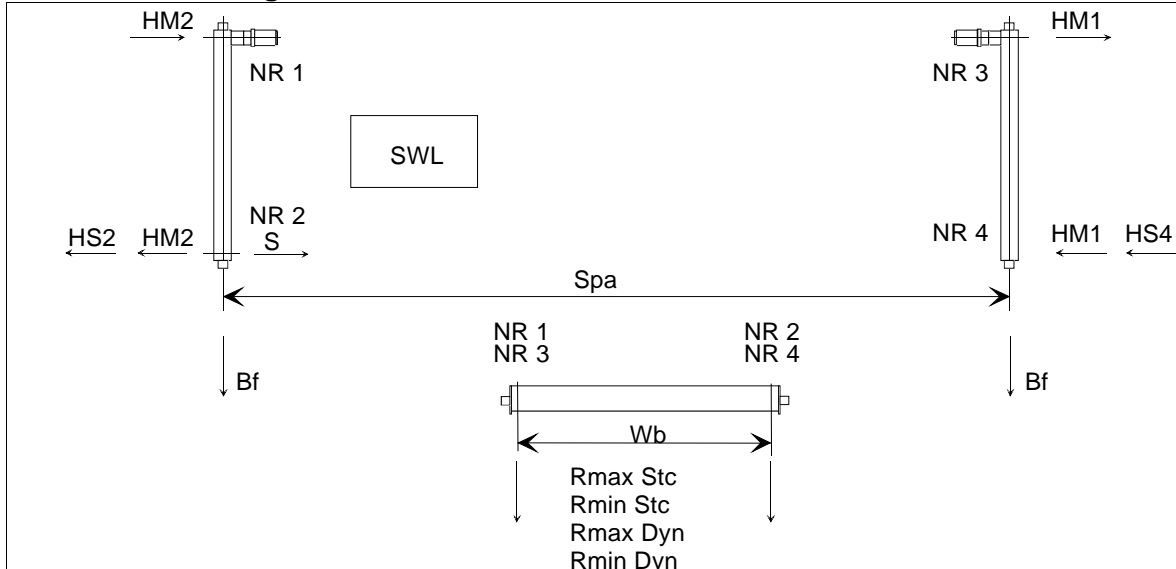


CRANE WHEEL LOAD DATA

WHEEL LOADS ARE BASED ON PROPOSED GIRDER (AND SERVICE PLATFORM) WEIGHT

1 Wheel load drawing



2 Crane information

Crane type	QXSk5-TON x 30ft Hol:19.66	Buffer type	D1801
Span (Spa)	30'-0"	Wheel base (Wb)	5'-10 7/8"
Load (SWL)	10 000 lbs	Crane rail in calculation	ASCE40
Crane group	CMAA C	Wheel groove	2 9/16"
Crane speed	100 ft/min		
Crane weight	3 740 lbs	Crane travel limit switch	1-step

3 Hoist Information

Hoist	Hoist type	Hoist group	Hoisting speed
Hoist 1 Main	SX40410050P	ASME H4	19,7/3.3 ft/min
Hoist 1 Aux			

4 Vertical wheel loads

Wheel	NR1	NR2	NR3	NR4
Rmax Stc	6 kips	5.6 kips	-	-
Rmin Stc	-	-	1.2 kips	1 kips
Rmax Dyn	6.8 kips	6.3 kips	-	-
Rmin Dyn	-	-	1.3 kips	1.2 kips

5 Horizontal wheel loads (according to DIN 4132 + 15018 and FEM)

5.1	Inertia forces (from driving mechanisms)	HM1 = 0.1 kips	HM2 = 0.8 kips
5.2	Wheel loads along crane runway		0.4 kips
5.3	Buffer force for dimensioning the crane runway end stop		Bf = 3 kips
5.4	Forces coming from skewing		
5.4.1	Guiding (contact) force (S= HS2 + HS4)		S = 2.1 kips
5.4.2	Friction forces due to oblique travel	HS2 = 1.8 kips	HS4 = 0.3 kips

Note! The inertia forces are acting on the crane structure only during acceleration and deceleration of the crane movement. Inertia forces and guiding forces do not act simultaneously. Guiding force S can also locate in wheel NR4.