the hazard, and how serious the injury or property damage could be, there are three levels if 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

### 2.1 Single ended torque arm TC A

In order to identify Hägglunds 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: Single ended torque arm TC A:

<b>TC</b>	<b>A</b>	<b>0070</b>	<b>2</b>	<b>0</b>	<b>00</b>
01	02	03	04	05	06

01	Torque arm (see 3.1)												
	Torque arm												TC
02	Type												
													A
03	For motor frame size												
	AM 10, AM 20												0020
	AM 30, AM 40												0040
	CA 50												0050
	CA 70												0070
	CA 100												0100
	CA 140, CA 210, CBp 140												0210
	QM 280, QM 400, CBp 280, CBp 400 F												0400
	QM 560, QM 840, CBp 400 C, CBp 560, CBp 840												0840
	QM 1120												1120
	CBm 2000												2000
	CBm 3000/4000												4000
04	Articulated connection	0020	0040	0050	0070	0100	0210	0400	0840	1120	2000	4000	
	Standard (see Fig. 2)	●	●	●	●	●	●	●	●	●	●	●	2
	Electrical isolated (see 5.3)	–	–	–	–	–	–	●	●	●	●	●	4
	Heavy duty designed (see 5.4)	–	–	●	●	●	●	●	●	–	–	–	5
05	Modification												
	Current modification												0
06	Design												
	Standard												00
	Special index												01-99

● = Available      – Not available

AM = Atom motor series

QM = Quantum motor series

C = Centre mounted

F = Front mounted

2.2 Double ended torque arm DTC

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: Double ended torque arm DTCB\_

DTC	B_		0400		05		2		0		00
01	02		03		04		05		06		07

01	Torque arm (see 2.2)			
	Double ended torque arm		DTC	
02	Motor series			
	CA		A_	
	QM, CBp		B_	
	CBm		BM	
03 04	For motor size		03 (size torque arm)	04 (cylinder type)
	CA 50 20 to CA 50 50		0050	01
	CA 70 40 to CA 70 70		0070	
	CA 100 40 to CA 100 100		0100	02
	CA 140 80 to CA 140 140		0140	03
	CA 210 160 to CA 210 210		0210	04
	QM 280 240 ,QM 400 240, CBp 280 240, CBp 400 240 F		0400	05
	QM 280 280, QM 400 280, QM 400 320, CBp 280 280, CBp 400 280 F, CBp 400 320 F			06
	QM 400 360, CBp 400 360 F			07
	QM 400 400 to QM 400 560, CBp 400 400 F			08
	CBp 400 240 C to CBp 400 360 C		1120	05
	QM 560 440 to QM 560 480, CBp 400 400 C, CBp 560 440 to CBp 560 480			06
	QM 560 520 to QM 560 560,CBp 560 520 to CBp 560 560			09
	QM 840 600, CBp 840 600			08
	QM 840 640 to QM 840 760, CBp 840 640 to CBp 840 760			10
	QM 840 800 to QM 840 840 QM 1120 880 to QM 1120 1120, CBp 840 800 to CBp 840 840			11
	CBm 2000 1200		1600	12
	CBm 2000 1400 to CBm 2000 1600			13
	CBm 2000 1800		2600	13
	CBm 2000 2000 to CBm 3000 2200			14
	CBm 3000 2400 to CBm 3000 2600			15
	CBm 3000 2800 to CBm 3000 3000		3600	15
	CBm 4000 3200 to CBm 4000 3600			16
	CBm 4000 3800 to CBm 4000 4000		4000	16
	CBm 5000 4600		4600	17
	CBm 5000 5000 to CBm 6000 5600		5600	17
CBm 6000 6000		6000	17	

C = Center mounted  
 F = Front mounted

05	<b>Attachment</b>	
	Standard: With mounting screws, washers, articulated connection, hydraulic cylinder and hose kit (see Fig. 3, Fig. 4)	<b>2</b>
	Option: Electrical isolated articulated connection and hydraulic cylinder with mounting screws, washers and hose kit <sup>1)</sup> (see 5.3)	<b>4</b>
06	<b>Modification</b>	
	Current modification	<b>0</b>
07	<b>Design</b>	
	Standard	<b>00</b>
	Special index	<b>01-99</b>

<sup>1)</sup> Available for torque arm sizes 1120 to 4000. For other sizes on request

### 3 Functional description

#### 3.1 Single ended torque arm

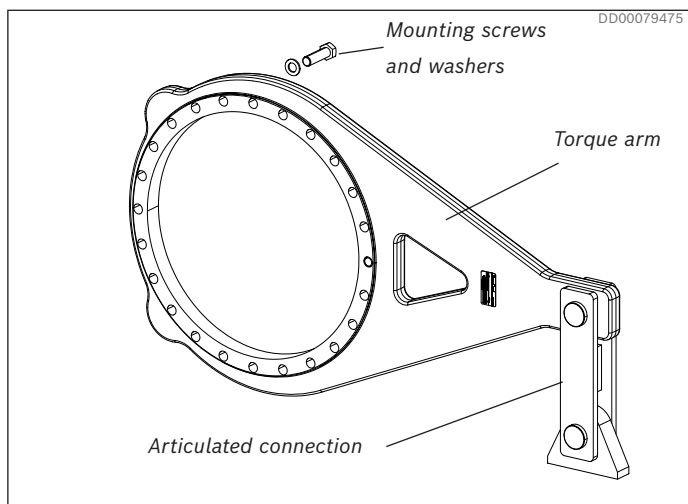
If the driven machine can stand the forces generated by the Hägglunds single ended torque arm arrangement, the Hägglunds single ended torque arm is an easy and favorable mounting solution for the Hägglunds hydraulic motor.

The torque arm transmits the force generated by the hydraulic motor in to a fixed point. The length of the torque arm determine the force  $F_r$  (see Fig. 14) on motor and driven shaft.

The standard torque arm kit consists of the torque arm, screws, washers and an articulated connection.

The articulated connection is a flexible link which allows the motor to follow the rotation of customer shaft within specified limits of misalignment and eccentricity.

See 7 Installation



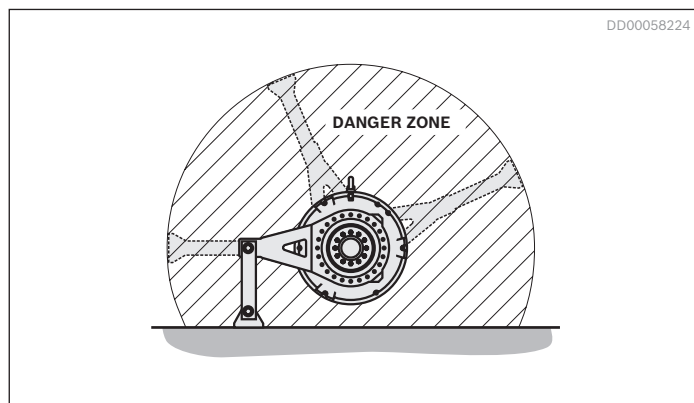
**Fig. 2: Example standard, single ended torque arm with mounting screws, washers and articulated connection**

## ! DANGER

#### Articulated connection rotates with the motor!

Risk to life and risk of injury or serious injuries and risk of damage to equipment! (see Fig. 1)

- Make sure the foundation and the customer machine, can withstand the forces from the torque arm.  
See Fig. 14 and Table 7 for single ended torque arms ,  
Fig. 15 and Table 8 for double ended torque arms.



**Fig. 1: Danger zone**

#### Note!

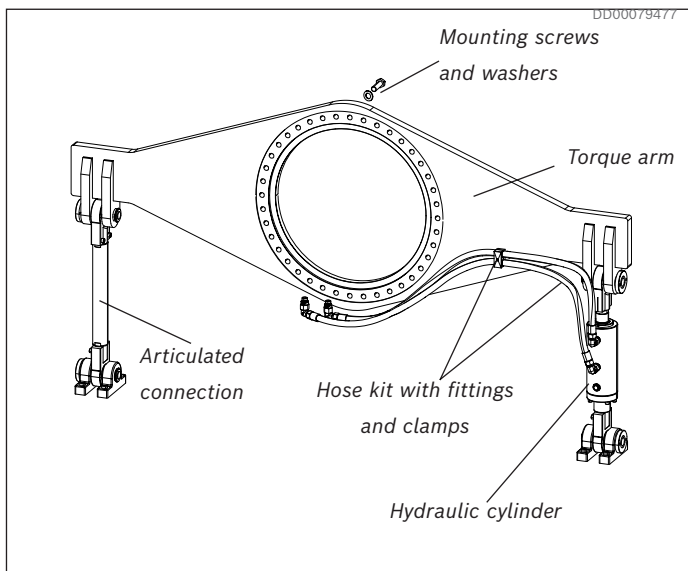
Mounting screws part of the motor for frame sizes AM 10, AM 20, CA 50, CA 70, QM 280, QM 400, CBp 280

For CBp 400 screws must be ordered separately!

