SV110

GEARED MACHINES
SV SERIES

Model	For rated loads up to	Speed range synchronous		Traction sheaves diameter	Max Static Load
	[kg]	50Hz [m/s]	60Hz [m/s]	[mm]	[kN-kg]
SV110 	**450**	0,27 ... 1,10	0,27 ... 1,32	480,520,600	19,6 - 2000

Roping 1 : 1

SICOR
TRACTION MACHINES FOR ELEVATORS

by
SICOR ITALY
AN ELEVANTIS COMPANY

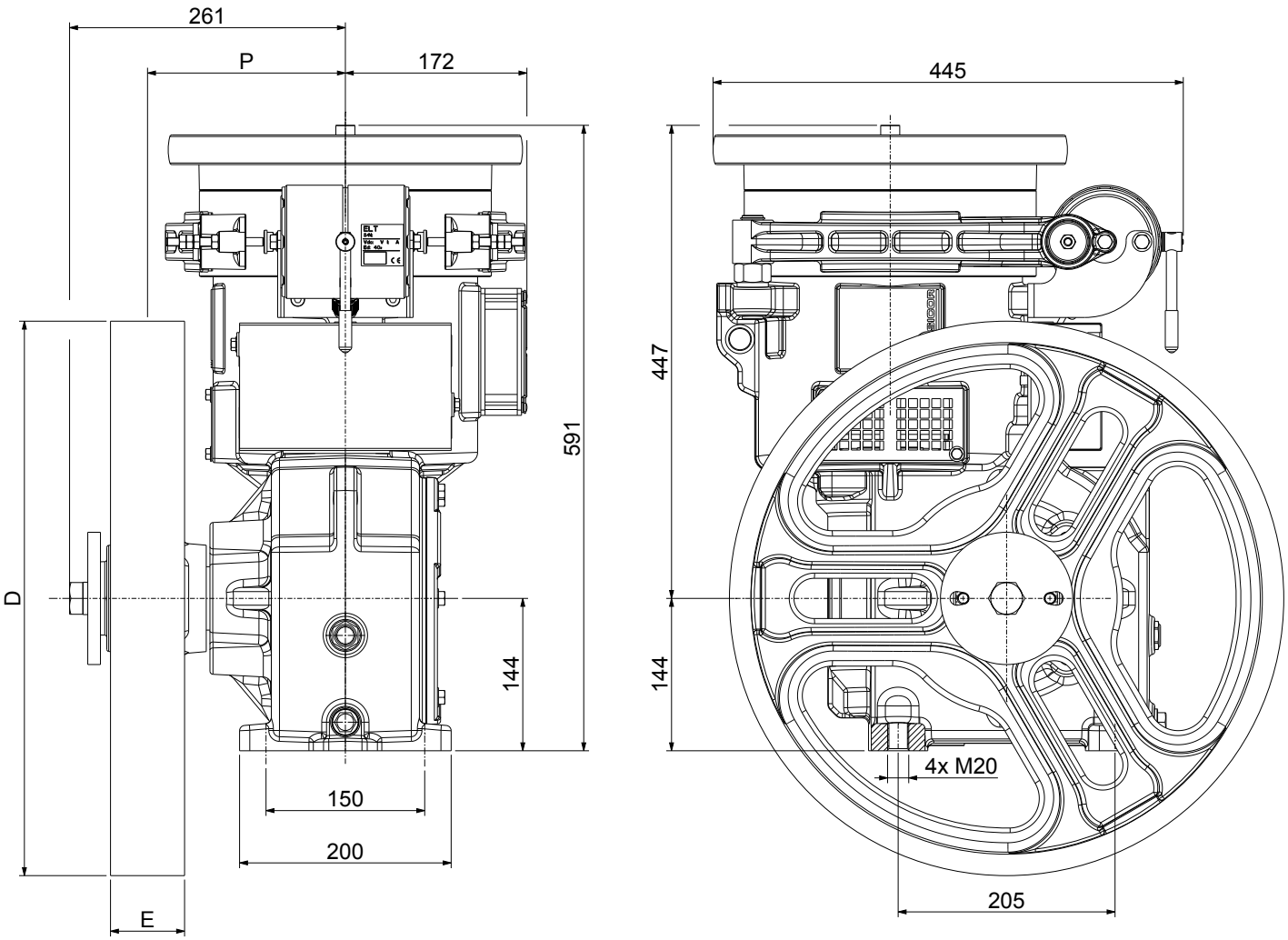
sicoritaly.com

SV110

Max. Static Load	**19,6 kN - 2000 kg**
Power Range 50 Hz 4 poles VVVF	**4 ÷ 5,5 kW**
Power Range 50 Hz 6 poles VVVF	**3,6 kW**
Power Range 60 Hz 4 poles VVVF	**4,4 ÷ 6 kW**
Power Range 60 Hz 6 poles VVVF	**4 kW**
Ratio	**1/55; 1/43**
Geared Weight	**160 kg**
Oil capacity	**2 l**
Geared machine	**Only vertical**

The geared machine efficiency values are present above each "rated load" table
The motor efficiency values are present in the table "electric motor data"

DIMENSIONS



Wrapping System	Traction sheave		Dimension	Load*)	Static Load Direction
	D [mm]	E [mm]	P [mm]	F [kN - kg]	[%]
CSW	480	70	187	19,6 - 2000	100% / 100% / 100% / 100%
	520				
	600				

Brake Electromagnet		
[V]	[A]	[W]
24	5,25	126
48	2,30	110
60	1,77	106
80	1,50	120
110	1,02	112
200	0,63	126

*) Max. static load on the slow shaft: CSW:Conventional single wrap

DUTY TABLE

Roping 1:1

50Hz

VVVF 1500 rpm 4 Poles

R.R.	Traction Sheave Ø	Motor Output **[kW]** Speed syn.	Frequency	VVVF **4** Max Rated Load	VVVF **5,5** Max Rated Load
