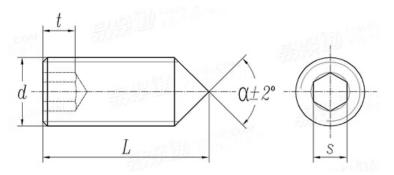


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## **Hexagon Socket Set Screws Cone Point - Inch Series**

#### 1.0 Dimensions: ASME B18.3.



Nominal	S	t	α	В
Size or Basic Product Diameter	Hexagon Socket Size	Key Engagement	Cone Point Angle 90 deg + or -2 deg for these nominal lengths or longer ; 118 deg + or - 2 deg for shorter lengths.	Shortest Optimum Nominal Length *
d	Nom	Min	Nom	Nom
# 2	0.035	0.060	0.13	0.19
# 3	0.050	0.070	0.13	0.19
# 4	0.050	0.070	0.19	0.19
# 5	1/16	0.080	0.19	0.19
# 6	1/16	0.080	0.19	0.25
# 8	5/64	0.090	0.25	0.25
# 10	3/32	0.100	0.25	0.25
1/4	1/8	0.125	0.31	0.31
5/16	5/32	0.156	0.38	0.44
3/8	3/16	0.188	0.44	0.44
7/16	7/32	0.219	0.50	0.63
1/2	1/4	0.250	0.57	0.63
5/8	5/16	0.312	0.75	0.88
3/4	3/8	0.375	0.88	1.00

**Notes:** \*For 90 Degree Cone Point Set Screws, minimum key engagement "t" is applicable only to nominal screw lengths equal to or longer than the lengths in column B. Thread Class of Fit: 3A.



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# **Hexagon Socket Set Screws Cone Point - Inch Series**

#### 2.0 Mechanical Properties:

Set screws are subjected to compressive stress in applications. Tensile testing is not carried out on set screws.

#### 2.1 Alloy Steel

Standard: ASTM F912 Hardness: HRC 45 to 53.

Hardness, Decarburization & Torsional strength test are the requisite mechanical properties to be met by the alloy steel socket set screws.

#### 2.2 Stainless Steel Standard: ASTM F880

**Condition: CW** 

Hardness: 96 HRB to 33 HRC.

Hardness and Torsional strength test are the requisite mechanical properties to be met by the stainless steel socket set screws. Set screws (Stainless steel only) of sizes above 1/2 " are not subjected to torsional strength test.

The set screws will not have any markings.

#### 3.0 Surface Finish:

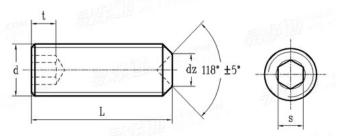
Alloy Steel: Thermal Black Oxide Finish.



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# **Hexagon Socket Set Screws Cup Point - Inch Series**

1.0 Dimensions: ASME B18.3.



		7000 au		- 1311	
Nominal	s	t	dz	Z	В
Size or Basic Product Diameter	Hexagon Socket Size	Key Engagement	Point Dia	ameter	Shortest Optimum Nominal Length*
d	Nom	Min	Max	Min	Nom
# 0	0.028	0.050	0.033	0.027	0.13
#1	0.035	0.060	0.040	0.033	0.13
# 2	0.035	0.060	0.047	0.039	0.13
#3	0.050	0.070	0.054	0.045	0.19
# 4	0.050	0.070	0.061	0.051	0.19
# 5	1/16	0.080	0.067	0.057	0.19
# 6	1/16	0.080	0.074	0.064	0.19
# 8	5/64	0.090	0.087	0.076	0.19
# 10	3/32	0.100	0.102	0.088	0.19
1/4	1/8	0.125	0.132	0.118	0.25
5/16	5/32	0.156	0.172	0.156	0.31
3/8	3/16	0.188	0.212	0.194	0.38
7/16	7/32	0.219	0.252	0.232	0.44
1/2	1/4	0.250	0.291	0.270	0.50
5/8	5/16	0.312	0.371	0.347	0.63
3/4	3/8	0.375	0.450	0.425	0.75
7/8	1/2	0.500	0.530	0.502	0.88
1	9/16	0.562	0.609	0.579	1.00
1-1/8	9/16	0.562	0.689	0.655	1.25
1-1/4	5/8	0.625	0.767	0.733	1.25
1-3/8	5/8	0.625	0.848	0.808	1.50
1-1/2	3/4	0.750	0.926	0.886	1.50
t					

**Notes:** \*Minimum key engagement "t" is applicable only to nominal screw lengths equal to or longer than the lengths in column B. Thread Class of Fit: 3A.



