

Constant Tension Clamps

Breeze Constant-Torque®

The Breeze CONSTANT-TORQUE® is a breakthrough in clamping technology. A belleville spring mechanism permits the CONSTANT-TORQUE® clamp to automatically increase or decrease its own diameter due to changes in operational or environmental temperatures.

This unique design eliminates “cold flow” leaks. Both the Aero-Seal and Heavy Duty construction CT clamps have an extended inner liner which protects all types of hoses from damage and helps to maintain consistent sealing pressure.



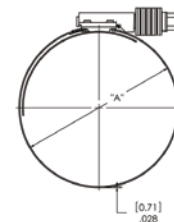
Constant-Torque - Aero-Seal Construction



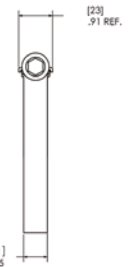
Constant-Torque - Heavy Duty Construction

Aero-Seal Construction / All Stainless Steel					
Breeze CONSTANT-TORQUE® Size table					
SAE Size	EFFECTIVE DIAMETER RANGE				Part Numbers
	Min.		Max.		
	in.	mm	in.	mm	
<i>AERO-SEAL construction for use on small diameter applications 9/16" (14.2 mm) bandwidth</i>					
10	9/16	14	1-1/16	27	CT-9410
12	11/16	17	1-1/4	32	CT-9412
16	13/16	21	1-1/2	38	CT-9416
20	13/16	21	1-3/4	44	CT-9420
24	1-1/16	27	2	51	CT-9424
28	1-5/16	33	2-1/4	57	CT-9428
32	1-9/16	40	2-1/2	64	CT-9432
36	1-13/16	46	2-3/4	70	CT-9436
40	2-1/16	52	3	76	CT-9440
44	2-5/16	59	3-1/4	83	CT-9444
48	2-9/16	65	3-1/2	89	CT-9448
52	2-13/16	71	3-3/4	95	CT-9452

Heavy Duty Construction						
Breeze CONSTANT-TORQUE® Size table						
SAE Size	EFFECTIVE DIAMETER RANGE				Carbon Screw	All SS Screw
	Min.		Max.			
	in.	mm	in.	mm		
<i>Heavy-duty construction for use on large diameter applications 5/8" (15.8 mm) bandwidth</i>						
212	1-1/4	32	2-1/8	54	CT 200 L	CT 200 L SS
262	1-3/4	45	2-5/8	67	CT 250 L	CT 250 L SS
312	2-1/4	57	3-1/8	79	CT 300 L	CT 300 L SS
362	2-3/4	70	3-5/8	92	CT 350 L	CT 350 L SS
412	3-1/4	83	4-1/8	105	CT 400 L	CT 400 L SS
462	3-3/4	95	4-5/8	118	CT 450 L	CT 450 L SS
512	4-1/4	108	5-1/8	130	CT 500 L	CT 500 L SS
562	4-3/4	121	5-5/8	143	CT 550 L	CT 550 L SS
612	5-1/4	133	6-1/8	156	CT 600 L	CT 600 L SS
662	5-3/4	146	6-5/8	168	CT 650 L	CT 650 L SS
712	6-1/4	159	7-1/8	181	CT 700 L	CT 700 L SS
762	6-3/4	172	7-5/8	194	CT 750 L	CT 750 L SS
812	7-1/4	184	8-1/8	206	CT 800 L	CT 800 L SS
862	7-3/4	197	8-5/8	219	CT 850 L	CT 850 L SS
912	8-1/4	210	9-1/8	232	CT 900 L	CT 900 L SS



CT - Heavy Duty



Per SAE standard J1508 Type "SLHD"

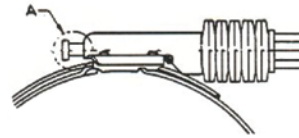
THE PREMIUM HOSE CLAMPS OF THE TRUCK/HEAVY EQUIPMENT/BUS & PERFORMANCE INDUSTRY.

Constant-Torque® Heavy Duty clamps are recommended for use on turbo exhaust sleeves, heater hoses, coolant hoses, intake systems.



- All Stainless Steel Construction

“TORQUE CHECK” The patented “CT” clamp is installed correctly as shown to the left, when the screw tip “A”(“TORQUE CHECK”) is extended beyond the housing, and the bellevillewasher stacks are nearly collapsed flat. We recommend using a torque wrench.



Feature/Benefits

PATENTED

Belleville Spring Assembly

- *Eliminates “cold flow hose leaks” & saves money in lost coolant.
- *Eliminates retightening clamps, saving money & mechanic labor.

VISUAL INSPECTION

“Torque Check” Feature

- *Provides visual proof of correct installation torque.

OEM/FLEET SPECIFIED

Proven Technology. Industry Tested

- *Readily available on new equipment or as replacement through nationwide distribution network.

LONG LIFE

Stainless Steel

- *Virtually unlimited product life – won’t rust or corrode, & is reusable.

SILICONE/ SOFT HOSES

Extended Internal Liner

- *Covers gear slots in band to protect all types of hose from damage and helps to maintain consistent sealing pressure.

WORM-GEAR DESIGN

“Quadra-Lock” Housing

- *Provides extra torque strength and stability for the ultimate in sealing pressure and vibration resistance.

HEX HEAD SCREWS

Fleet Standard

- *Easily installed/Easily replaced in field. No special tools needed for installation.

