

HAYER & BOECKER



NIAGARA

HAYER EXCITERS



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Haver & Boecker Niagara is a leader in screening and pelletizing. Our mission is to deliver the best of these technologies to customers in the mining, minerals, aggregates, cement, construction materials, fertilizers and salt industries. With deep roots and years of experience in these industries, we use innovative and shared technologies to effectively meet the needs of customers around the world.

Our goal is to offer a complete portfolio of innovative mineral processing technologies to better meet the needs of our customers.

Driving our roots, our history and our technology around the world, Haver & Boecker Niagara is more than merely the name of our entity, it represents our heritage and our legacy, both in the past and our future.



XL-CLASS

HAYER EXCITERS

HAYER exciters combine years of experience in engineering high performance vibrating screens manufactured to properly set the required stroke, frequency and exact static moment for each application, resulting in improved screening performance.

Bearings and Lubricants

Dedicated spherical roller bearings, particularly designed for vibrating equipment applications, provide increased service life, resulting in greater machine availability and production increase. The optimal combination of oil and grease in each exciter model - according to the application - results in lower operating temperature, which prolongs the service life of the bearings.

Labyrinth and Seals

HAYER, in partnership with a premium bearings, seals and lubricants manufacturer, developed a seal system that features an oil deflector and mechanical labyrinth, in combination with specific O-rings and V-rings to resist the vibration. This prevents contamination and oil leakage, ensuring optimal labyrinth performance.

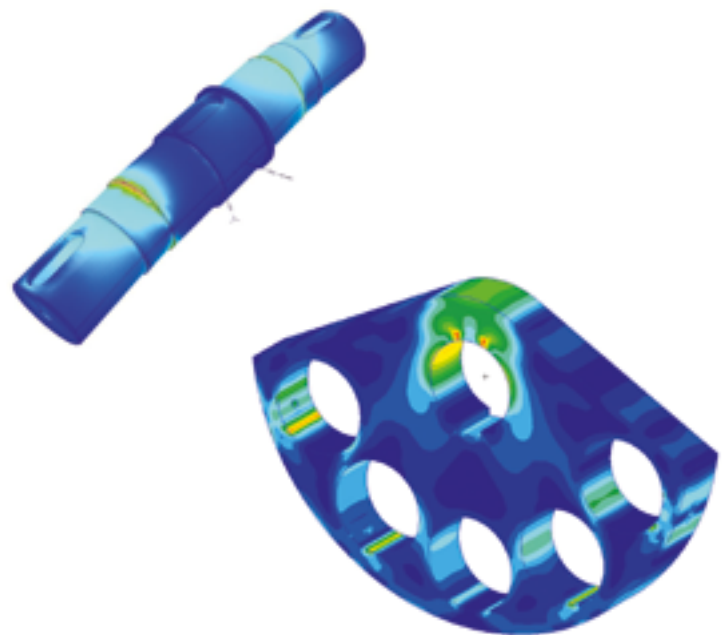
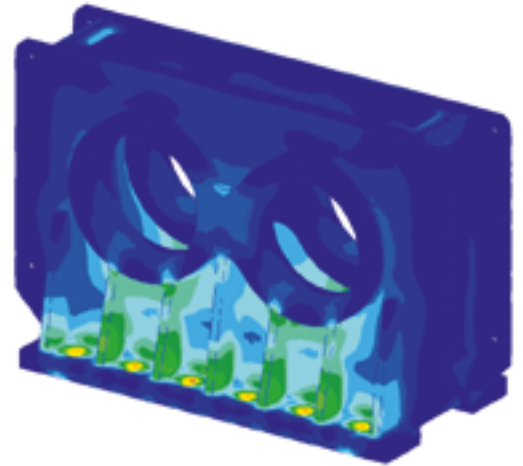
Customer Benefits

- Robust engineering.
- Design that ensures greater bearing life through a specific lubricant and optimized sealing system.
- Minimum maintenance requirements, allowing higher rates of availability and increased production.
- Adjustable static moment through variable inserts configurations enable fine tuning of the amplitude.
- Operational safety is guaranteed through correct sizing of all components.
- Global availability of stock with short delivery times.
- Worldwide assistance through the global Hayer & Boecker Service network.

