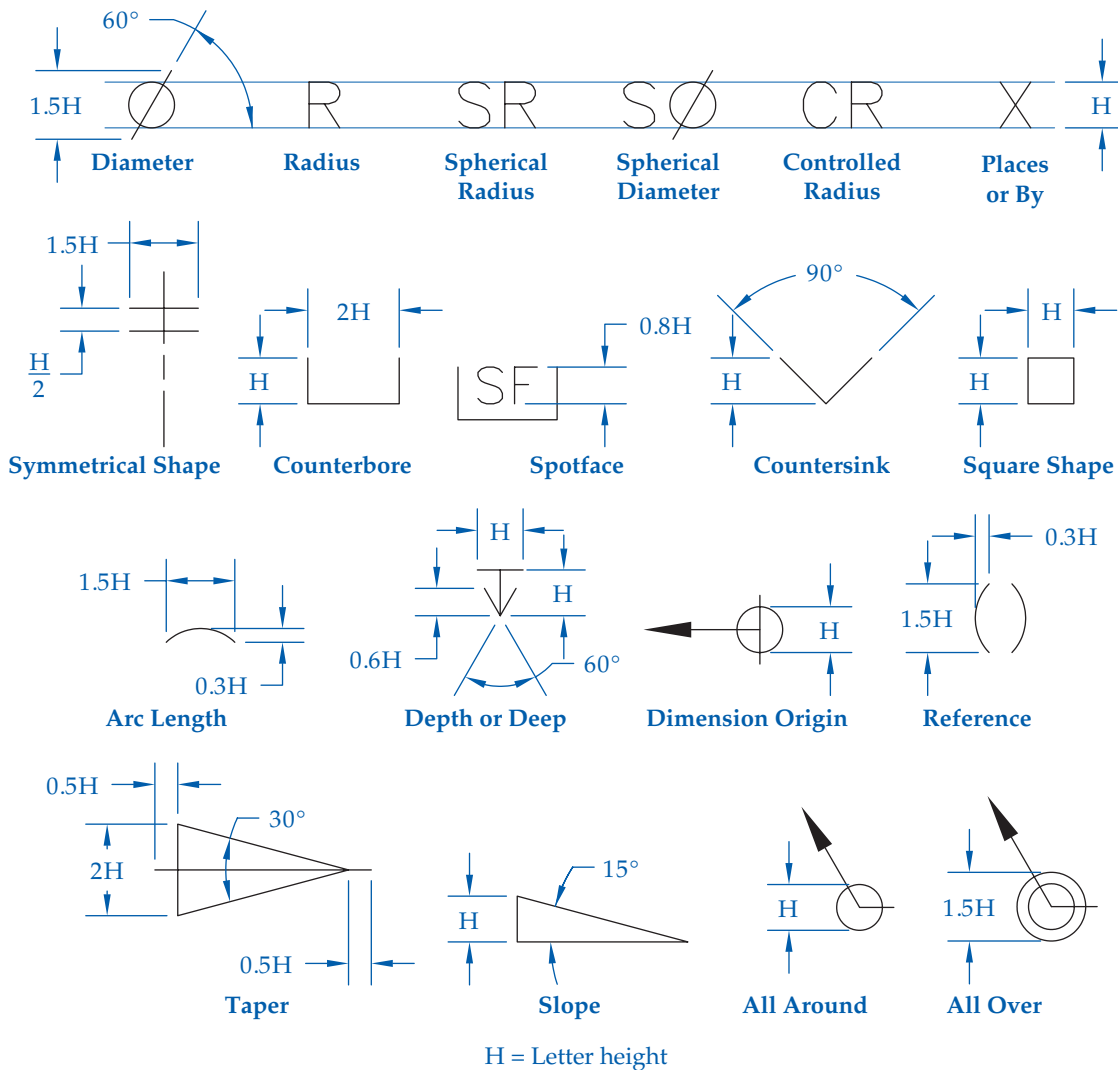


# Drafting Symbols

Symbols provide a “common language” for drafters all over the world. However, symbols are meaningful only if they are drawn according to relevant standards or conventions. This document describes and illustrates common dimensioning, GD&T, architectural, piping, and electrical symbols.

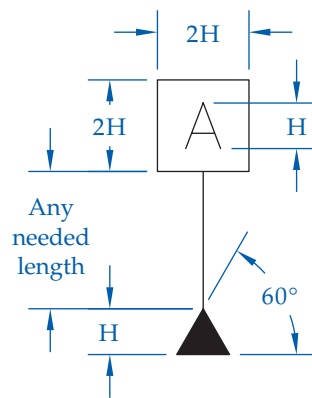
## Recommended ASME Dimensioning Symbols

The size of dimensioning symbols is consistent with text height. In the following illustration, H = text height.

