

EMCO®

EMCO® & EMCO-Simplatroll®

making machines friendly

The brands emco & emco-simplatroll stand for uncompromised quality in products as well the services. Products that are safe & reliable and service that makes our products and your machines perform efficiently.



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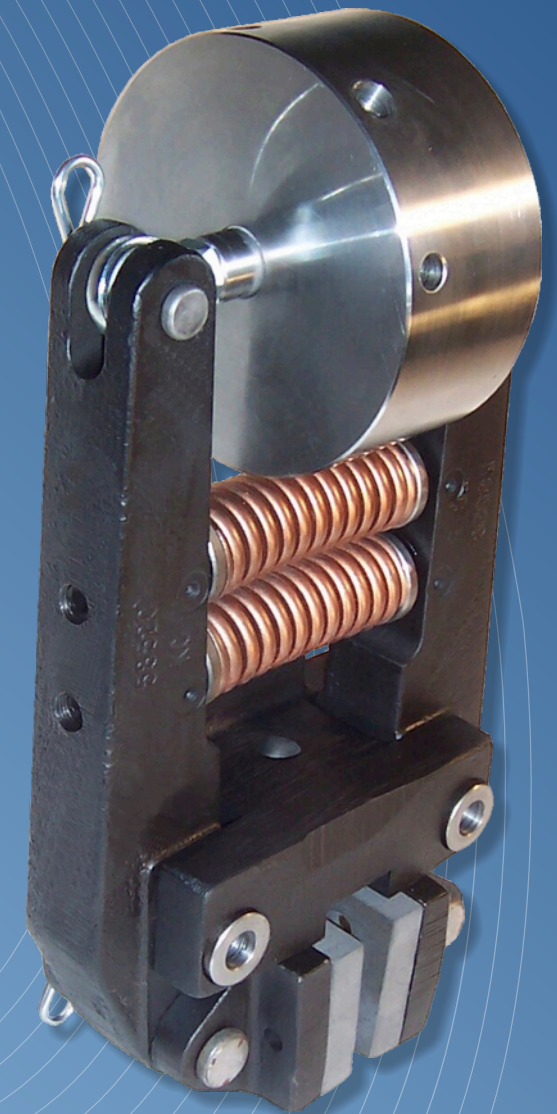
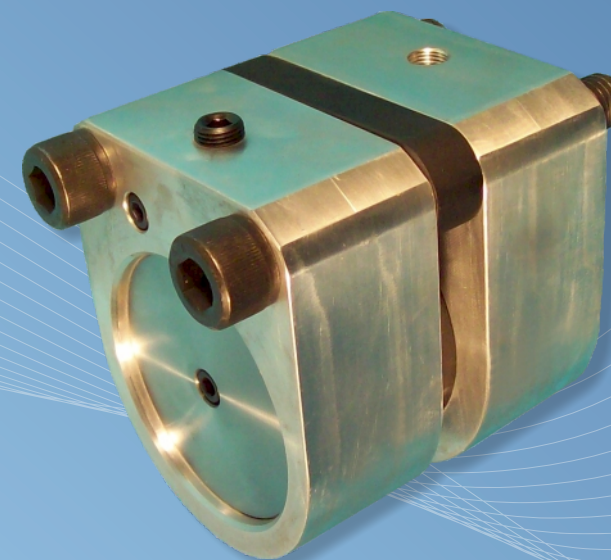
Emco Dynatorq Pvt. Ltd.
(Formerly Emco Lenze Pvt. Ltd.)

CIN NO. : U74999MH1991PTC061109

ISO 9001:2008 Company

Pneumatic Caliper Disc Brake

Licensee: Carlson Company Inc.
Wichita, Kansas, USA



Emco Dynatorq Pvt. Ltd.
(Formerly Emco Lenze Pvt. Ltd.)

