

HD XimmiX® USER'S MANUAL



This user's manual is intended to guide users of the XimmiX® Modular Hard Die punching and notching system manufactured by S.B. Whistler & Sons, Inc. of Akron, NY 14001 USA.

For further information, or to place an order, contact our sales department at:

S.B. Whistler and Sons, Inc.

Post Office Box 207
32 Main Street
Akron, N.Y. 14001-0207

Phone: 716-542-4141 • 800-828-1010 • Fax: 716-542-4226

email: sales@sbwhistler.com / engineer@sbwhistler.com

www.sbwhistler.com

WARNING

TO PREVENT SERIOUS BODILY INJURY

- NEVER** PLACE ANY PART OF YOUR BODY UNDER THE SLIDE (RAM) OR WITHIN THE DIE AREA UNLESS POWER IS OFF, FLYWHEEL IS STOPPED AND THE SLIDE (RAM) IS BLOCKED UP.
- NEVER** OPERATE, INSTALL DIES, OR MAINTAIN THE PRESS WITHOUT PROPER INSTRUCTION AND WITHOUT FIRST READING AND UNDERSTANDING THE OPERATORS MANUAL AND PRESS MANUAL.

IT IS THE EMPLOYER'S RESPONSIBILITY TO IMPLEMENT THE ABOVE & ALSO TO PROVIDE PROPER DIES, GUARDS, DEVICES OR MEANS THAT MAY BE NECESSARY OR REQUIRED FOR ANY PARTICULAR USE, OPERATION, SET UP OR SERVICE.

This manual has been written to instruct personnel in the operation and maintenance of the XimmiX Modular Hard Die System. Product design, dimensions and tolerances are subject to change without notice.

NOTE: IF THE EMPLOYEE DOES NOT READ OR UNDERSTAND ENGLISH, IT IS THE EMPLOYER'S RESPONSIBILITY TO INTERPRET AND EXPLAIN ALL WARNING SIGNS, ALL INFORMATION CONTAINED IN THIS MANUAL, THE POWER PRESS SAFETY OR ANYTHING PERTAINING TO THE CARE AND USE OF SUCH PRODUCTS.

SECTION "A"- INTRODUCTION

This manual will assist the reader in understanding and properly implementing the XimmiX® Modular Hard Die System.

XimmiX is entirely developed and patented by S. B. Whistler & Sons and incorporates several innovations. XimmiX is a technical evolution of our two earlier die system product lines known world-wide as Adjustable Modular Hard Die and Magna Die® Modular Hard Die Systems.

XimmiX is designed as an efficient, productive tool for punching and notching flat sheet metal in conventional stamping presses and press brakes. Maximum system capacity is .25" thick mild steel. Components are interchangeable and reuseable. Features you will appreciate are

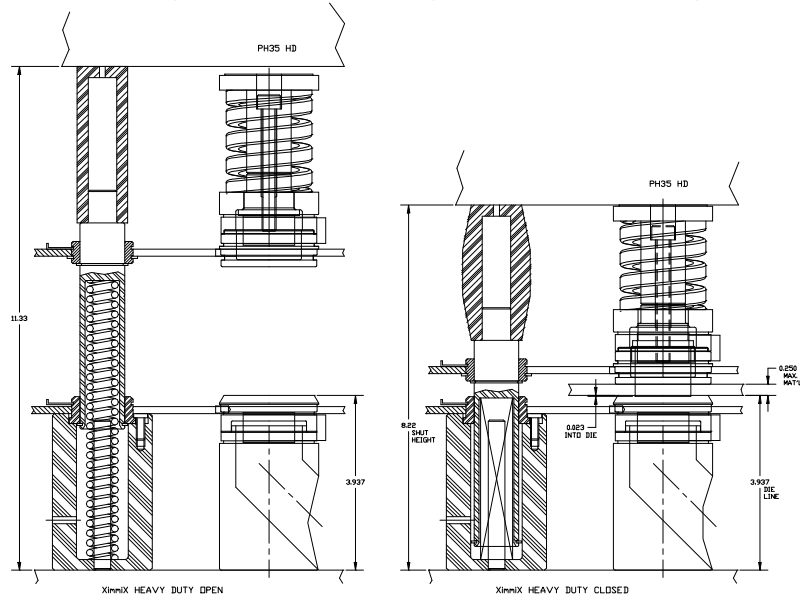
- high quality tool steel components
- self-contained, bump style design
- close center tool units
- high accuracy
- reversible punches
- light weight tooling
- simple set up
- fast tool changes
- complete factory services and support