Method and Analysis Tools

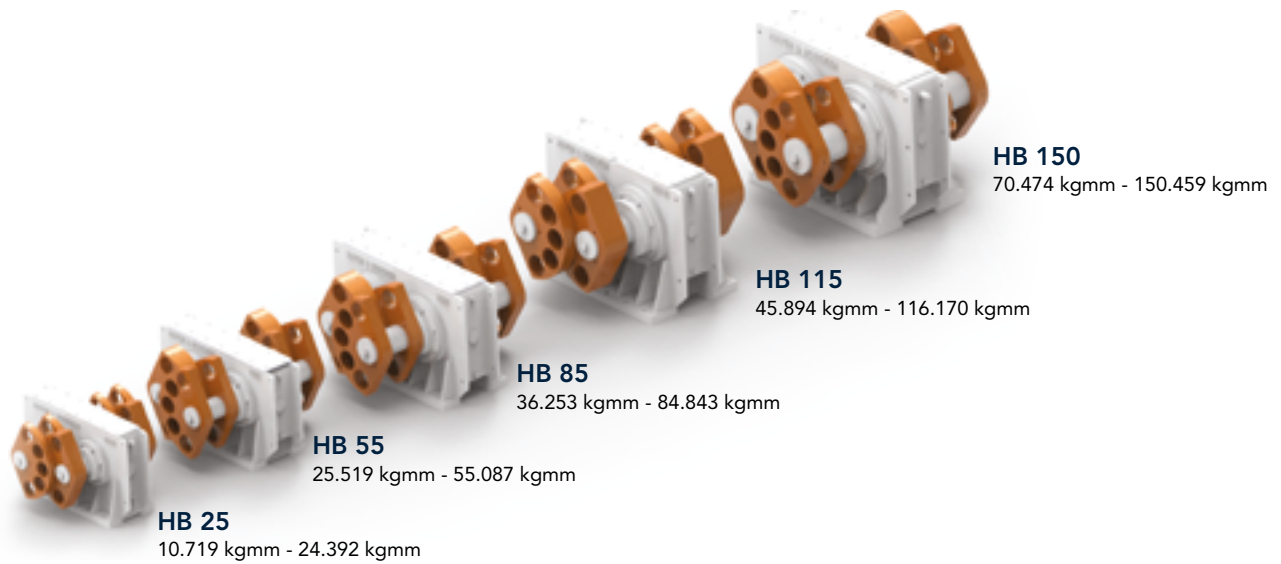
The exciter components, such as shafts, housing and counterweights, were designed using analytical calculation and finite element analysis.

FEA software based on the AGMA, ISO, DIN and BS standards. Through these calculations and simulations, components were accurately measured to assure equipment reliability.