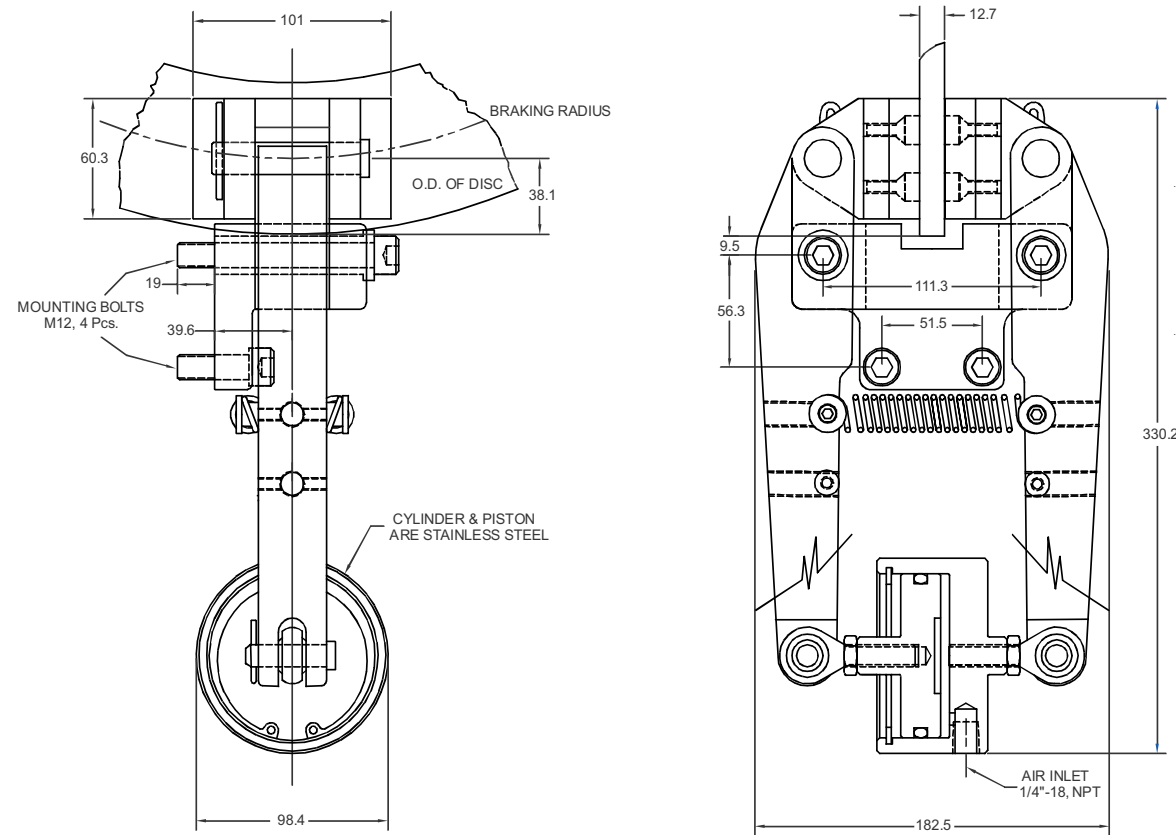
ISO 9001:2008 Company

PNEUMATIC BRAKES/REV. 03/JAN 2015

CBAA - Air Applied Spring Release Caliper Disc Brake



CBAA20 The Model CBAA20 is air applied, spring released caliper brake which is used in stopping applications of industrial equipment. It has a unique design, using an actuator located between two caliper arms. This allows the brake to have a compact physical size in relation to its high torque capacity. Friction linings are changed by pulling the clip pin and removing the caliper shoe. The CBAA20 unit comes assembled and ready for mounting.