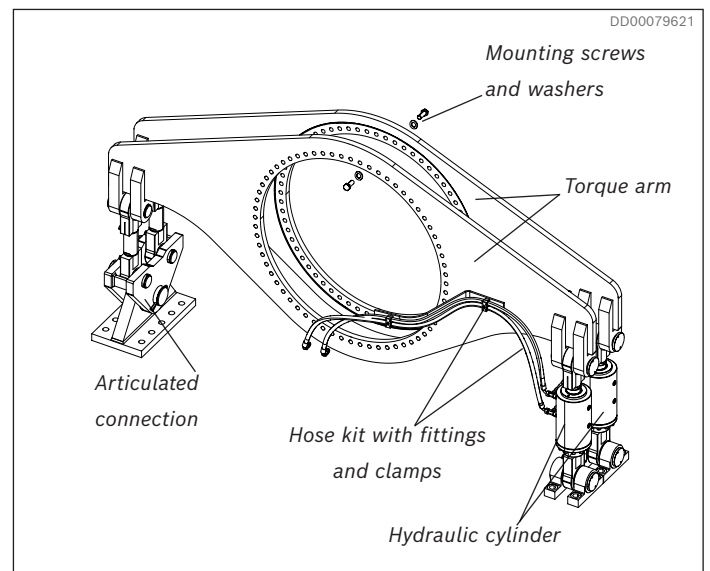
### 3.2 Double ended torque arm

If the driven machine or the driven shaft can not withstand the external forces generated by a single ended torque arm arrangement (see Fig. 14 and Table 7). In such a case a double ended torque arm is the optional solution.

One end of the torque arm is fixed with a articulated connection. The other end of the torque arm is equipped with a double acting hydraulic cylinder connected to the main pressure ports of the motor. By sizing the cylinder area and the torque arm length the differential pressure on the cylinder area equalize the forces in both ends of the torque arm and consequently limited forces are acting on the driven machine shaft.



**Fig. 3: Double ended torque arm, DTCA , DTCB and DTCBM 1600 to DTCBM 4000**



**Fig. 4: Double ended torque arm, DTCBM 4600 to DTCBM 6000**

## 4 Technical data

### 4.1 General data

**Table 1: General data for single ended torque arms**

Torque arm	Max torque for alternating or pulsating torque		Max torque static		Weight <sup>1)</sup>	
	Nm	lb·ft	Nm	lb·ft	Kg	lb
TC A 0020	8 750	6 454	10 500	7 744	18	40
TC A 0040	14 000	10 326	16 800	12 391	20	44
TC A 0050	17 500	12 900	21 000	15 489	28	62
TC A 0070	24 500	18 100	29 400	21 684	31	68
TC A 0100	35 000	25 800	42 000	30 978	91	200
TC A 0210	70 000	51 600	84 000	61 955	81	179
TC A 0400	140 000	103 200	168 000	123 910	162	357
TC A 0840	294 000	216 700	352 800	260 211	223	492
TC A 1120	392 000	289 000	470 400	346 949	344	759
TC A 2000	700 000	516 300	840 000	619 551	450	992
TC A 4000	1 400 000	1 032 600	1 680 000	1 239 103	1 085	2392

**Table 2: General data for double ended torque arms**

Torque arm	Max torque for alternating or pulsating torque		Max torque static		Weight <sup>1)</sup>	
	Nm	lb·ft	Nm	lb·ft	Kg	lb
DTCA 0050	17 500	12 900	21 000	15 489	95	209
DTCA 0070	24 500	18 100	29 400	21 684	100	220
DTCA 0100	35 000	25 800	42 000	30 978	135	297
DTCA 0140	70 000	51 600	84 000	61 955	155	341
DTCA 0210	73 500	54 210	88 200	65 052	162	357
DTCB 0400	196 000	216 700	350 000	258 146	500	1 102
DTCB 1120	392 000	289 124	470 400	346 949	500	1 102
DTCBM 1600	560 000	413 100	672 000	495 642	740	1 631
DTCBM 2600	1 050 000	774 441	1 260 000	929 328	950	2 094
DTCBM 3600	1 260 000	939 328	1 512 000	1 115 194	950	2 094
DTCBM 4000	1 400 000	1 032 587	1 680 000	1 239 103	1 130	2 491
DTCBM 4600	1 610 000	1 187 475	1 932 000	1 424 970	1 760	3 880
DTCBM 5600	1 960 000	1 445 622	2 352 000	1 734 746	1 960	4 321
DTCBM 6000	2 100 000	1 548 881	2 520 000	1 858 654	2 170	4 784

**<sup>1)</sup> Single ended torque arm with articulated connection and double ended torque arm with articulated connection and hydraulic cylinder**



## 4.2 Painting system

The painting system of Hägglands motors and accessories are available in three different corrosivity categories regarding corrosion protection in accordance with SS-EN ISO 12944:

- C3 - Corrosivity category Medium - which is recommended for normal urban and industrial atmosphere
- C5 - Corrosivity category Very High - which is recommended for coastal environment with high salinity or aggressive industrial atmosphere
- CX - Corrosivity category Extreme - which is recommended for extreme industrial areas, offshore environment with high salinity or extreme humidity

### Colour

Standard colour for Hägglands motors and accessories is orange (RAL 2002)

5
Dimensions/interface

5.1
TC A

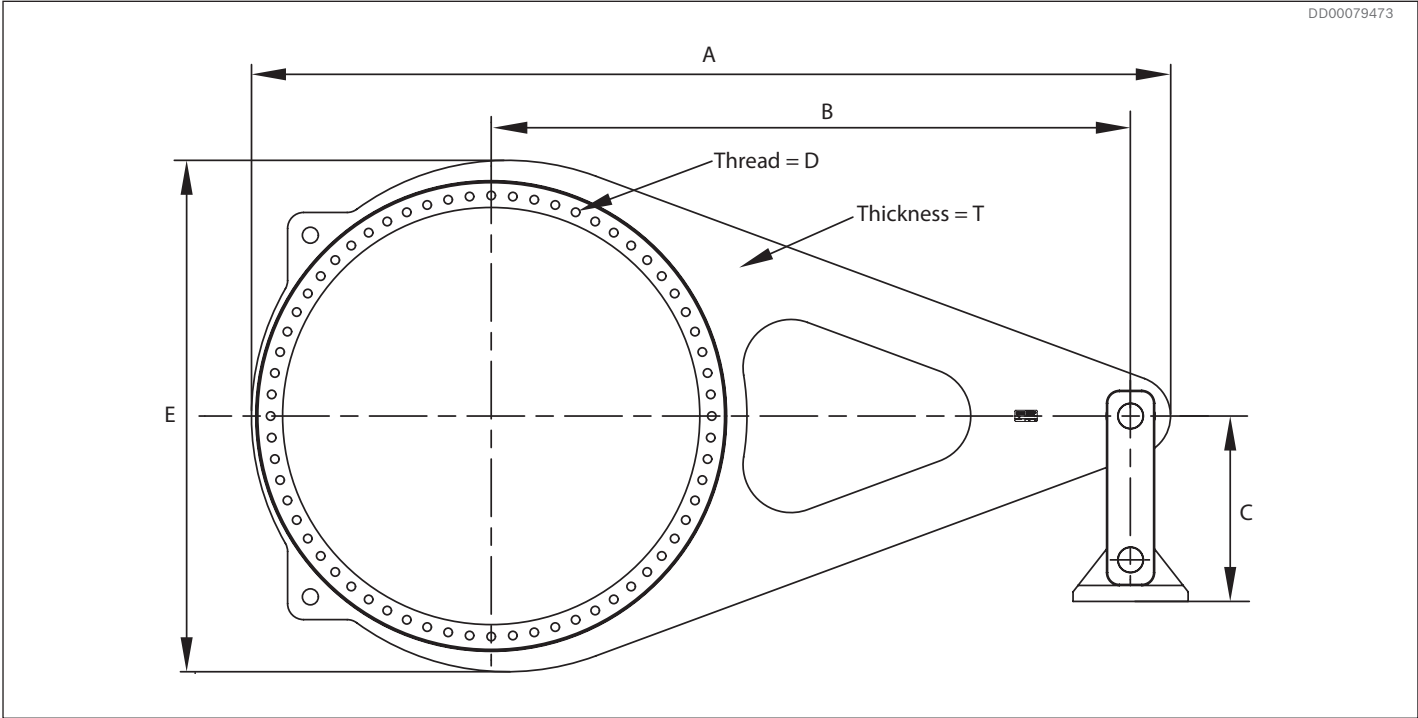
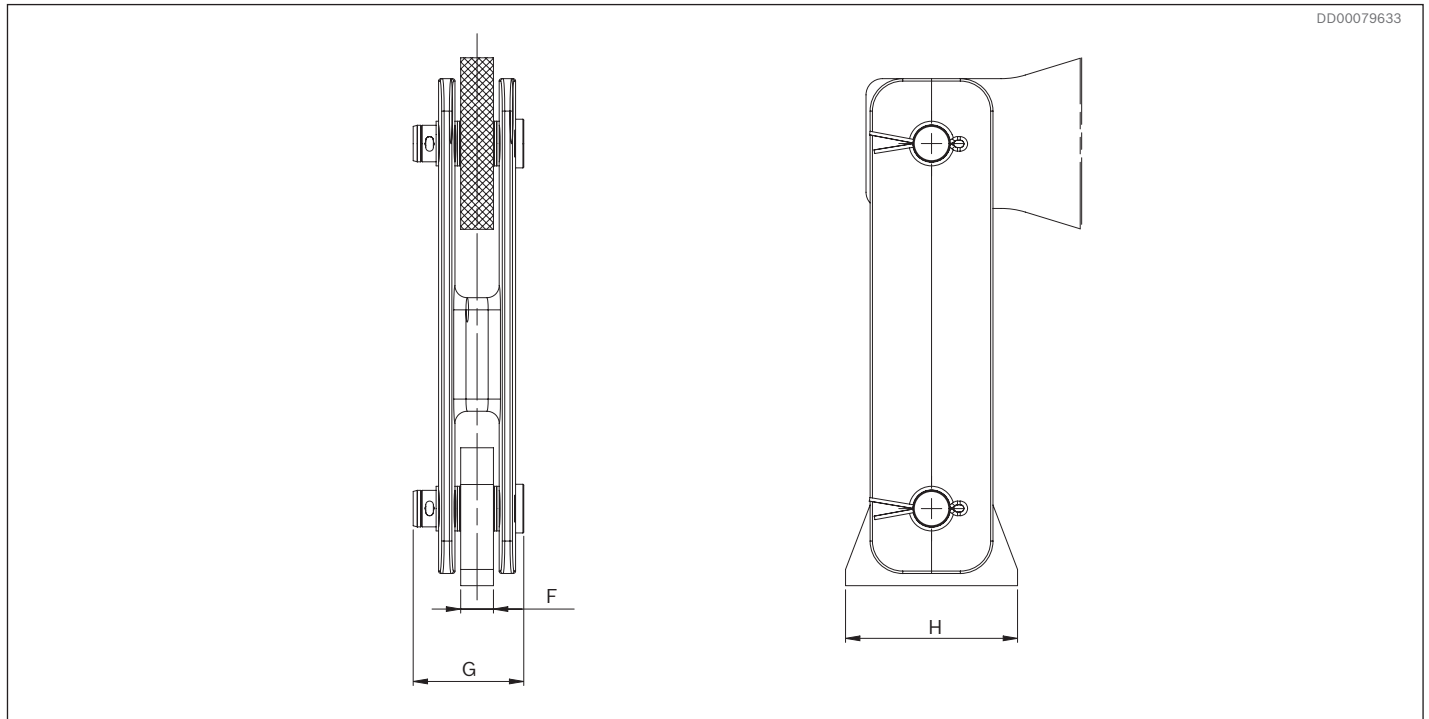