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# **Hexagon Socket Set Screws Cup Point - Inch Series**

#### 2.0 Mechanical Properties:

Set screws are subjected to compressive stress in applications. Tensile testing is not carried out on set screws.

#### 2.1 Alloy Steel

Standard: ASTM F912 Hardness: HRC 45 to 53.

Hardness, Decarburization & Torsional strength test are the requisite mechanical properties to be met

by the alloy steel socket set screws.

#### 2.2 Stainless Steel Standard: ASTM F880

**Condition:** CW

Hardness: 96 HRB to 33 HRC.

Hardness and Torsional strength test are the requisite mechanical properties to be met by the stainless steel socket set screws. Set screws (Stainless steel only) of sizes above 1/2 " are not subjected to torsional strength test.

The set screws will not have any markings.

#### 3.0 Surface Finish:

Alloy Steel: Thermal Black Oxide Finish.

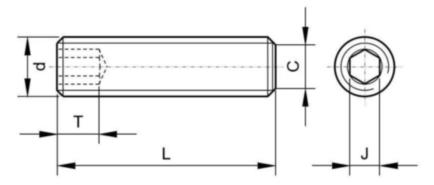
Properties	Zinc Clear	Mechanical Zinc
Туре	Trivalent (Cr+3)	Trivalent (Cr+3)
Color	Clear	Clear
Minimum Coating Thickness	0.0001" / 3 Microns	0.0003 " / 8 Microns
Specification	ASTM F1941 / F1941M. Fe/Zn 3AN	ASTM B695. Class 8. Type II.



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# **Hexagon Socket Set Screws Flat Point - Inch Series**

#### 1.0 Dimensions: ASME B18.3.



	J	т		С	В
Nominal Size or Basic Product	Hexagon Socket Size	Key Engagement	Point Diameter		Shortest Optimum Nominal Length *
Diameter d	Nom	Min	Max	Min	Nom
# 4	0.050	0.070	0.061	0.051	0.19
# 5	1/16	0.080	0.067	0.057	0.19
# 6	1/16	0.080	0.074	0.064	0.19
# 8	5/64	0.090	0.087	0.076	0.19
# 10	3/32	0.100	0.102	0.088	0.19
1/4	1/8	0.125	0.132	0.118	0.25
5/16	5/32	0.156	0.172	0.156	0.31
3/8	3/16	0.188	0.212	0.194	0.38
7/16	7/32	0.219	0.252	0.232	0.44
1/2	1/4	0.250	0.291	0.270	0.50
5/8	5/16	0.312	0.371	0.347	0.63
3/4	3/8	0.375	0.450	0.425	0.75

**Notes:** \*Minimum key engagement "T" is applicable only to nominal screw lengths equal to or longer than the lengths in column B.



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# **Hexagon Socket Set Screws Flat Point - Inch Series**

#### 2.0 Mechanical Properties:

Set screws are subjected to compressive stress in applications. Tensile testing is not carried out on set screws.

#### 2.1 Alloy Steel

Standard: ASTM F912 Hardness: HRC 45 to 53.

Hardness, Decarburization & Torsional strength test are the requisite mechanical properties to be met by the alloy steel socket set screws.

# 2.2 Stainless Steel Standard: ASTM F880

**Condition: CW** 

Hardness: 96 HRB to 33 HRC.

Hardness and Torsional strength test are the requisite mechanical properties to be met by the stainless steel socket set screws. Set screws (Stainless steel only) of sizes above 1/2 " are not subjected to torsional strength test.

The set screws will not have any markings.

#### 3.0 Surface Finish:

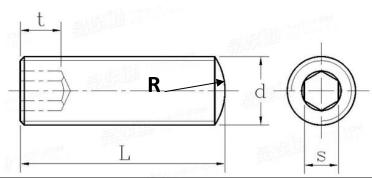
Alloy Steel: Thermal Black Oxide Finish.