CBAA20 Static Braking Force (SBF) 8450N at 80 PSI with Full Lining Brake torque depends upon disc size

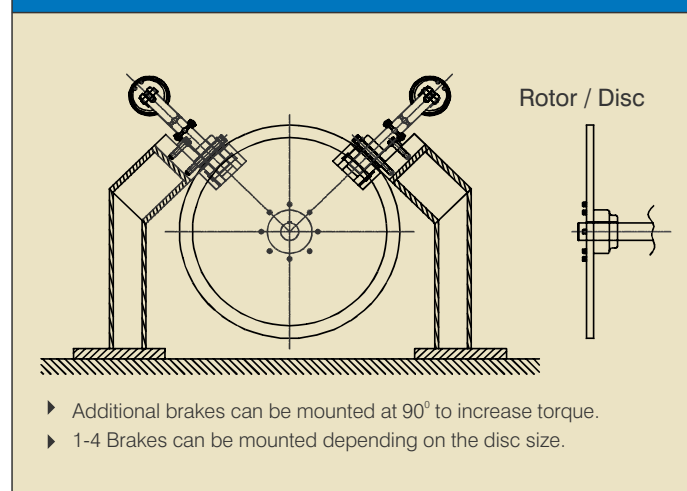
$$T = \text{SBF} \times \left(\frac{\text{Disc Radius (mm)} - 38.1}{1000} \right) \text{Nm}$$

T = Torque SBF = Static Braking Force

Disc Size		Static Torque at 80 PSI (Nm)	Weight
Inches	(mm)		
12	(305)	950	13.6 Kg (Approx.)
14	(356)	1180	
16	(406)	1400	
18	(457)	1600	
24	(610)	2260	
36	(914)	3650	

- Notes :-
i) Caliper Brakes are to be operated with solenoid valve.
ii) Dynamic torque is approximately 85% of static torque.