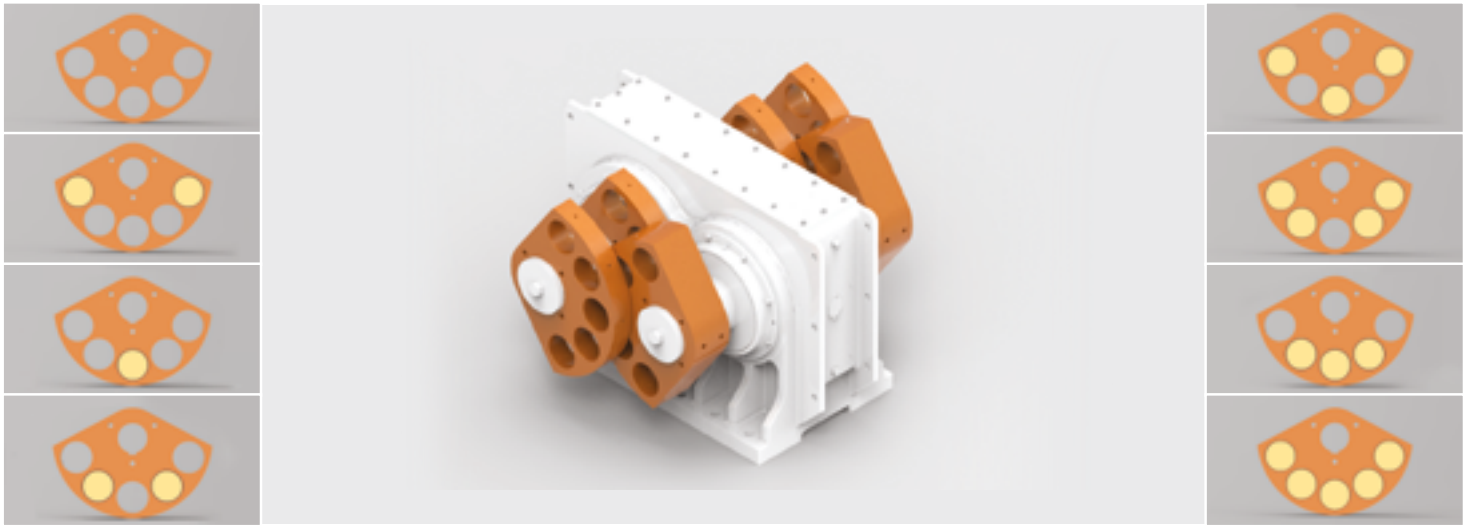


Finite Element Analysis of the shaft, housing and counterweight.

MODELS



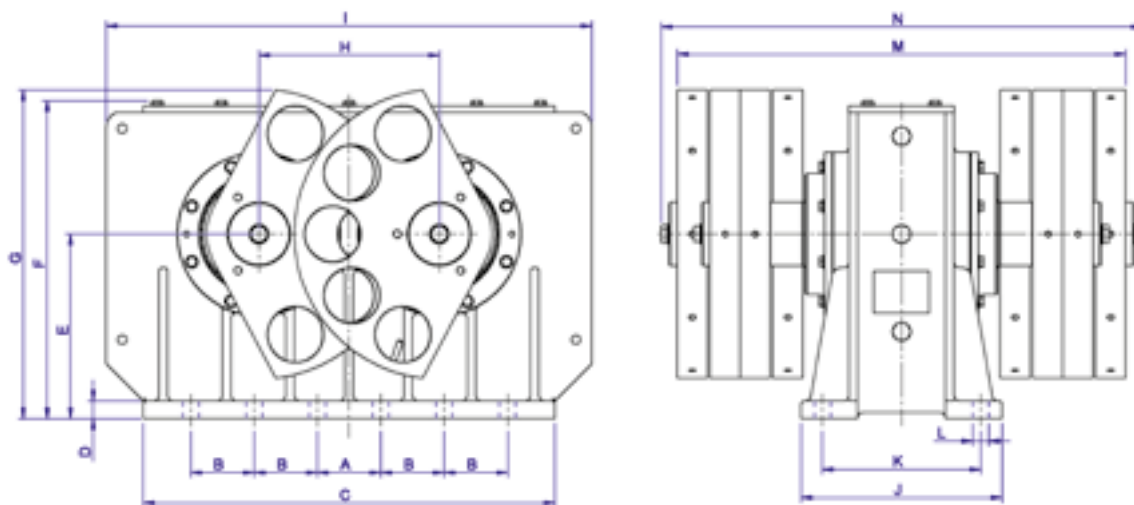
HAYER Exciter models with minimum and maximum static moment of each model. All Haver exciters leave the factory ready for Pulse CM installation.



Possible mounting configurations of the weight (steel or lead) for the static moment change.

		STATIC MOMENT								Required motor power (kW)		
Models	Config.									1 Exciter	2 Exciters	3 Exciters
	Insert											
HB 25	Steel	10.719	12.593	13.601	15.411	15.481	17.291	18.300	20.173	11	22	37
	Lead	10.719	13.431	14.886	17.503	17.603	20.221	21.677	24.392			
	Frequency (max)	1.500	1.350	1.300	1.200	1.200	1.100	1.100	1.050			
HB 55	Steel	25.519	29.731	31.674	35.604	35.884	39.809	41.759	45.969	22	37	55
	Lead	25.519	31.608	34.423	40.102	40.504	46.188	48.994	55.087			
	Frequency (max)	1.200	1.050	1.050	950	950	900	900	850			
HB 85	Steel	36.253	42.918	46.496	52.933	53.172	59.612	63.186	69.857	30	55	90
	Lead	36.253	45.881	51.062	60.369	60.721	70.026	75.196	84.843			
	Frequency (max)	1.150	1.050	1.000	900	900	850	850	800			
HB 115	Steel	45.894	55.177	60.909	70.195	70.196	79.479	85.219	94.495	45	90	150
	Lead	45.894	59.317	67.611	81.028	81.025	94.452	102.740	116.170			
	Frequency (max)	1.150	1.000	950	900	900	850	800	750			
HB 150	Steel	70.474	81.862	87.199	97.755	98.515	109.138	114.403	125.794	55	150	220
	Lead	70.474	86.938	94.545	109.919	111.021	126.383	133.993	150.459			
	Frequency (max)	1.100	1.000	1.000	900	900	850	850	800			

