



BRIGHTON-BEST INTERNATIONAL

TECHNICAL GUIDE



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Hose Clamps

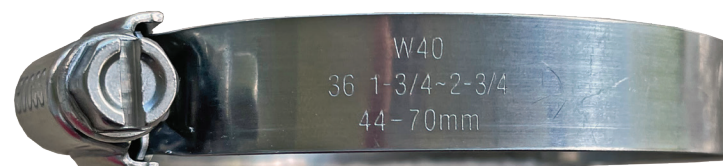
SAE J1508 TYPE F & TYPE M-MINI WORM-GEAR HOSE CLAMPS - 304 & 316 STAINLESS STEEL

FAMILY	HOUSING	BAND	HEX HEAD SCREW	BBI CLAMP FAMILY IDENTIFIER	BAND STAMP (ALL MANUFACTURERS)	COO	CORROSION RESISTANCE
VH1	304 STAINLESS	304 STAINLESS	400 SERIES STAINLESS PLATED	W30 STAMP ON BAND	SAE SIZE & CLAMPING RANGE	TAIWAN	BETTER
VH2	304 STAINLESS	304 STAINLESS	304 STAINLESS	W40 STAMP ON BAND	SAE SIZE & CLAMPING RANGE	TAIWAN	BEST
VH3	316 STAINLESS	316 STAINLESS	316 STAINLESS	W50 STAMP ON BAND	SAE SIZE & CLAMPING RANGE	TAIWAN	PREMIUM
VH4	304 STAINLESS	304 STAINLESS	CARBON STEEL PLATED	PHILLIPS/COMBO DRIVE SCREW	SAE SIZE & CLAMPING RANGE	TAIWAN	GOOD

HOSE CLAMP IDENTIFIERS



HOUSING STAMP
304 SS



BAND STAMP
W40 (VH2) 304 SS
SAE Size - (4M-128)
Clamping Range - inch & mm



SCREW TIP MARKING
#3 - 304 SS Screw

WORM-GEAR HOSE CLAMPS

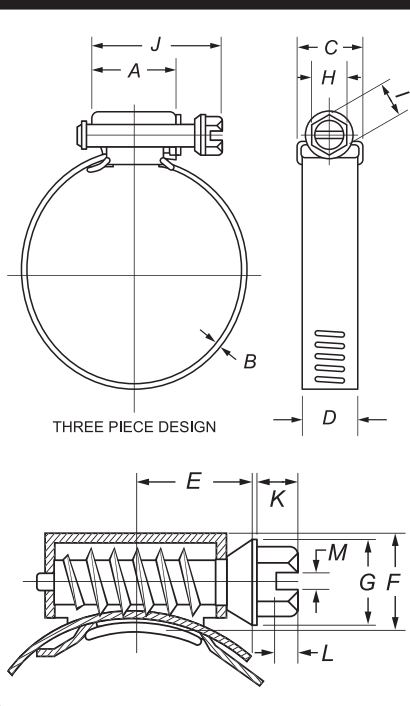
Worm-Gear or Worm-Drive hose clamps are general purpose hose clamps with a tangential worm drive screw engaging either pierced through slots or embossed threads to allow easy installation. The Worm-Gear hose clamp has a 2-part housing and band construction that allows the band to detach from the housing to be installed without removing the hose or tube. Hose clamps are designed to secure a hose or tube over a fitting, acting as a seal to prevent fluid, gas or air from leaking at the connection.

CLAMPING RANGE is the minimum and maximum usable diameter which varies slightly by manufacturer.

DURABILITY TORQUE is the maximum torque value applied to a clamp without evidence of deformation or excessive wear when tightened once over a mandrel. The durability torque varies by screw type.

INSTALLATION TORQUE also known as application torque is the recommended torque for installation of the clamp. This is defined by SAE J1508 as 50% to 70% of the rated "Durability Torque" for specific clamps. However, suggested installation torque for a particular application must be established by the supplier and the user, giving due consideration to the physical configurations, properties of the materials involved, and assembly tools to be used.

SAE J1508 TYPE F & TYPE M-MINI WORM-GEAR HOSE CLAMP STANDARD



DIMENSION	TYPE F (inch)	TYPE F (mm)	TYPE M MINI (inch)	TYPE M MINI (mm)
A. HOUSING LENGTH	0.76	19.30	0.42	10.70
B. THICKNESS	0.021/0.031	0.53/0.79	0.019/0.026	0.48/0.66
C. HOUSING WIDTH	0.81	20.60	0.60	15.20
D. BANDWIDTH	0.495/0.569	12.57/14.45	0.305/0.325	7.75/8.26
E. MAX AT OPEN DIAM.	0.75	19.10	0.44	11.20
F. HEIGHT	0.56	14.20	0.38	9.60
G.*COLLAR DIAM.	0.370/0.425	9.40/10.80	NA	NA
H. ACROSS FLATS	0.305/0.312	7.75/7.92	0.244/0.250	6.20/6.35
I. ACROSS CORNERS (MIN)	0.34	8.64	0.27	6.86
J. SCREW LENGTH (MAX)	1.35	34.30	0.80	20.30
K. HEX HEIGHT	0.14/0.25	3.56/6.35	0.140/0.185	3.56/4.70
L. SLOT DEPTH	0.077/0.120	1.96/3.05	0.052/0.105	1.32/2.67
M. SLOT WIDTH	0.056/0.076	1.42/1.93	0.042/0.060	1.07/1.52

*Type M-Mini clamps do not have collars (G) as standard. Dimensions may vary slightly by manufacturer.

