X72DF-1.1

External forces and moments

Crankshaft type : Full crank pin

Rating R1 : 3225 kW/Cyl. @ 89 rpm / max. values of Gas/Diesel Mode

Engine Type		5X72DF-1.1	6X72DF-1.1	7X72DF-1.1	8X72DF-1.1
Speed		89 rpm	89 rpm	89 rpm	89 rpm
Power		16125 kW	19350 kW	22575 kW	25800 kW
Crank type		FCV2	FCV2	FCV2	FCV1
Massmoments / Forces					
Free Forces					
F1v	[±kN]	0	0	0	0
F1h	[±kN]	0	0	0	0
F2v	[±kN]	0	0	0	0
F4v	[±kN]	0	0	0	0
External Moments					
M1v	[±kNm]	379	0	230	759
M1h	[±kNm]	383	0	223	762
M2v	[±kNm]	4520	3144	913	0
M2v *)	[±kNm]	1749	1556	-	-
M4v	[±kNm]	28	218	620	252
Lateral H-Moments M_{LH}					
Ord.1	[±kNm]	0	0	0	0
Ord.2	[±kNm]	0	0	0	0
Ord.3	[±kNm]	0	0	0	0
Ord.4	[±kNm]	0	0	0	0
Ord.5	[±kNm]	1952	0	0	0
Ord.6	[±kNm]	0	1395	0	0
Ord.7	[±kNm]	0	0	1163	0
Ord.8	[±kNm]	0	0	0	931
Ord.9	[±kNm]	0	0	0	0
Ord.10	[±kNm]	304	0	0	0
Ord.11	[±kNm]	0	0	0	0
Ord.12	[±kNm]	0	215	0	0
Lateral X-Moments M_{LX}					
Ord.1	[±kNm]	276	0	164	551
Ord.2	[±kNm]	822	572	166	0
Ord.3	[±kNm]	451	814	891	1141
Ord.4	[±kNm]	70	540	1534	623
Ord.5	[±kNm]	0	0	124	1558
Ord.6	[±kNm]	27	0	16	0
Ord.7	[±kNm]	228	0	0	41
Ord.8	[±kNm]	161	112	9	0
Ord.9	[±kNm]	9	179	20	18
Ord.10	[±kNm]	0	59	167	0
Ord.11	[±kNm]	6	0	134	172
Ord.12	[±kNm]	47	0	9	38
Torque variation	[±kNm]	1979	1384	1162	937

*) with iELBA applied at FE + DE

The values for other engine ratings are available on request
The resulting lateral guide force at the crosshead can be estimated as follows: FL=MLH x 0.215 [kN]

5-8 X72DF-1.1 / Free external mass moments
Power Related Unbalance (PRU)
Rating R1 3225 kW/Cyl @ 89 rpm

Crankshaft type: Full crank pin