The system consists of two identically matched, 8 gage steel templates. One template positions the punch tooling, the other positions the die tooling. Tool units lock into the templates.

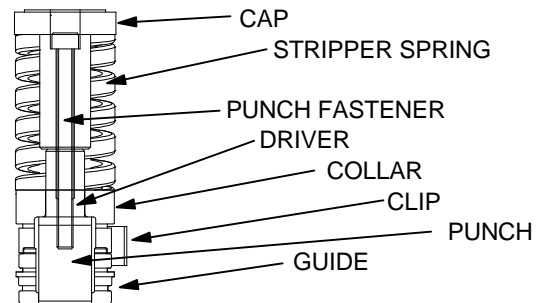
The upper (punch) template and the lower (die) template assemble together with spring loaded precision alignment posts. The posts hold and align the assembly and insure that the punch and die templates are kept in precise vertical alignment with each other during the press cycle.

The posts return the punch template assembly to an open position at top of the press stroke, to facilitate loading and removing of the workpiece. Since XimmiX operates like a "bump" die, there is no press ram attachment.

The sectional view below illustrates XimmiX tooling in both the open (top of stroke) condition, and at shut height (For clarity, page 3 provides a larger view of this detail).



A major design feature of XimmiX is the construction of the punch assembly. Punches are located at the punch point by the guide. XimmiX guides are stripper plates and are precision fitted to each punch point. Guides are precisely located in the upper (punch) template, which defines the plane of the punch points.



It is this design concept that insures the accuracy of XimmiX dies. The precision of the templates is transferred to the workpiece. This unique design also eliminates the need for a punch body that must be concentric to the punch point. Without a punch body, most XimmiX punches can be made reversible.

The die pod assembly in the die (lower) template is concentric to the punch assembly located within the corresponding bore in the punch template. Template bores are identical since the templates are machined while clamped together in sets of (2) pieces.

XimmiX is metric in design and is user friendly. Tool holder designations reflect this. For example, the smallest standard tool holder is the TH20HD. The largest punch that can be used in this tool holder is 20mm (.787"). The largest standard tool holder is the TH80HD, for punches up to 80mm (3.150"). Other standard tool holder sizes within the XimmiX system are 35 and 55mm. If you have an application where one of the standard sizes will not be sufficient, Whistler can build Sub Press Die units that can be incorporated into your system.

Whistler offers assistance and services to help make your use of XimmiX punching and notching equipment easy, enjoyable and financially rewarding. We thank you for giving Whistler the opportunity to help you.

SECTION "B"- RECEIVING THE ORDER

When you receive your shipment, it is important to review the whole order to make sure that all the parts of the XimmiX system you ordered are accounted for. It is also important to understand how to identify each individual component and how all the pieces fit together. Following are basic illustrations of the XimmiX components and how they are identified on the packing list. (additional information can be found in the reorder guide).