Representative Mounting Arrangement

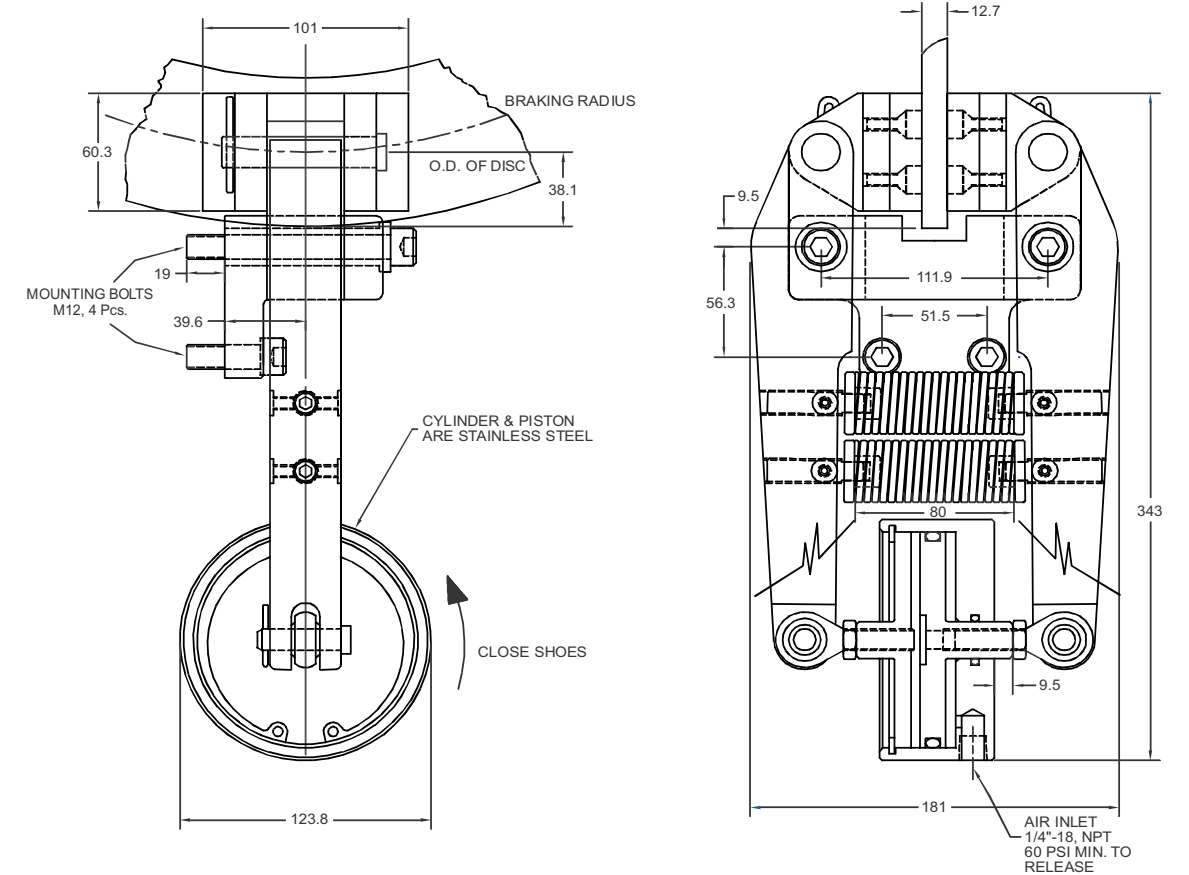


Application Areas : Steel mills, Cranes, Conveyors, Wind turbines, Textile machinery, Paper industries, Wire drawing machinery, Test rigs, Tyre industries, Printing machines, Mines, Special purpose machines, Bulk material handling equipment, Cable machinery, Sugar centrifuges, Ball mills, Nuclear power plants, Cement mills & plants, Hydro turbines etc.

CBSA - Spring Applied Air Release Caliper Disc Brake



CBSA20 The Model CBSA20 is spring applied, air released caliper brake which is used in stopping and holding applications of industrial equipment. It has a unique design, using an actuator located between two caliper arms. This allows the brake to have a compact physical size in relation to its high torque capacity. Friction linings are changed by pulling the clip pin and removing the caliper shoe. The CBSA20 unit comes assembled and ready for mounting.



CBSA20 Static Braking Force (SBF) 8450N with Full Lining Brake torque depends upon disc size

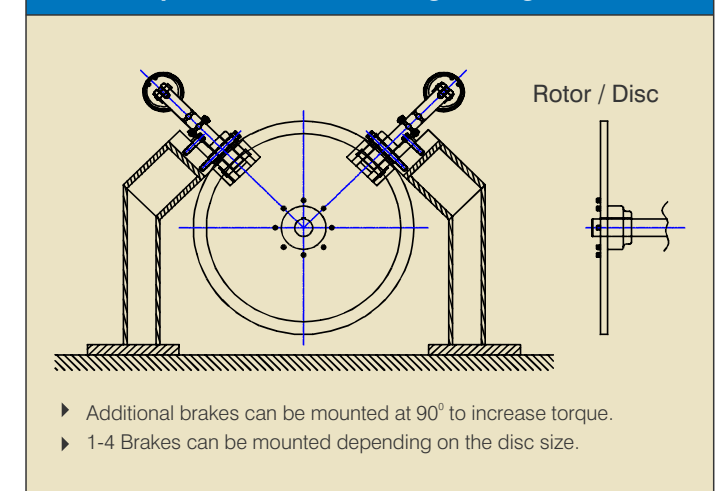
$$T = \text{SBF} \times \left(\frac{\text{Disc Radius (mm)} - 38.1}{1000} \right) \text{Nm}$$

T = Torque SBF = Static Braking Force

Disc Size		Static Torque (Nm)	Min. Release Pressure	Weight
Inches	(mm)			
12	(305)	950	60 PSI	15.5 Kg (Approx.)
14	(356)	1180		
16	(406)	1400		
18	(457)	1600		
24	(610)	2260		
36	(914)	3650		

