

X52DF

External forces and moments

Crankshaft type : Full crank pin

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

Engine Type		5X52DF	6X52DF	7X52DF	8X52DF
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]	749	0	0	0
Ord.6	[±kNm]	0	546	0	0
Ord.7	[±kNm]	0	0	455	0
Ord.8	[±kNm]	0	0	0	364
Ord.9	[±kNm]	0	0	0	0
Ord.10	[±kNm]	119	0	0	0
Ord.11	[±kNm]	0	0	0	0
Ord.12	[±kNm]	0	84	0	0
Lateral X-Moments M_{LX}					
Ord.1	[±kNm]	96	0	57	192
Ord.2	[±kNm]	144	100	29	0
Ord.3	[±kNm]	110	199	217	279
Ord.4	[±kNm]	26	201	570	232
Ord.5	[±kNm]	0	0	45	566
Ord.6	[±kNm]	10	0	6	0
Ord.7	[±kNm]	87	0	0	16
Ord.8	[±kNm]	61	42	3	0
Ord.9	[±kNm]	3	68	8	7
Ord.10	[±kNm]	0	22	63	0
Ord.11	[±kNm]	2	0	51	65
Ord.12	[±kNm]	18	0	4	14
Torque variation	[±kNm]	760	541	455	366

*) 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: $FL = MLH \times 0.287$ [kN]

5-8 X52DF / Free external mass moments Power Related Unbalance (PRU) Rating R1 1490 kW/Cyl @ 105 rpm

Crankshaft type: Full crank pin