Fig. 5: Dimensions torque arm TC A

Table 3: Dimensions torque arm TC A

Torque arm	A		B		C		D	E		T	
	mm	in	mm	in	mm	in		mm	in	mm	in
TC A 0020	603	23.74	400	15.75	250	9.84	M10	325	12.80	25	0.98
TC A 0040	603	23.74	400	15.75	250	9.84	M10	380	14.96	25	0.98
TC A 0050	890	35.04	600	23.62	340	13.39	M16	500	19.69	25	0.98
TC A 0070	915	36.02	600	23.62	340	13.39	M16	550	21.65	25	0.98
TC A 0100	1 175	46.26	800	31.50	430	17.20	M20	665	26.18	35	1.38
TC A 0210	1 175	46.26	800	31.50	430	17.20	M20	665	26.18	35	1.38
TC A 0400	1 725	67.91	1 250	49.21	545	21.46	M20	820	32.28	40	1.58
TC A 0840	2 088	82.20	1 500	59.06	545	21.46	M24	1 088	42.86	35	1.38
TC A 1120	2 588	101.89	2 000	78.74	545	21.46	M24	1 088	42.86	40	1.57.
TC A 2000	2 875	113.19	2 000	78.74	580	22.83	M30	1 600	62.99	40	1.57
TC A 4000	3 900	154.54	3 000	118.11	700	27.56	M30	1 600	62.99	50	1.97



**Fig. 6: Dimensions articulated connection TC A 0020 to TC A 4000**

**Table 4: Dimensions articulated connection TC A 0020 to TC A 4000**

Torque arm	F		G		H	
	mm	in	mm	in	mm	in
TC A 0020 to TC A 0070	25	0.98	77	3.03	100	3.94
TC A 0050 to TC A 0070 heavy duty			109	4.29		
TC A 0100 to TC A 0210	40	1.57	118	4.65	170	6.69
TC A 0100 to TC A 0210 heavy duty			138	5.43		
TC A 0400 to 0840	40	1.57	135	5.31	210	8.27
TC A 0400 to 0840 heavy duty			154	6.06		
TC A 0400 to 0840 electrical isolated			144	5.67		
TC A 1120	40	1.57	135	5.31	210	8.27
TC A 1120 electrical isolated			144	5.67		
TC A 2000	40	1.57	135	5.31	360	14.17
TC A 2000 electrical isolated			144	5.67		
TC A 4000	50	1.97	180	7.09	450	17.72
TC A 4000 electrical isolated			190	7.48		

## 5.2 DTC

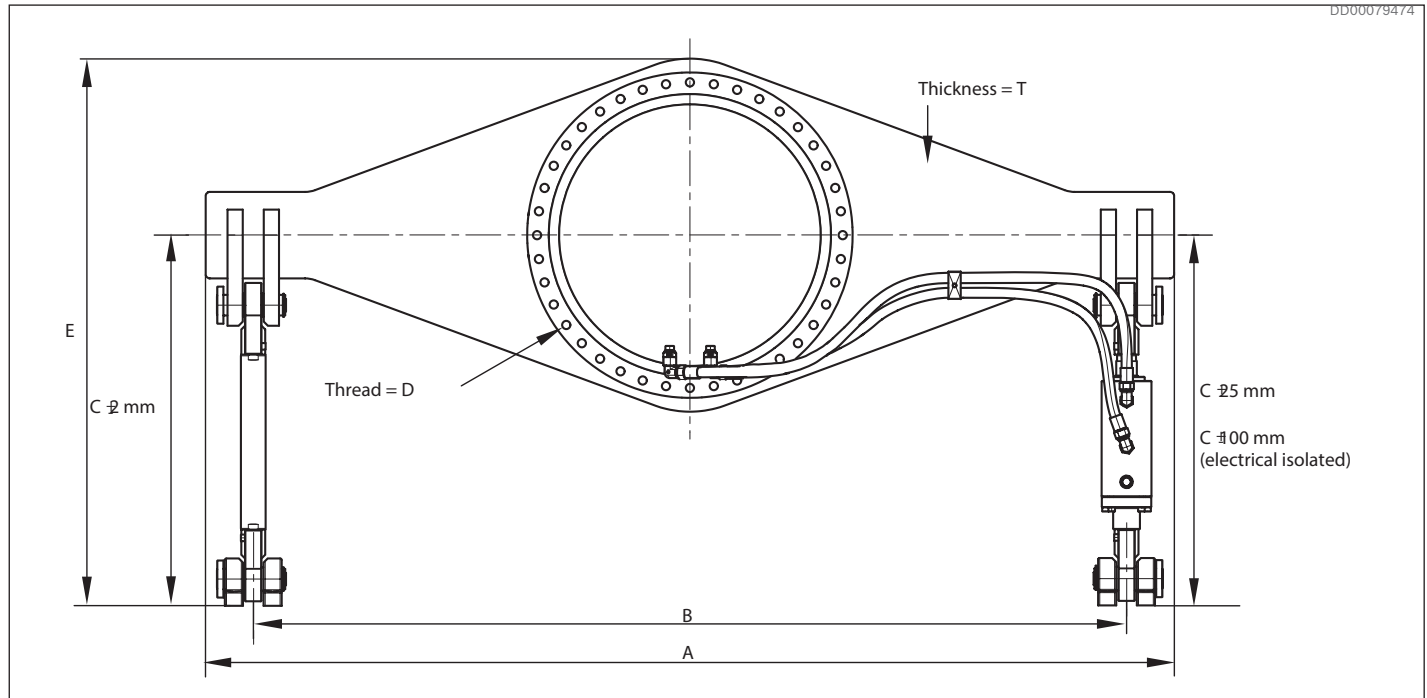
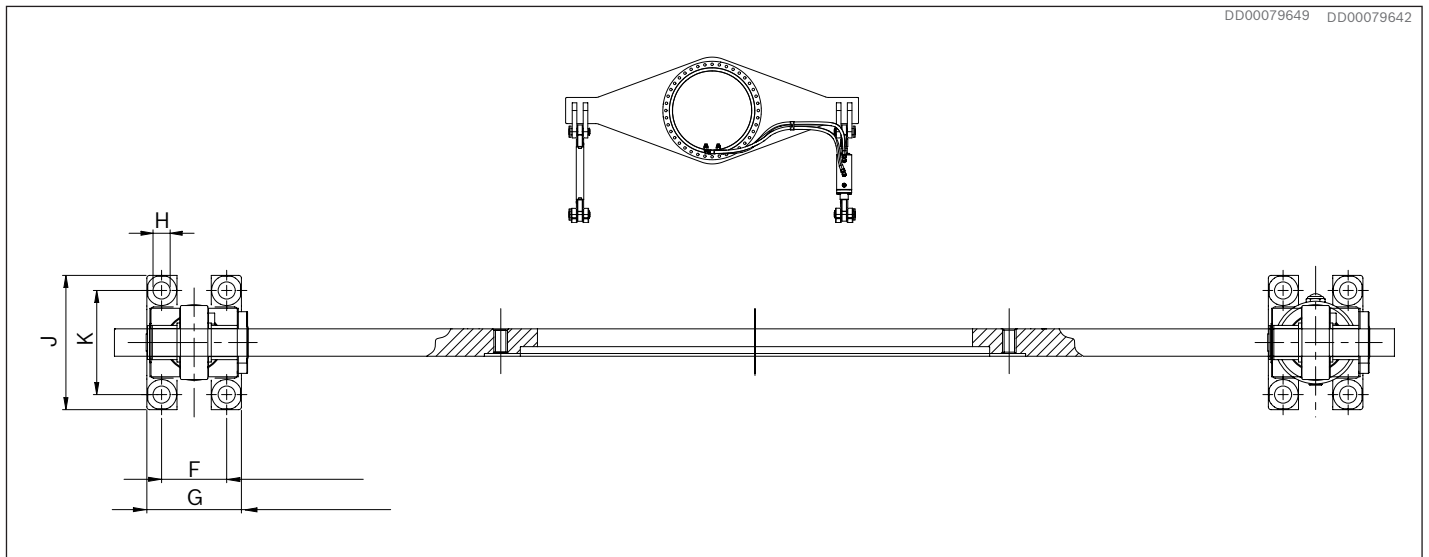