[i]	[mm]	[m/s]	[Hz]	[kg]	[kg]
1/55	480	0,27	20	460	460
1/55	480	0,34	25	460	460
1/55	480	0,41	30	460	460
1/55	480	0,48	35	460	460
1/55	480	0,55	40	460	460
1/55	480	0,62	45	460	460
1/55	480	0,69	50	460	460
1/55	520	0,74	50	425	425
1/55	600	0,77	45	365	365
1/43	480	0,79	45	475	475
1/43	480	0,84	48	475	475
1/43	480	0,88	50	475	475
1/43	520	0,91	48	435	435
1/43	520	0,95	50	435	435
1/43	600	1,05	48	380	380
1/43	600	1,10	50	380	380

60Hz

VVVF 1800 rpm 4 Poles

R.R.	Traction Sheave Ø	Motor Output **[kW]** Speed syn.	Frequency	VVVF **4,4** Max Rated Load	VVVF **6** Max Rated Load
[i]	[mm]	[m/s]	[Hz]	[kg]	[kg]
1/55	480	0,27	20	460	460
1/55	480	0,34	25	460	460
1/55	480	0,41	30	460	460
1/55	480	0,48	35	460	460
1/55	480	0,55	40	460	460
1/55	480	0,62	45	460	460
1/55	480	0,69	50	460	460
1/55	480	0,75	55	460	460
1/55	520	0,82	55	425	425
1/55	480	0,82	60	460	460
1/43	480	0,88	50	475	475
1/55	520	0,89	60	425	425
1/43	480	0,96	55	475	475
1/43	480	1,00	57	475	475
1/43	480	1,05	60	475	475
1/43	520	1,10	58	435	435
1/43	520	1,14	60	435	435
1/43	600	1,21	55	380	380
1/43	600	1,27	58	380	380
1/43	600	1,32	60	380	380

50Hz

R.R.	Motor Output **[kW]** Max Output Torque	VVVF **4** Geared Efficiency	VVVF **5,5** Geared Efficiency
[i]	[Nm]		
1/55	680	0,72	0,74
1/43	700	0,74	0,76

60Hz

R.R.	Motor Output **[kW]** Max Output Torque	VVVF **4,4** Geared Efficiency	VVVF **6** Geared Efficiency
[i]	[Nm]		
1/55	680	0,71	0,73
1/43	700	0,73	0,76