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# **Hexagon Socket Set Screws Oval Point - Inch Series**

1.0 Dimensions: ASME B18.3.



	S	t	R	В
Nominal Size or Basic Product Diameter	Hexagon Socket Size	Key Engagement	Oval Point Radius	Shortest Optimum Nominal Length *
d	Nom	Min	Basic	Nom
# 4	0.050	0.070	0.084	0.19
# 5	1/16	0.080	0.094	0.19
# 6	1/16	0.080	0.104	0.25
# 8	5/64	0.090	0.123	0.25
# 10	3/32	0.100	0.142	0.25
1/4	1/8	0.125	0.188	0.31
5/16	5/32	0.156	0.234	0.44
3/8	3/16	0.188	0.281	0.44
7/16	7/32	0.219	0.328	0.63
1/2	1/4	0.250	0.375	0.63
5/8	5/16	0.312	0.469	0.88
3/4	3/8	0.375	0.562	1.00

**Notes**: \*Minimum key engagement "t" is applicable only to nominal screw lengths equal to or longer than the lengths in column B.



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## **Hexagon Socket Set Screws Oval Point - Inch Series**

#### 2.0 Mechanical Properties:

Set screws are subjected to compressive stress in applications. Tensile testing is not carried out on set screws.

#### 2.1 Alloy Steel

Standard: ASTM F912 Hardness: HRC 45 to 53.

Hardness, Decarburization & Torsional strength test are the requisite mechanical properties to be met

by the alloy steel socket set screws.

# 2.2 Stainless Steel Standard: ASTM F880

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Condition: CW

Hardness: 96 HRB to 33 HRC.

Hardness and Torsional strength test are the requisite mechanical properties to be met by the stainless steel socket set screws. Set screws (Stainless steel only) of sizes above 1/2 " are not subjected to torsional strength test.

The set screws will not have any markings.

#### 3.0 Surface Finish:

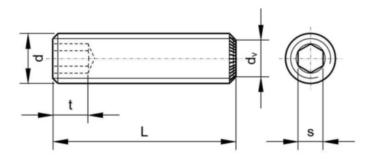
Alloy Steel: Thermal Black Oxide Finish.



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# Hexagon Socket Set Screws Knurled Cup Point Inch Series

1.0 Dimensions: ASME B18.3.



	S	t	dv		В
Nominal Size or Basic Product Diameter	Hexagon Socket Size	Key Engagement	Point Diameter		Shortest Optimum Nominal Length *
d	Nom	Min	Max	Min	Nom
# 4	0.050	0.070	0.061	0.051	0.19
# 5	1/16	0.080	0.067	0.057	0.19
# 6	1/16	0.080	0.074	0.064	0.19
# 8	5/64	0.090	0.087	0.076	0.19
# 10	3/32	0.100	0.102	0.088	0.19
1/4	1/8	0.125	0.132	0.118	0.25
5/16	5/32	0.156	0.172	0.156	0.31
3/8	3/16	0.188	0.212	0.194	0.38
7/16	7/32	0.219	0.252	0.232	0.44
1/2	1/4	0.250	0.291	0.270	0.50
5/8	5/16	0.312	0.371	0.347	0.63
3/4	3/8	0.375	0.450	0.425	0.75

**Notes: \***Minimum key engagement "t" is applicable only to nominal screw lengths equal to or longer than the lengths in column B.



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# Hexagon Socket Set Screws Knurled Cup Point Inch Series

#### 2.0 Mechanical Properties:

2.1 Alloy Steel

Standard: ASTM F912 Hardness: HRC 45 to 53.

Set screws are subjected to compressive stress in applications. Tensile testing is not carried out on set screws. Hardness, Decarburization & Torsional strength test are the requisite mechanical properties to be met by the alloy steel socket set screws.

The set screws will not have any marking.

