HYDRAULIC
DISC BRAKES

ГИДРАВЛИЧЕСКИЕ РАБОЧИЕ
ДИСКОВЫЕ ТОРМОЗА
СЕРИИ HE

antec

APLICACIÓN NUEVAS TECNOLOGÍAS ANTEC, S.A.

TÜVRheinland CERT ISO 9001

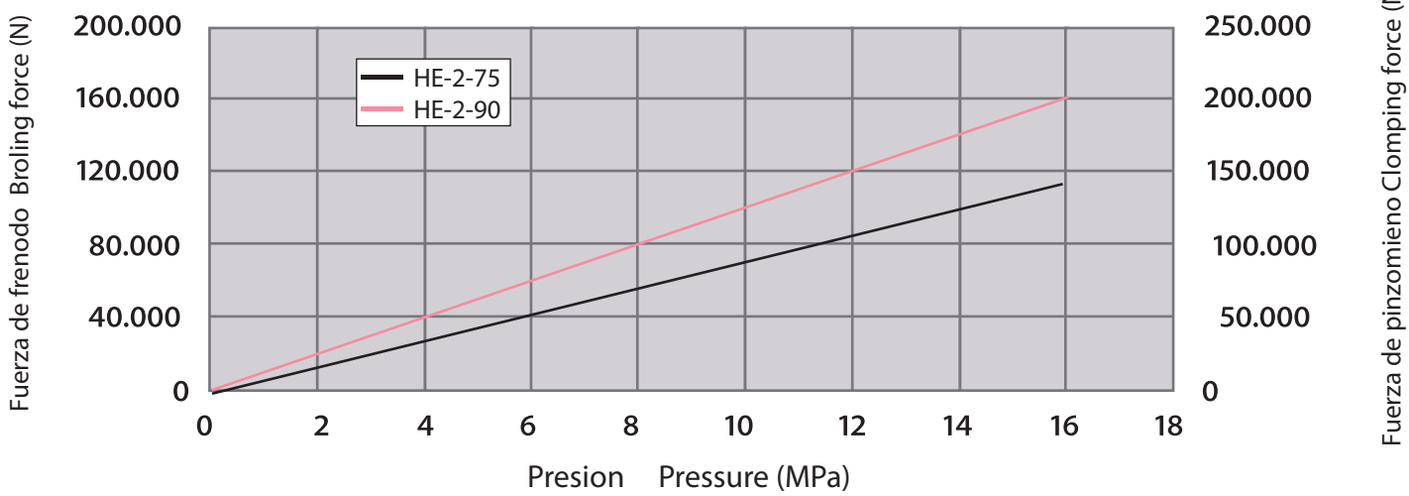
HE-2-75/90 (YAW)

- **Active brake**
- **Hydraulic applied**

	HE-2-75	HE-2-90
Clamping force	Cf = 141 KN	Cf = 203 KN
Braking force	Bf = 113 KN	Bf = 160 KN
Maximum pressure	P = 160 bar	
Piston diameter	75 mm	90 mm
Piston area	44,2 cm2	63,6 cm2
Lining dimension	219 x 110	
Lining material	RP - 01	
Considered friction coef	0,4	
Pad thickness	18 mm	
Lining material thickness	8 mm	
Maximum pad wear	6 mm	
Pad wear indicator	Optional	
Retraction springs	No	
End-stops	Optional	
Weight	75 Kg	
Temperature Range*	-20º C to 70º C	

***For lower temperatures please contact**

Fuerza de pinzamiento y fuerza de frenado
Clamping and braking force



- Braking Torque (Nm)
  - Brake installrd towards disc centre

$$\text{Torque}_{\text{Brate}} = n - 2 - \mu - 2 - P - 10 - A - \frac{\text{Ø}_{\text{Ext}} - 0.1}{2}$$