Rated load values listed in the table include the weight of the ropes.
To know the theoretical load, subtract the weight of the ropes.
Position Of The Geared = Top Counterweight = 50% Plant efficiency = 0,80

DUTY TABLE
Roping 1:1

50Hz

VVVF 1000 rpm 6 Poles

R.R.	Traction Sheave Ø	Motor Output **[kW]** VVVF **3,6** Speed syn.	Frequency	Max Rated Load
[i]	[mm]	[m/s]	[Hz]	[kg]
1/55	480	0,18	20	460
1/55	520	0,20	20	425
1/55	480	0,23	25	460
1/55	520	0,25	25	425
1/55	480	0,27	30	460
1/55	520	0,30	30	425
1/55	480	0,32	35	460
1/55	520	0,35	35	425
1/55	480	0,37	40	460
1/55	520	0,40	40	425
1/55	520	0,45	45	425
1/55	480	0,46	50	460
1/55	520	0,50	50	425
1/43	480	0,53	45	505
1/55	600	0,57	50	365
1/43	480	0,58	50	505
1/43	520	0,63	50	470
1/43	600	0,66	45	405
1/43	600	0,73	50	405

60Hz

VVVF 1200 rpm 6 Poles

R.R.	Traction Sheave Ø	Motor Output **[kW]** VVVF **4** Speed syn.	Frequency	Max Rated Load
[i]	[mm]	[m/s]	[Hz]	[kg]
1/55	480	0,27	30	460
1/55	520	0,30	30	425
1/55	480	0,32	35	460
1/55	520	0,35	35	425
1/55	480	0,37	40	460
1/55	520	0,40	40	425
1/55	520	0,45	45	425
1/55	480	0,50	55	460
1/43	480	0,53	45	505
1/55	480	0,55	60	460
1/55	600	0,57	50	365
1/55	520	0,59	60	425
1/55	600	0,63	55	365
1/43	480	0,64	55	505
1/43	600	0,66	45	405
1/55	600	0,69	60	365
1/43	480	0,70	60	505
1/43	600	0,73	50	405
1/43	520	0,76	60	470
1/43	600	0,80	55	405
1/43	600	0,88	60	405

50Hz

R.R.	Motor Output **[kW]** VVVF **3,6** Max Output Torque	Geared Efficiency
[i]	[Nm]	
1/55	680	0,74
1/43	700	0,76

60Hz

R.R.	Motor Output **[kW]** VVVF **4** Max Output Torque	Geared Efficiency
[i]	[Nm]	
1/55	680	0,73
1/43	700	0,76

Rated load values listed in the table include the weight of the ropes.
To know the theoretical load, subtract the weight of the ropes.
Position Of The Geared = Top Counterweight = 50% Plant efficiency = 0,80

ELECTRIC MOTOR DATA

		50Hz		
		VVVF 1500 rpm 4 Poles		**VVVF 1000 rpm** 6 Poles
		Asynchronous Rated Power **[kW]**		
		VVVF **4**	VVVF **5,5**	VVVF **3,6**
		Motor Parameters		
Rated Voltage (star connection) (1) (3)	[V]	400	400	400
Frequency	[Hz]	50	50	50
Synchronous Speed	[rpm]	1500	1500	1000
Asynchronous Speed	[rpm]	1423	1424	962
Rated Current (2)	[A]	9,4	12,4	10,9
Rated Torque	[Nm]	26,8	36,9	35,7
Cos φ Power Factor	[ ]	0,76	0,78	0,62
Starting Current	[A]	41	51	43
Starting Torque	[Nm]	54	78	80
Duty Cycle	[%]	60	60	60
Starts per Hour	[s/h]	240	240	240
Insulation Class	[ ]	F	F	F
Degree of Protection IP	[ ]	IP21	IP21	IP21

(1) The motors are standard supplied with star connection (Y), the customer can arrange a delta connection (Δ).
(2) The indicated current values are related to 400V voltage. For current values with delta connection, multiply the values by 1,732.
(3) The standard supply voltage is suitable for 380-400V/220-230V power supplies.
The geared machine includes a fan, 1~220...240V, 50/60Hz.
Available on request 115V supply voltage.

