

Carbon Steel C1045—Cold-Drawn Hex**1. SCOPE**

This standard specification covers carbon steel bars in hot rolled, cold drawn, or heat treated condition.

2. DRAWING SPECIFICATIONS

The following material codes apply to Carbon Steel C1045.

2.1 VERSATILE ONLY

263 Cold Drawn, Hex

2.2 NEW HOLLAND ONLY

CD Hex, AISI 1045

3. RELATED SPECIFICATIONS**3.1 REFERENCE STANDARD**

86050124 (FNHA-2-A-027.00)—General Requirements for Carbon and Alloy Steel Bars, Hot Rolled and Cold Finished

3.2 This standard replaces the following company standard:

Versatile

MS-608

4. CHEMICAL REQUIREMENTS

The material must meet the following chemical requirements:

Element	Composition, %
Carbon	0.43–0.50
Manganese	0.60–0.90
Phosphorus, max.	0.040
Sulfur, max.	0.050

5. MECHANICAL REQUIREMENTS

The following mechanical requirements shall be met or exceeded:

Cold Drawn, Hex	
Tensile Strength, psi	85,000
Yield Strength, psi	73,000
Elongation in 2", %	12
Reduction of Area, %	30
Rockwell B Hardness	87 (typical)
Brinell Hardness	170

6. DIMENSIONAL TOLERANCES

7.1 Size Tolerances for Cold Drawn Hex—See Table 1.

7.2 Length tolerance for cut lengths is +2/-0 inches, unless otherwise specified by part number drawing.

7.3 Straightness Tolerances for Cold Drawn Hex—See Table 2.

					NAME	STD AISI 1045 CD HX		
ALL	J	TH	119045	JUL 02	 NEW HOLLAND	ENGINEERING SPECIFICATION		
ALL	H	TH	117141	DEC 01				
ALL	G	RLF	110229	JUL 97				
ALL	F	TH	107053	951019				
ALL	E	TH	106556	950523				
ALL	D	RE	104739	931015	THE INFORMATION HEREON IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF NEW HOLLAND N. V. AND/OR ITS SUBSIDIARIES. ANY USE, EXCEPT THAT FOR WHICH IT MAY BE LOANED, IS PROHIBITED.	FRAME 1 OF 2		
FRAME NO.	REV	BY	ECN NO.	DATE		PART NUMBER		
APP.	DRAWN		TH	AUG 93				
KHH OCT 93	CHECKED							

Table 1: Size Tolerance for 1045 C.D. Hex

Size, Inches	Cold Drawn Tolerance From Specified Size, Minus Only, Inches
To 3/4, incl.	0.003
Over 3/4 to 1-1/2, incl.	0.004
Over 1-1/2 to 2-1/2, incl.	0.005
Over 2-1/2 to 3-1/2, incl.	0.006

Table 2: Straightness Tolerance for 1045 C.D. Hex

Size, Inches	Length, Feet	Straightness Tolerance, Inches, Maximum Deviation From Straightness in Any 10 Ft. Portion of Bar
Less than 5/8	Less than 15	3/16
Less than 5/8	15 and over	5/16
5/8 and over	Less than 15	1/8
5/8 and over	15 and over	3/16

 NEW HOLLAND	NAME				PART NUMBER	
	STD AISI 1045 CD HX				9842964	
ENGINEERING SPECIFICATION		REV. J	FRAME 2	OF 2		