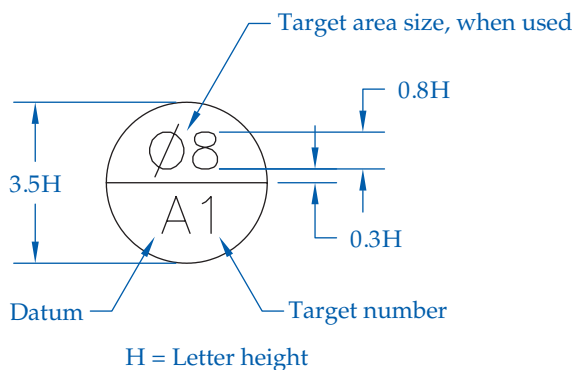


## Geometric Dimensioning and Tolerancing Symbols

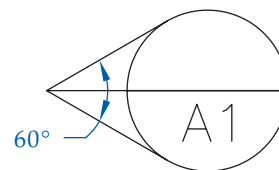
You can create a library of GD&T symbols, use AutoCAD GD&T tools, or use an AutoCAD GD&T font to insert symbols as text. The following tables show examples of GD&T symbols. For complete coverage of GD&T, refer to *Geometric Dimensioning and Tolerancing* by David A. Madsen, published by Goodheart-Willcox Company, Inc.