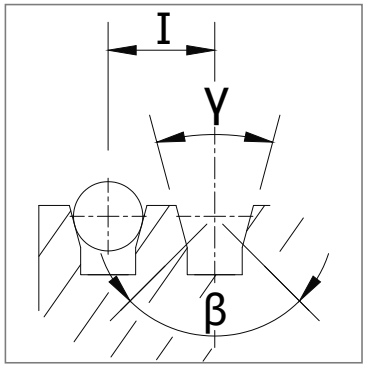
		60Hz		
		VVVF 1800 rpm 4 Poles		**VVVF 1200 rpm** 6 Poles
		Asynchronous Rated Power **[kW]**		
		VVVF **4,4**	VVVF **6**	VVVF **4**
		Motor Parameters		
Rated Voltage (star connection) (1) (3)	[V]	400	400	400
Frequency	[Hz]	60	60	60
Synchronous Speed	[rpm]	1800	1800	1200
Asynchronous Speed	[rpm]	1714	1708	1138
Rated Current (2)	[A]	10,2	15,2	12,4
Rated Torque	[Nm]	24,5	33,5	33,6
Cos φ Power Factor	[ ]	0,75	0,7	0,6
Starting Current	[A]	48	70	49
Starting Torque	[Nm]	44	70	62
Duty Cycle	[%]	60	60	60
Starts per Hour	[s/h]	240	240	240
Insulation Class	[ ]	F	F	F
Degree of Protection IP	[ ]	IP21	IP21	IP21

(1) The motors are standard supplied with star connection (Y), the customer can arrange a delta connection (Δ).
(2) The indicated current values are related to 400V voltage. For current values with delta connection, multiply the values by 1,732.
(3) The standard supply voltage is suitable for 380-400V/220-230V power supplies.
The geared machine includes a fan, 1~220...240V, 50/60Hz.
Available on request 115V supply voltage.

TRACTION SHEAVES AND GROOVES NUMBER x ROPES DIAMETER

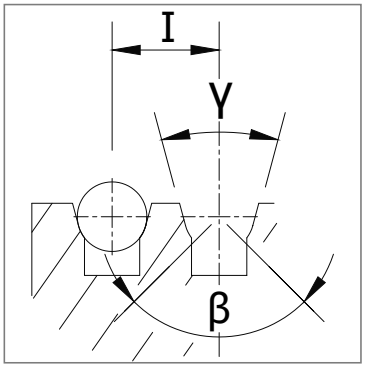
Wrapping System	Traction sheave		Max n° Grooves x D	Grooves Pitch
	D [mm]	E [mm]	n° x mm	I [mm]
CSW	480	70	5xD8	14
	480	70	4xD9	17
	480	70	4xD10	17
	480	70	4xD11	17
	480	70	3xD12	19
	520	70	5xD8	14
	520	70	4xD9	17
	520	70	4xD10	17
	520	70	4xD11	17
	520	70	3xD12	19
	520	70	3xD13	19
	600	70	5xD8	14
	600	70	4xD9	17
	600	70	4xD10	17
	600	70	4xD11	17
	600	70	3xD12	19
	600	70	3xD13	19