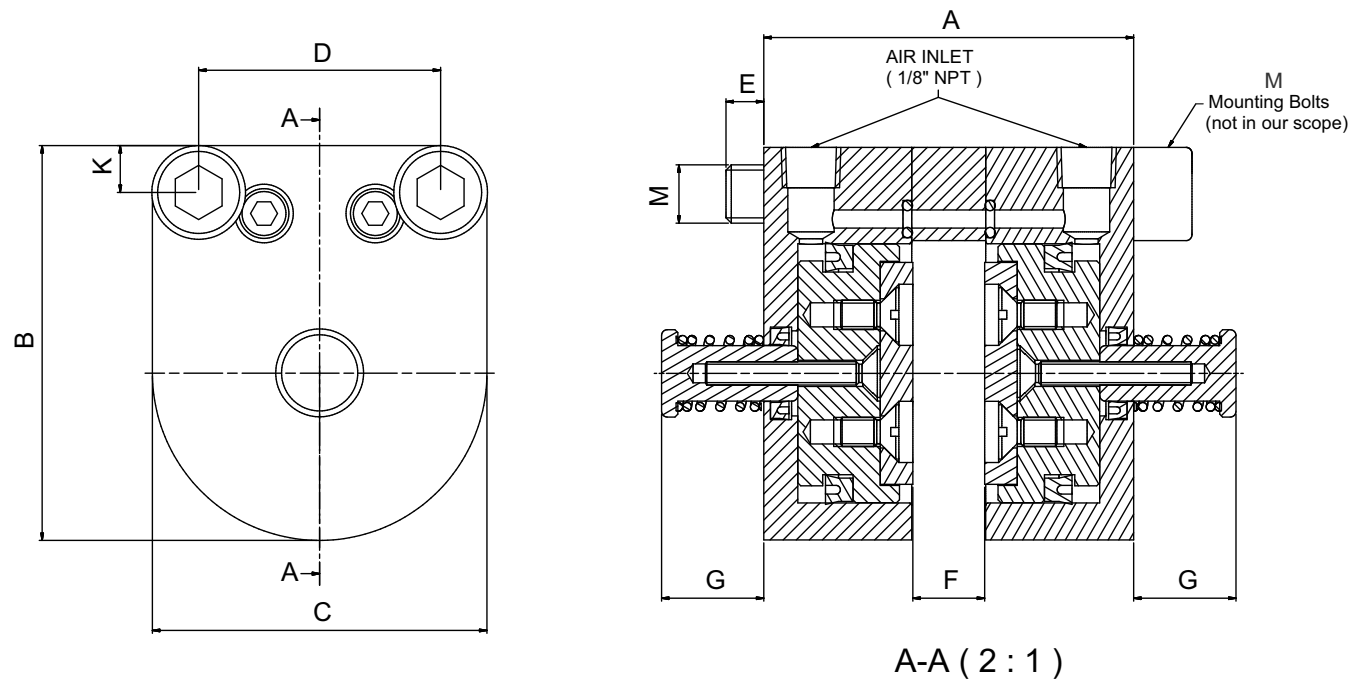
- Notes :-
i) Caliper Brakes are to be operated with solenoid valve
ii) Dynamic torque is approximately 85% of static torque

Representative Mounting Arrangement



Application Areas : Steel mills, Cranes, Conveyors, Wind turbines, Textile machinery, Paper industries, Wire drawing machinery, Test rigs, Tyre industries, Printing machines, Mines, Special purpose machines, Bulk material handling equipment, Cable machinery, Sugar-centrifuges, Ball mills, Nuclear power plants, Cement mills & plants, Hydro turbines etc.

CB Caliper Brake - Pneumatic Caliper Disc Brake



Model	A	B	C	D	E	F	G	K	M Mounting Bolts	Static Tangential Force @ 80 PSI	Lining Radius
CB 100	63.5	66.7	57	41.3	12.7	9.5	17	8	2 x M10	556 N	20.2 mm
CB 200	73	95	59	57	16	10	16	11.1	2 x M12	1100 N	30.5 mm