Fig. 7: Dimensions double ended torque arm DTCA, DTCB, DTCBM

Table 5: Dimensions double ended torque arm DTCA, DTCB, DTCBM

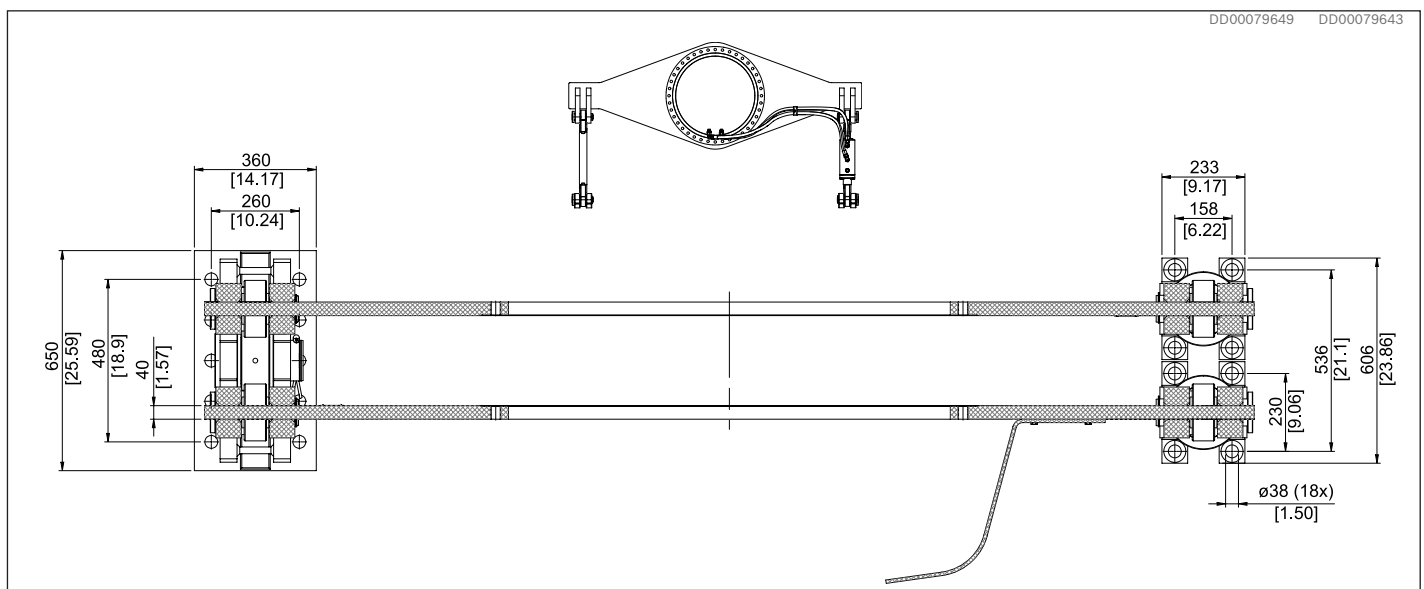
Torque arm	A		B		C		D	E		T	
	mm	in	mm	in	mm	in		mm	in	mm	in
DTCA 0050	709	27.91	625	24.6	730	28.74	M16	980	38.58	30	1.18
DTCA 0070	984	38.74	900	35.4	730	28.74	M16	1 029	40.50	30	1.18
DTCA 0100	1 188	46.77	1 015	40.0	780	30.71	M20	1 088	42.83	40	1.57
DTCA 0140	1 338	52.68	1 165	45.9	780	30.71	M20	1 095	43.11	40	1.57
DTCA 0210	1 496	58.90	1 320	52.0	780	30.71	M20	1 095	43.11	40	1.57
DTCB 0400	2 351	92.56	2 120	83.46	900	35.43	M20	1 329	52.32	40	1.57
DTCB 1120	3 231	127.20	3 000	118.11	900	35.43	M24	1 408	55.43	40	1.57
DTCB 1120 electrical isolated	3 231	127.20	3 000	118.11	1 275	50.20	M24	1 783	70.20	40	1.57
DTCBM 1600	3 100	122.05	2 800	110.24	1 235	48.62	M30	2 035	80.12	40	1.57
DTCBM 1600 electrical isolated	3 100	122.05	2 800	110.24	1 558	61.32	M30	2 035	80.12	40	1.57
DTCBM 2600	3 500	137.79	3 200	125.98	1 235	48.62	M30	2 035	80.12	40	1.57
DTCBM 2600 electrical isolated	3 500	137.79	3 200	125.98	1 558	61.32	M30	2 035	80.12	40	1.57
DTCBM 3600	3 900	153.54	3 600	141.73	1 235	48.62	M30	2 035	80.12	40	1.57
DTCBM 3600 electrical isolated	3 900	153.54	3 600	141.73	1 558	61.32	M30	2 035	80.12	40	1.57
DTCBM 4000	4 500	177.16	4 200	165.35	1 235	48.62	M30	2 035	80.12	40	1.57
DTCBM 4000 electrical isolated	4 500	177.16	4 200	165.35	1 558	61.32	M30	2 035	80.12	40	1.57
DTCBM 4600	3 100	122.05	2 800	110.23	1 235	48.62	M30	2 035	80.12	40	1.57
DTCBM 5600	3 500	137.79	3 200	125.98	1 235	48.62	M30	2 035	80.12	40	1.57



**Fig. 8: Dimensions articulated connection for DTCA, DTCB and DTCBM 1600 to DTCBM 4000**

**Table 6: Dimensions articulated connection for DTCA, DTCB, DTCBM 1600 to DTCBM 4000**

Torque arm	F		G		H		J		K	
	mm	in	mm	in	mm	in	mm	in	mm	in
DTCA 0050	47	1.85	69	2.72	13	0.51	110	4.33	88	3.46
DTCA 0070										
DTCA 0100										
DTCA 0140	85	3.35	129	5.08	25	0.98	196	7.72	152	5.98
DTCA 0210										
DTCB 0400 to DTCB 1120	95	3.74	138	5.43	25	0.98	196	7.72	152	5.98
DTCB 1120 electrical isolated	106	4.17	150	5.91	25	0.98	196	7.72	152	5.98
DTCBM 1600 to 4000	157	6.18	233	9.17	38	1.50	300	11.81	230	9.06
DTCBM 1600 to 4000 electrical isolated	169	6.65	245	6.22	38	1.50	300	11.81	230	9.06

