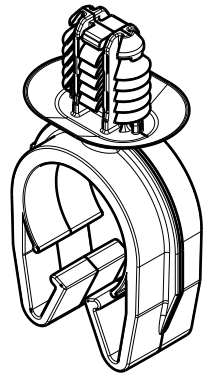
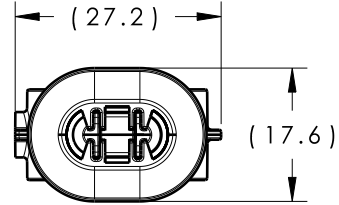




Revision Level			Revision Record	Changed	Date	Approved	Date
Drawing	State	Part					
02.1	Design Release	-	SEE ECN# 014632	TAT	9/7/18	EJH	9/7/18

REFERENCE:

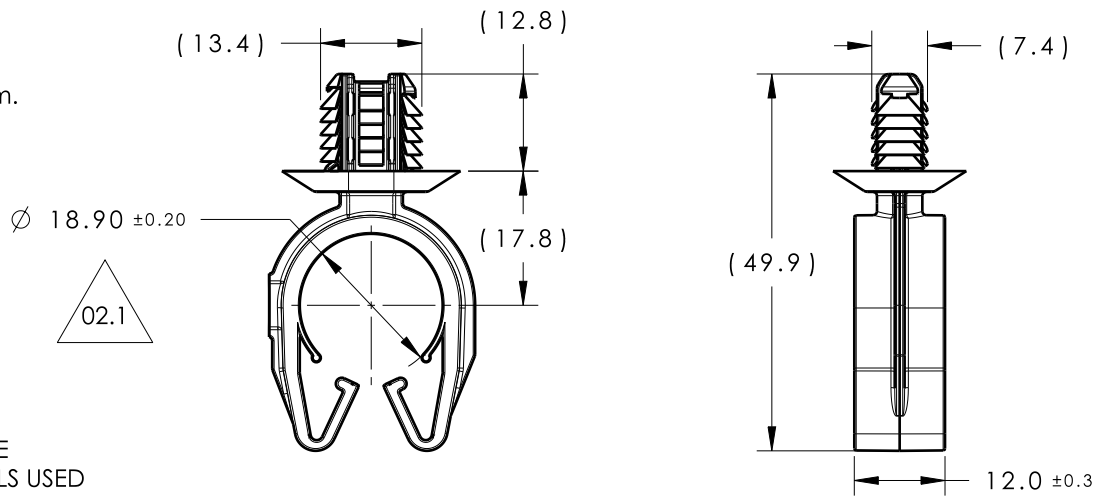
- PERFORMANCE REQUIREMENTS AT DRY AS MOLDED:
1. FIR TREE PUSH IN FORCE: 45 NEWTONS (10 LBS) MAX IN EACH APPLICABLE OVAL HOLE SIZE AND A PLATE THICKNESS OF 1.8mm.
 2. FIR TREE PULL OUT FORCE: 155 NEWTONS (35 LBS) MIN IN EACH APPLICABLE OVAL HOLE SIZE AND A PLATE THICKNESS OF 1.8mm.
 3. SHEET METAL THICKNESS RANGE: 0.60mm - 6.75mm
 4. APPLICABLE OVAL HOLE SIZES:
 - A. 6.2 X 12.2mm
 - B. 6.5 X 12.5mm
 - C. 6.5 X 13.0mm
 - D. 7.0 X 12.0mm
 5. FITS USCAR MATING HOLE EWCAP -007 (NOT A TEST SPEC.)



ISOMETRIC VIEW

NOTES:

1. MAXIMUM PERCENT REGRIND PERMISSIBLE: 25%
2. MAX ALLOWABLE FLASH OR MISMATCH TO BE 0.5mm.



*RECOMMENDED SIZES MAY DIFFER DEPENDING ON THE APPLICATION, PRODUCT REQUIREMENTS AND MATERIALS USED

**PATENT PENDING 29/582,271

DIAMETER RANGE*		
HARNESS	HOSE	HARD PIPE/TUBE
17.0MM-20.0MM	17.0MM-20.0MM	19.0MM-21.8MM

GLOBAL PART DESCRIPTION	MATERIAL	COLOR
MOC19FTOVAL-PA66HIRHSUV-BK	PA66HIRHSUV	BLACK

Material SEE CHART COLOR: SEE CHART 	Units millimeters Tolerance defined on each dimension	The copyright of this drawing is reserved by HellermannTyton. It is issued on condition that it is not reproduced, copied or disclosed to a third party, either wholly or in part, without the consent of HellermannTyton.	Drawn	CRB	08/09/16	Article/Type-No	MOC19FTOVAL		Scale	1:1
			Approved	EJH	09/30/16		 Title 19MM (3/4") MOC WITH 6.5 X 12.5MM OVAL FIR TREE	Project Number		16-0322
			 North America Email: corp@htamericas.com Web: www.hellermann.tyton.com						Drawing-No	PRODUCTION : Phase
						16-0322-010-CSU 		Sheet	1/1	