CS Static Braking Force (SBF) 8450N with Full Lining

Brake torque depends upon disc size

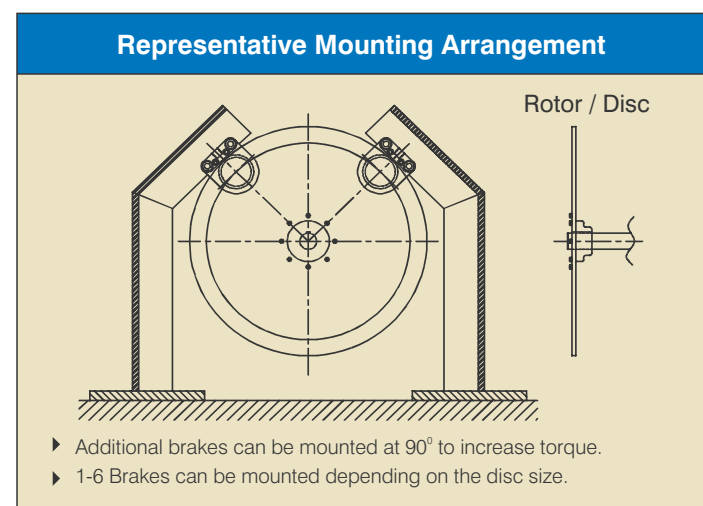
$$T = SBF \times \left(\frac{\text{Disc Radius (mm)} - \text{Lining Radius (mm)}}{1000} \right) \text{Nm}$$

T = Torque SBF = Static Braking Force

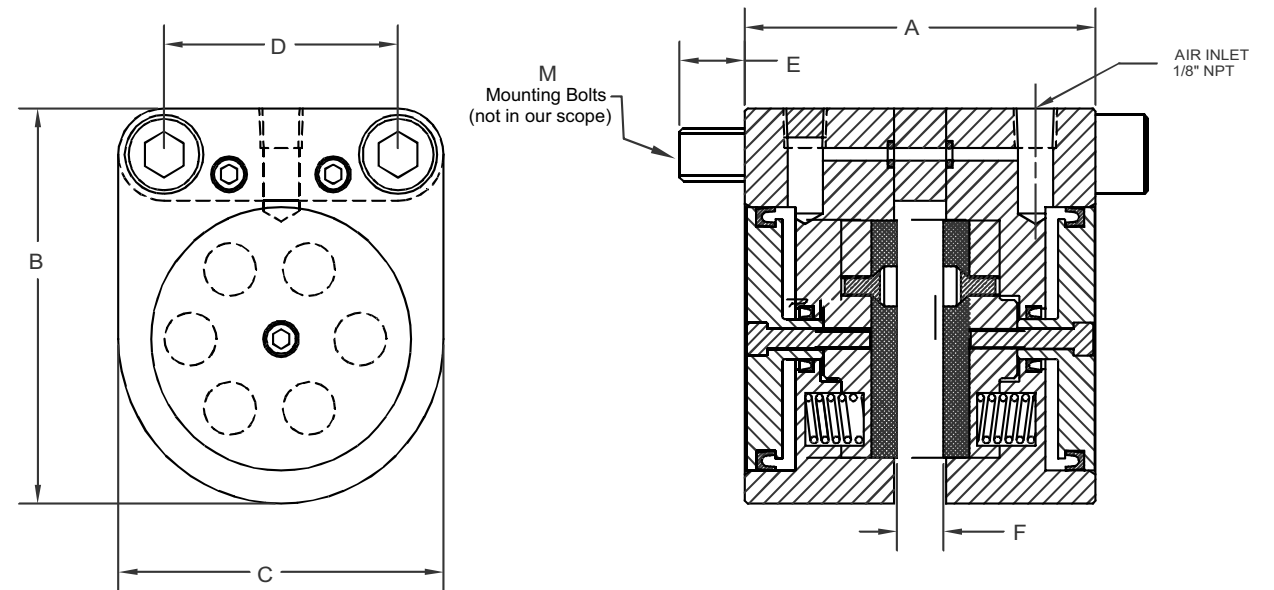
Disc Size		CB 100	CB 200
Inches	(mm)	Static Torque Ratings @ 80 PSI Air Pressure	
6	(152)	31 Nm	50 Nm
9	(229)	52 Nm	92 Nm
12	(305)	73 Nm	134 Nm

Note :- Caliper Brakes are to be operated with solenoid valve

Applications : Steel mills, Cranes, Conveyors, Wind turbines, Textile machinery, Paper industries, Wire drawing machinery, Test rigs, Tyre industries, Printing machines, Mines, Special purpose machines, Bulk material handling equipment, Cable machinery, Sugar-centrifuges, Ball mills, Nuclear power plants, Cement mills & plants, Hydro turbines etc.