H = Letter height  
Datum Feature Symbols

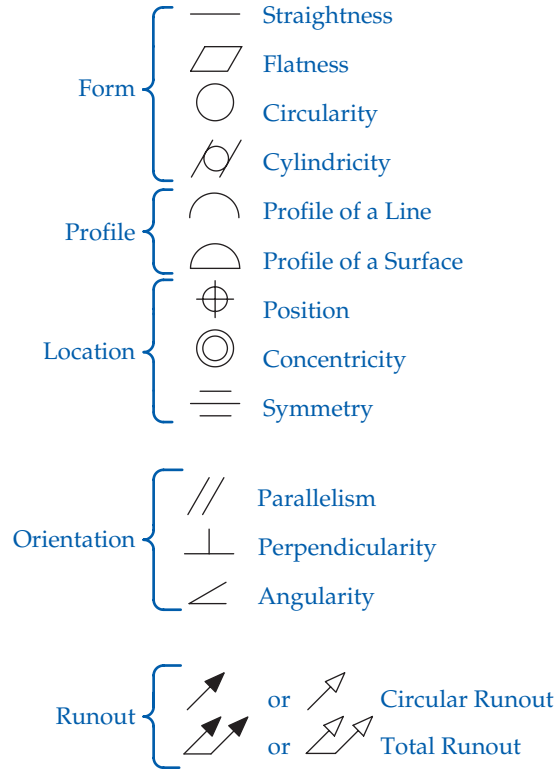


H = Letter height  
Datum Target Symbol

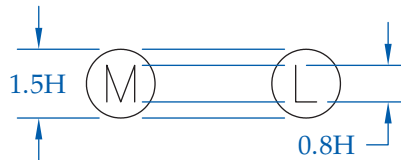


Movable Datum Target Symbol

Datum Target Symbols

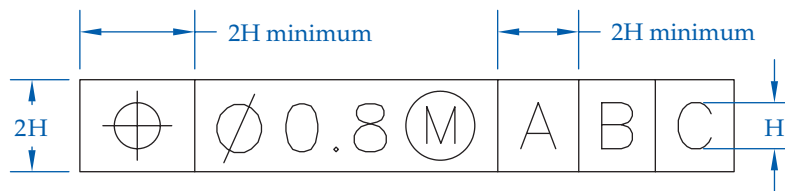


### Geometric Characteristic Symbols



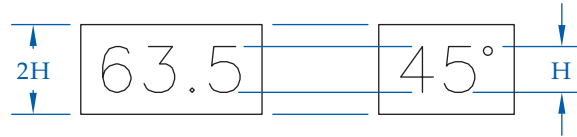
H = Letter height

### Material Condition and Material Boundary Style

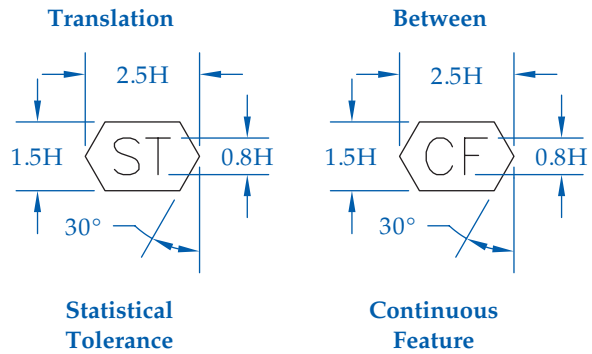
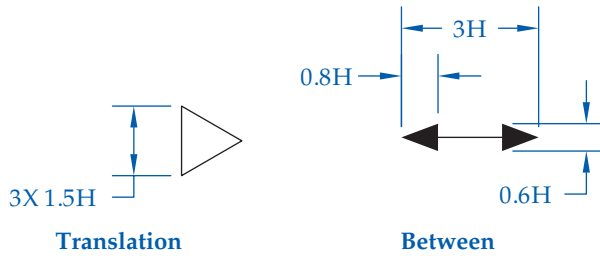
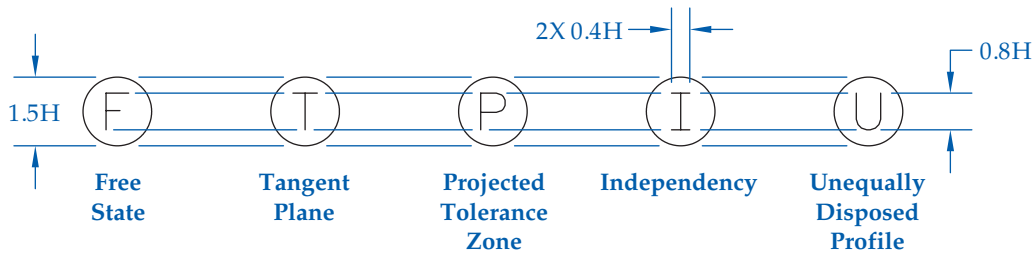


H = Letter height

### Feature Control Frame Symbol



H = Letter height  
**Basic Dimension Symbol**






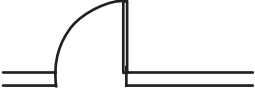

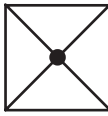


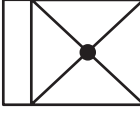
































H = Letter height  
**Additional GD&T Symbols**

To draw GD&T symbols as text, create a style using the gdt.shx, GDT\_IV25, or GDT\_IV50 font. Then use the lowercase alphabet to type the symbols. The following table shows the symbol produced by each lowercase letter.

Lowercase Letter	Symbol Produced
a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
l	
m	
n	
o	
p	
q	
r	
s	
t	
u	
v	
w	
x	
y	
z	

## Architectural Symbols

The following table show basic examples of architectural drafting symbols.

Common Architectural Symbols		
		
Exterior Door	Toilet	Water Heater
		
Interior Door	Wall Hung Toilet	Shower
		
Pocket Door	Urinal	Shower w/ Seat
		
Bifold Door	Oval Vanity Sink	Tub
		
Bypass Door	Rectangular Vanity Sink	Washer/Dryer
		
Window	Single Kitchen	Range
		
Lighting Outlet	Double Kitchen	Refrigerator
		
Recessed Lighting Outlet	220V Outlet	Fan
		
Wall Lighting Outlet	Weatherproof Outlet	Conduit
		
Fluorescent Light Fixture	Thermostat	
		
Single Receptacle Outlet	Doorbell	
		
Duplex Convenience Outlet	Fan Hanger Receptacle	
		
Triplex Receptacle Outlet	Clock Hanger Receptacle	
		
Special Outlet	TV Outlet	
		
Floor Single Receptacle Outlet		
		
Floor Duplex Receptacle Outlet		
		
Single Pole Switch		
		
3-Way Switch		

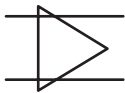

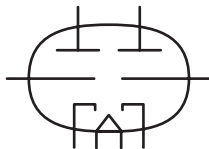







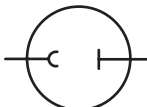






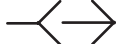





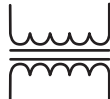

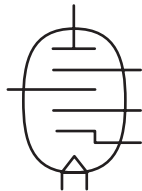






## Piping Symbols

The following table show basic examples of piping drawing symbols.

Single-Line Piping Symbols						
Name	Screwed			Buttwelded		
	Left Side	Front	Right Side	Left Side	Front	Right Side
90° Elbow						
45° Elbow						
Tee						
45° Lateral						
Cross						
Cap						
Concentric Reducer						
Eccentric Reducer						
Union						
Coupling						

### Electronic Symbols

The following table show basic examples of electronic drawing symbols.

Common Symbols for Electrical Diagrams			
			
Amplifier	Capacitor, Polarized	Twin Triode Using Elongated Envelope	Receiver, Earphone
			
Antenna, General	Circuit Breaker	Voltage Regulator, also, Glow Lamp	Resistor, General
			
Antenna, Dipole	Ground	Phototube	Resistor, Adjustable
			
Antenna, Dipole	Chassis Ground	Inductor, Winding, Reactor, General	Resistor, Variable
			
Antenna, Counterpoise	Engaged Connectors	Magnetic Core Inductor	Transformer, General
			
Battery, Long Line Positive	Triode with Directly Heated Cathode and Envelope Connection to Base Terminal	Adjustable Inductor	Transformer, Magnetic Core
			
Multicell Battery	Pentode Using Elongated Envelope	Ballast Lamp	Shielded Transformer, Magnetic Core
			
Capacitor, General	Incandescent Lamp	Fluorescent, 2-Terminal Lamp	Auto-Transformer, Adjustable
