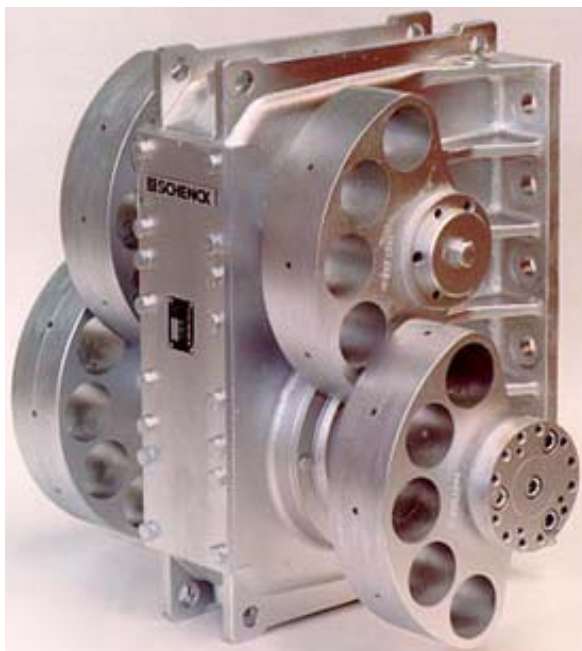


Directional Force Exciter DF



- **Economic and powerful exciter for high performance**
- **Long service life and extremely calm operation**
- **Minimum maintenance requirements**
- **Optimum, application-orientated graduation of exciters**
- **Low operation noise level**
- **98% availability**
- **Ideal for use in continuous operation**

Application

Sandvik directional force exciters series DF are used to drive vibrating conveyors or vibrating screens with exciting forces from 43 up to 603 kN per exciter.

Contrary to unbalance motors, directional force exciters have the advantage of well defined force flows and defined mechanical loads in the vibrating machine.

The vibration data are independent of bulk material loads.

Construction

Roller bearings and gear wheels are accommodated in a cast iron housing and are oil-lubricated (oil immersion lubrication).

Maintenance is limited to an oil change or an oil-level check, respectively, at the prescribed intervals.

The unbalance masses can be changed during shutdown, simply by installing or removing supplementary masses (steel or lead unbalance weights). The exciter is run externally by a standard electric motor via a drive shaft.

For all directional force exciters suitable drive shafts are available.

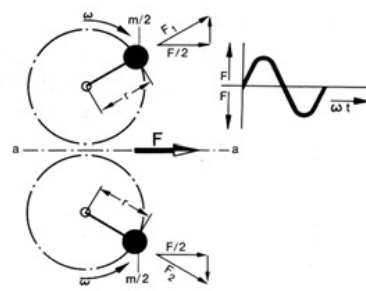
If required, braking devices can be used to reduce slow-down oscillations. Frequency converters allow for infinite variability of the centrifugal force, which is, in effect, the variation of the feed rate.

Functions

The Sandvik DF directional force exciter generates a force F with a sine-shaped pattern along line a-a.

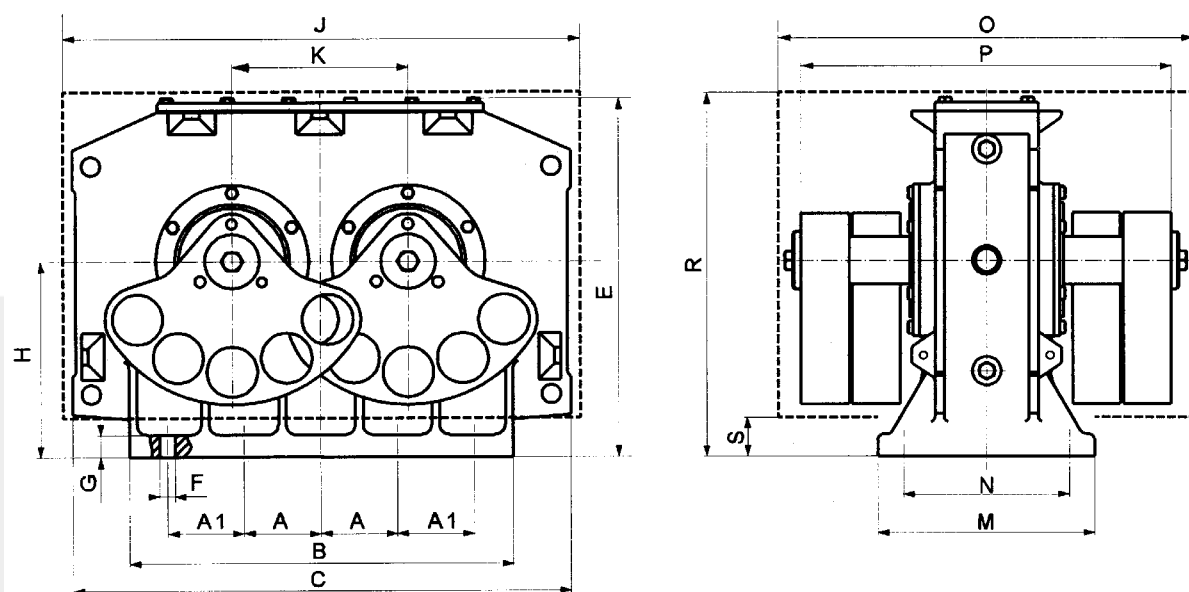
The exciter is equipped with two shafts and unbalance masses. The unbalance masses are synchronized by a built-in gear drive, rotating both at the same speed in opposite directions.

