

## Split Insert Tensile Grips | W-5158 and W-5159

Instron® Split Insert Tensile Grips are designed for safe, high-volume production testing of shoulder-end or button-head machined specimens. Engineered with an operator focus, the split insert style tensile grips are easy to install, offer quick change inserts for standard specimen sizes, and promote efficient testing of a wide range of metals and alloys.

### Features and Benefits

- Preferred solution for the testing of high-strength materials that may damage or cause excessive wear to traditional grip arrangements
- Precision components improve your ability to meet alignment standards ASTM E1012 and Nadcap AC7101 when test is performed on a properly machined specimen
- Modular design offers a single set of holders and interchangeable split inserts that match industry standard specimen dimensions
- Automatic positioning of the inserts ensures uniform specimen support and loading for standard shoulder-end or button-head specimens
- Self-contained assembly eliminates the risk of specimen ejection at failure, and minimizes loose parts to ensure operator safety when inserting and removing the specimen
- Compact size minimizes test area required for installation, and maximizes the grip separation for testing with a clip-on or automatic extensometer

### Standards

Split Insert Style Tensile Grips conform to many international standards, including the following:

- ASTM E8 and A370
- ASTM A48
- GOST 1497 (Type III specimen)
- Consult Instron for compliance with other standards

### System Compatibility

- Static Hydraulic Testers
- Electromechanical Testers
- Secondary Load Strings

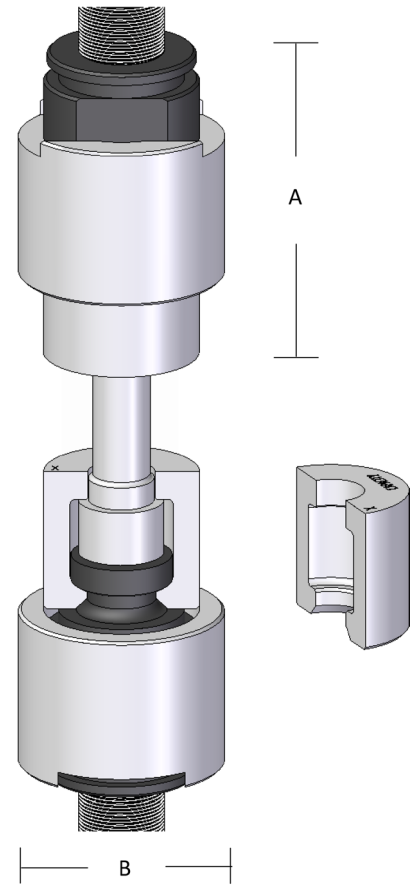
### Installation Accessories

- Spherical Tension Adapter
- Adapter Kits



## Specifications for Holders

		W-5158-x	W-5159
Maximum Capacity*	kN	300	600
	kgf	30,000	60,000
	lbf	67,500	135,000
Mounting Type	W-5158-1	Type R4 (M36 × 4p)	Type II RH (M48 × 2p RH)
	W-5158-2	1.5 - 6 in UNC	
	W-5158-3	1.5 - 12 inch UNF	
Effective Length (A)	mm	83	127
	in	3.3	5.0
Maximum Diameter (B)	mm	76.2	114
	in	3.0	4.5
Weight (Inserts)	kgs	0.82	2.4
	lbs	1.81	5.3
Weight (Holders)	kgs	1.86	6.16
	lbs	4.1	13.58
Operating Temperature Rating	°C	0 - 38	0 - 38
	°F	32 - 100	32 - 100
Humidity (Non-condensing)		10 - 90%	10 - 90%
Finish		Black Oxide	Black Oxide



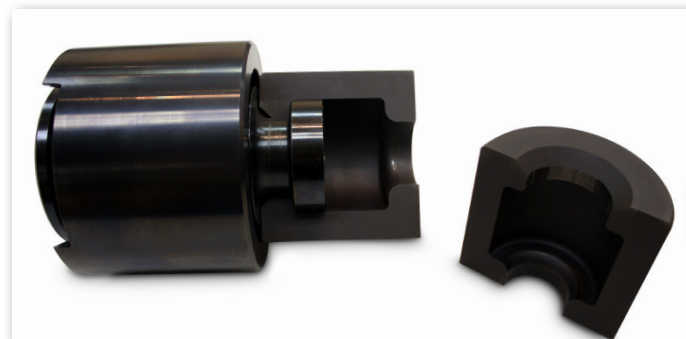
\* Maximum Capacity for Holders Only. See Insert Specifications for Insert Capacities.