DURABILITY TORQUE

CLAMP TYPE	SCREW TYPE		
	CARBON STEEL	400 SERIES STAINLESS	300 SERIES STAINLESS
TYPE F	50 IN-LB (5.6 Nm)	60 IN-LB (6.8 Nm)	60 IN-LB (6.8 Nm)
TYPE M	20 IN-LB (2.3 Nm)	20 IN-LB (2.3 Nm)	15 IN-LB (1.7 Nm)
BBI TYPE M*	26 IN-LB (3 Nm)	28 IN-LB (3.2 Nm)	30 IN-LB (3.4 Nm)

SAE J1508 TYPE M-MINI

~3/8" (.35") (9MM) WIDE BAND
1/4" HEX HEAD SCREW

SAE SIZE	CLAMPING RANGE (INCH)	CLAMPING RANGE (MM)
4M-MINI	5/16"-5/8"	8-16
6M-MINI	1/2"-7/8"	13-23
8M-MINI	1/2"-1"	13-25
10M-MINI	9/16"-1-1/16"	14-27
12M-MINI	11/16"-1-1/4"	17-32
16M-MINI	13/16"-1-1/2"	21-38

SAE J1508 TYPE F

1/2" (12.7MM) WIDE BAND
5/16" HEX HEAD SCREW

SAE SIZE	CLAMPING RANGE (INCH)	CLAMPING RANGE (MM)
6	1/2"-7/8"	13-23
8	1/2"-1"	13-25
10	9/16"-1-1/16"	14-27
12	11/16"-1-1/4"	17-32
16 (11/16)	11/16"-1-1/2"	17-38
16 (13/16)	13/16"-1-1/2"	21-38
20	13/16"-1-3/4"	21-44
24	1"-2"	25-51
28	1-1/4"-2-1/4"	32-57
32	1-1/2"-2-1/2"	38-63
36	1-3/4"-2-3/4"	44-70
40	2"-3"	51-76
44	2-1/4"-3-1/4"	57-82
48	2-1/2"-3-1/2"	64-89
52	2-3/4"-3-3/4"	70-95
56	3"-4"	76-102
60	3-1/4"-4-1/4"	82-108
64	3-1/2"-4-1/2"	89-114
72	4"-5"	102-127
80	4-1/2"-5-1/2"	114-140
88	5"-6"	127-152
96	5-1/2"-6-1/2"	140-165
104	6"-7"	152-178
128	5-5/8"-8-1/2"	143-216

INSTALLATION TORQUE

CLAMP TYPE	SCREW TYPE		
	CARBON STEEL (RANGE)	400 SERIES STAINLESS (RANGE)	300 SERIES STAINLESS (RANGE)
TYPE F	25-35 IN-LB (2.8-4 Nm)	30-42 IN-LB (3.4-4.8 Nm)	30-42 IN-LB (3.4-4.8 Nm)
TYPE M	10-14 IN-LB (1.1-1.6 Nm)	10-14 IN-LB (1.1-1.6 Nm)	7.5-10.5 IN-LB (0.9-1.1 Nm)
BBI TYPE M*	13-18.2 IN-LB (1.5-2.1 Nm)	14-19.6 IN-LB (1.6-2.2 Nm)	15-21 IN-LB (1.7-2.4 Nm)

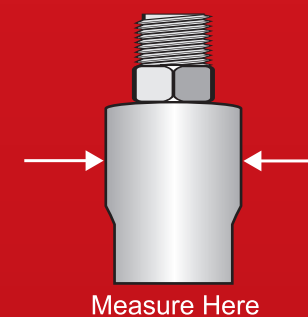
*Note - The BBI Type M-Mini Clamps have a wider band than the industry standard - ~3/8" (0.35") vs 5/16" (0.312") - and has a higher torque rating which allows the clamp to withstand higher pressure.

MARKETS

AUTOMOTIVE	MARINE	PLUMBING/HVAC	IRRIGATION	RESIDENTIAL/DIY
VH1, VH2, VH3	VH2, VH3	VH1, VH2, VH3, VH4	VH1, VH2, VH3	VH1, VH2, VH4
GARDEN	INDUSTRIAL/MRO	FOOD	MEDICAL	
VH1, VH2	VH1, VH2, VH3	VH2, VH3	VH2, VH3	

HOSE CLAMP INSTALLATION

- 1 Measure the outside diameter of the hose or tube in the area where the hose fits over the fitting.
- 2 Select a clamp where the hose or tube diameter falls at the midpoint of the clamping range. Avoid choosing a clamp that is too large, to avoid a long extended tail when tightened.
- 3 Remove the hose or tube from the fitting and slide the hose clamp on the hose before reattaching or fully open the clamp releasing the band from the screw housing and position the clamp on the hose and reengage the band.
- 4 Once the hose is securely fastened, place the clamp ~ 1/4" from the end of the hose.
- 5 Hand tighten the clamp with a screw driver or hex nut driver. Avoid overtightening. Overtightening can cause damage, failure or leakage. For critical applications use a torque wrench.



The Family and Clamping Range are the same for both clamp types.

Type M-Mini clamps have a low profile housing and a narrow band making them ideal for applications in restricted spaces.

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