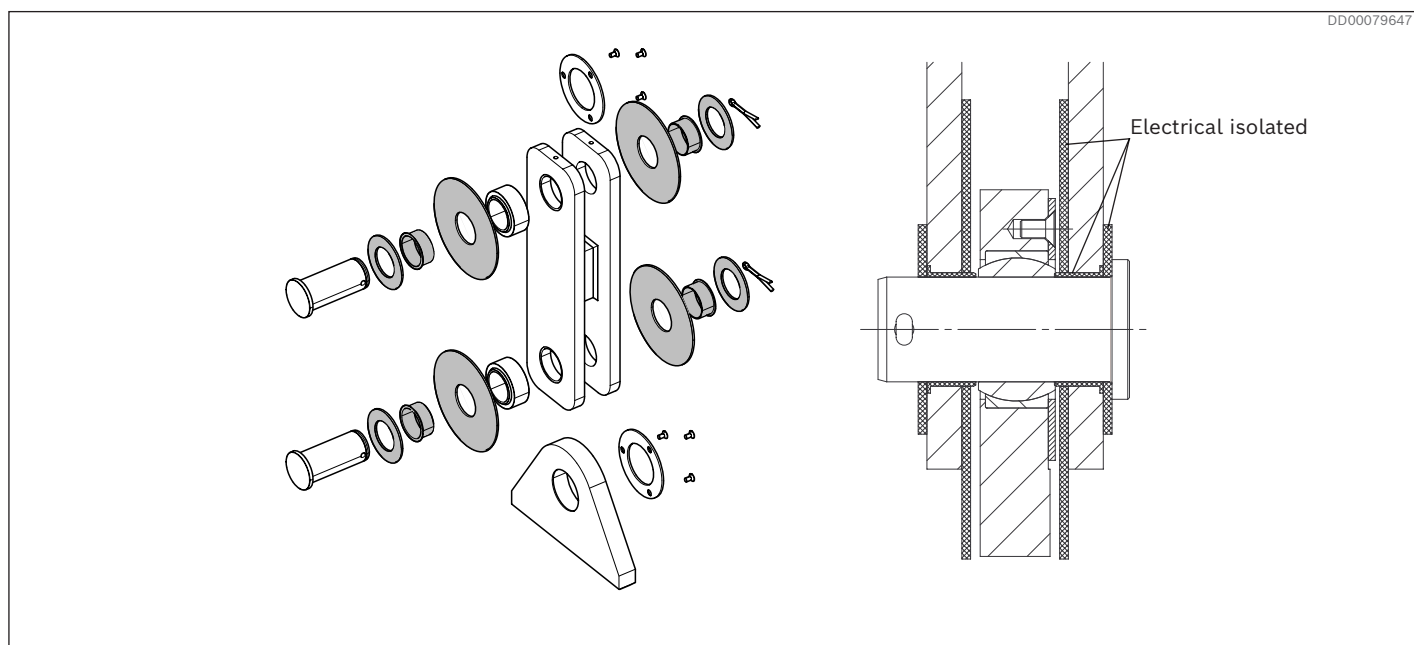


**Fig. 9: Dimensions articulated connection for DTCBM 4600 to DTCBM 6000**

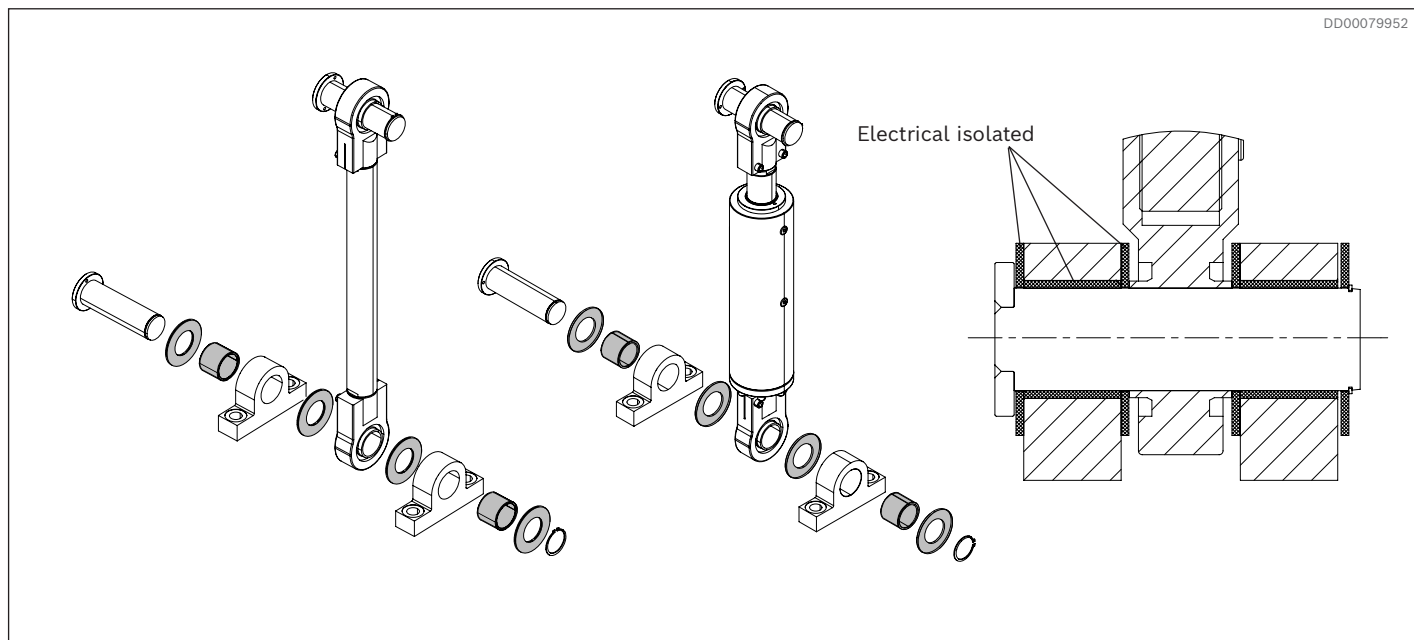
### 5.3 Electrical isolated articulated connection

If there is a risk of current passing through the hydraulic motor an electrical isolated articulated connection is one solution to prevent damage of the bearing interfaces in the hydraulic motor.

Dimensions for TC A with electrical isolated articulated connection, see *Fig. 5, Fig. 6, Table 3 and Table 4*.  
Dimensions for DTCBM with electrical isolated articulated connection, see *Fig. 7, Fig. 8, Table 5 and Table 6*.



**Fig. 10: Electrical isolated articulated connection for TC A**



**Fig. 11: Example electrical isolated articulated connection for DTCB, DTCBM**

#### 5.4 Heavy duty designed articulated connection

In applications with extensive vibrations or pulsating torque, the heavy duty designed articulated connection is a suitable solution. It is designed with expander systems to reduce mechanical play and prevent damage of the articulated connection.

Dimensions for TC A, with heavy duty designed articulated connection see *Fig. 6 and Table 4*

##### Note!

The torque of the expander systems must regularly be checked. Ensure that the axle is centered in the linkage part! For more information see respective motor's Installation & Maintenance manual.