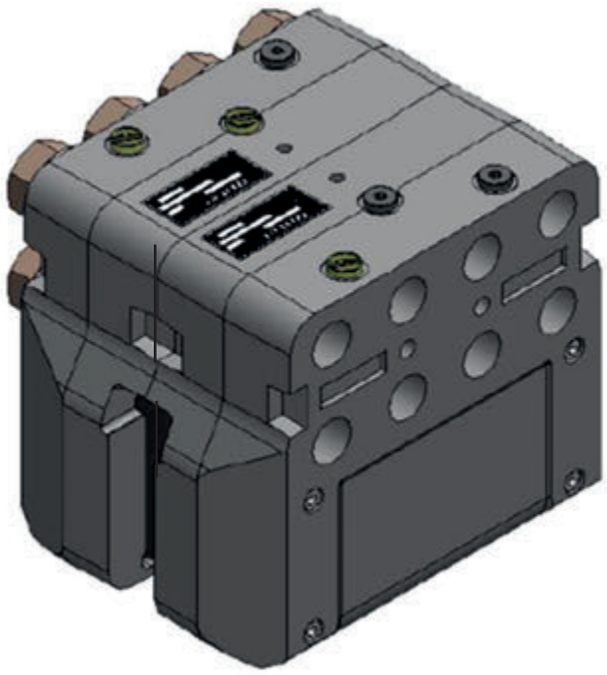
  - Brake installrd outwards disc centre

$$\text{Torque}_{\text{Brate}} = n - 2 - \mu - 2 - P - 10 - A - \frac{\text{Ø}_{\text{Ext}} - 0.1}{2}$$

n = Number of brakes
μ = 0.4 (*)
P = Pressure (bar)
A = Piston area (1Piston) (cm^2)
Ø = Diameter (m)

(*) The friction coefficent depends on different factors such as disc material, speed, temperature, application and may vary between 0.25 and 0.5

HE-2- 90 (ROTOR)

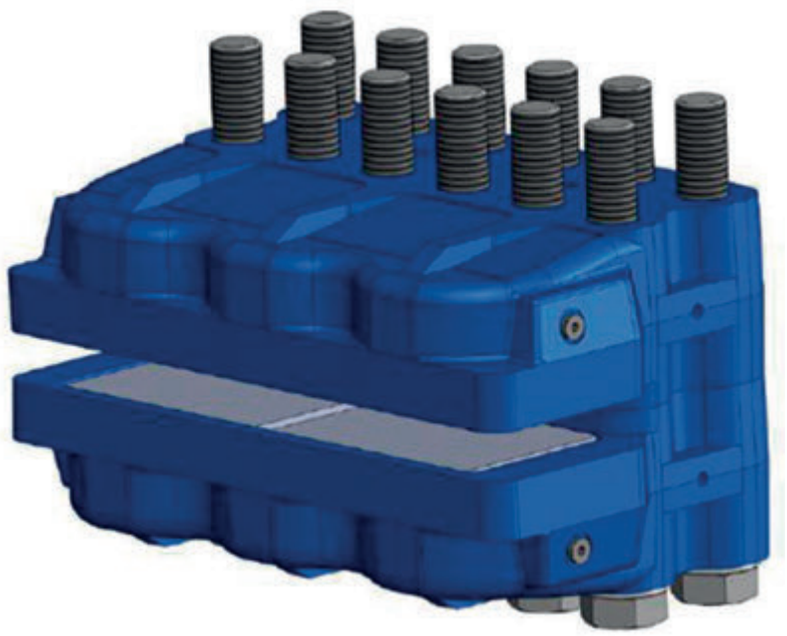


- Active brake
- Hydraulically applied

	HE-2-90/37
Clamping force	Cf = 200 KN
Braking force	Bf = 160 KN
Maximum pressure	P = 160 bar
Piston diameter	90 mm
Piston area	63,6 cm2
Lining dimension	219 x 110
Lining material	Organic
Considered friction coef	0,4
Pad thickness	18 mm
Lining material thickness	8 mm
Maximum pad wear	6 mm
Pad wear indicator	Available
Retraction springs	Available
End-stops	Available
Weight	70 Kg
Temperature Range*	-20º C to 70º C