#### 3.0 Surface Finish:

Thermal Black Oxide & Zinc Plating. Zinc plating as per details given in the table below:

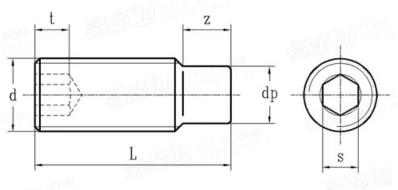
Properties	Zinc Clear
Туре	Trivalent (Cr+3)
Color	Clear
Minimum Coating Thickness	0.0001" / 3 Microns
Specification	ASTM F1941 / F1941M.
Specification	Fe/Zn 3AN



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# Hexagon Socket Set Screws Full Dog Point - Inch Series

#### 1.0 Dimensions: ASME B18.3.



		577.1					
	S	t		Full Dog Poi	nt Dimensions		
Nominal Size or Basic Product	Hexagon Socket Size	Key Engagement		g Point eter dp		g Point gth Z	
Diameter d	Nom	Min	Max	Min	Max	Min	
# 6	1/16	0.080	0.092	0.087	0.073	0.067	
# 8	5/64	0.090	0.109	0.103	0.083	0.077	
# 10	3/32	0.100	0.127	0.120	0.095	0.085	
1/4	1/8	0.125	0.156	0.149	0.130	0.120	
5/16	5/32	0.156	0.203	0.195	0.161	0.151	
3/8	3/16	0.188	0.250	0.241	0.193	0.183	
1/2	1/4	0.250	0.344	0.334	0.255	0.245	
5/8	5/16	0.312	0.469	0.456	0.321	0.305	

**Notes:** Full dog point dimensions are not covered in ASME B18.3. Full dog point diameter is exactly the same as that of the half dog point diameter. Full dog point length is almost double the half dog point length. For sizes #10 & above, the full dog point length is same as that of square head set screws full dog point length, given in the standard ASME B18.6.2.



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# **Hexagon Socket Set Screws Full Dog Point - Inch Series**

#### 2.0 Mechanical Properties:

**Alloy Steel** 

**Standard:** ASTM F912. **Hardness:** HRC 45 to 53.

Set screws are subjected to compressive stress in applications. Tensile testing is not carried out on set screws. Hardness, Decarburization & Torsional strength test are the requisite mechanical properties to be met by the alloy steel socket set screws.

The set screws will not have any marking.

#### 3.0 Surface Finish:

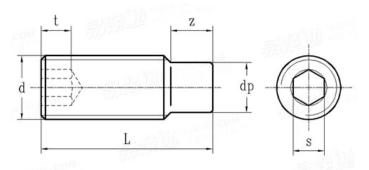
Alloy Steel: Thermal Black Oxide Finish.



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# **Hexagon Socket Set Screws Half Dog Point - Inch Series**

1.0 Dimensions: ASME B18.3.



	S	t	Hal	ons		
Nominal Size or Basic Product Diameter	Hexagon Socket Size	Key Engagement	Half Dog Point Diameter dp		Half Dog Point Length Z	
d	Nom	Min	Max	Min	Max	Min
# 4	0.050	0.070	0.075	0.070	0.030	0.026
# 5	1/16	0.080	0.083	0.078	0.033	0.027
# 6	1/16	0.080	0.092	0.087	0.038	0.032
# 8	5/64	0.090	0.109	0.103	0.043	0.037
# 10	3/32	0.100	0.127	0.120	0.049	0.041
1/4	1/8	0.125	0.156	0.149	0.067	0.059
5/16	5/32	0.156	0.203	0.195	0.082	0.074
3/8	3/16	0.188	0.250	0.241	0.099	0.089
7/16	7/32	0.219	0.297	0.287	0.114	0.104
1/2	1/4	0.250	0.344	0.334	0.130	0.120
5/8	5/16	0.312	0.469	0.456	0.164	0.148
3/4	3/8	0.375	0.562	0.549	0.196	0.180

Notes: Thread Class of Fit: 3A.



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# **Hexagon Socket Set Screws Half Dog Point - Inch Series**

#### 2.0 Mechanical Properties:

Set screws are subjected to compressive stress in applications. Tensile testing is not carried out on set screws.

#### 2.1 Alloy Steel

Standard: ASTM F912 Hardness: HRC 45 to 53.

Hardness, Decarburization & Torsional strength test are the requisite mechanical properties to be met by the alloy steel socket set screws.

# 2.2 Stainless Steel Standard: ASTM F880

**Condition: CW** 

Hardness: 96 HRB to 33 HRC.

Hardness and Torsional strength test are the requisite mechanical properties to be met by the stainless steel socket set screws. Set screws (Stainless steel only) of sizes above 1/2 " are not subjected to torsional strength test.

The set screws will not have any markings.

#### 3.0 Surface Finish:

Alloy Steel: Thermal Black Oxide Finish.