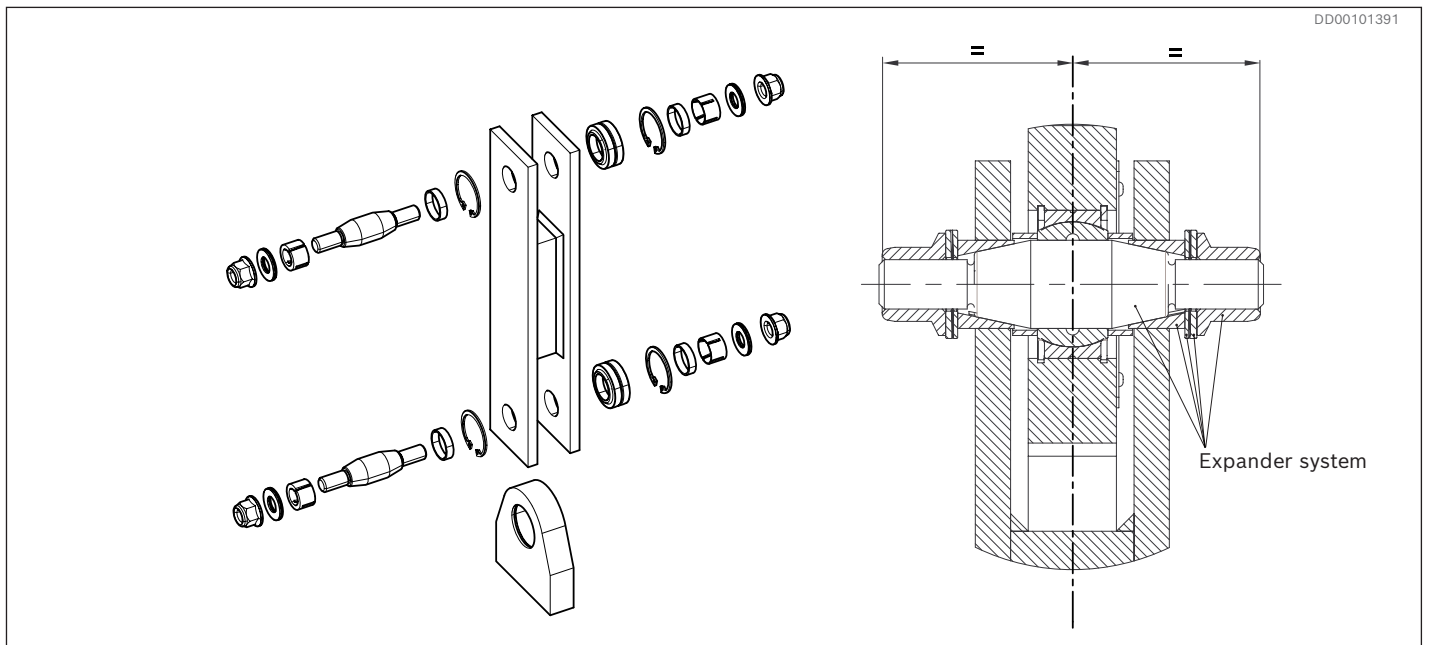


Fig. 12: Heavy duty designed articulated connection for TC A 0050 to TC A 0210

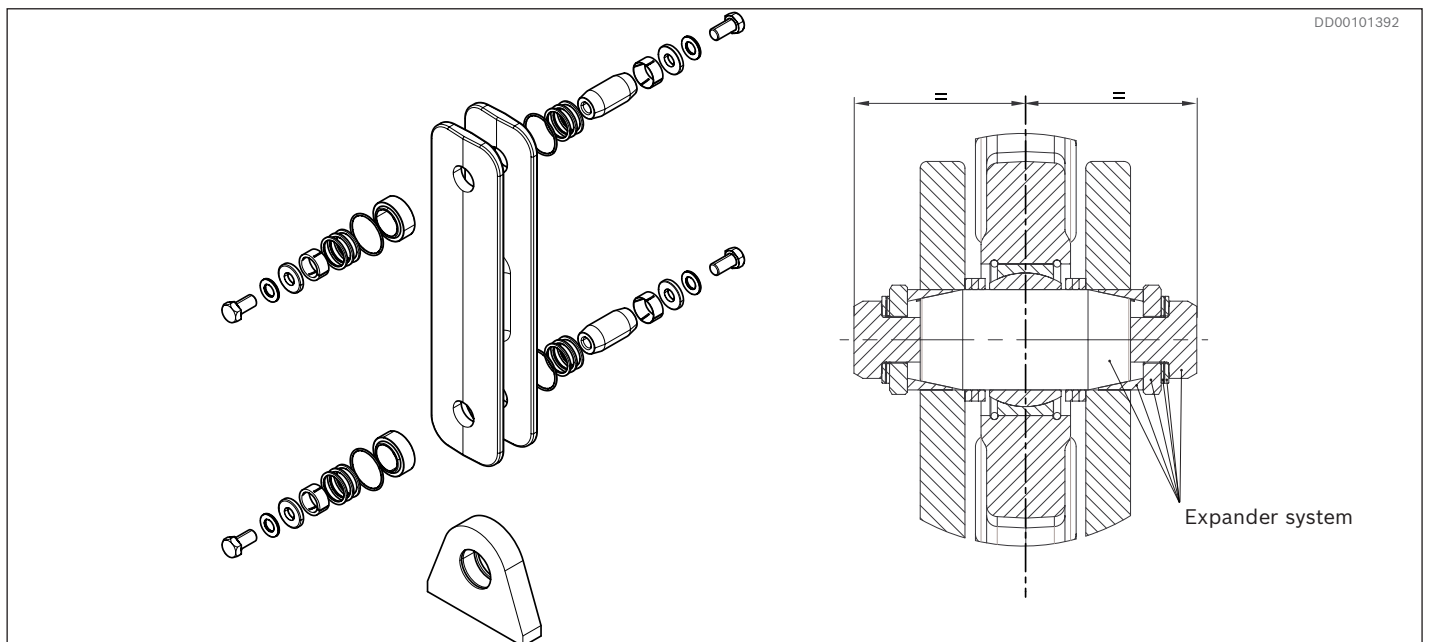
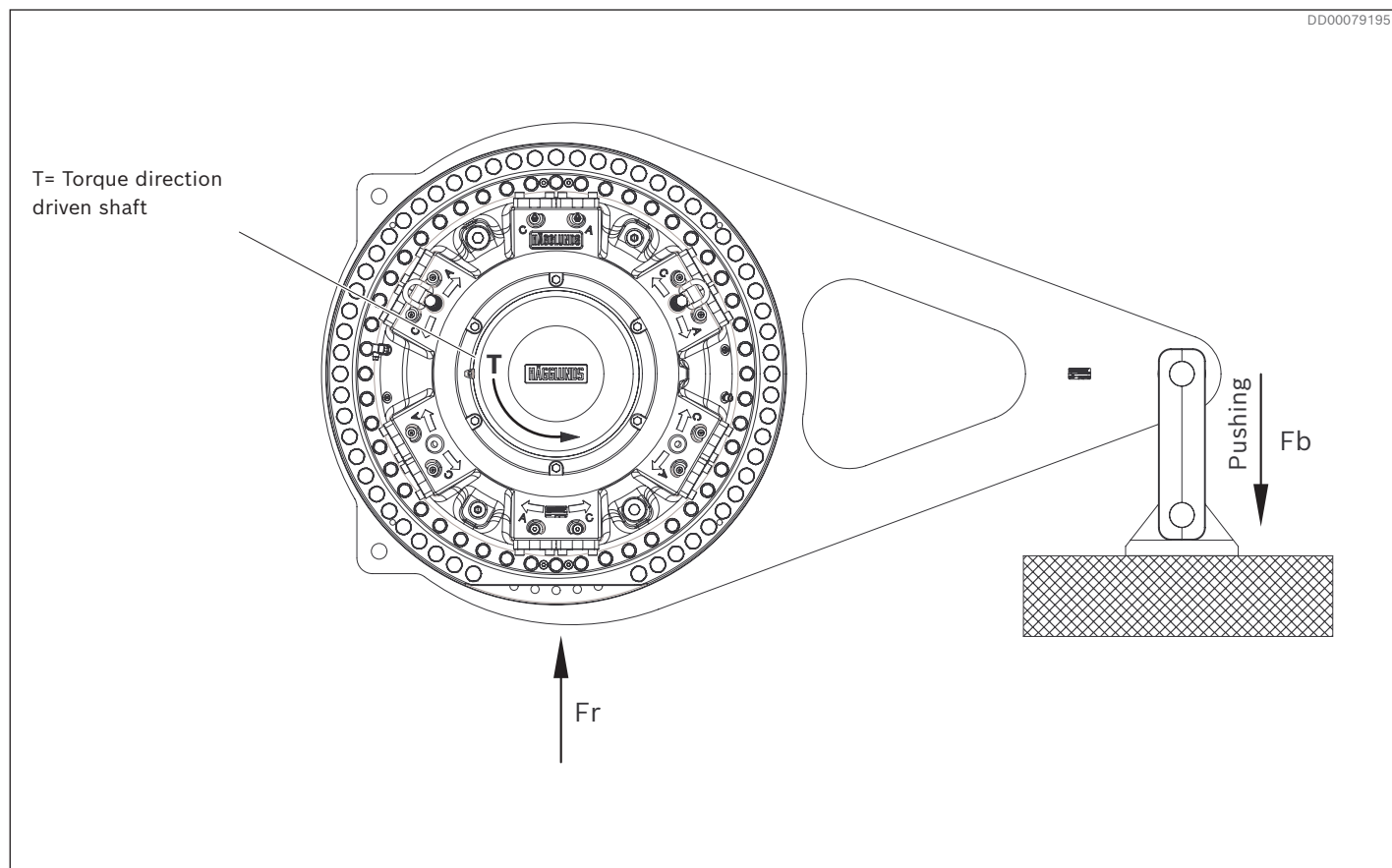


Fig. 13: Heavy duty designed articulated connection for TC A 0400 to TC A 0840

## 6 External forces



**Fig. 14: External forces  $F_r$ ,  $F_b$  for TC A**

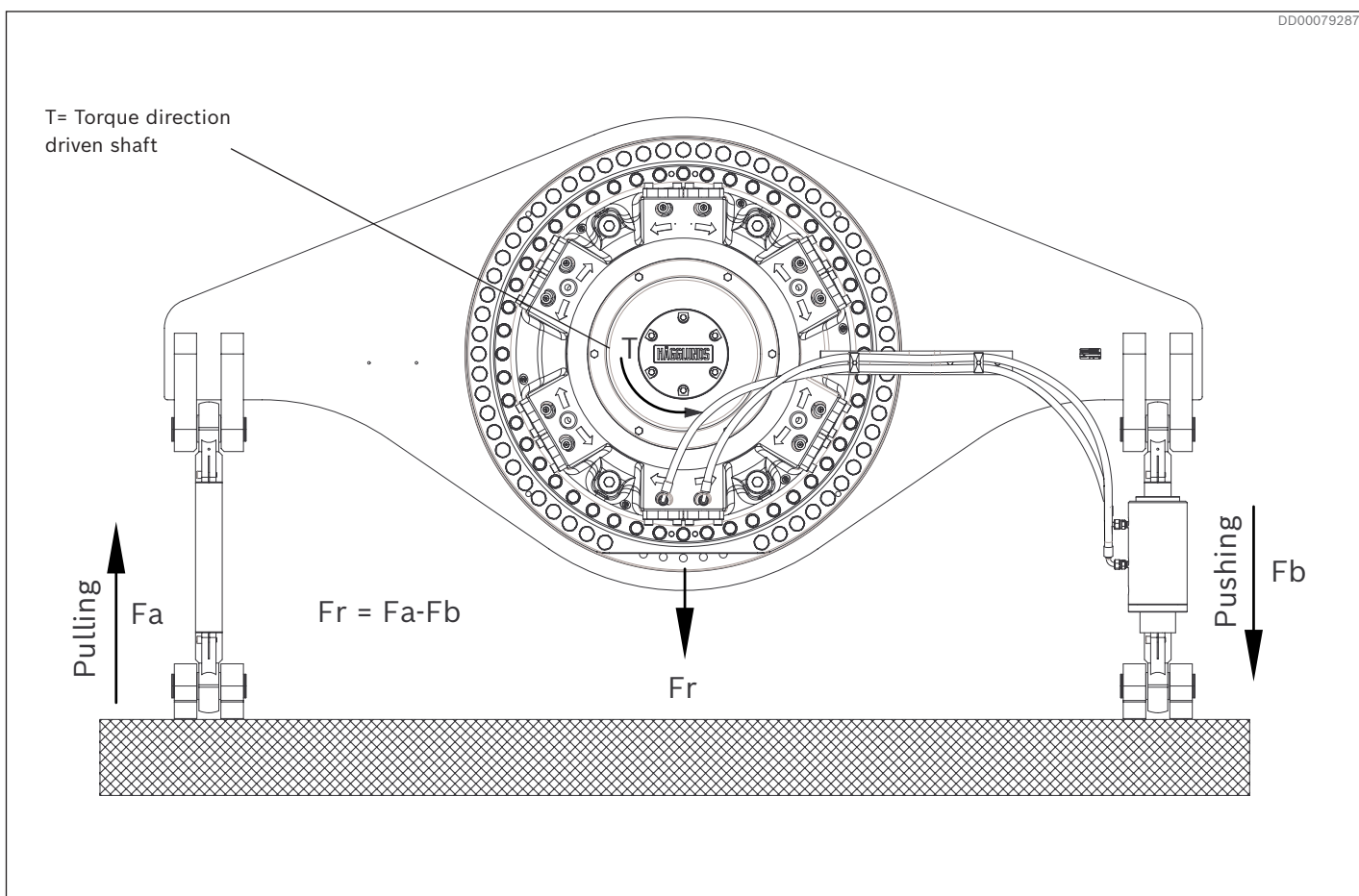


**Table 7: External forces single ended torque arm valid for a pressure difference of 405 bar [5875 psi] static**

Torque arm	Motor	Force Fb		Force Fr <sup>1)</sup>	
		N	lbf	N	lbf
TC A 0020	AM 20 25	26 250	5 901.24	25 439	5 718.92
TC A 0040	AM 40 40	42 000	9 441.98	41 849	9 408.03
TC A 0050	CA 50 50	35 000	7 868.31	33 077	7 436.00
TC A 0070	CA 70 70	49 000	11 015.64	46 754	10 510.72
TC A 0100	CA 100 100	52 500	11 802.47	49 164	11 052.51
TC A 0210	CA 140 140	73 500	16 523.46	69 517	15 628.04
	CBp 140 140	73 500	16 523.46	68 977	15 506.65
	CA 210 210	110 250	24 785.19	105 384	23 691.27
TC A 0400	QMX 280 280, CBp 280 280	94 080	21 150.03	86 046	19 343.91
	QMP 280 280	94 080	21 150.03	80 660	18 133.09
	CBp 280 280 F	94 080	21 150.03	77 462	17 414.15
	QMX 400 400, CBp 400 400 F	134 400	30 214.32	122 883	27 625.20
	QMP 400 400	134 400	30 214.32	117 527	26 421.12
	CBp 400 400 C	134 400	30 214.32	114 839	25 816.83
TC A 0840	QMX 560 560	156 800	35 250.04	143 674	32 299.20
	QMP 560 560	156 800	35 250.04	138 181	31 064.32
	CBp 560 C	156 800	35 250.04	136 071	30 589.98
	QMX 840 840	235 200	52 875.06	218 837	49 196.51
	QMP 840 840	235 200	52 875.06	213 657	48 032.00
	CBp 840 840 C	235 200	52 875.06	211 724	47 597.45
TC A 1120	QMX 1120 1120	235 200	52 875.06	214 792	48 287.16
	QMP 1120 1120	235 200	52 875.06	208 281	46 823.43
TC A 2000	CBm 2000 2000	420 000	94 419.76	375 845	84 493.32
TC A 4000	CBm 3000 3000	308 000	69 241.15	251 553	56 551.36
TC A 4000	CBm 4000 4000	560 000	125 893.00	495 705	111 438.90
TC A 6000	CBm 5000 5000	700 000	157 366.30	619 585	139 288.20
TC A 6000	CBm 6000 6000	840 000	188 839.50	751 737	168 997.20

