

X52DF-2.1

External forces and moments

Crankshaft type : Full crank pin

Rating R1 : 1490 kW/Cyl. @ 105 rpm / max. values of Gas/Diesel-Mode/iCER Diesel-Mode

Engine Type		5X52DF-2.1	6X52DF-2.1	7X52DF-2.1	8X52DF-2.1
Speed		105 rpm	105 rpm	105 rpm	105 rpm
Power		7450 kW	8940 kW	10430 kW	11920 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]	116	0	69	231
M1h	[±kNm]	116	0	69	233
M2v	[±kNm]	1380	960	279	0
M2v *)	[±kNm]	525	473	-	-
M4v	[±kNm]	9	67	189	77
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]	989	0	0	0
Ord.6	[±kNm]	0	723	0	0
Ord.7	[±kNm]	0	0	562	0
Ord.8	[±kNm]	0	0	0	470
Ord.9	[±kNm]	0	0	0	0
Ord.10	[±kNm]	146	0	0	0
Ord.11	[±kNm]	0	0	0	0
Ord.12	[±kNm]	0	110	0	0
Lateral X-Moments M_{LX}					
Ord.1	[±kNm]	104	0	62	207
Ord.2	[±kNm]	113	79	23	0
Ord.3	[±kNm]	112	202	221	283
Ord.4	[±kNm]	33	256	726	295
Ord.5	[±kNm]	0	0	58	729
Ord.6	[±kNm]	13	0	8	0
Ord.7	[±kNm]	106	0	0	19
Ord.8	[±kNm]	81	56	4	0
Ord.9	[±kNm]	5	91	10	9
Ord.10	[±kNm]	0	26	74	0
Ord.11	[±kNm]	3	0	68	87
Ord.12	[±kNm]	24	0	5	20
Torque variation	[±kNm]	1003.8	725.6	576.2	476.6

*) 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 0.287 [kN]

5-7 X52DF-2.1 / Free external mass moments Power Related Unbalance (PRU) Rating R1 1490 kW/Cyl @ 105 rpm

Crankshaft type: Full crank pin