VCI



V grooves with undercut

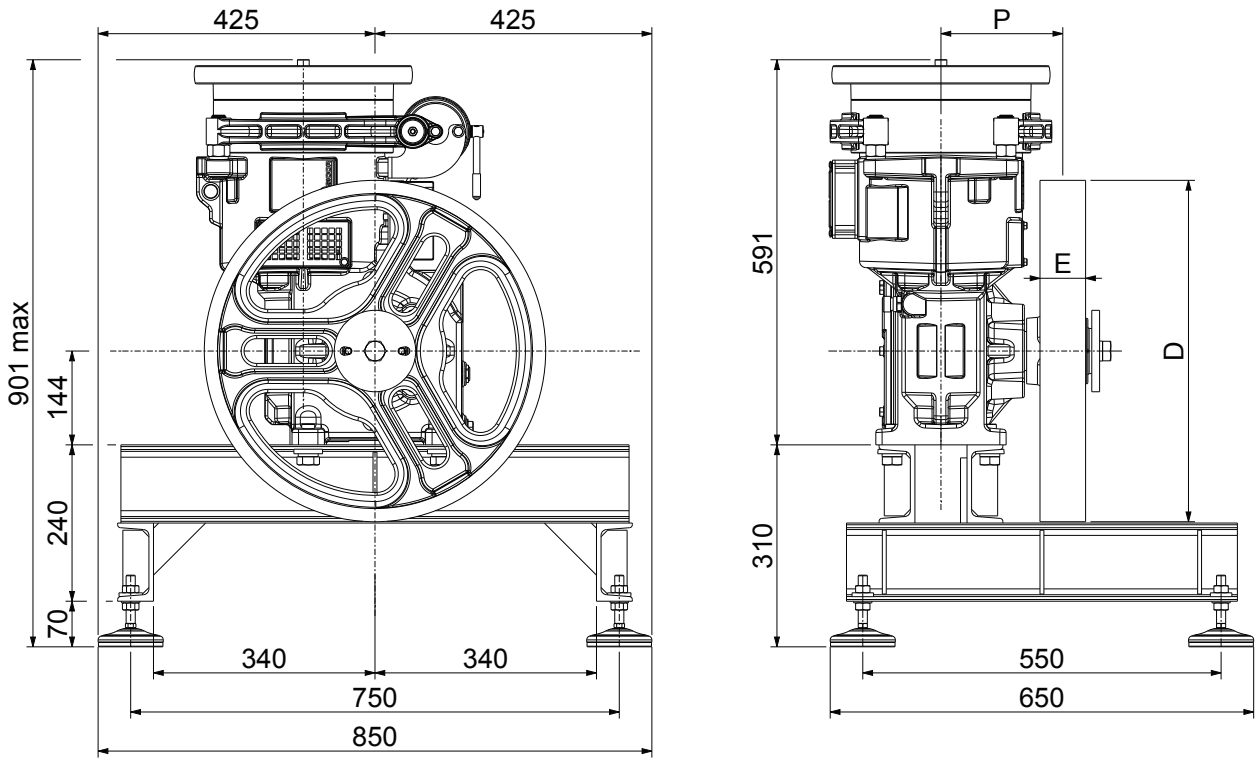
UCI



U grooves with undercut

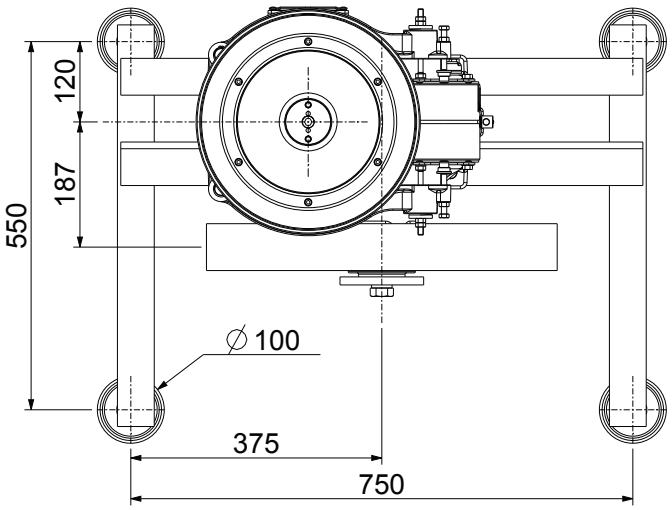
γ = groove angle
β = undercut angle
I = grooves pitch

