

AXIAL VIBRATION DATA**Subject to modification****5-8 X72DF-1.1 / -2.1**

Dia.880 / 880 mm

Forged crank type FCV1 acc. DAAD019158

General engine data

Cylinder bore	:	720	[mm]					
Stroke	:	3086	[mm]					
Crank journal diameter	:	outer / inner diameter : 880 / 250 [mm]						
Crank pin diameter	:	outer / inner diameter : 880 / 0 [mm]						
Ratio of the connecting rod	:	0.500	[-]					
Oscillating mass per cylinder	:	9129	[kg]					
Rating	:	R1	R2	R3	R4			
Engine speed	:	89	89	69	69		[rpm]	
Output per cylinder	:	3225	2685	2500	2080		[kW]	
Mean indicated pressure (mip)	:	18.4	15.5	18.2	15.3		[bar]	
Harmonic radial forces	:	see corresponding tables						
Thrustbrg. / Axial-Damper Elasticity	:	e-TH = 0.4 E-09		e-AX.Damp. = 1. E-03			[m/N]	

Engine type	5X72DF-1.1 / -2.1		6X72DF-1.1 / -2.1		7X72DF-1.1 / -2.1		8X72DF-1.1 / -2.1	
	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]
		*E-9		*E-9		*E-9		*E-9
cwo +	1271		-		765		1827	
Part of shaft	3823		3823		3823		3823	
Crank No. 12								
11								
10								
9								0.0064
8						0.0064	10742	2.1495
7				0.0064	10742	2.1495	21485	1.5133
6		0.0064	10742	2.1495	21485	1.5133	21485	1.5133
5	10742	2.1495	21485	1.5133	21485	1.5133	21485	1.5133
4	21485	1.5133	21485	1.5133	21485	1.5133	21485	1.5133
3	21485	1.5133	21485	1.5133	21485	1.5133	21485	1.5133
2	21485	1.5133	21485	1.5133	21485	1.5133	21485	1.5133
1	21485	1.3890	21485	1.3890	21485	1.3890	21485	1.3890
	10742		10742		10742		10742	
Thrustbrg. / Flex drive 1)	9683	0.0037	9683	0.0037	9683	0.0037	9683	0.0037
Flywheel + cwf +	x	0.0067	x	0.0067	x	0.0067	x	0.0067
Part of shaft	4340		4340		4340		4340	
		0.0005		0.0005		0.0005		0.0005
Firing order	regular		regular		regular		regular	
clockwise rotating	1 - 4 - 3 - 2 - 5		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	
counter-clockwise rotating	1 - 5 - 2 - 3 - 4		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	

1) for two-part gear wheel on crankshaft use m = 11172 kg

4-107.054.722-FCV1

28.02.2022 pre / 21393

AXIAL VIBRATION DATA**Subject to modification****5-8 X72DF-1.1 / -2.1**

Dia.880 / 880 mm

Forged crank type FCV2 acc. DAAD027103

General engine data

Cylinder bore	:	720	[mm]					
Stroke	:	3086	[mm]					
Crank journal diameter	:	outer / inner diameter : 880 / 250 [mm]						
Crank pin diameter	:	outer / inner diameter : 880 / 0 [mm]						
Ratio of the connecting rod	:	0.500	[-]					
Oscillating mass per cylinder	:	9129	[kg]					
Rating	:	R1	R2	R3	R4			
Engine speed	:	89	89	69	69		[rpm]	
Output per cylinder	:	3225	2685	2500	2080		[kW]	
Mean indicated pressure (mip)	:	18.4	15.5	18.2	15.3		[bar]	
Harmonic radial forces	:	see corresponding tables						
Thrustbrg. / Axial-Damper Elasticity	:	e-TH = 0.4 E-09		e-AX.Damp. = 1. E-03			[m/N]	