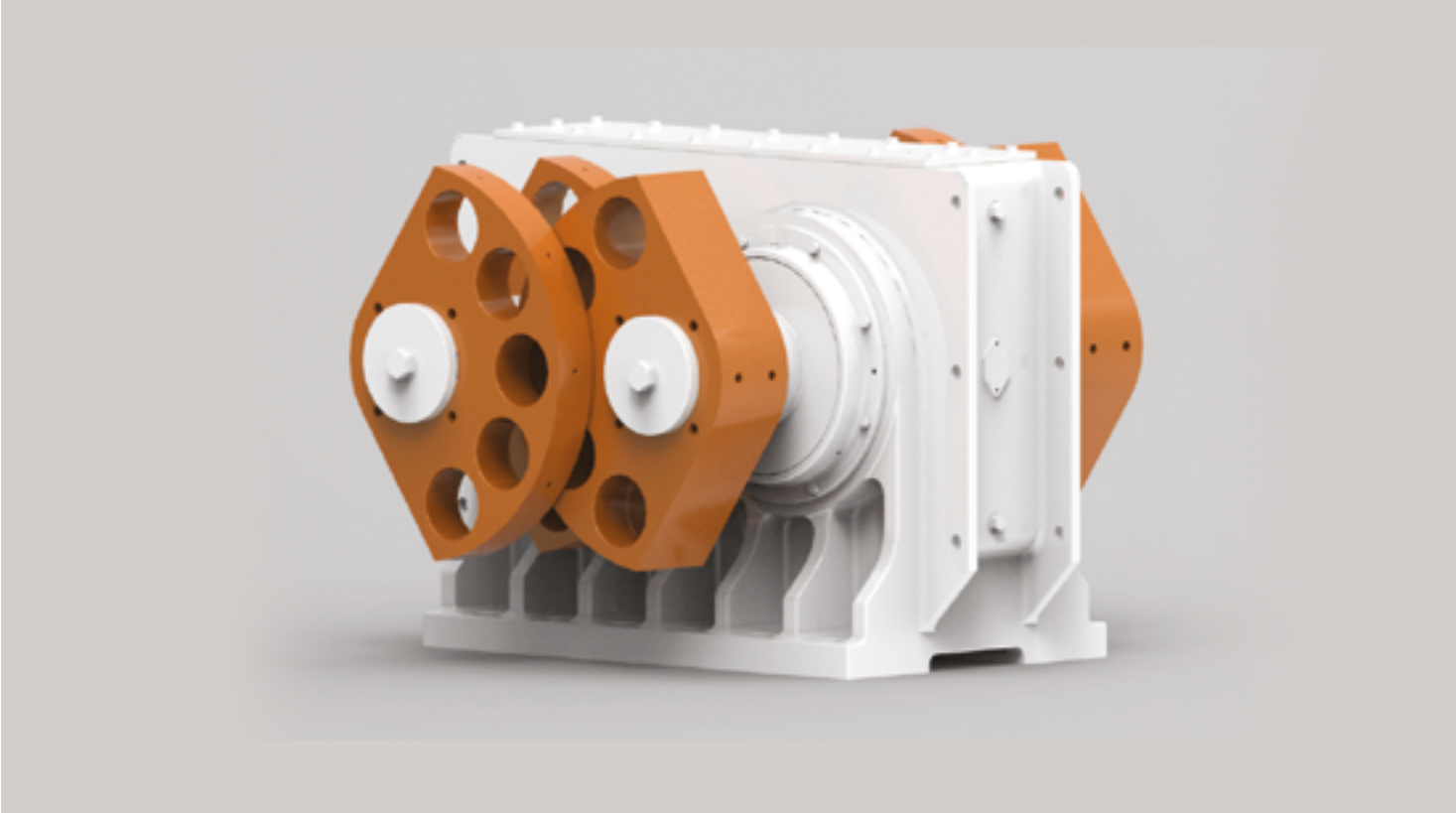
TECHNICAL DATA



HAVER Exciters		HB 25	HB 55	HB 85	HB 115	HB 150
Mass (without inserts)	kg	544	903	1419	1991	2981
Bearing	[-]	22.319	22322	22328	22332	22340
A	mm	280	120	200	150	164
B	mm	130	120	130	150	164
C	mm	700	780	920	940	1019
D	mm	34	34	40	45	59
E	mm	310	350	380	470	523
F	mm	549	603	688	794	896
G	mm	538	623	675	781	865
H	mm	288	342	378	402	492
I	mm	840	920	1060	1100	1245
J	mm	332	380	470	630	650
K	mm	252	300	360	550	550
(N° HOLES) / ØL	mm	(8) Ø31	(12) Ø31	(12) Ø31	(12) Ø34	(12) Ø40
M	mm	680	850	1020	1179	1227
N	mm	741	911	1095	1253	1320

All Haver exciters leave the factory ready for Pulse CM installation.

SPECIAL EXCITERS



Models		Config. Insert	STATIC MOMENT							Required motor power (kW)			
										1 Exciter	2 Exciters	3 Exciters	
HB25L	Steel		6.286	7.613	8.322	9.603	9.647	10.928	11.637	12.965	11	22	37
	Lead		6.286	8.203	9.227	11.079	11.145	12.993	14.022	15.942			
	Frequency (max)		1.800	1.650	1.600	1.450	1.450	1.350	1.300	1.250			
HB55F	Steel		17.891	20.709	22.012	24.645	24.835	27.465	28.768	31.589	22	37	55
	Lead		17.891	21.962	23.845	27.644	27.915	31.716	33.599	37.671			
	Frequency (max)		1.350	1.250	1.200	1.150	1.150	1.050	1.050	1.000			
HB55S	Steel		15.480	17.422	22.427	26.014	24.370	27.956	32.961	34.904	22	37	55
