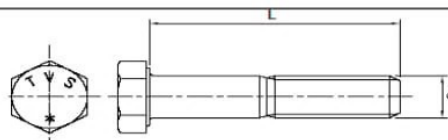


HEXAGONAL HEAD BOLT - 21



*Grade Mark

Reference Standards:

Coarse Pitch: IS 1364-1 / IS 1363-1 / ISO 4014 / ISO 4016 / DIN 931 / JIS B1180

Fine Pitch: IS 13726 / ISO 8765 / DIN 960 / JIS B1180

Thread Size 'd'	M5	M6	M8		M10			M12				M14		M16	
Pitch	0.8	1.0	1.0	1.25	1.0	1.25	1.5	1.0	1.25	1.5	1.75	1.5	2.0	1.5	2.0
Length 'L'	20 - 55	25 - 85	30 - 140		35 - 160			40 - 200				45 - 200		50 - 200 210 - 400 HF	
Across Flat	8.0	10.0	13.0		REV - 16.0 OLD - 17.0			REV - 18.0 OLD - 19.0				REV - 21.0 OLD - 22.0		24.0	

Thread Size 'd'	M18			M20			M22			M24			M27	M30	M36
Pitch	1.5	2.0	2.5	1.5	2.0	2.5	1.5	2.0	2.5	1.5	2.0	3.0	3.0	3.5	4.0
Length 'L'	55 - 200 210 - 400 HF			60 - 200 210 - 400 HF			65 - 200 210 - 400 HF			70 - 200 210 - 400 HF			100-300 HF	110-300 HF	140-300 HF
Across Flat	27.0			30.0			REV - 34.0 OLD - 32.0			36.0			41.0	46.0	55.0

HF - HOT FORGED

Manufacturing Range:

Grades:

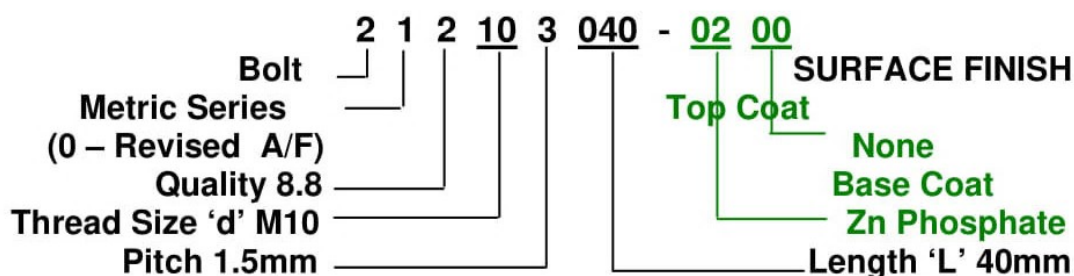
8.8, 10.9 & 12.9

Codification:

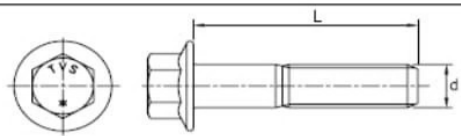
Example :-

M10 x 1.5 x 40
HEX HEAD BOLT
With Zn Phosphate finish

Codification structure



HEXAGONAL FLANGE BOLT – 2C



*Grade Mark

Reference Standards:

Coarse Pitch: ISO 4162 / ISO 15071 / JIS B1189
 Fine Pitch: ISO 4162 / ISO 15072 / JIS B1189

Manufacturing Range:

Thread Size ‘d’	M6	M8	M10	M12
Pitch	1.0	1.25	1.5	1.75
Length ‘L’	30 - 60	35 - 125	40 - 200	40 - 140
Across Flat	8.0	10.0	13.0	15.0

Grades:

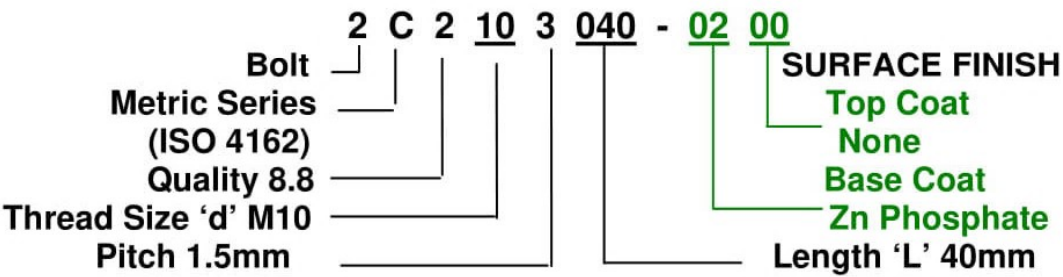
8.8, 9.8, 10.9 & 12.9

Codification:

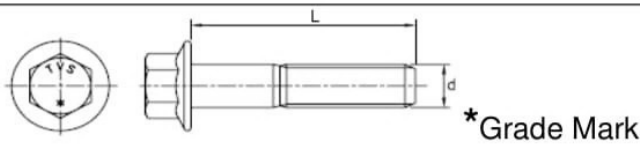
Example

M10 x 1.5 x 40
 HEX FLANGE BOLT
 With Zn Phosphate finish

Codification structure



HEXAGONAL FLANGE BOLT – 2F



Reference Standard:
DIN 6921

Manufacturing Range:

Thread Size 'd'	M6	M8	M10		M12
Pitch	1.0	1.25	1.25	1.5	1.75
Length 'L'	25 - 60	35 - 125	40 - 125	40 - 200	45 - 120
Across Flat	10.0	13.0	15.0		16.0

Grades:

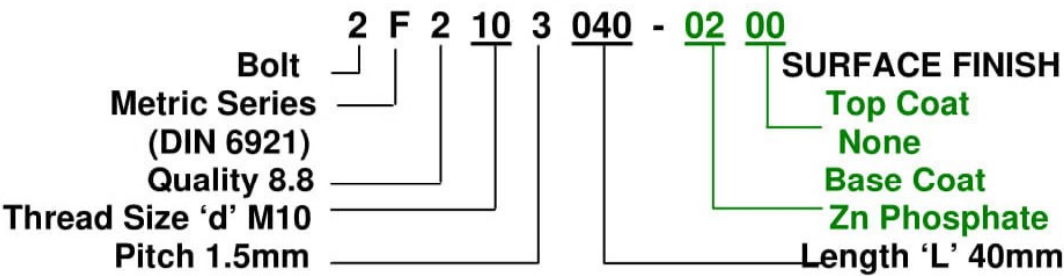
8.8, 10.9 & 12.9

Codification:

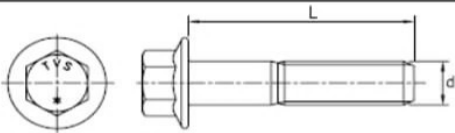
Example

M10 x 1.5 x 40
HEX FLANGE BOLT
With Zn Phosphate finish

Codification structure



HEXAGONAL FLANGE BOLT – 2H



*Grade Mark

Reference Standards:

ANSI B 18.2.3.9M

Manufacturing Range:

Thread Size 'd'	M12	M14	M16	M18	M20
Pitch	1.75	2.0	2.0	2.5	2.5
Length 'L'	45 - 125	50 - 150	55 - 200	55 - 200	50 - 200
Across Flat	18.0	21.0	24.0	27.0	30.0

Grades:

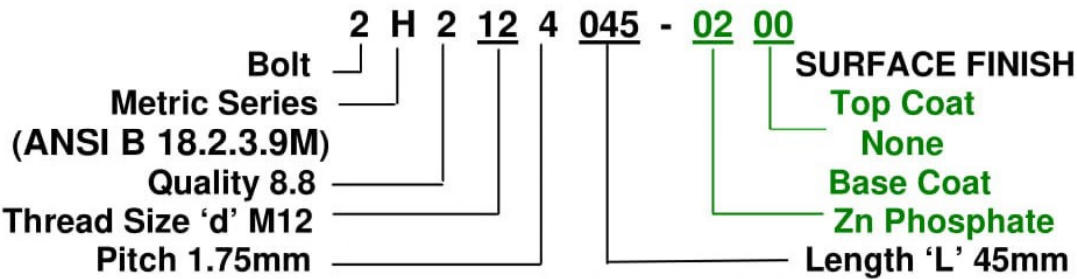
8.8, 10.9 & 12.9

Codification:

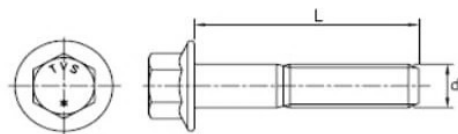
Example

Codification structure

M12 x 1.75 x 45
HEX FLANGE BOLT
With Zn Phosphate finish



HEXAGONAL FLANGE BOLT – 2J



*Grade Mark

Reference Standard:

JIS 1189 – Annexure 1 Attached table 2

Manufacturing Range:

Thread Size ‘d’	M6	M8	M10	
Pitch	1.0	1.25	1.25	1.5
Length ‘L’	25 - 60	30 - 140	32 - 125	
Across Flat	10.0	12.0	14.0	

Grades:

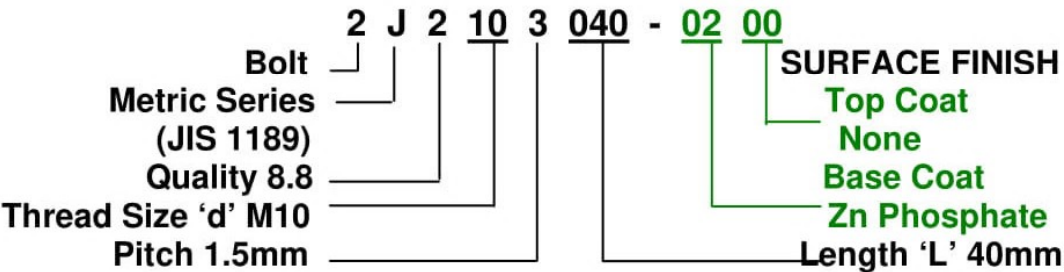
8.8, 10.9 & 12.9

Codification:

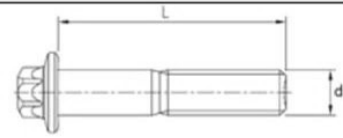
Example

M10 x 1.5 x 40
HEX FLANGE BOLT
With Zn Phosphate finish

Codification structure



HEXALOBULAR HEAD BOLT – 2X



*Grade Mark

Reference Standard:

DIN 34800

Manufacturing Range:

Thread Size 'd'	M10	M12	M16
Pitch	1.5	1.75	2.0
Length 'L'	35-100	85-125	55-125
Lobe Diameter	10.75	12.85	18.35
Lobe Size	E12	E14	E20

Grades:

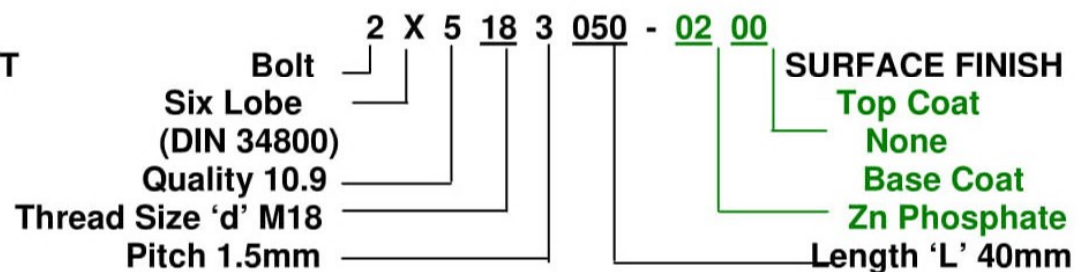
8.8 & 10.9

Codification:

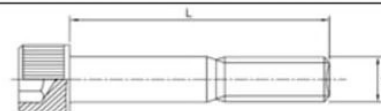
Example

M18 x 1.5 x 50
HEXALOBULAR HEAD BOLT
With Zn Phosphate finish

Codification structure



SOCKET HEAD CAP BOLT - 41



*Grade Mark

Reference Standards:

DIN 912 / ISO 4762

Manufacturing Range:

Thread Size 'd'	M3	M4	M5	M6	M8	M10	M12		M14	M16	M20	M24
Pitch	0.5	0.7	0.8	1	1.25	1.5	1.25	1.75	2	2	2.5	3
Length 'L'	25-30	30-55	30-50	35-70	40-120	45-80	50-120	50-90	60-110	60-120	75-150	90-200
Head Dia	5.5	7.0	8.5	10.0	13.0	16.0	18.0		21.0	24.0	30.0	36.0
Across Flat	2.0	3.0	4.0	5.0	6.0	8.0	10.0		12.0	14.0	17.0	19.0

Grades:

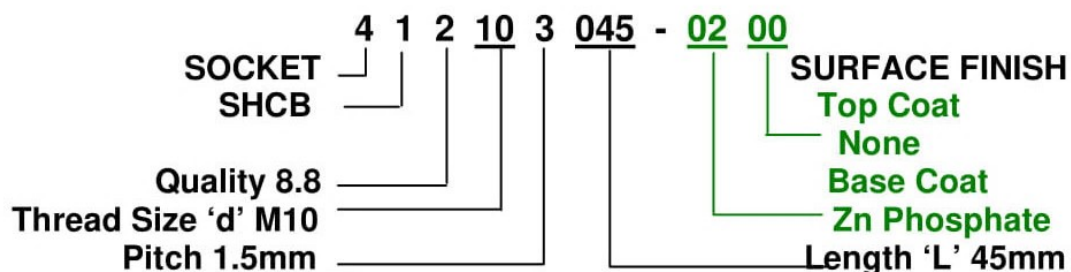
8.8, 10.9 & 12.9

Codification:

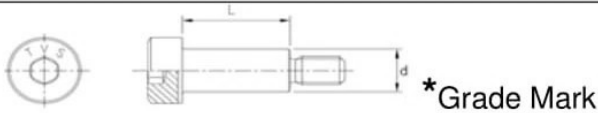
Example

M10 x 1.5 x 45
SOCKET HEAD CAP BOLT
With Zn Phosphate finish

Codification structure



SOCKET HEAD SHOULDER SCREW - 4F



Reference Standards:

ISO 7379

Manufacturing Range:

Shoulder Diameter 'd'	M6	M8	M10	M12	M16	M20
Pitch	1.0	1.0	1.25	1.5	1.75	2.0
Length 'L'	08-50	10-60	12-100	16-100	30-120	40-120
Head Diameter	10.0	13.00	16.00	18.00	24.00	30.00
Across Flat	3.0	4.0	5.0	6.0	8.0	10.0

Grade:

12.9

Codification:

Example

Codification structure

10DS x 1.5 x 40
SOCKET HEAD SHOULDER SCREW
With Zn Phosphate finish

Socket SHSB

Quality 12.9

Shoulder Diameter 10mm

Pitch 1.25mm

4

F

6

10

2

040

-

02

00

SURFACE FINISH

Top Coat

None

Base Coat

Zn Phosphate

Length 'L' 40mm

SQUARE NECK BOLT – C1



*Grade mark

Reference Standards:

ISO 8678

Manufacturing Range:

Thread Size 'd'	M6	M8	M10	M12	M16
Pitch	1.0	1.25	1.5	1.75	2.0
Length 'L'	30-60	35-100	50-120	50-120	60-160
Head Diameter	14.2	18.0	22.3	26.6	35.0
Neck length	3.0	3.0	4.0	4.0	5.0
SQ. A/F	6.48	8.58	10.58	12.70	16.70

Grades:

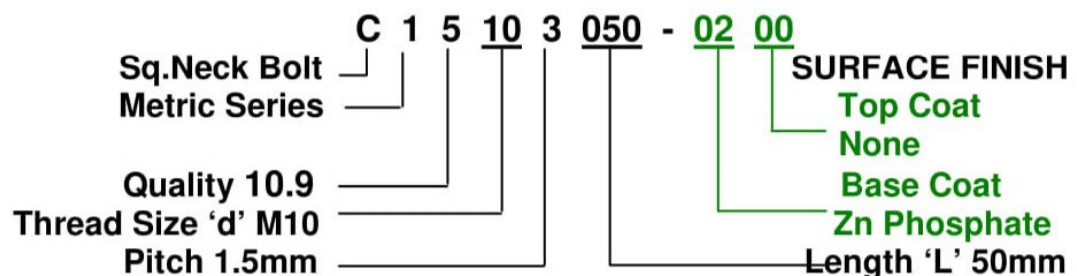
8.8 & 10.9

Codification:

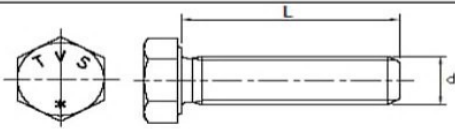
Example

M10 x 1.5 x 50
SQUARE NECK BOLT
With Zn Phosphate finish

Codification structure



HEXAGONAL HEAD SCREW - 11



*Grade Mark

Reference Standards:

Coarse Pitch: IS 1364-2 / IS 1363-2 / ISO 4017 / ISO 4018 / DIN 933 / JIS B1180
Fine Pitch: IS 13725 / ISO 8676 / DIN 961 / JIS B1180

Manufacturing Range:

Thread Size 'd'	M5	M6	M8		M10			M12				M14		M16	
Pitch	0.8	1.0	1.0	1.25	1.0	1.25	1.5	1.0	1.25	1.5	1.75	1.5	2.0	1.5	2.0
Length 'L'	8 - 50	10 - 60	10 - 80		12 - 100			20 - 110				20 - 110		25 - 110	
Across Flat	8.0	10.0	13.0		REV - 16.0 OLD - 17.0			REV - 18.0 OLD - 19.0				REV - 21.0 OLD - 22.0		24.0	

Thread Size 'd'	M18			M20			M22			M24			M27	M30	M36
Pitch	1.5	2.0	2.5	1.5	2.0	2.5	1.5	2.0	2.5	1.5	2.0	3.0	3.0	3.5	4.0
Length 'L'	40 - 110			40 - 150			40 - 150			40 - 150			55 – 200 HF	60 – 220 HF	70 – 220 HF
Across Flat	27.0			30.0			REV - 34.0 OLD - 32.0			36.0			41.0	46.0	55.0

HF - HOT FORGED

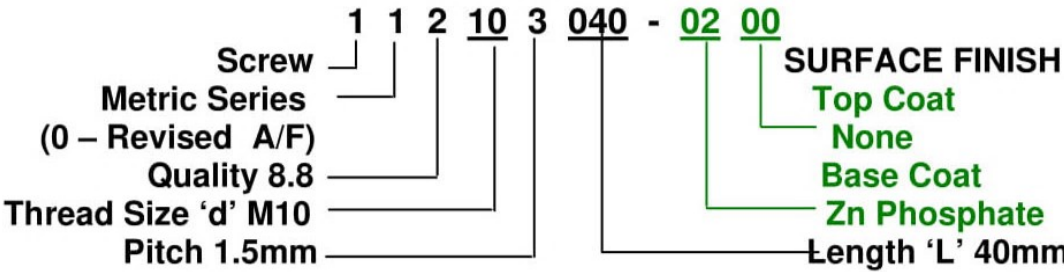
Grades:

8.8, 10.9 & 12.9

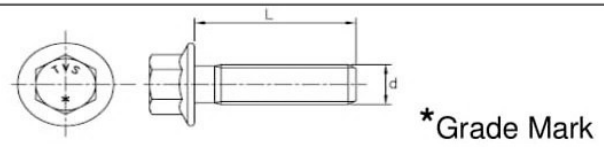
Codification:

Example

Codification structure



HEXAGONAL FLANGE SCREW - 1C



*Grade Mark

Reference Standards:

Coarse Pitch: ISO 4162 / ISO 15071 / JIS B1189

Fine Pitch: ISO 4162 / ISO 15072 / JIS B1189

Manufacturing Range:

Thread Size 'd'	M5	M6	M8	M10	M12	M14
Pitch	0.8	1.0	1.25	1.5	1.75	2.0
Length 'L'	10 - 20	10 - 25	10 - 30	14 - 35	20 - 50	25 - 80
Across Flat	7.0	8.0	10.0	13.0	15.0	18.0

Grades:

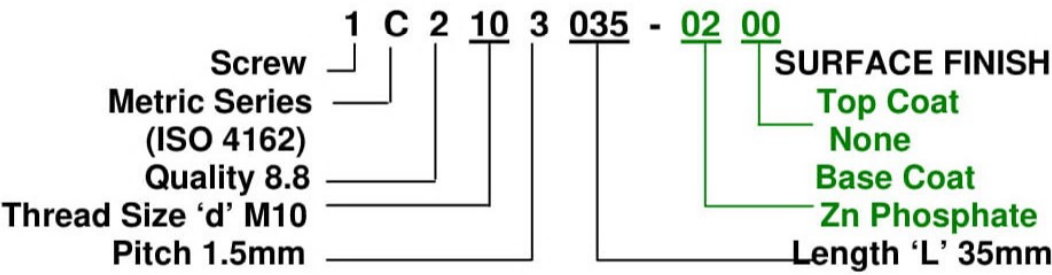
8.8, 9.8, 10.9 & 12.9

Codification:

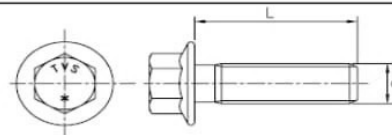
Example

M10 x 1.5 x 35
 HEX FLANGE SCREW
 With Zn Phosphate finish

Codification structure



HEXAGONAL FLANGE SCREW – 1F



*Grade Mark

Reference Standard:

DIN 6921

Manufacturing Range:

Thread Size 'd'	M6	M8	M10	M12	M16
Pitch	1.0	1.25	1.5	1.75	2.0
Length 'L'	10 - 45	12 - 55	16 - 55	20 - 60	35 - 60
Across Flat	10.0	13.0	15.0	16.0	18.0

Grades:

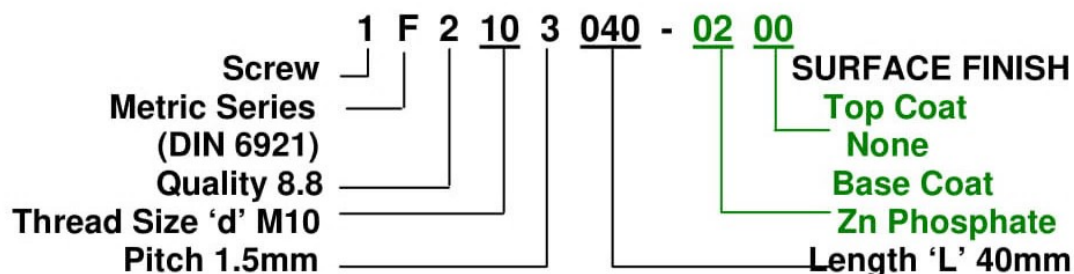
8.8, 10.9 & 12.9

Codification:

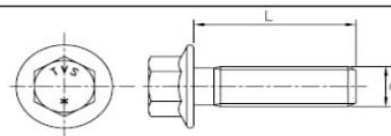
Example

M10 x 1.5 x 40
HEX FLANGE SCREW
With Zn Phosphate finish

Codification structure



HEXAGONAL FLANGE SCREW – 1H



* Grade Mark

Reference Standard:

ANSI B18.2.3.9M

Manufacturing Range:

Thread Size 'd'	M10	M12	M14	M16	M20
Pitch	1.5	1.75	2.0	2.0	2.5
Length 'L'	20 - 35	16 - 100	35 - 100	25 - 100	30 - 100
Across Flat	15.0	18.0	21.0	24.0	30.0

Grades:

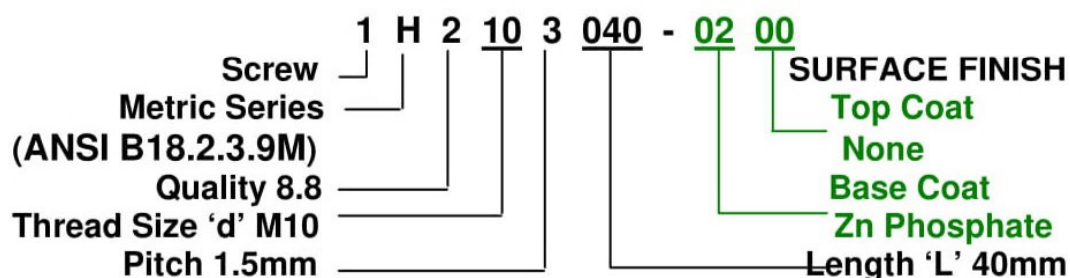
8.8, 10.9 & 12.9

Codification:

Example

M10 x 1.5 x 40
HEX FLANGE SCREW
With Zn Phosphate finish

Codification structure



HEXALOBULAR HEAD SCREW - 1X



*Grade Mark

Reference Standard:

DIN 34800

Manufacturing Range:

Thread Size 'd'	M8	M10	M12	M18
Pitch	1.25	1.5	1.75	1.5
Length 'L'	16 - 70	20 - 80	25-100	50-90
Lobe Diameter	9.00	10.75	12.85	21.85
Lobe Size	E10	E12	E14	E24

Grades:

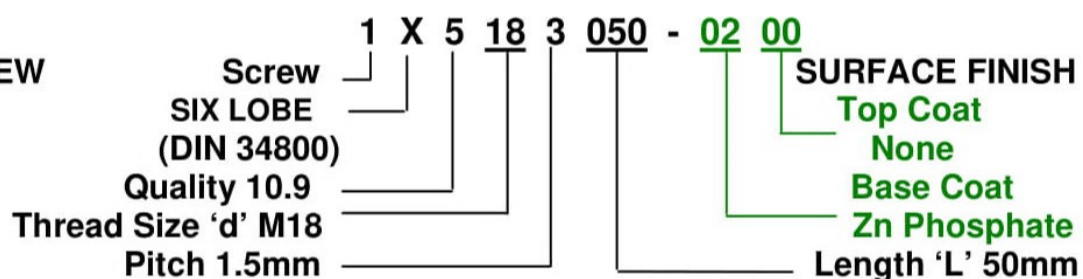
8.8 & 10.9

Codification:

Example

M18 x 1.5 x 50
HEXALOBULAR HEAD SCREW
With Zn Phosphate finish

Codification structure



SOCKET HEAD CAP SCREW - 31



*Grade Mark

Reference Standards:

DIN 912 / DIN 7984 / ISO 4762

Manufacturing Range:

Thread Size 'd'	M4	M5	M6	M8	M10	M12	M16	M20	M22	M24
Pitch	0.7	0.8	1	1.25	1.5	1.5	1.5	2.5	2.5	3
Length 'L'	5-20	6-30	10-30	8-50	16-50	20-60	25-65	75	35-70	40-120
Head Diameter	7.0	8.5	10.0	13.0	16.0	18.0	24.0	30.0	33.0	36.0
Across Flat	3.0	4.0	5.0	6.0	8.0	10.0	14.0	17.0	17.0	19.0

Grades:

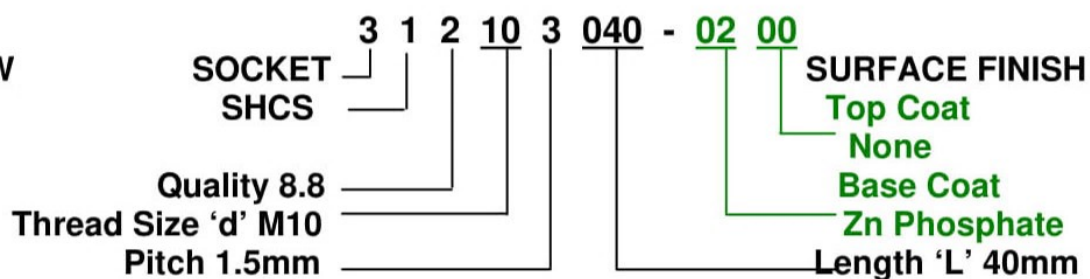
8.8, 10.9 & 12.9

Codification:

Example

M10 x 1.5 x 40
SOCKET HEAD CAP SCREW
With Zn Phosphate finish

Codification structure



LOW HEAD CAP SCREW – 3L



*Grade Mark

Reference Standards:

DIN 7984

Manufacturing Range:

Thread Size 'd'	M4	M5	M6	M8	M10	M12	M16	M20
Pitch	0.7	0.8	1.0	1.25	1.5	1.75	2.0	2.5
Length 'L'	6-30	6-30	6-30	8-35	12-45	20-50	30-55	40-100
Head Diameter	7.0	8.5	10.0	13.0	16.0	18.0	24.0	30.0
Across Flat	2.0	3.0	4.0	5.0	7.0	8.0	12.0	14.0

Grades:

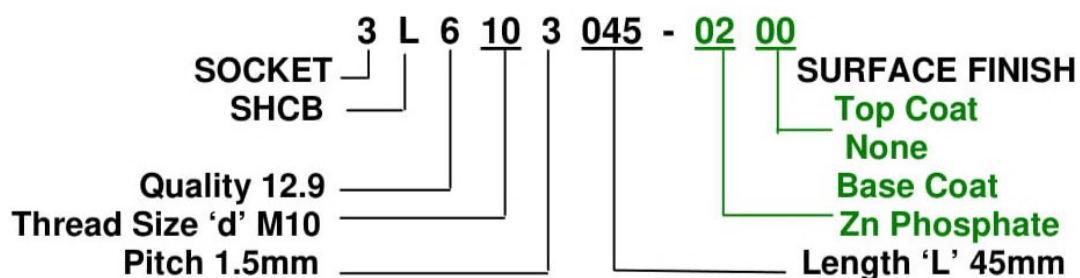
8.8, 10.9 & 12.9

Codification:

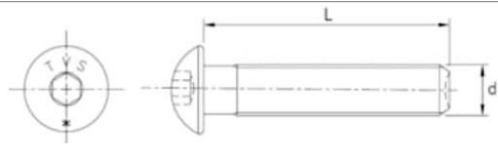
Example

M10 x 1.5 x 45
LOW HEAD CAP SCREW
With Zn Phosphate finish

Codification structure



SOCKET BUTTON HEAD SCREW – 3B



*Grade Mark

Reference Standards:

ISO 7380

Manufacturing Range:

Thread Size ‘d’	M3	M4	M5	M6	M8	M10	M12	M16
Pitch	0.5	0.7	0.8	1.0	1.25	1.5	1.75	2.0
Length ‘L’	06-25	06-35	08-40	08-45	10-50	12-50	16-50	20-50
Head Diameter	5.70	7.60	9.50	10.50	14.00	17.50	21.00	28.00
Across Flat	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0

Grades:

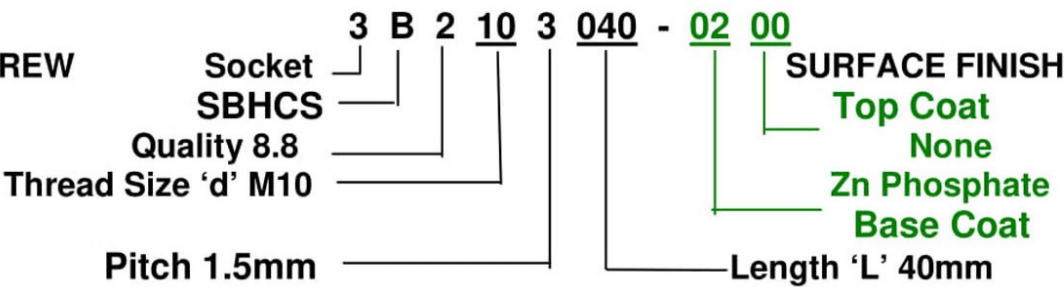
8.8, 10.9 & 12.9

Codification:

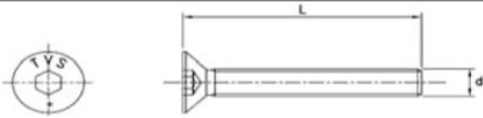
Example

M10 x 1.5 x 40
SOCKET BUTTON HEAD SCREW
With Zn Phosphate finish

Codification structure



COUNTER SUNK SCREW – 3C



*Grade Mark

Reference Standards:

ISO 10642, DIN 7991

Manufacturing Range:

Thread Size 'd'	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24
Pitch	0.5	0.7	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0
Length 'L'	06-25	08-30	08-30	08-30	12-40	12-50	18-60	25-80	35-70	50-90
Head Diameter	5.54	7.53	9.43	11.34	15.24	19.22	23.12	29.01	36.05	38.38
Across Flat	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0

Grades:

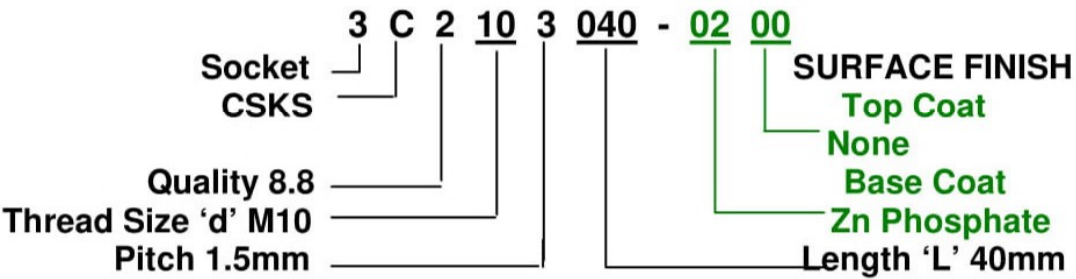
8.8, 10.9 & 12.9

Codification:

Example

M10 x 1.5 x 40
COUNTER SUNK SCREW
With Zn Phosphate finish

Codification structure



SQUARE NECK SCREW - 3B



*Grade Mark

Reference Standards:

ISO 8678

Manufacturing Range:

Thread Size 'd'	M6	M8	M10	M12	M16
Pitch	1.0	1.25	1.5	1.75	2.0
Length 'L'	12-60	12-80	20-120	25-120	30-160
Head Diameter	14.2	18.0	22.3	26.6	35.0
Neck length	3.0	3.0	4.0	4.0	5.0
SQ. A/F	6.48	8.58	10.58	12.70	16.70

Grades:

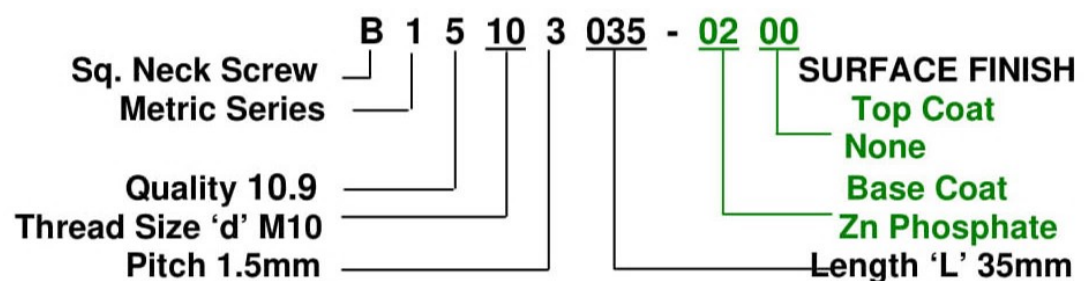
8.8 & 10.9

Codification:

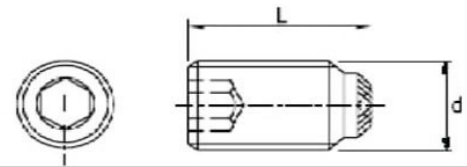
Example

M10 x 1.5 x 35
SQUARE NECK SCREW
With Zn Phosphate finish

Codification structure



SOCKET SET SCREW KNURLED CUP POINT - 35



Reference Standards:

DIN 915 / IS-6094

Manufacturing Range:

Thread Size 'd'	M3	M4	M5	M6	M8	M10	M12	M14
Pitch	0.5	0.7	0.8	1.0	1.25	1.5	1.75	2.0
Length 'L'	3-16	4-16	8-25	8-35	8-35	8-35	10-35	12-35
Across Flat	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.0

Grades:

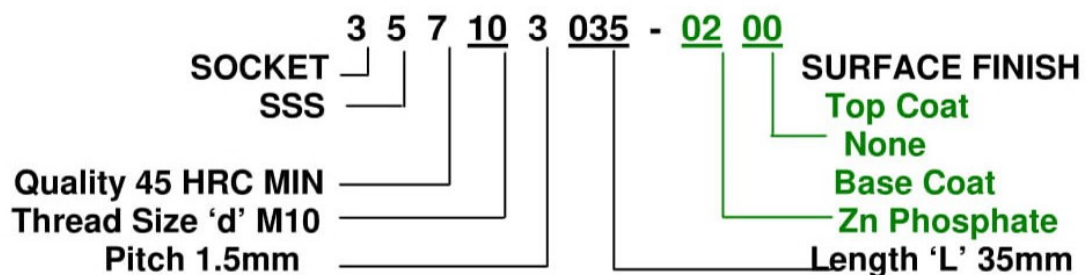
45 HRC MIN

Codification:

Example

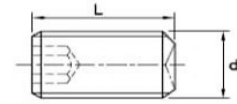
**M10 x 1.5 x 35
KNURLED CUP POINT
SOCKET SET SCREW
With Zn Phosphate finish**

Codification structure



SOCKET SET SCREW

CUP POINT - 3P



Reference Standards:

DIN 916 / IS-6094

Manufacturing Range:

Thread Size 'd'	M3	M4	M5	M8	M10	M12	M14
Pitch	0.5	0.7	0.8	1.25	1.5	1.75	2.0
Length 'L'	3-16	3-20	4-30	6-35	8-35	10-35	12-35
Across Flat	1.5	2.0	2.5	4.0	5.0	6.0	6.0

Grades:

45 HRC MIN

Codification:

Example

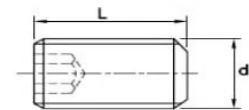
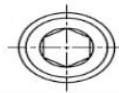
M10 x 1.5 x 35
CUP POINT
SOCKET SET SCREW
With Zn Phosphate finish

Codification structure

3 P 7 10 3 035 - 02 00
 SOCKET CPSSS
 Quality 45 HRC MIN
 Thread Size 'd' M10
 Pitch 1.5mm
 SURFACE FINISH
 Top Coat None
 Base Coat Zn Phosphate
 Length 'L' 35mm

SOCKET SET SCREW

FLAT POINT - 3T



Reference Standards:

DIN 913 / IS-6094

Manufacturing Range:

Thread Size 'd'	M4	M5	M6	M8	M10	M12
Pitch	0.7	0.8	1.0	1.25	1.5	1.75
Length 'L'	3-16	3-25	4-35	5-35	6-35	8-35
Across Flat	2.0	2.5	3.0	4.0	5.0	6.0

Grades:

45 HRC MIN

Codification:

Example

M10 x 1.5 x 35
FLAT POINT
SOCKET SET SCREW
With Zn Phosphate finish

Codification structure

3 T 7 10 3 035 - 02 00

SOCKET
FPSSS

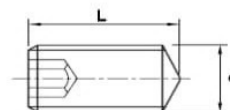
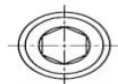
Quality 45 HRC MIN

Thread Size 'd' M10

Pitch 1.5mm

SURFACE FINISH
Top Coat
None
Base Coat
Zn Phosphate
Length 'L' 35mm

SOCKET SET SCREW **CONE POINT - 3N**



Reference Standards:

DIN 916 / DIN 913 / DIN 914 / IS-6094

Manufacturing Range:

Thread Size 'd'	M3	M4	M5	M6	M8	M10	M12	M14
Pitch	0.5	0.7	0.8	1.0	1.25	1.5	1.75	2.0
Length 'L'	3-16	3-20	4-25	5-35	6-35	8-35	10-35	12-35
Across Flat	1.5	2.0	2.5	3.0	4.0	5.0	6.0	6.0

Grades:

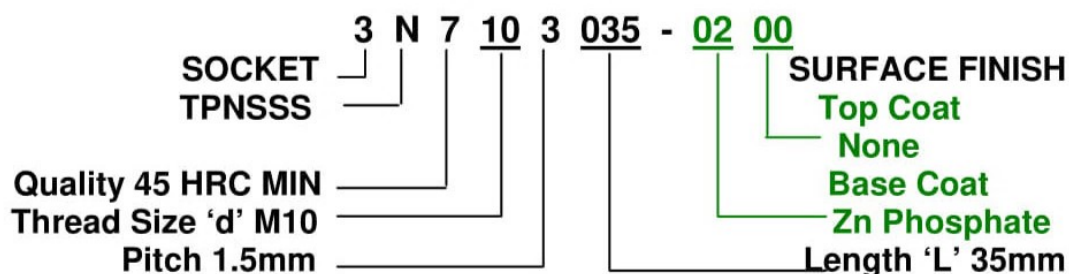
45 HRC MIN

Codification:

Example

M10 x 1.5 x 35
CONE POINT
SOCKET SET SCREW
With Zn Phosphate finish

Codification structure



HEXAGONAL SOCKET KEY



*Grade Mark

Reference Standards:

DIN 911, BS:4160 & IS:3182

Manufacturing Range:

Key Across Flat details in mm

Short Term	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	12.0	14.0	17.0	19.0	22.0	24.0	27.0	32.0	36.0
Long Term	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	-										

T – Handle Hex Socket Key

Key Across Flat details in mm

Short Term	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0
Long Term	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0

Grade:

50 HRC