1) The force Fr is calculated including the weight of splines motor and torque arm.

- The Hägglunds Quantum motor has the abbreviation QMX
- The Hägglunds Quantum Power motor has the abbreviation QMP



**Fig. 15: External forces  $F_r$ ,  $F_a$ ,  $F_b$  for DTCBM**

**Note!**

In the event of a hose rupture, all force goes into  $F_a$  ( $F_b=0$ ) which can lead to damage of equipment.

Table 8: External forces double ended torque arm valid for a pressure difference of 405 bar [5875 psi] static

Torque arm	Motor	Force Max (Fa, Fb) on foundation		Force Fr on driven shaft <sup>1)</sup>	
		N	lbf	N	lbf
DTCA_ 0050 01	CA 50 50	31 013	6 972.00	2 182	490.53
DTCA_ 0070 01	CA 70 70	31 013	6 972.00	815	183.22
DTCA_ 0100 02	CA 100 100	38 298	8 609.733	3 142	706.35
DTCA_ 0140 03	CA 140 140	46 727	10 504.65	3 531	793.80
DTCA_ 0210 04	CA 210 210	61 836	13 901.29	4 213	947.12
DTCB_ 0400 05	QMX 280 240 QMX 400 240	46 727	10 504.65	8 325	1 871.53
	CBp 280 240 F CBp 400 240 F				
	QMP 280 240 QMP 400 240			12 230	2 749.41
DTCB_ 0400 06	QMX 280 280 QMX 400 280 QMX 400 320	61 836	13 901.29	-10 906	-2 451.77
	CBp 280 280 F CBp 400 280 F CBp 400 320 F				
	QMP 280 280 QMP 400 280 QMP 400 320			11 049	2 483.91
DTCB_ 0400 07	QMX 400 360 CBp 400 360 F	76 341	17 162.14	-5 727	-1 287.48
	QMP 400 360			-1 823	-409.83
DTCB_ 0400 08	QMX 400 400 QMX 400 480 QMX 400 520 QMX 400 560	111 814	25 136.79	35 031	7 875.28
	CBp 400 400 F				
	QMP 400 400 QMP 400 480 QMP 400 520 QMP 400 560			38 935	8 752.94
DTCB_ 1120 05	CBp 400 240 C CBp 400 280 C CBp 400 360 C	83 943	18 871.14	59 416	13 357.25
DTCB_ 1120 06	QMX 560 440 QMX 560 480	61 836	13 901.29 2	15 389	3 459.58
	CBp 400 400 C CBp 560 440 C/F Bp 560 480 C/F				
	QMP 560 440 QMP 560 480			19 166	4 308.69
DTCB_ 1120 09	QMX 560-520 QMX 560-560 CBp 560-520 CBp 560 560 C/F	77 327	17 383.80	6 546	1 471.60
	QMP 560-520 QMP 560-560			10 323	2 320.70
DTCB_ 1120 08	QMX 840 600 CBp 840 600 C	91 450	20 558.78	-8 202	-1 843.88
	QMP 840 600			-4 739	-1 065.37
DTCB_ 1120 10	QMX 840 640 QMX 840 680 QMX 840 720 QMX 840 760	103 823	23 340.34	-22 690	-5 100.92
	CBp 840 640 C CBp 840 680 C CBp 840 7220 C				
	CBp 840 760 C				
DTCB_ 1120 11	QMP 840 640 QMP 840 680 QMP 840 720 QMP 840 760	163 226	36 694.66	-19 227	-4 322.40
	QMX 840 800 QMX 840 840 QMX 1120 880 QMX 1120 920				
	QMX 1120 960 QMX 1120 1000 QMX 1120 1040			67 033	15 069.62
	QMX 1120 1080 QMX 1120 1120				
	CBp 840 800 C CBp 840 840 C				
	QMP 840 800 QMP 840 840 QMP 1120 880				
DTCB_ 1120 11	QMP 1120 920 QMP 1120 960 QMP 1120 1000			67 720	15 224.06
	QMP 1120 1040 QMP 1120 1080 QMP 1120 1120				
DTCBM 1600 12	CBm 2000 1200	167 600	37 677.98	48 502	10 903.68
DTCBM 1600 13	CBm 2000 1600	233 800	37 677.98	70 957	15 951.77
DTCBM 2600 13	CBm 2000 1800	227 000	51 031.63	64 086	14 407.11
DTCBM 2600 14	CBm 3000 2200	290 000	65 194.59	101 912	22 910.73
DTCBM 2600 15	CBm 3000 2600	320 000	52 560.33	66 094	14 858.52
DTCBM 3600 15	CBm 3000 3000	336 000	75 535.80	82 125	18 462.43
DTCBM 3600 16	CBm 4000 3600	404 000	71 938.86	98 822	22 216.07
DTCBM 4000 16	CBm 4000 4000	367 100	90 822.81	62 179	13 978.40
DTCBM 4600 17	CBm 5000 4600	636 200	82 527.36	64 940	14 599.09
DTCBM 5600 17	CBm 6000 5600	710 500	143 023.40	114 590	25 760.86
DTCBM 6000 17	CBm 6000 6000	646 400	159 726.80	82 527	18 552.81

1) The force Fr is calculated included the weight of splines motor and torque arm.

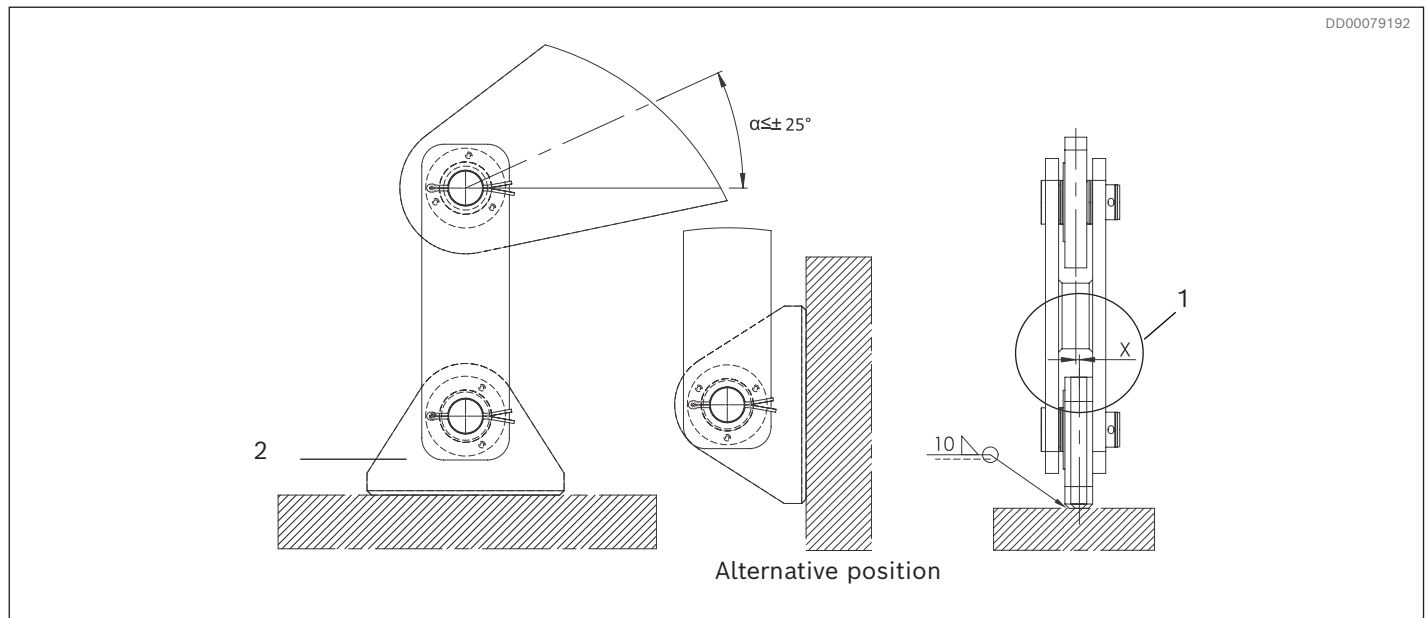
- The Hägglunds Quantum motor has the abbreviation QMX
- The Hägglunds Quantum Power motor has the abbreviation QMP