P O NUMBER		CUSTOMER		SHIP VIA		REQ. DATE		TERMS	
9814459-1		VENT2		TRUCK		02/12/99		1% 15 NET 30	
SALESPERSON									WH
16									1
LN#	ORDER QTY	SHIP QTY	B/O QTY	ITEM NO.	& TYPE	DESCRIPTION	BIN	MFG	
1	1			0440		07 SET XIMMIX PUNCH/DIE TEMPL 1 OF 1-REF NO 81539-2, REWORK TO LATEST REVISION, P/N 37092		MX	
2	1			0399		07 B35 BUSH ANVIL FOR STAMP	1	MX	
3	1			0440		07 SET XIMMIX PUNCH/DIE TEMPL 1 OF 1-REF NO 81539-3, REWORK TO LATEST REVISION, P/N'S 36725 & 36532		MX	
4	2			12502		07 TH35 XIM TOOL HOLDER COMPLETE	<KIT>		
	2			12509		PH35 XIM PUNCH HEAD COMPLETE	B18G		
	2			12013		POD35 XIM DIE POD COMPLETE	B18H		
5	1			0387		07 P35 PUNCH CHISELPOINT STAMP: "FRONT SERVE"	1	MX	
6	1			0387		07 P35 PUNCH CHISELPOINT STAMP: "REAR SERVE"	1	MX	
7	1			0387		07 P35 PUNCH CHISELPOINT STAMP: "SUPPLY"	1	MX	
8	2			0394		07 G35 GUIDE 'D'SHAPE TO SUIT STAMP	1	MX	
9	2			0399		07 B35 BUSH ANVIL FOR STAMP	1	MX	
*** P A C K I N G L I S T ***									

PUNCH ASSEMBLY



PH20HD - PUNCH HEAD (20-80) SERIES

CLP20 - CLIP (20-80) SERIES



HP20D - PUNCH (20-80) SERIES

G20D - GUIDE (20-80) SERIES



B20D - BUSHING (DIE) (20-80) SERIES

DIE ASSEMBLY



POD20 - DIE POD (20-80) SERIES

CAUTION

NEVER dry cycle the system, especially with corner notching and edge piercing.

SECTION "C"- PRESS REQUIREMENTS

The Whistler XimmiX Modular Hard System is intended for use in conventional machine tool stamping and forming presses, either mechanically or hydraulically driven. Typical press styles used are: OBS, OBI, Gap Frame, Straight Side and Press Brake. Other types of machines, such as air powered and the so called "platten press" may be applicable, but should be carefully reviewed with the manufacturer for specific applications.

XimmiX requires a press of sufficient punching tonnage, equipped with working surfaces or filler plates, on both the slide (ram) and the bed which are flat, parallel and free of any openings or depressions which can influence the tooling. Working surfaces should be tough enough to withstand the repeated impact of the punching forces generated by the tool holders. We recommend an AISI 1045 high carbon plate or a similar high strength low alloy.

Required operating shut height between working surfaces is 8.22" (209mm) and we recommend a press with a least a 3" (76mm) stroke or greater for hand feed operations.

Filler plates should be equal in size to the largest overall XimmiX template set to be run. If the filler plates extend beyond the bed, bolster or slide face, the unsupported area should not be greater than the filler plate thickness.

If the unsupported area of the filler plate is greater than the plate thickness, then supporting brackets, adapters, or other means of support should be added to prevent any deflection of the filler plate during maximum expected punching load. Whistler will quote, design and manufacture filler plates for your specific application upon request.

If you are in doubt about calculating tonnage or balancing tonnage load, just ask a Whistler representative about your specific application and we will be happy to assist; or, see page 9 for instructions on how to calculate tonnage.

When calculating press tonnage requirements, remember that press brakes should be considered from 1/2 to 2/3 of rated tonnage for punching. For example, a 100 ton hydraulic press brake should not be used for a punching application which exceeds 50-67 tons of force. The break through shock of punching can damage hydraulic circuits. Be sure to consult with the press manufacturer. Stop blocks or kiss blocks should also be considered when XimmiX is run in a hydraulic or pneumatic press.

Maximum production efficiency is often a result of operator comfort. XimmiX tooling provides approximately 3-1/2" of vertical opening for loading and removal of the workpieces. If a setup is deep front-to-back and the press bed (tool position) is low, the operator may have to bend or stoop to see the gages when loading a part. This will become tiresome with a resultant drop in productivity.

Consider ergonomics, proper lighting and work placement when operating your press. Also, you can consider front gaging, template viewing cutouts and other remedies to the above problems.

Whistler assumes no responsibility beyond the XimmiX tooling itself. Filler plates, feed equipment, installation, safety precautions and proper press equipment, maintenance and care are the responsibility of the customer/user.