

## Applications

DAYSet™ Compound Tooling has a wide range of applications and uses—primarily in the production of round washers. Virtually hundreds of different types of manufacturers find new uses every day. By using DAYSet™ Compound Tooling, your company can produce top quality washers quickly and economically.

Further, you can eliminate the need (and the high cost) for progressive dies; you can save the cost of manufacturing and testing in-house tooling; and you can design products with a wide variety of thickness, size, material, etc. This gives you the ability to maintain a larger inventory of ready-to-ship washers to meet the ever-changing needs of your customers.



## Industries Served

- Aerospace
- Agricultural
- Automotive
- Consumer Goods
- Commercial Engines
- Factory Automation
- Marine
- Material Handling
- Medical/Scientific
- National Defense
- Pharmaceutical
- Trucks & Buses



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Global leader in providing fabrication and stamping solutions

Form 8072 12/08

# DAYSet™ High-Precision Compound Die Tooling

Custom Fit. 5-part Die Assemblies.



Dayton DAYSet™ Compound Tooling offers you a complete system (punches, stripper, die button, knockout, compound) for producing high-quality, cost-effective stampings. Instead of using progressive dies, the DAYSet™ method allows you to complete multiple stamping operations in a single step. The DAYSet™ system—based on the “Hovis Die” principle—is an improved design that gives you maximum end-product consistency and precision. Standard components can be ordered in sets or separately; individual tools can be made to spec. (See inside for details.)

Makes one-step  
punching more  
reliable & consistent.

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Cost-effective.  
Innovative,  
New Design.

DAYSET™  
Compound Tooling



Global leader in  
providing fabrication  
and stamping solutions

[www.daytonprogress.com](http://www.daytonprogress.com)

## DAYSet™ Compound Tooling



### Product Description

Dayton DAYSet™ Compound Tooling is a complete system for producing high-quality, cost-effective stamped products in a single-step operation. The full set includes: an upper punch; a knockout; a die button; a stripper; and a lower punch (compound). All components can be ordered as a set or separately. All tools are designed to standard compound die set configurations, but assemblies can be made to your specifications.

Components include your choice of an ejector or regular punch for the upper assembly. All Dayton punches improve finished part quality and add longer tool life. Ejector punches (Dayton Jektole® Punches) are considered the standard in the industry, providing up to triple the number of cycles between punch regrinds, using increased clearance. Other system components are designed and manufactured to Dayton's high standards.