***For lower temperatures please contact us**

HE-3- 120 (YAW)

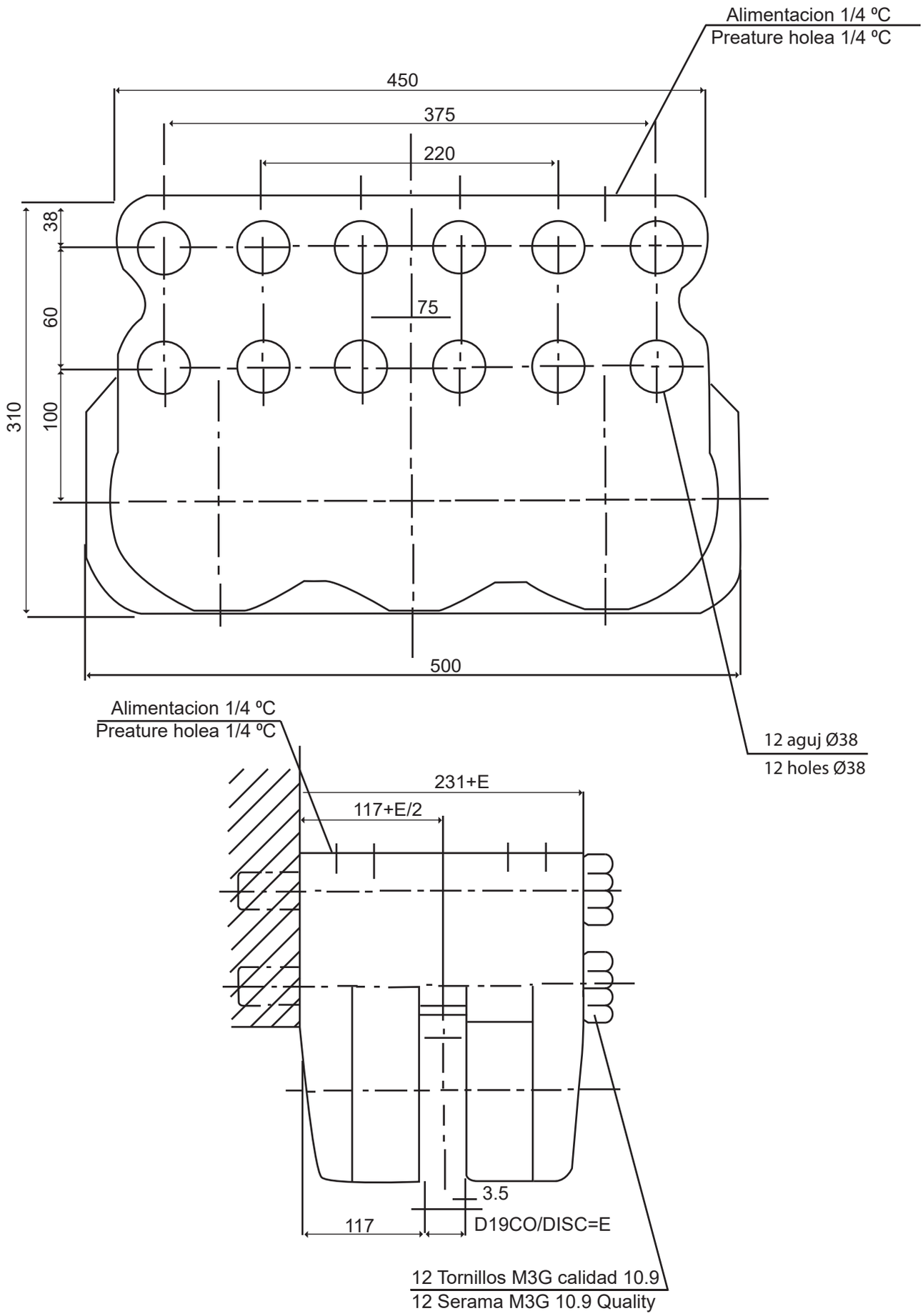


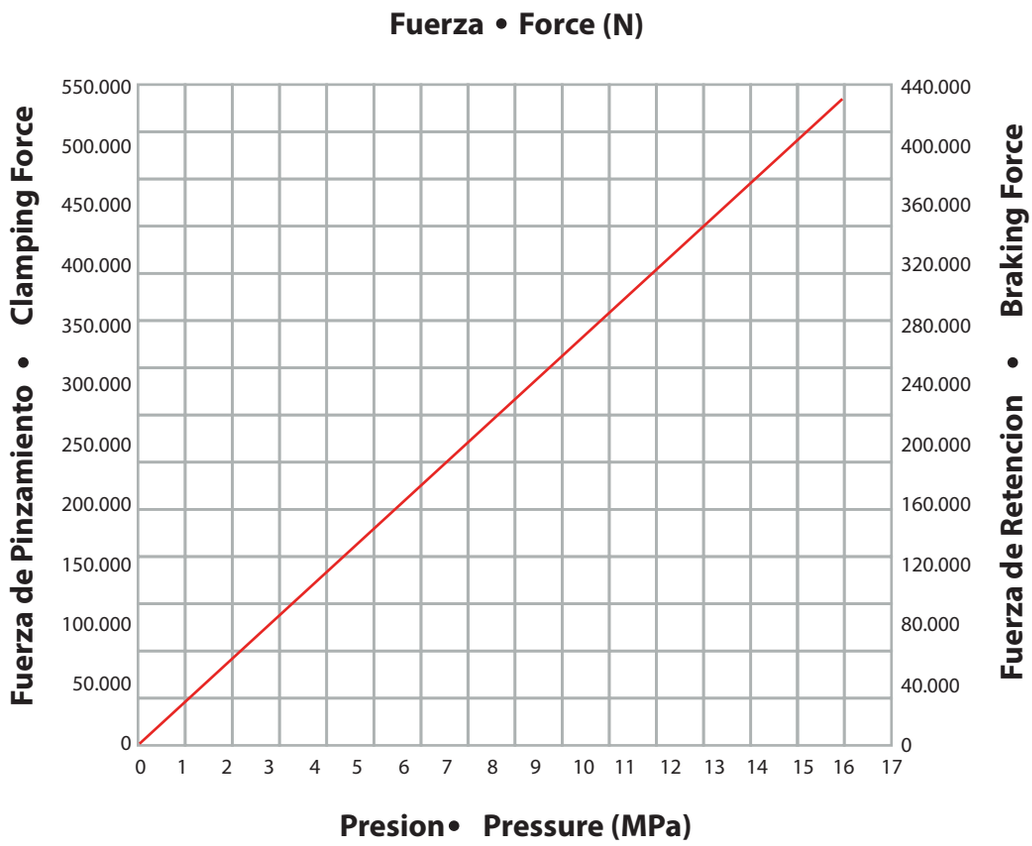
- Active brake
- Hydraulically applied

Clamping force	Cf = 610 KN
Braking force	Bf = 490 KN
Maximum pressure	P = 180 bar
Piston diameter	120 mm
Piston area	113 cm2
Lining dimension	420 x 135
Lining material	RP 01
Considered friction coef	0,4
Pad thickness	20 mm
Lining material thickness	8 mm
Maximum pad wear	6 mm
Weight	190 Kg
Temperature Range*	-20º C to 70º C

***For lower temperatures please contact us**

HE-3- 120


Alimentacion 1/4 ºC
Preature holea 1/4 ºC
450
375
220
38
60
100
310
75
500
12 aguj Ø38
12 holes Ø38
Alimentacion 1/4 ºC
Preature holea 1/4 ºC
231+E
117+E/2
3.5
117
D19CO/DISC=E
12 Tornillos M3G calidad 10.9
12 Serama M3G 10.9 Quality