Engine type	5X72DF-1.1 / -2.1		6X72DF-1.1 / -2.1		7X72DF-1.1 / -2.1		8X72DF-1.1 / -2.1	
	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]
		*E-9		*E-9		*E-9		*E-9
cwo +	1271		-		765		1827	
Part of shaft	3823		3823		3823		3823	
Crank No. 12								
11								
10								
9								0.0064
8						0.0064	10395	2.1543
7				0.0064	10395	2.1543	20790	1.5171
6		0.0064	10395	2.1543	20790	1.5171	20790	1.5171
5	10395	2.1543	20790	1.5171	20790	1.5171	20790	1.5171
4	20790	1.5171	20790	1.5171	20790	1.5171	20790	1.5171
3	20790	1.5171	20790	1.5171	20790	1.5171	20790	1.5171
2	20790	1.5171	20790	1.5171	20790	1.5171	20790	1.5171
1	20790	1.3910	20790	1.3910	20790	1.3910	20790	1.3910
	10395	0.0037	10395	0.0037	10395	0.0037	10395	0.0037
Thrustbrg. / Flex drive 1)	9683	0.0067	9683	0.0067	9683	0.0067	9683	0.0067
Flywheel + cwf +	x		x		x		x	
Part of shaft	4340		4340		4340		4340	
		0.0005		0.0005		0.0005		0.0005
Firing order	regular		regular		regular		regular	
clockwise rotating	1 - 4 - 3 - 2 - 5		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	
counter-clockwise rotating	1 - 5 - 2 - 3 - 4		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	

1) for two-part gear wheel on crankshaft use m = 11172 kg

4-107.054.722-FCV2

28.02.2022 pre / 21393

AXIAL VIBRATION DATA**Subject to modification****5-8 X72DF-1.1 / -2.1**

Dia.880 / 880 mm

Forged crank type FCV3 acc. DAAD019157

General engine data

Cylinder bore	:	720	[mm]					
Stroke	:	3086	[mm]					
Crank journal diameter	:	outer / inner diameter : 880 / 250 [mm]						
Crank pin diameter	:	outer / inner diameter : 880 / 0 [mm]						
Ratio of the connecting rod	:	0.500	[-]					
Oscillating mass per cylinder	:	9129	[kg]					
Rating	:	R1	R2	R3	R4			
Engine speed	:	89	89	69	69		[rpm]	
Output per cylinder	:	3225	2685	2500	2080		[kW]	
Mean indicated pressure (mip)	:	18.4	15.5	18.2	15.3		[bar]	
Harmonic radial forces	:	see corresponding tables						
Thrustbrg. / Axial-Damper Elasticity	:	e-TH = 0.4 E-09		e-AX.Damp. = 1. E-03			[m/N]	

Engine type	5X72DF-1.1 / -2.1		6X72DF-1.1 / -2.1		7X72DF-1.1 / -2.1		8X72DF-1.1 / -2.1	
	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]
		*E-9		*E-9		*E-9		*E-9
cwo +	1271		-		765		1827	
Part of shaft	3823		3823		3823		3823	
Crank No. 12								
11								
10								
9								0.0064
8						0.0064	9981	2.1615
7				0.0064	9981	2.1615	19962	1.5221
6		0.0064	9981	2.1615	19962	1.5221	19962	1.5221
5	9981	2.1615	19962	1.5221	19962	1.5221	19962	1.5221
4	19962	1.5221	19962	1.5221	19962	1.5221	19962	1.5221
3	19962	1.5221	19962	1.5221	19962	1.5221	19962	1.5221
2	19962	1.5221	19962	1.5221	19962	1.5221	19962	1.5221
1	19962	1.3935	19962	1.3935	19962	1.3935	19962	1.3935
	9981	0.0037	9981	0.0037	9981	0.0037	9981	0.0037
Thrustbrg. / Flex drive 1)	9683	0.0067	9683	0.0067	9683	0.0067	9683	0.0067
Flywheel + cwf +	x		x		x		x	
Part of shaft	4340		4340		4340		4340	
		0.0005		0.0005		0.0005		0.0005
Firing order	regular		regular		regular		regular	
clockwise rotating	1 - 4 - 3 - 2 - 5		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	
counter-clockwise rotating	1 - 5 - 2 - 3 - 4		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	

1) for two-part gear wheel on crankshaft use m = 11172 kg

4-107.054.722-FCV3

28.02.2022 pre / 21393

AXIAL VIBRATION DATA**Subject to modification****5-8 X72DF-1.1 / -2.1**

Dia.880 / 880 mm

Forged crank type FCV4 acc. DAAD113064

General engine data

Cylinder bore	:	720	[mm]					
Stroke	:	3086	[mm]					
Crank journal diameter	:	outer / inner diameter : 880 / 250 [mm]						
Crank pin diameter	:	outer / inner diameter : 880 / 0 [mm]						
Ratio of the connecting rod	:	0.500	[-]					
Oscillating mass per cylinder	:	9129	[kg]					
Rating	:	R1	R2	R3	R4			
Engine speed	:	89	89	69	69		[rpm]	
Output per cylinder	:	3225	2685	2500	2080		[kW]	
Mean indicated pressure (mip)	:	18.4	15.5	18.2	15.3		[bar]	
Harmonic radial forces	:	see corresponding tables						
Thrustbrg. / Axial-Damper Elasticity	:	e-TH = 0.4 E-09		e-AX.Damp. = 1. E-03			[m/N]	