FLEET VALUE

Reusable

- *Eliminates the sometimes necessary replacement of expensive “single use” clamps during routine or emergency maintenance.

QUICK AND EASY REPAIR

Can be installed or replaced without removing the hose from connection.

- *Prevents massive and costly loss of engine coolant.

CONSOLIDATE INVENTORY

Extended Adjustment Range

- *Fewer parts needed for complete coverage.

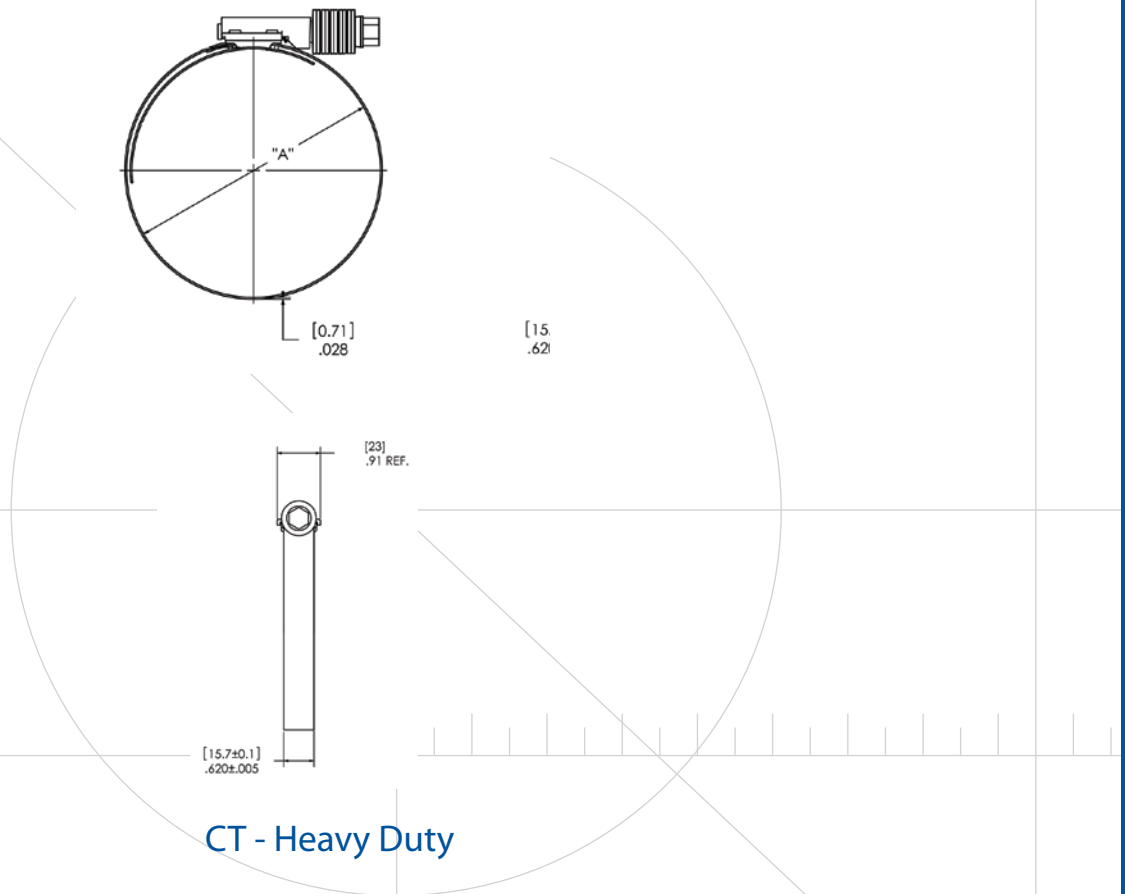
**Specify Breeze
OEM Clamp Technology for Over 50 Years!**

Virtually all rubber hose compresses “cold flow” after installation of a clamping device, resulting in an almost immediate torque loss that can exceed 80% of installation torque. Similarly, virtually all metal connections expand as a system heats up, and then contracts as the system cools. Conventional worm-gear, T-Bolt, and other clamps are passive, in that expansion and contraction of components cannot be compensated for without retightening or loosening the clamps. This Breeze clamping system is an “active” clamp mechanism, which monitors and then compensates for the temperature changes by actually changing diameter through a unique worm-gear Belleville assembly.

In addition, an integral extended liner covers the gear slots of the extra-wide band to prevent hose damage and ensure complete and even sealing pressure.

Typical applications are sealed systems where clamps cannot be retightened, systems where clamps are difficult to get to, applications requiring higher torque, large diameters, extremes of heat or cold, or system expansion or contraction. CONSTANT TORQUE® clamps are specifically recommended for bus, truck, and heavy-duty equipment, air intake and coolant connections.

RESULT: Used as a complete clamping system, the Breeze CONSTANT TORQUE® clamp virtually eliminates hose clamp maintenance and non-scheduled coolant replacement and the premium heavy-duty, stainless steel construction assures year after year of trouble free service.



INSTALLATION: A torque wrench should be used for proper installation. The Belleville spring washer stacks should be nearly collapsed flat and the screw tip should extend beyond the housing about 1/4”.

Nominal Installation Torque Recommendations:
AERO-SEAL® Constant Torque® - 45 in-lb (5 Nm)
Heavy-Duty CONSTANT-TORQUE® - 90 in-lb (10.2Nm)