

X40DF

External forces and moments

Crankshaft type : FCV2 / Full crank pin

Rating R1 : 935 kW/Cyl. @ 146 rpm / max. values of Gas/Diesel-Mode

Engine Type		5X40DF	6X40DF	7X40DF	8X40DF
Speed		146 rpm	146 rpm	146 rpm	146 rpm
Power		4675 kW	5610 kW	6545 kW	7480 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]	58	0	118	116
M1h	[±kNm]	45	0	57	90
M2v	[±kNm]	614	427	124	0
M2v *)	[±kNm]	-	-	-	-
M4v	[±kNm]	4	30	84	34
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]	352	0	0	0
Ord.6	[±kNm]	0	259	0	0
Ord.7	[±kNm]	0	0	209	0
Ord.8	[±kNm]	0	0	0	178
Ord.9	[±kNm]	0	0	0	0
Ord.10	[±kNm]	54	0	0	0
Ord.11	[±kNm]	0	0	0	0
Ord.12	[±kNm]	0	43	0	0
Lateral X-Moments M_{LX}					
Ord.1	[±kNm]	43	0	26	86
Ord.2	[±kNm]	64	44	13	0
Ord.3	[±kNm]	55	100	109	140
Ord.4	[±kNm]	11	88	250	102
Ord.5	[±kNm]	0	0	21	263
Ord.6	[±kNm]	5	0	3	0
Ord.7	[±kNm]	37	0	0	7
Ord.8	[±kNm]	30	21	2	0
Ord.9	[±kNm]	2	35	4	4
Ord.10	[±kNm]	0	9	26	0
Ord.11	[±kNm]	1	0	24	31
Ord.12	[±kNm]	10	0	2	8
Torque variation	[±kNm]	352.5	254.1	209.4	178.6

*) no engine fitted 2nd order balancer available

The values for other engine ratings are available on request

The resulting lateral guide force at the crosshead can be estimated as follows: $FL = MLH \times 0.376$ [kN]

5-8 X40DF / Free external mass moments Power Related Unbalance (PRU) Rating R1 935 kW/Cyl @ 146 rpm

Crankshaft type: FCV2 / Full crank pin