W-5158-A 300 kN Split Inserts



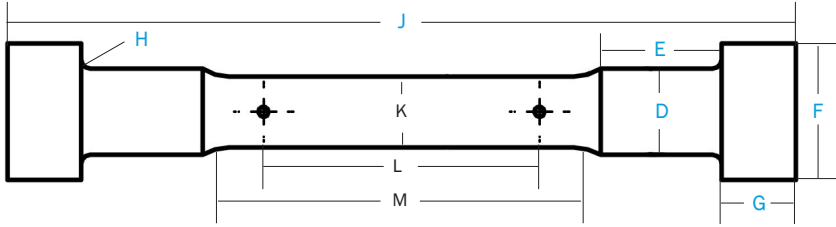
W-5158 300 kN Holders



W-5159 Holder and W-5159-A Insert, Half Set

## 300 kN Inserts Specifications to ASTM E8, A370

ASTM E8, A370 Interchangeable Inserts, Requires W-5158 Holders



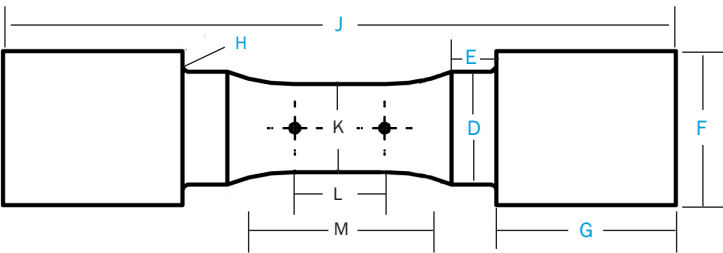
	Capacity		Dimensions						Dimensions (in)		
	kN		D	E	F	G	H	J	K	L	M
W-5158-A	300	mm	15.88	19.05	22.23	12.70	1.60	120.7	12.83	50.8	57.15
		in	0.625	0.75	0.875	0.050	0.063	4.75	0.505	2.0	2.25
W-5158-B	200	mm	11.05	19.05	17.48	9.53	1.19	101.6	9.07	35.6	44.45
		in	0.435	0.75	0.688	0.375	0.047	4.00	0.357	1.4	1.75
W-5158-C	150	mm	8.13	19.05	12.7	6.35	0.79	82.6	6.40	25.4	31.75
		in	0.320	0.75	0.500	0.250	0.031	3.25	0.252	1.0	1.25
W-5158-D	50	mm	5.08	12.7	7.95	3.18	0.64	50.8	4.06	16.3	19.05
		in	0.200	0.50	0.313	0.125	0.025	2.00	0.160	0.64	0.75
W-5158-X		mm	—	—	46	15.98	—	—	—	—	—
		in	—	—	1.811	0.629	—	—	—	—	—

Note:

1. Reference Specimen Machining Diagram 231249-2

## 600 kN Inserts Specifications to ASTM A48

ASTM A48, Interchangeable Inserts, Requires W-5159 Holders



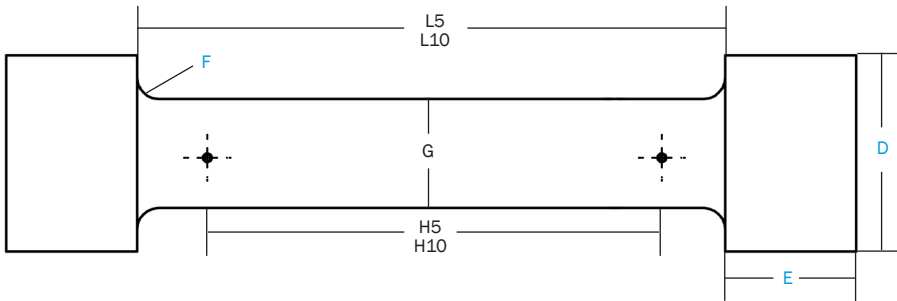
	Capacity		Dimensions						Dimensions		
	kN		D	E	F	G	H	J	K	L	M
W-5159-A1	400	mm	15.88	6.35	22.23	25.4	0.76	95.25	12.7	12.7	31.75
		in	0.625	0.25	0.875	1.0	0.03	3.75	0.5	0.5	1.25
W-5159-A2	500	mm	23.81	6.35	31.75	25.4	0.76	101.6	19.0	19.0	38.1
		in	0.938	0.25	1.25	1.0	0.03	4.0	0.75	0.75	1.5
W-5159-A3	600	mm	36.51	19.05	47.63	30.2	0.76	161.9	31.75	31.75	57.2
		in	1.4	0.75	1.875	1.19	0.03	6.375	1.25	1.25	2.25

