

X52DF-S2.0

External forces and moments

Crankshaft type : Full crank pin

Rating R1 : 1500 kW/Cyl. @ 120 rpm / max. values of Gas/Diesel-Mode

Engine Type		5X52DF-S2.0	6X52DF-S2.0	7X52DF-S2.0	8X52DF-S2.0
Speed		120 rpm	120 rpm	120 rpm	120 rpm
Power		7500 kW	9000 kW	10500 kW	12000 kW
Crank type		FCV2	FCV2	FCV2	FCV2
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]	121	0	72	243
M1h	[±kNm]	121	0	72	243
M2v	[±kNm]	1441	1002	291	0
M2v *)	[±kNm]	719	502	-	-
M4v	[±kNm]	9	70	198	80
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]	793	0	0	0
Ord.6	[±kNm]	0	611	0	0
Ord.7	[±kNm]	0	0	486	0
Ord.8	[±kNm]	0	0	0	413
Ord.9	[±kNm]	0	0	0	0
Ord.10	[±kNm]	125	0	0	0
Ord.11	[±kNm]	0	0	0	0
Ord.12	[±kNm]	0	100	0	0
Lateral X-Moments M_{LX}					
Ord.1	[±kNm]	92	0	55	183
Ord.2	[±kNm]	182	127	37	0
Ord.3	[±kNm]	93	169	184	236
Ord.4	[±kNm]	27	207	587	239
Ord.5	[±kNm]	0	0	49	615
Ord.6	[±kNm]	12	0	7	0
Ord.7	[±kNm]	92	0	0	17
Ord.8	[±kNm]	73	51	4	0
Ord.9	[±kNm]	4	84	9	8
Ord.10	[±kNm]	0	22	63	0
Ord.11	[±kNm]	3	0	59	76
Ord.12	[±kNm]	24	0	5	19
Torque variation					
	[±kNm]	840.6	642	504.5	424.8

*) 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 0.325 [kN]

5-8 X52DF-S2.0 / Free external mass moments
Power Related Unbalance (PRU)
 Rating R1 1500 kW/Cyl @ 120 rpm

Crankshaft type: Full crank pin