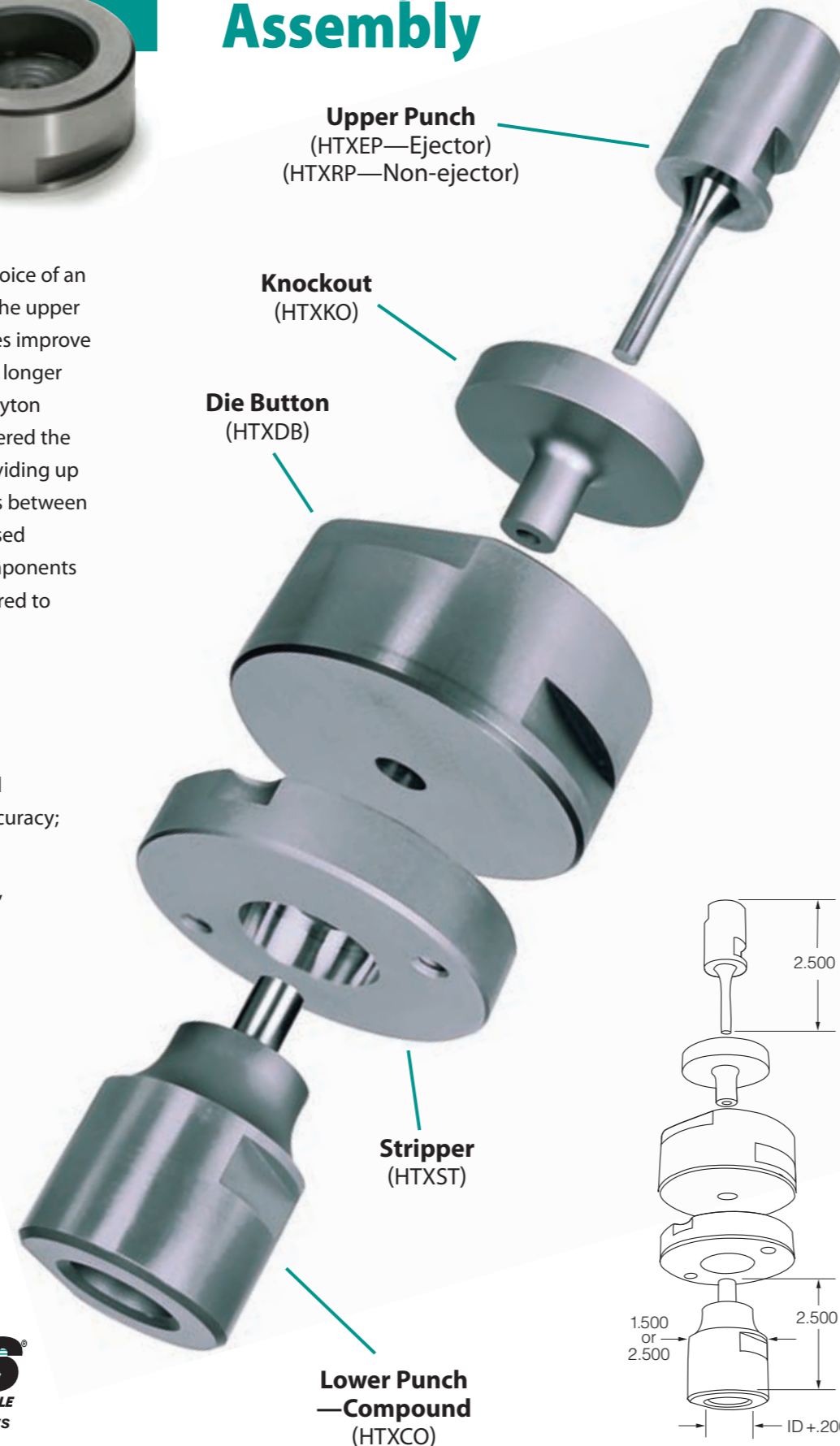
### Features/Benefits

The DAYSet™ system—based on the “Hovis Die” principle—is an improved design that utilizes top-quality components; assures complete process accuracy; and delivers optimum end-product consistency.

DAYSet™ Compound Tooling offers many advantages over other methods, in-house tool making, and products offered by other manufacturers:

- Less expensive than progressive dies
- Eliminates expense of in-plant design, production, and testing
- Provides multiple stamping operations in a single step
- Longer die button land provides additional sharpenings, longer die life.
- More accurate & consistent than multiple run methods
- Ideal for selected products—typically produced in shorter runs
- Faster delivery—10 working days for complete sets (shorter delivery for individual parts)

## DAYSet™ Compound Tooling Assembly



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### Ordering Information

Description	Type	Size	Washer Size		*MT	Example Total Clearance	Class	Material RC 60-63
			OD	ID				
Sets	HTXES	150 250	.175-1.500 .750-2.500	.075-.750 .200-1.500	.030	.003	2	
	HTXRS	150 250	.175-1.500 .750-2.500	.075-.750 .200-1.500				
Punch (Ejector)	HTXEP	150 250		.075-.750 .200-1.500	.030	.003	2	M2
Punch (Non-ejector)	HTXRP	150 250		.075-.750 .200-1.500				
Compound	HTXCO	150 250	.175-1.500 .750-2.500	.075-.750 .200-1.500	.030	.003	2	M2
Die Button	HTXDB	150 250	.175-1.500 .750-2.500					
Knockout	HTXKO	150 250	.175-1.500 .750-2.500	.075-.750 .200-1.500	.030	.003	2	A2
Stripper	HTXST	150 250	.175-1.500 .750-2.500					

\* Material thickness

The complete DAYSet™ assembly carries a product number and other pertinent information, as do the individual punches and other punch products. When ordering, please specify quantity, product type, OD, ID, MT (material thickness), total clearance, and class.

In the example below, the type specified is “HTXRS150,” which is the designation for the complete assembly set: H=Hovis; T=Tooling; X=Round; R=Regular Punch; and S=Set. The other dimensions (i.e., OD, ID, etc.) are found in the individual columns.

#### HOW TO ORDER

Specify:	Qty.	Type	OD	ID	Alt.	Coating Alt.	*MT	Total Clearance	Class
Example:	5	HTXRS 150	.750	.380	XEJ	XNT	.030	.003	2
	2	HTXES 250	1.500	1.255	XRLD	XCN	.008	.0008	0

\* Material thickness

### Clearance & Class

You can specify any class or clearance based on any thickness you require.

If the total class and clearance are not specified, 10% will be used. The chart to the right shows the class that will be used based on the thickness of the material. Any class or clearance may be specified for any thickness.

Material Thickness	**Component Fit Class		
	0	1	2
.005-.009	●		
.010-.020		●	
>.020			●

\*\*A small upcharge is applied to class 0 & 1.

#### Punch, Die Button, Compound Fit Classifications

Class 0 Fit is a “metal-to-metal” fit	<.001” clearance
Class 1 Fit is “tight tolerance” fit	.001-.002” clearance
Class 2 Fit is “standard” fit	>.002” clearance

OD/ID Tolerance	
Class 0	Fit
Class 1	+.0002
Class 2	+.0005

Tolerance refers to the cut diameters of the punch, the compound, and the die button.

Surface Coatings		
Code	Alterations	Add
XNT	DayTiN®	3 days
XCN	TCN	3 days

### Alterations

Ejectors are available for knockouts (HTXKO). Specify “XEJ” on order. See “How to Order” example above.

Also available are a dowel pin slot on the OD of the knockout (HTXKO) and a dowel pin inserted into the die button to match the slot for radial location of both components. Specify “XRLD” on the order. See example above.

## Washers and Compound Dies—A Better Way

Hundreds of manufacturers produce tens of thousands of different types of washers every day. Washers made from aluminum, brass, copper, nylon, steel, and other materials. Washers of all shapes, sizes, and thickness. Washers used in machines, conveyor belts, suspension systems, tractors, cars, lawn mowers, etc.—in virtually any product that uses nuts and bolts or has moving parts.

In spite of their seeming simplicity, washer quality and value mean everything. Manufacturers must be innovative and competitive, always looking for new ideas and new ways to produce these products. OD and ID tolerances (round washers) are more critical than ever. And, the tools used to produce these products must meet rigid standards for precision and durability.

State-of-the-art compound dies offer many advantages to today's washer manufacturer.

### DAYSet™—State of the Art

DAYSet™ Compound Tooling is an excellent choice for today's washer manufacturer:

- Improved, leading-edge design
- Top quality materials
- Made to exacting standards
- Less expensive/more accurate than progressive dies
- Ideal for shorter runs/high-quality products
- Backed by Dayton Progress