Note:

1. Reference Specimen Machining Diagram 232572-2

# 600 kN Inserts Specifications to GOST 1497

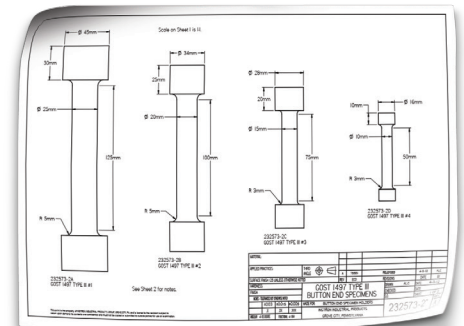
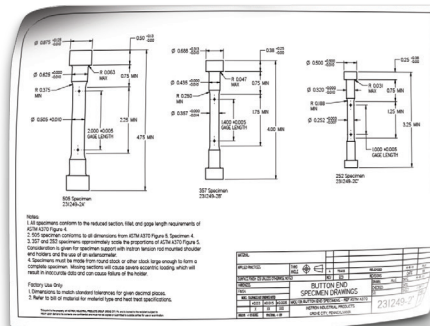
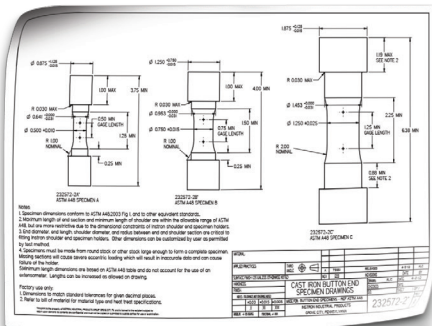
GOST 1497 Interchangeable Inserts, Requires W-5159 Holders



	Capacity		Dimensions			Dimensions				
	kN		D	E	F	G	H5	L5	H10	L10
W-5159-B1	600	mm in	45 1.77	30 1.18	5 0.197	25 0.984	125 4.92	175 6.89	250 9.84	300 11.81
W-5159-B2	600	mm in	34 1.34	25 0.984	5 0.197	20 0.787	100 3.94	140 5.51	200 7.87	240 9.45
W-5159-B3	300	mm in	28 1.102	20 0.787	3 0.118	15 0.591	75 2.95	105 4.13	150 5.91	180 7.09
W-5159-B4	150	mm in	16 0.63	10 0.394	3 0.118	10 0.394	50 1.968	70 2.76	100 3.94	120 4.72
W-5159-B5	100	mm in	13 0.512	10 0.394	2 0.079	8 0.315	40 1.57	56 2.2	80 3.15	96 3.78
W-5159-B6	50	mm in	12 0.472	10 0.394	1.5 0.059	6 0.236	30 1.18	42 1.65	60 2.36	72 2.83
W-5159-B7	40	mm in	11 0.433	10 0.394	1.5 0.059	5 0.197	25 0.984	35 1.38	50 1.97	60 2.36
W-5159-B8	25	mm in	9 0.354	8 0.315	1.5 0.059	4 0.157	20 0.787	28 1.1	40 1.57	48 1.89
W-5159-B9	10	mm in	7 0.276	7 0.276	1.5 0.059	3 0.118	15 0.591	21 0.827	30 1.18	36 1.42
W-5159 - X	—	mm in	50 1.97	30 1.18	—	—	—	—	—	—

Note:

1. Reference Specimen Machining Diagram 232573-2



Contact Instron® for Specimen Machining Diagrams

[www.instron.com](http://www.instron.com)



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