- Braking Torgue (Nm)
  - Brake installed towards disc centre

$$Torque_{Brake} = n \cdot 2 \cdot \mu \cdot 3 \cdot P \cdot 10 \cdot A \cdot \left(\frac{Ø_{Ext} - 0.136}{2} \right)$$

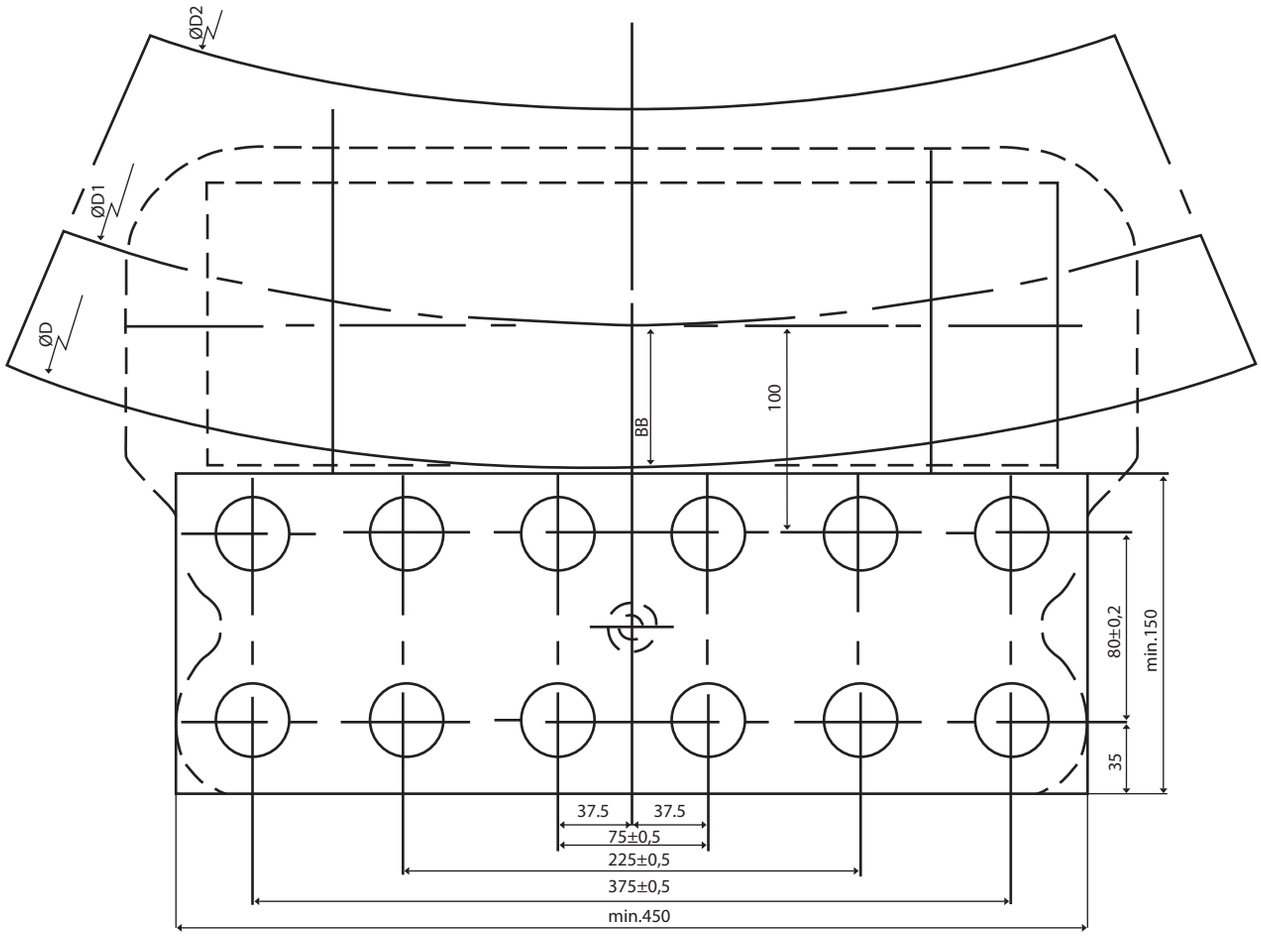
  - Brake installed outwards disc centre