BEDPLATE | TOP MACHINE WITHOUT DIVERTING PULLEY FOR CSW WRAPPING



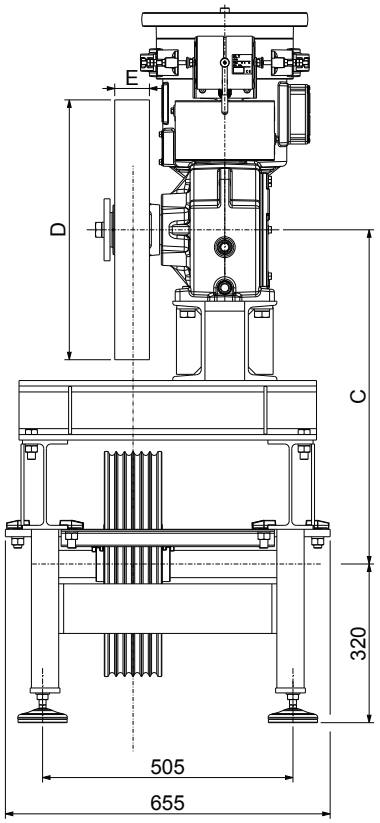
XTE0456 (included vibration dampers)
Weight of machine bedplate: 49 kg
(bedplate + vibration dampers)

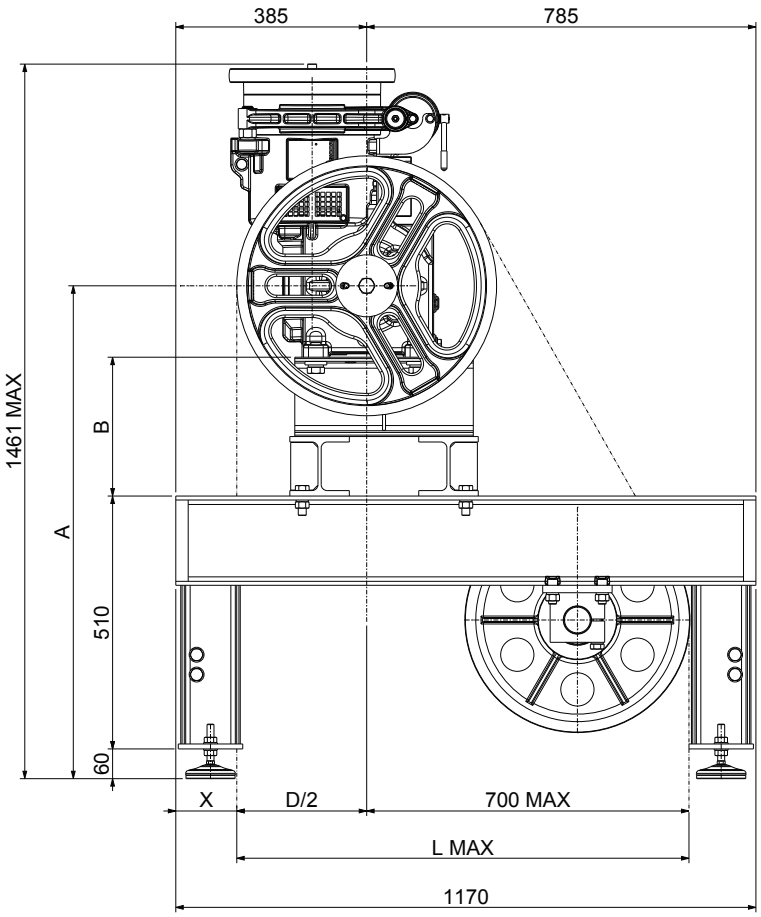
VIBRATIONS DAMPER SET UP FOR MACHINE BEDPLATE