	Lead		15.480	18.294	25.545	30.741	28.359	33.555	40.806	43.620			
	Frequency (max)		1.450	1.400	1.200	1.100	1.150	1.100	1.000	950			
HB80	Steel		36.253	42.918	46.496	52.933	53.172	59.612	63.186	69.857	30	55	90
	Lead		36.253	45.881	51.062	60.369	60.721	70.026	75.196	84.843			
	Frequency (max)		1.050	1.050	1.000	900	900	850	850	750			

SPECIAL EXCITERS

		STATIC MOMENT								Required motor power (kW)		
Models	Config.									1 Exciter	2 Exciters	3 Exciters
	Insert											
HB85M	Steel	36.253	42.918	46.496	52.933	53.172	59.612	63.186	69.857	30	55	90
	Lead	36.253	45.881	51.062	60.369	60.721	70.026	75.196	84.843			
	Frequency (max)	1.050	1.050	1.000	900	900	850	850	750			
HB85MF	Steel	36.253	42.918	46.496	52.933	53.172	59.612	63.186	69.857	30	55	90
	Lead	36.253	45.881	51.062	60.369	60.721	70.026	75.196	84.843			
	Frequency (max)	1.050	1.050	1.000	900	900	850	850	750			
HB135S	Steel	70.338	79.539	84.471	93.350	93.678	102.561	107.487	116.692	45	150	90
	Lead	70.338	83.649	90.772	103.615	104.080	116.930	124.057	137.360			
	Frequency (max)	1.050	1.000	950	900	900	850	800	800			

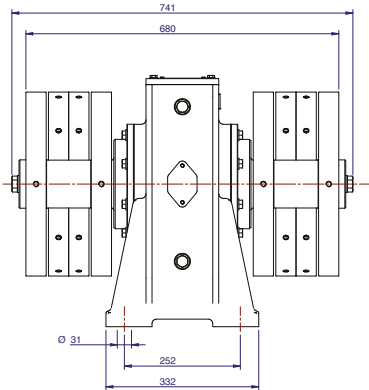
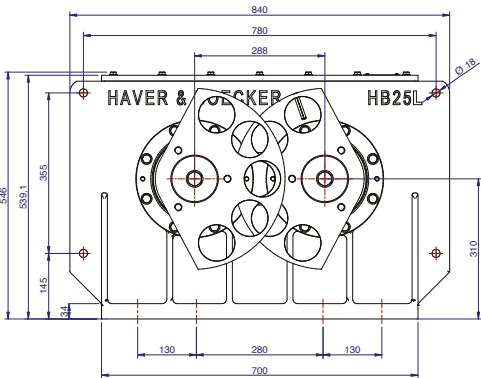
All Haver exciters leave the factory ready for Pulse CM installation.