CSB Caliper Brake - Spring Applied / Air Release



Model	A	B	C	D	E	F	M Mounting Bolts	Static Tangential Force	Lining Radius
CSB 100	79.4	67.5	57.1	41.3	12.7	11	2 x M10	330 N	20.2 mm
CSB 200	85.7	95	79	57	16	11	2 x M12	660 N	30.5 mm

CSB Static Braking Force (SBF) 8450N with Full Lining

Brake torque depends upon disc size

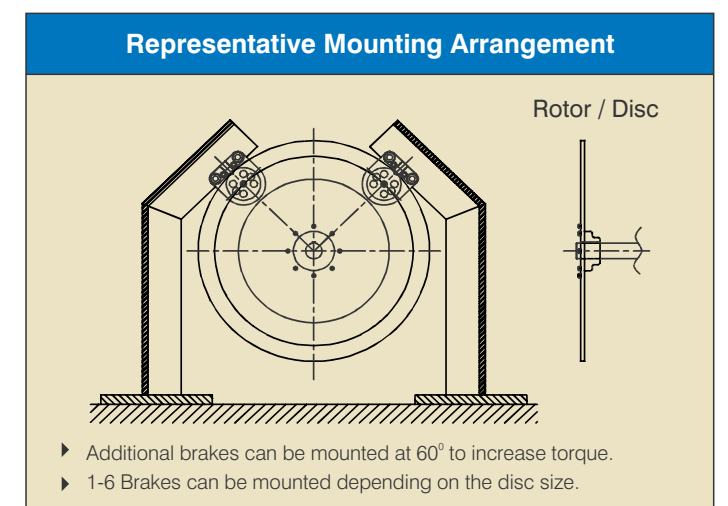
$$T = SBF \times \left(\frac{\text{Disc Radius (mm)} - \text{Lining Radius (mm)}}{1000} \right) \text{Nm}$$

T = Torque SBF = Static Braking Force

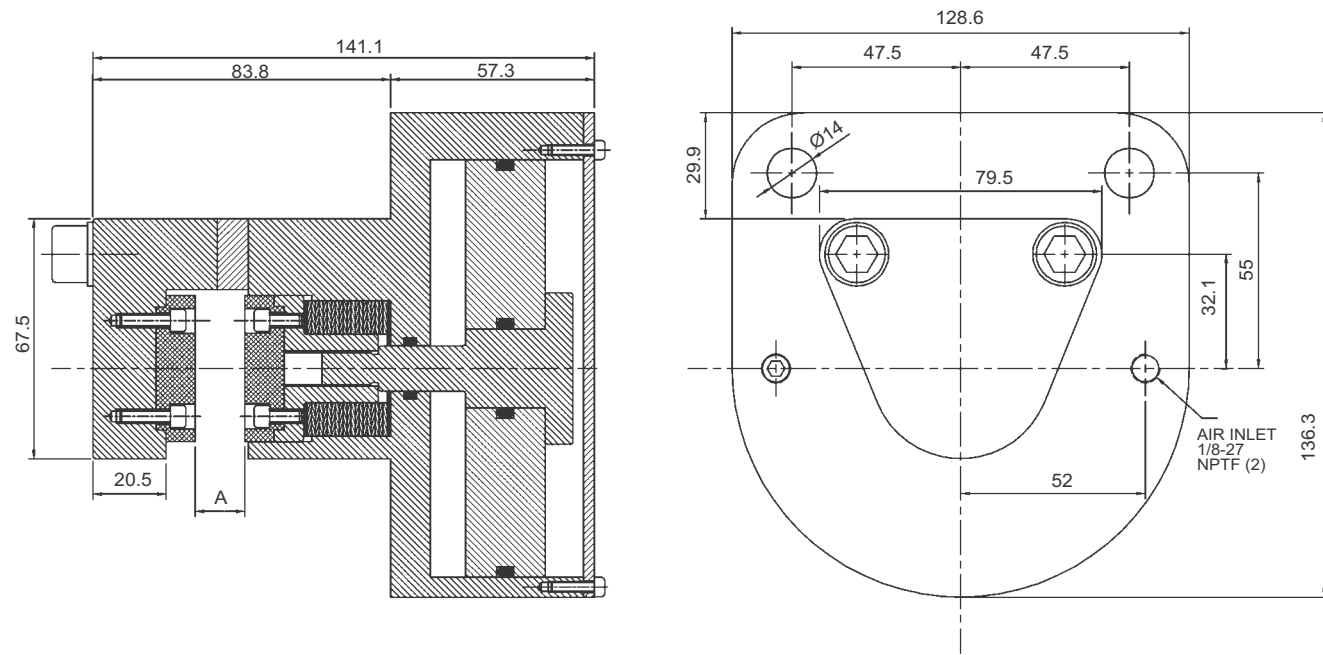
Disc Size		CSB 100	CSB 200
Inches	(mm)	Release Pressure @ 70 PSI	
6	(152)	18 Nm	30 Nm
9	(229)	31 Nm	55 Nm
12	(305)	44 Nm	81 Nm