Damper Dimension	Dimension
	[mm]
TAI0110	D.100x28

BEDPLATE | TOP MACHINE WITH DIVERTING PULLEY FOR CSW WRAPPING



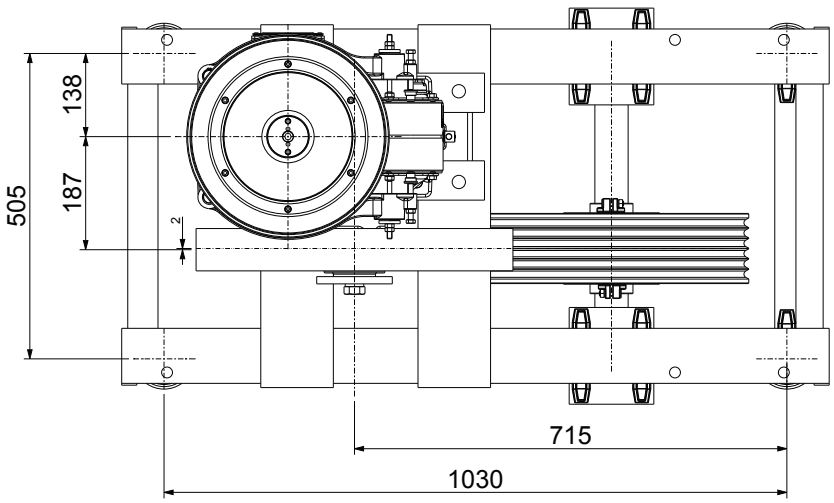


Traction Sheave	X	L max
D [mm]	[mm]	[mm]
480	140	940
520	120	960
600	80	1000

Diverting Pulley	A	B	C
Dt [mm]			
400	994	280	674
450	994	280	674
520	1014	300	694

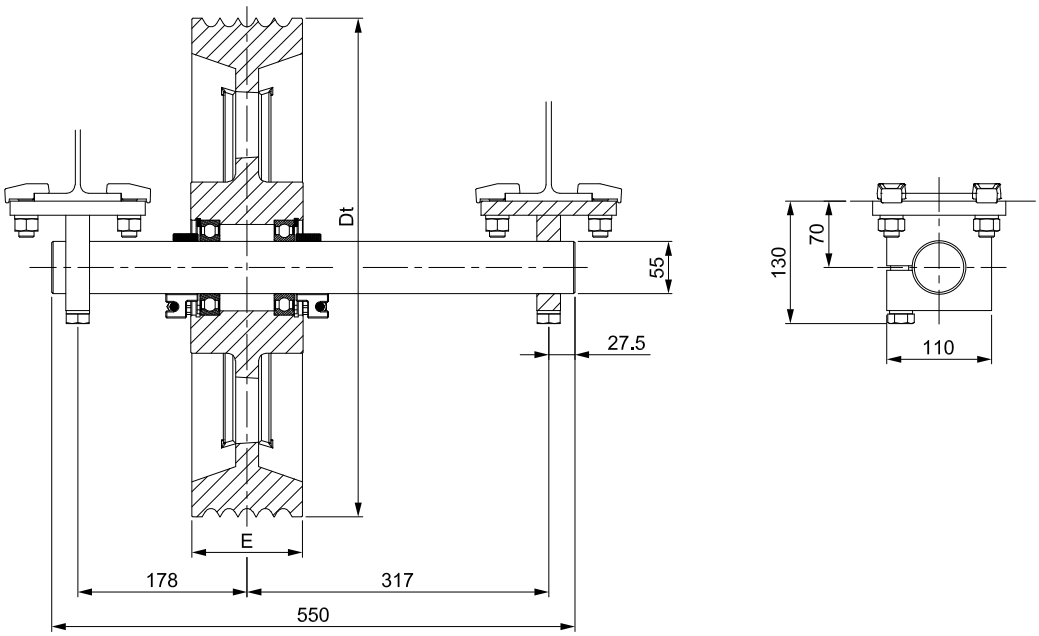
XTE0516 (Dt 520)—**XTE0517** (Dt 400-450) (included vibration dampers)
Weight of machine bedplate: (XTE0516) 163 kg, (XTE0517) 153Kg
(bedplate + diverting pulley + vibration dampers)

VIBRATIONS DAMPER SET UP FOR MACHINE BEDPLATE XTE0516 AND XTE0517



Damper Code	Dimension
	[mm]
TAI0110	D.100x28

DIVERTING PULLEYS AND GROOVES NUMBER x ROPES DIAMETER



Diverting Pulley		Max n°Grooves x D	Grooves Pitch
Dt [mm]	E [mm]	n° x mm	I [mm]
400	116	7xD8	14
450	116	6xD11	17
520	116	5xD13	19

SICOR
TRACTION MACHINES FOR ELEVATORS

by
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AN ELEVANTIS COMPANY

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Products' specifications included in this brochure are subject to change by Sicor without notice.