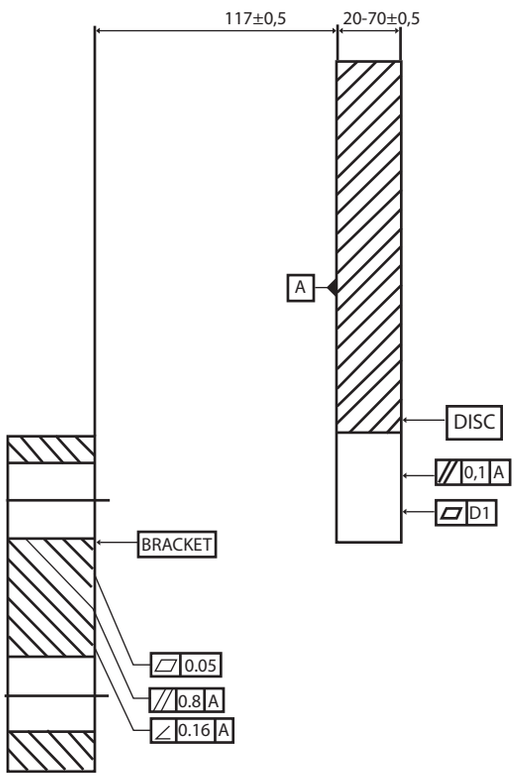
$$Torque_{Brake} = n \cdot 2 \cdot \mu \cdot 3 \cdot P \cdot 10 \cdot A \cdot \left(\frac{Ø_{Ext} - 0.136}{2} \right)$$

n=Number of brakes
n=0.4(*)
P=Pressure (bar)
A=Piston area(1Piston) (cm²)
Ø=Diameter(m)

(*) The friction coefficient depends on different factors such as disc material speed,temperature,application and may vary between 0.25 and 0.5