The components of the centrifugal forces F_1 and F_2 working along line a-a add to the resulting force F . The force components perpendicular to that direction cancel each other.



Dimensions in [mm]	DF 100S	DF 200S	DF 300S	DF 401L	DF 401S	DF 401V	DF 404S	DF 404V	DF 5L
A	2x125	1x75	4x120	4x120	4x120	4x120	4x120	4x120	5x120
A1	-	115	-	-	-	-	-	-	-
B	380	435	600	600	600	600	600	600	730
C	515	636	690	780	780	780	780	780	830
E	434	438	537	568	568	568	568	568	568
F	Ø 31	Ø 27	Ø 31	Ø 25	Ø 25	Ø 25	Ø 25	Ø 25	Ø 31
G	18	18	18	34	34	34	34	34	23
H	250	250	310	310	310	310	310	310	315
J	536	646	701	786	786	786	-	-	819
K	190	230	250	275	275	275	275	275	300
M	320	320	340	340	340	340	340	340	380
N	240	260	260	260	260	260	260	260	300
O	504	574	600	670	670	794	-	-	814
P	434	494	522	580	580	708	-	-	712
R	439	456	543	560	560	560	-	-	579
S	46	44	84	63	63	63	-	-	46

Dimensions in [mm]	DF 5S	DF 501S	DF 501V	DF 504S	DF 504V	DF 601S	DF 601V	DF 604S	DF 604V
A	5x120	5x120	5x120	5x120	5x120	4x120	4x120	4x120	4x120
A1	-	-	-	-	-	150	150	150	150
B	730	730	730	730	730	910	910	910	910
C	830	830	830	830	830	1040	1040	1040	1040
E	568	569	569	569	569	659	675	659	675
F	Ø 31	Ø 31	Ø 31	Ø 31	Ø 31	Ø 31	Ø 31	Ø 31	Ø 31
G	23	23	23	23	23	25	25	25	25
H	315	315	315	315	315	370	370	370	370
J	819	819	819	819	819	1032	1032	-	-
K	300	300	300	300	300	376	376	376	376
M	380	380	380	380	380	470	470	470	470
N	300	300	300	300	300	390	390	390	390
O	814	918	918	1014	1014	1087	1087	-	-
P	712	883	883	906	906	934	994	1064	1064
R	579	579	579	579	579	696	696	-	-
S	46	46	46	46	46	16	16	-	-



Directional force exciter

Exciter Type	Speed in [min ⁻¹]	Working Moment in [kg/cm]		max. Exciter Force in [kN]	Rated Power of Drive Motor in [kW ¹⁾]	Weight without Protective Box in [kg]	Unbalances ²⁾	Order No.r
		min	max					
DF 100 S	1000	416	780	43	3	250	Steel	S000239.06
DF 100 S	1000	416	912	50	3	260	Lead	S000239.11
DF 200 S	1000	624	1208	67	4	285	Steel	S000240.06
DF 200 S	1000	624	1400	77	4	295	Lead	S000240.11
DF300 S	1000	968	1780	98	5,5	435	Steel	S000216.06
DF300 S	1000	968	2072	114	5,5	455	Lead	S000216.11
DF401 L	1500	848	1648	203	7,5	420	Steel	S001021.01
DF401 S	1000	1680	3248	178	7,5	490	Steel	S000012.06
DF401 V	750	2400	4632	143	7,5	550	Steel	S000013.06
DF404 S	1000	2033	3930	215	11	-	Steel	on request
DF404 V	750	2033	4764	147	11	-	Lead	on request
DF5 L	1500	1520	2820	348	11	700	Steel	S009470.06
DF5 S	1000	2536	4220	231	11	740	Steel	S000265.06
DF501 S	1000	2816	5600	307	15	880	Steel	S000235.06
DF501 V	750	2320	6216	192	15	920	Steel	S000236.04
DF501 V	750	2320	7680	237	15	980	Lead	S000236.07
DF504 S	1000	3564	7128	391	18,5	924	Steel	V055700.B01
DF504 V	750	4342	8684	268	18,5	973	Lead	V064328.B01
DF601 S	1000	4592	9000	493	22	1270	Steel	S000233.06
DF601 V	750	7184	15200	469	30	1490	Steel	S000234.06
DF604 S	750	7832	16570	511	37	1550	Steel	V056400.B01
DF604 V	740	7832	20076	603	37	1675	Lead	V063722.B01

¹⁾ Standard values at operating voltage, the torque in the 0-300 min-1 speed range must be at least double and not more than 2,5 times the nominal moment.

²⁾ Including clamping pins, attachments, dipstick, punch; DF 300S and higher with transport restraint.



Protective box for directional force exciters

Type	Single Drive		Twin Drive	
	Weight in [kg]	Order No.	Weight in [kg]	Order No.
DF100 S	13	X794990.01	26	X794998.01
DF200 S	18	S000011.01	36	S000011.02
DF300 S	19	X794985.01	38	X794995.01
DF401 S/L	29	X794986.01	59	X794987.01
DF401 V	29	X794996.01	59	X794997.01
DF404 S	-	on request	-	on request
DF5 S/L	34	S006918.01	66	S006918.02
DF501 S/V	34	S000010.01	66	S000010.02
DF504 S/V	35	V057068.B01	70	V057068.B02
DF601 S/V	63	X794751.01	118	X794752.01
DF604 S/V	-	on request	-	on request