		STATIC MOMENT				Required motor power (kW)		
Models	Config.					1 Exciter	2 Exciters	3 Exciters
	Insert							
HB85ML	Steel	24.687	30.276	40.411	46.001	22	37	55
	Lead	24.687	32.782	47.460	55.555			
	Frequency (max)	1.350	1.200	1.000	950			

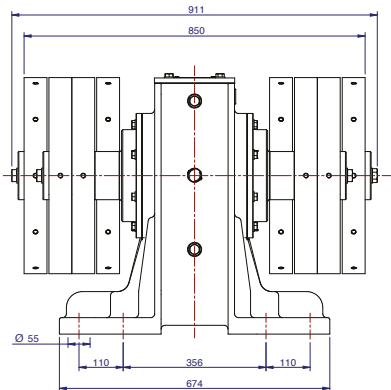
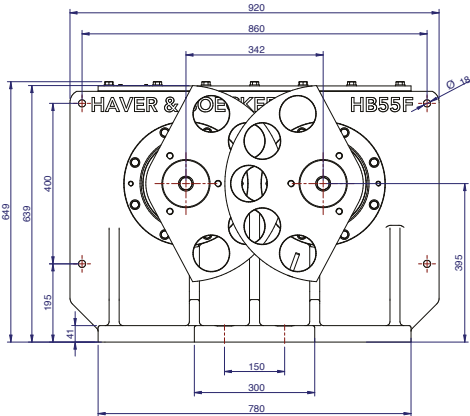


MODELS

HB25L

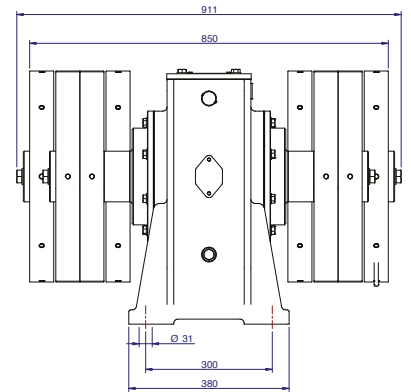
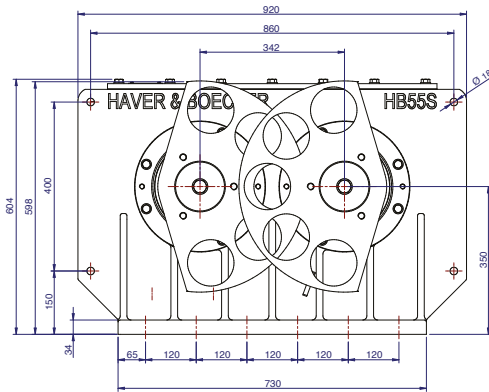


HB55F

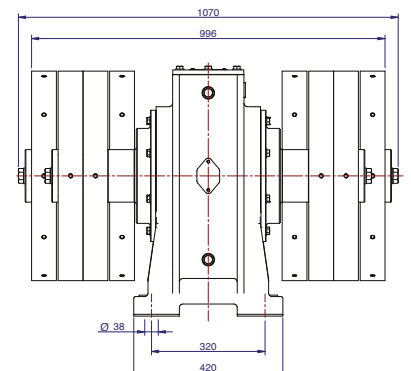
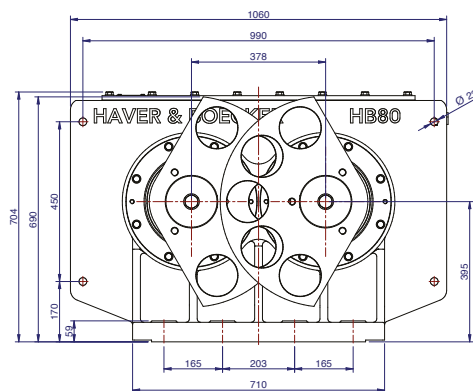