## 7 Installation

### Note!

For more information see Installation and maintenance manual for respective Hägglunds motor. ( See chapter 8 *Required and additional documents*)

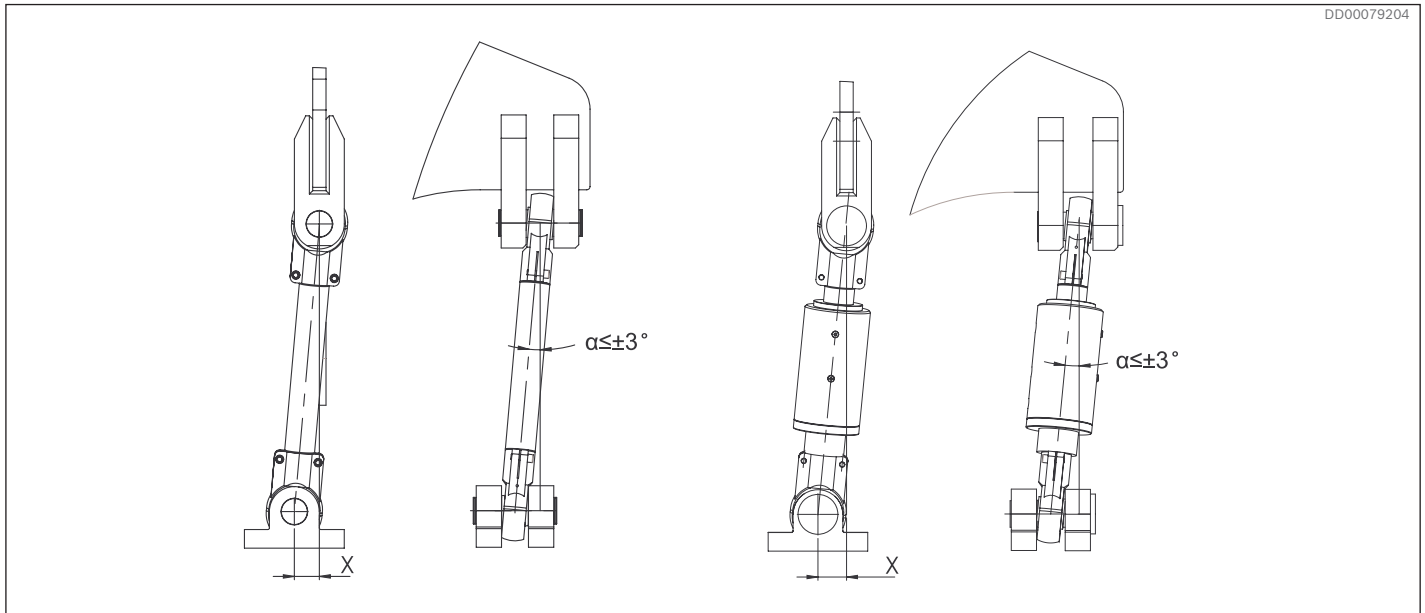
### 7.1 Single ended torque arm



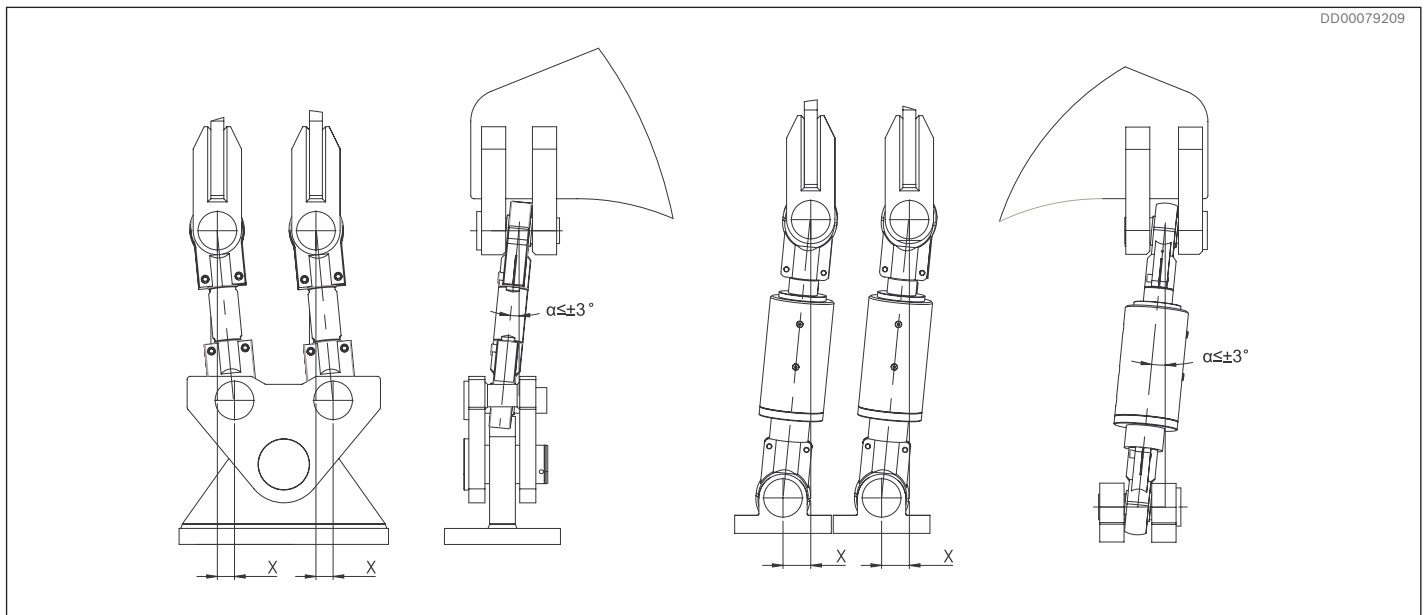
**Fig. 16: Installation instruction for articulated connection for TC A**

- 1  $x \leq \pm 2 \text{ mm}$  (0,079 inch) misalignment in installation.  
 $x \leq \pm 15 \text{ mm}$  (0,59 inch) movement when in use.
- 2 Steel EN 10025-3 – S355N (1.0545), Protected against corrosion, after welding.

## 7.2 Double ended torque arm













**Fig. 17:** Installation instruction for articulated connection and hydraulic cylinder for DTCA, DTCB and DTCBM 1600 to DTCBM 4000



**Fig. 18:** Installation instruction for articulated connection and hydraulic cylinder for DTCBM 4600-6000

- 1  $x \leq \pm 2 \text{ mm}$  (0,079 inch) misalignment in installation.  
 $x \leq \pm 15 \text{ mm}$  (0,59 inch) movement when in use.
- 2 Hole dimensions hole for ground attachment see Fig. 8, Fig. 14 and Table 6

## 8 Required and additional documents

Title	Document no	Document type
 Häggglunds Atom	<a href="#">RE 15354-WA</a>	Installation & maintenance manual
 Häggglunds CA	<a href="#">RE 15305-WA</a>	Installation & maintenance manual
 Häggglunds Quantum	<a href="#">RE 15428-A-WA</a>	Installation & maintenance manual
 Häggglunds Quantum Power	<a href="#">RE 15428-B-WA</a>	Installation & maintenance manual
 Häggglunds CBp	<a href="#">RE 15301-WA</a>	Installation & maintenance manual
 Häggglunds CBm	<a href="#">RE 15300-WA</a>	Installation & maintenance manual
 Häggglunds Atom	<a href="#">RE 15354</a>	Data sheet
 Häggglunds CA	<a href="#">RE 15305</a>	Data sheet
 Häggglunds Quantum	<a href="#">RE 15428-A</a>	Data sheet
 Häggglunds Quantum Power	<a href="#">RE 15428-B</a>	Data sheet
 Häggglunds CBp	<a href="#">RE 15301</a>	Data sheet
 Häggglunds CBm	<a href="#">RE 15300</a>	Data sheet
 TC A 0020	RA30004506*	Dimension drawing
 TC A 0040	RA30004507*	Dimension drawing
 TC A 0050	278 1348*	Dimension drawing
 TC A 0050 HD	RA30004609*	Dimension drawing
 TC A 0070	278 1498*	Dimension drawing
 TC A 0070 HD	RA30004610*	Dimension drawing
 TC A 0100	RA30064868	Dimension drawing
 TC A 0100 HD	RA30004611*	Dimension drawing
 TC A 0210	278 1490*	Dimension drawing
 TC A 0210 HD	RA30004616*	Dimension drawing
 TC A 0400	RA30005920*	Dimension drawing
 TC A 0400 HD	RA30004618*	Dimension drawing
 TC A 0840	RA30005921*	Dimension drawing
 TC A 0840 HD	RA30004619*	Dimension drawing
 TC A 1120	078 1310*	Dimension drawing
 TC A 2000	078 2668*	Dimension drawing
 TC A 4000	078 2667*	Dimension drawing
 DTCA_	RA30002880*	Dimension drawing
 DTCB_0400	141 0460*	Dimension drawing
 DTCB_1120	141 0461*	Dimension drawing
 DTCBM 1600-4000	078 2669*	Dimension drawing
 DTCBM 4600-6000	078 2682*	Dimension drawing

\*) Documents only available for Bosch Rexroth employees on MyRexroth. Contact your Bosch Rexroth representative for information.



## **HÄGGLUNDS**

### **Bosch Rexroth AB**

SE-895 80 Mellansel

tel: +46 (0)660 870 00

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

Häggglunds is a brand of Rexroth, a leading global supplier of drive and control technologies. Häggglunds solutions enrich a comprehensive Rexroth portfolio.

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 a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.