

FUNDAMENTAL MANUFACTURING PROCESSES

Sheet Metal Stamping Presses - SP

SCENE 1.

, CGS: Hydraulic Presses
white text, centered on background
FMP BKG, motion background

SCENE 2.

, **SME2757, 01:14:42:00-01:14:48:00**
hydraulic press in operation
SP061B, SME3534, 10:12:35:00 - 10:13:05:00
hydraulic press blanking sheet metal
SP061C, SME3534, 10:13:25:26 - 10:18:40:00
hydraulic press in operation

NARRATION (VO) :

HYDRAULIC PRESSES ARE THE ALTERNATIVE TO
MECHANICALLY DRIVEN PRESSES. THESE
PRESSES USE ONE OR MORE CYLINDERS AND
PRESSURIZED FLUID TO PROVIDE THE
REQUIRED MOTION AND FORCE TO FORM OR
BLANK WORKPIECES. WHILE MECHANICAL
PRESSES ARE STILL THE PREDOMINANT TYPE,
HYDRAULIC PRESSES ARE BECOMING
INCREASINGLY MORE POPULAR.

SCENE 3.

, **SME2757, 01:13:34:00-01:13:54:00**
operation needing hydraulic press

ANI: hydraulic full force available
contrasted with mechanical full force

NARRATION (VO) :

THERE ARE METAL STAMPING APPLICATIONS
WHERE HYDRAULIC PRESSES OFFER CERTAIN
ADVANTAGES AND, IN SOME CASES, ARE THE
ONLY MACHINES THAT CAN BE USED. ONE OF
THE MAJOR BENEFITS IS THAT THE FULL
FORCE OF THE HYDRAULIC PRESS CAN BE
DELIVERED AT ANY POINT IN THE STROKE,
NOT JUST AT THE BOTTOM OF THE STROKE AS
WITH A MECHANICAL PRESS.

SCENE 4.

, **SME2758, 02:01:14:00-02:01:35:00**
hydraulic press, deep drawing operation

NARRATION (VO) :

DEEP DRAWING AND FORMING APPLICATIONS

OFTEN REQUIRE LARGE FORCES VERY HIGH IN THE STROKE. FEW MECHANICAL PRESSES HAVE TONNAGE CAPABILITY TO PERMIT SUCH APPLICATIONS.

SCENE 5.

SP064A, SME4427, 15:33:26:17 - 15:33:40:00

Two strokes on one machine render different shapes after adjustment

SP064B, SME4427, 15:35:41:07 - 15:35:47:25

Two strokes on one machine render different shapes after adjustment

SP064C, SME4427, 15:36:26:00 - 15:36:34:22

Two strokes on one machine render different shapes after adjustment

Edit lapse these 3 shots so they show the different shape coming from one press with a height adjustment

NARRATION (VO) :

THE STROKE OF A HYDRAULIC PRESS CAN ALSO BE ADJUSTED TO PROVIDE OPTIMAL PART CLEARANCE BEFORE CYCLING AGAIN. MOREOVER, BECAUSE THE DESIRED PRESET HYDRAULIC PRESSURE PROVIDES A FIXED WORKING FORCE, IT IS WELL SUITED FOR DIFFERENT TOOL HEIGHTS AND VARIOUS MATERIAL THICKNESS'.

SCENE 6.

, SME2760, 03:05:08:00-03:05:20:00

compact hydraulic press operating

SP065B, SME4427, 15:31:40:00 - 15:31:57:10

hydraulic press in operation

NARRATION (VO) :

HYDRAULIC PRESSES ARE MORE COMPACT THAN MECHANICAL PRESSES OF COMPARABLE CAPACITY AND HAVE FEWER MOVING PARTS, AND ARE IDEALLY SUITED FOR MANY APPLICATIONS, SUCH AS NON-AUTOMATED OPERATIONS AND SMALL LOT SIZES.

--- TOUCH BLACK ---

SCENE 7.

, SME2756, 02:21:16:00-02:21:20:00

wide, mechanical gap-frame press

SP066B, SME4427, 15:09:42:00 - 15:09:44:00

wide, hydraulic straightside press

, SME2756, 02:03:50:00-02:03:54:00

wide, mechanical straightside press

SP066D, SME4311, 03:34:43:15 - 03:35:07:02

wide, mechanical gap-frame press

, SME2764, 01:01:51:00-01:01:55:00

wide, mechanical straightside press

, SME2760, 03:05:48:00-03:05:52:00

wide, hydraulic gap-frame press

NARRATION (VO) :

PROPER SELECTION OF A PRESS IS ESSENTIAL FOR SUCCESSFUL AND ECONOMICAL OPERATION. IT IS IMPORTANT TO NOTE, HOWEVER, THAT NO GENERAL-PURPOSE PRESS EXISTS THAT CAN PROVIDE MAXIMUM PRODUCTIVITY FOR ALL

SP066G, SME4421, 12:01:50:01 - 12:02:15:15
wide, mechanical gap-frame press

APPLICATIONS. COMPROMISES MUST BE MADE
IF A PRESS IS TO BE USED FOR MORE THAN
ONE JOB.

SCENE 8.
continue previous shot

, CGS: Press Size
Press Force
Energy Requirements
Speed Requirements

, **SME2764, 01:09:03:00-01:09:27:00**
wide, mechanical straightside press
operating

NARRATION (VO) :

FACTORS THAT MUST BE CONSIDERED DURING
PRESS SELECTION INCLUDE:
PRESS SIZE,
PRESS FORCE,
ENERGY REQUIREMENTS,
AND SPEED REQUIREMENTS. THE PRESS MUST
BE CAPABLE OF EXERTING FORCE IN THE
AMOUNT, LOCATION, AND DIRECTION AS WELL
AS FOR THE LENGTH OF TIME NEEDED TO
PERFORM THE SPECIFIED OPERATIONS.

SCENE 9.
SP, SME4421, 12:11:19:16 - 12:11:37:12
zoom out, stamping operation

, CGS: Size & Geometry of the Workpieces
Operations to be Performed
Workpiece Quantities
Production Rate
Workpiece Accuracy
Finish Requirements
Equipment Costs

NARRATION (VO) :

OTHER PRESS SELECTION CONSIDERATIONS
MUST INCLUDE: THE SIZE AND GEOMETRY OF
THE WORKPIECES,
OPERATIONS TO BE PERFORMED,
WORKPIECE QUANTITIES,
PRODUCTION RATE NEEDED,
WORKPIECE ACCURACY,
FINISH REQUIREMENTS,
AND EQUIPMENT COSTS.

--- FADE TO BLACK ---