MODELS

HB55S

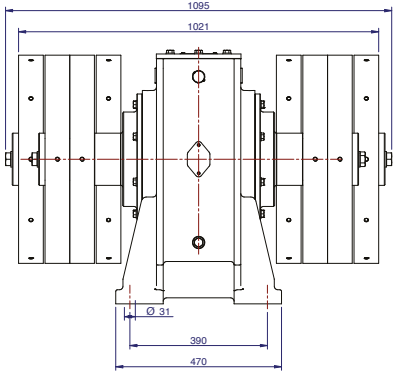
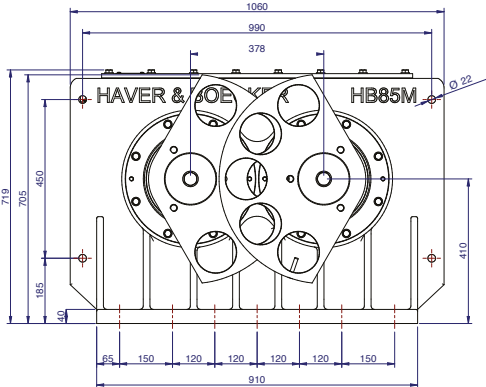


HB80

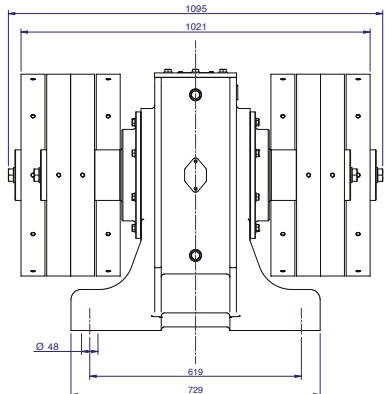
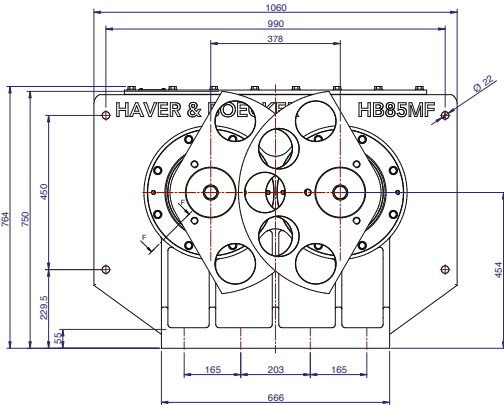


MODELS

HB85M

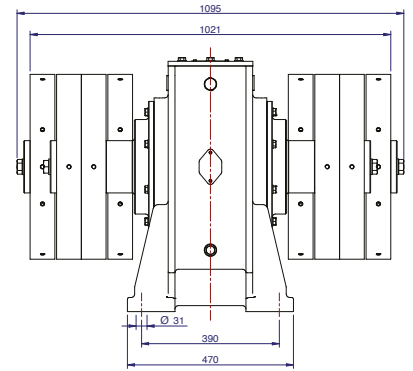
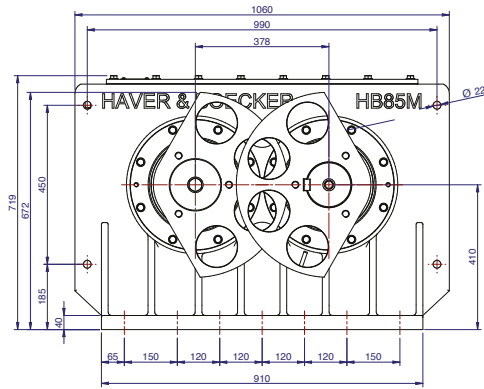


HB85MF

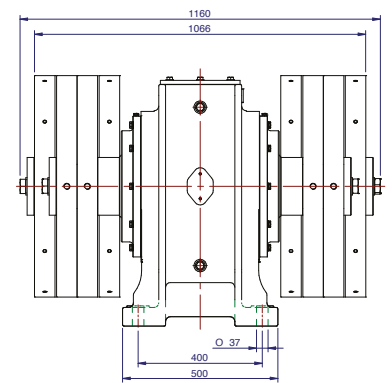
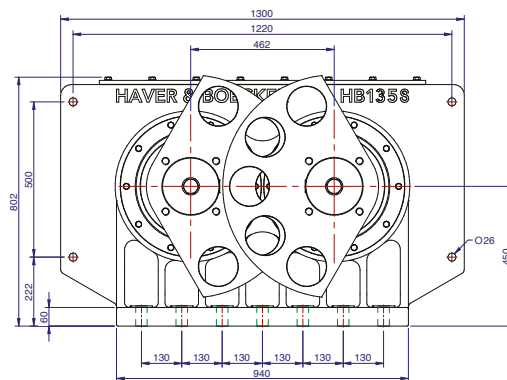


MODELS

HB85ML



HB135S



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