Engine type	5X72DF-1.1 / -2.1		6X72DF-1.1 / -2.1		7X72DF-1.1 / -2.1		8X72DF-1.1 / -2.1	
	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]	m [kg]	e [m/N]
		*E-9		*E-9		*E-9		*E-9
cwo +	1271		-		765		1827	
Part of shaft	3823		3823		3823		3823	
Crank No. 12								
11								
10								
9								0.0064
8						0.0064	9517	2.2138
7				0.0064	9517	2.2138	19035	1.5533
6		0.0064	9517	2.2138	19035	1.5533	19035	1.5533
5	9517	2.2138	19035	1.5533	19035	1.5533	19035	1.5533
4	19035	1.5533	19035	1.5533	19035	1.5533	19035	1.5533
3	19035	1.5533	19035	1.5533	19035	1.5533	19035	1.5533
2	19035	1.5533	19035	1.5533	19035	1.5533	19035	1.5533
1	19035	1.4155	19035	1.4155	19035	1.4155	19035	1.4155
	9517	0.0037	9517	0.0037	9517	0.0037	9517	0.0037
Thrustbrg. / Flex drive 1)	9683	0.0067	9683	0.0067	9683	0.0067	9683	0.0067
Flywheel + cwf +	x		x		x		x	
Part of shaft	4340		4340		4340		4340	
		0.0005		0.0005		0.0005		0.0005
Firing order	regular		regular		regular		regular	
clockwise rotating	1 - 4 - 3 - 2 - 5		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	
counter-clockwise rotating	1 - 5 - 2 - 3 - 4		1 - 6 - 2 - 4 - 3 - 5		1 - 6 - 3 - 4 - 5 - 2 - 7		1 - 8 - 3 - 4 - 7 - 2 - 5 - 6	

1) for two-part gear wheel on crankshaft use m = 11172 kg

4-107.054.722-FCV4

28.02.2022 pre / 21393

AXIAL VIBRATION DATA**Subject to modification****5-6 X72DF-1.1 / -2.1**

Dia.880 / 880 mm

Forged crank type FCV5 acc. PAAD376772

General engine data

Cylinder bore	:	720	[mm]							
Stroke	:	3086	[mm]							
Crank journal diameter	:	outer / inner diameter : 880 / 250 [mm]								
Crank pin diameter	:	outer / inner diameter : 880 / 0 [mm]								
Ratio of the connecting rod	:	0.500	[-]							
Oscillating mass per cylinder	:	9129	[kg]							
Rating	:			R1	R2	R3	R4			
Engine speed	:								[rpm]	
Output per cylinder	:								[kW]	
Mean indicated pressure (mip)	:								[bar]	
Harmonic radial forces	:	see corresponding tables								
Thrustbrg. / Axial-Damper Elasticity	:	e-TH = 0.4 E-09 e-AX.Damp. = 1. E-03								[m/N]

only valid for max. nominal
engine torque 1571 kNm

Engine type	5X72DF-1.1 / -2.1		6X72DF-1.1 / -2.1	
	m [kg]	e [m/N]	m [kg]	e [m/N]
		*E-9		*E-9
cwo +	1271		-	
Part of shaft	3823		3823	
Crank No. 12				
11				
10				
9				
8				
7				0.0064
6		0.0064	9379	2.9570
5	9379	2.9570	18758	2.9570
4	18758	2.9570	18758	2.9570
3	18758	2.9570	18758	2.9570
2	18758	2.9570	18758	2.9570
1	18758	2.9570	18758	2.9570
	9379	0.0037	9379	0.0037
Thrustbrg. / Flex drive 1)	9683	0.0067	9683	0.0067
Flywheel + cwf +	x		x	
Part of shaft	4340		4340	
		0.0005		0.0005
Firing order	regular		regular	
clockwise rotating	1 - 4 - 3 - 2 - 5		1 - 6 - 2 - 4 - 3 - 5	
counter-clockwise rotating	1 - 5 - 2 - 3 - 4		1 - 6 - 2 - 4 - 3 - 5	

1) for two-part gear wheel on crankshaft use m = 11172 kg

4-107.054.722a-FCV5

09.11.2023 gl / CH104008