Note :- Caliper Brakes are to be operated with solenoid valve

Applications : Steel mills, Cranes, Conveyors, Wind turbines, Textile machinery, Paper industries, Wire drawing machinery, Test rigs, Tyre industries, Printing machines, Mines, Special purpose machines, Bulk material handling equipment, Cable machinery, Sugar-centrifuges, Ball mills, Nuclear power plants, Cement mills & plants, Hydro turbines etc.



E-CSB-300 Caliper Brake - Spring Applied Air Release



Brake Model	Disc Thickness (A) (mm)	Disc Dia. (mm)	Braking Radius (mm)	Torque (Nm)
E-CSB-300-01	4	160	58	90
		203	79	122
		254	104	161
		305	130	201
	6.4	406	180	208

- ▶ 85 PSI (5.87 Kg/m²) release pressure
- ▶ Aluminum construction
- ▶ 2640 sq. mm. total friction pad area
- ▶ Unlimited disc diameter
- ▶ Replaceable friction pads
- ▶ Non-asbestos friction material

NOTE :
1) Disc spacers for other disc thickness available.

Torque Selection Guideline

Torque (Nm) = 9550 x (Motor kW / RPM) x Safety Factor (K)

Load Condition	Safety factor (K)
Load Condition	2.0
Low masses, equal loading & non-intermittent operation	2.5
Low masses, light shock load & intermittent operation	3.0
Medium masses, light shock & intermittent operation	4-5
Large masses, light shock & intermittent operation	5-6
Diesel engine drive	2-3
Compressor drive	3-4
Non overhauling loads	2-3
Overhauling loads	3-4

Our other products

Custom clutches & brakes manufactured



EMCO - Simplatroll®
Electromagnetic D.C. Spring Applied Brakes
Normally On, Type 14.458



EMCO-Simplatroll®
Electromagnetic DC Spring Applied Brakes
Normally ON, Type 14.450 / Type 14.461



EMCO - Simplatroll®
Electromagnetic Flange Mounted DC Brakes
Normally Off, Type 14.115



EMCO®
A.C. Spring Applied Brakes
Type 1000 / Type 5000 (Self Adjusting)



EMCO - Simplatroll®
Electromagnetic DC Clutch Brake Combinations
Type 14.125 / Type 14.800 (Foot Mounted) / Type 14.800 (Flange Mounted)



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Flame Proof & Marine Duty Brakes
Type FLP458 / Type WP458



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Electromagnetic D.C. Clutches
Normally Off, Type 14.105



EMCO®
Electr-hydraulic Disc Brakes
Type EHT1/2/3 & EHT21