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All Dimension is in mm



Note:

- a. $\beta = 15^\circ$ to 30°
- b. Point shall be chamfered on for threads < M4 may be as-rolled (sheared end) in accordance with ISO 4753.
- c. Incomplete thread $\mu < 2P$.
- d. Reference datum for d_w .
- e. Maximum underhead fillet.



Hex Bolt DIN EN 14399-4 M-48x220

'X' Enlarge View

Parameters	Symbol	Minimum	Maximum
Raw material diameter	D	48.50	49.50
Head thickness	k	28.95	31.05
Width A/F	s	78.10	80.00
Width A/C	e	88.25	-
Shank diameter	ds	47.00	49.00
Major diameter	D	44.44	44.94
Pitch diameter	D1	41.78	42.01
Minor diameter	D2	-	40.07
Threading length	(b)	82.00	92.00
Shank length	ls	123.00	-
Total Shank length	lg	-	138.00
Total length of bolt	l	217.70	222.30
da	da	-	55.00
dw	dw	74.20	-
Radius of fillet	r	3.00	-
c	c	0.50	1.00
Chamfer	b	0.00	10.00
Amendment			
Details	Revision No.	Dated	Authorised by

Drawing No.- KE-BASE-1133-00081-14399.4-898.1-10.9-48x220		
Dimension as per	DIN EN 14399-4	
Mechanical properties as per	ISO 898-1	
Grade	10.9	
Size	48x220	
Pitch	5.00	
Title	Hex Bolt	Status- Approved
Dated	20.04.2018	Proj.
Mass/Weight	4.226 kg/piece	
Drawn By Pankaj Kumar (Ass. QC Manager)	Checked By Santosh Kumar (Plant Head-GM)	Approved By Kapil Aggarwal CEO-MD
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