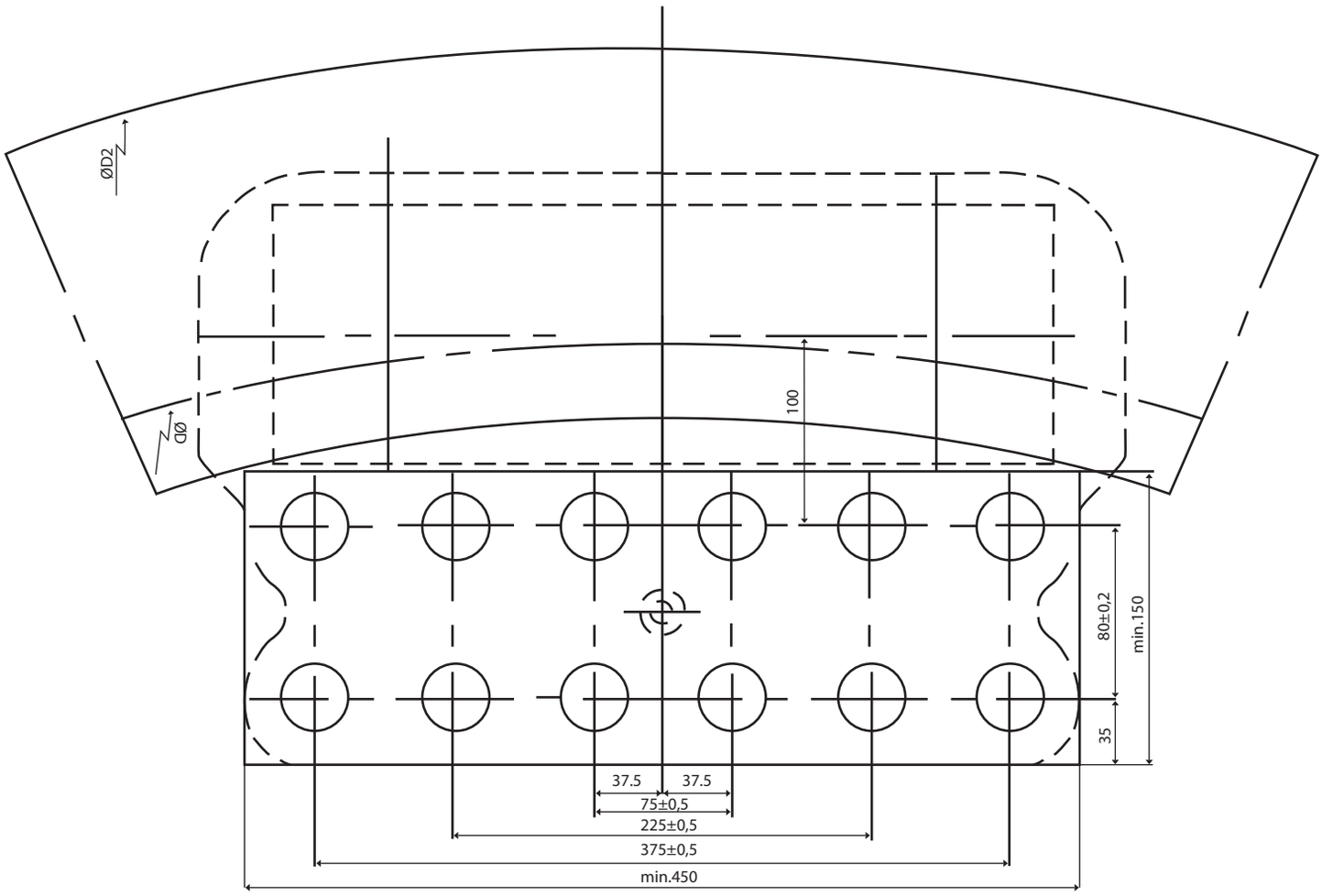
HE-3- 120

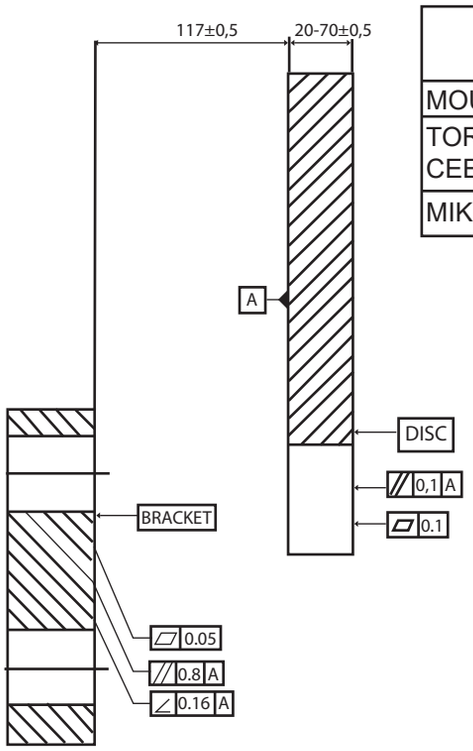




	HE-3-120
MOUNING BOLT	M3C-10.9
TORQUE (μ=0.14) CEEASE FREE	3500 Nm

HE-3 - 120





	HE-3-120
MOUNING BOLT	M3C-10.9
TORQUE (μ=0.14) CEEASE FREE	3500 Nm
MIK.#01	1566 mm

ØD	ØD1
1855	1951
2000	2098
2500	2606
3000	3112
3500	3616
4000	4118
4500	4620
5000	5120

Тормоза для ветрогенараторов

В мире используется более 250 000 тормозов для ветрогенераторов производства Antec.