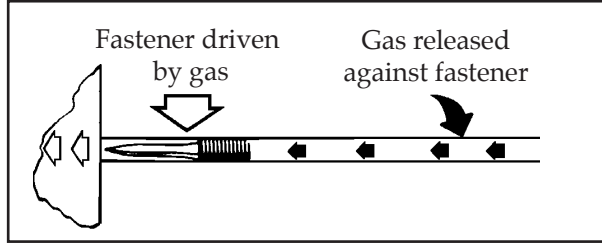


POWDER ACTUATED SYSTEMS GUIDE

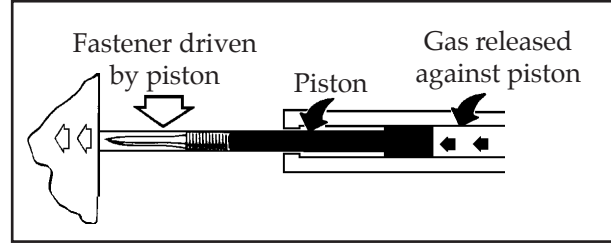
A POWDER ACTUATED SYSTEM CONSISTS OF A TOOL, A FASTENER AND A POWER LOAD.

TOOL TYPES

DIRECT*



IN-DIRECT



* Direct acting, commonly known as "High Velocity" is no longer manufactured in the USA nor sold by major suppliers.

TOOL CLASSES

LOW VELOCITY TOOL

Average test velocity less than 100 meters/sec. (328 ft.)

MEDIUM VELOCITY TOOL

Average test velocity greater than 100 meters/sec. but not exceeding 150 meters/sec. (492 ft.)

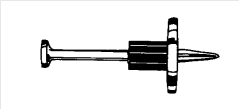
HIGH VELOCITY TOOL

Produces average test velocity greater than 150 meters/sec.

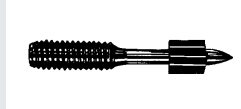
FASTENER TYPES

THE THREE MOST COMMON TYPES OF FASTENERS ARE:

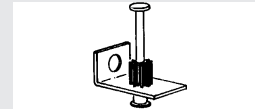
DRIVE PIN (With Washer)



THREADED STUD



CEILING CLIP



POWER LOADS

STANDARD NUMBER AND COLOR IDENTIFICATION



1	Brass	Gray	7	Nickel	Gray
2	Brass	Brown	8	Nickel	Brown
3	Brass	Green	9	Nickel	Green
4	Brass	Yellow	10	Nickel	Yellow
5	Brass	Red	11	Nickel	Red
6	Brass	Purple	12	Nickel	Purple

CALIBER & LOAD TYPES

CALIBERS

.22
.25
.27

CRIMPED



STRIP LOADS

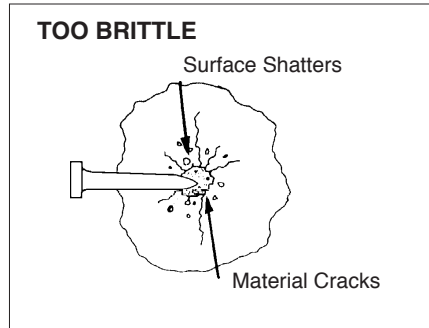
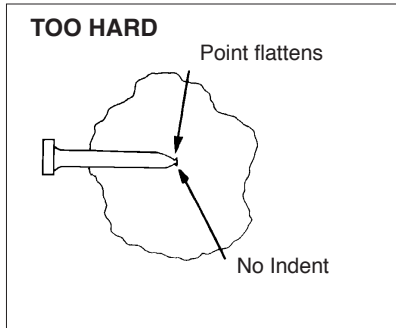


DISC LOADS

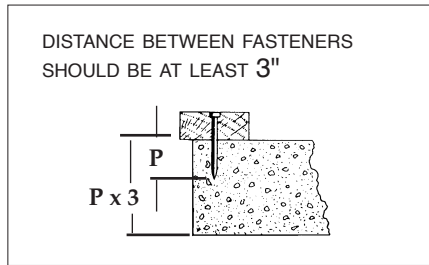
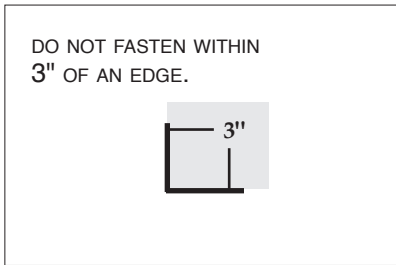


P.A.T. APPLICATIONS

DETERMINE THE SUITABILITY OF THE MATERIAL TO BE FASTENED WITH A PIN AND HAMMER USING THE "PRE-PUNCH TEST"



MASONRY MATERIALS



- THE MASONRY MUST BE AT LEAST 3 TIMES AS THICK AS THE FASTENER PENETRATION.

- TEST FIRE WITH THE LIGHTEST POWER LOAD RECOMMENDED FOR THE TOOL, INCREASING POWER LEVELS BY SINGLE STEPS UNTIL PROPER PENETRATION IS OBTAINED.

TOOLS & ACCESSORIES CORP. * Annapolis Junction

THE PROPER LENGTH FASTENER IS DETERMINED BY ADDING THE THICKNESS OF THE MATERIAL TO BE FASTENED TO THE REQUIRED PENETRATION.

EXAMPLE: 2 X 4 TO CONCRETE LENTIL (SOFT MATERIAL) USING 9/64" DIAMETER PIN.

1-1/2" (THICKNESS OF 2 X 4)

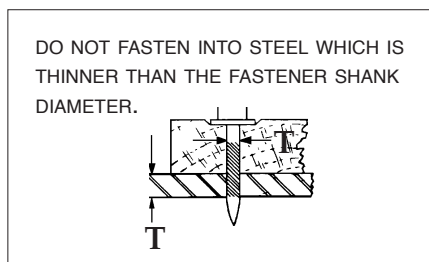
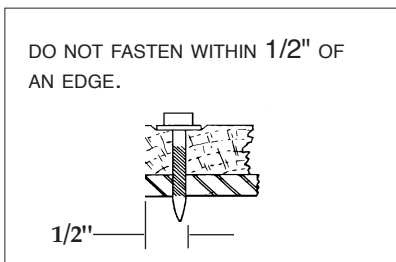
9 X 9/64" = 1-1/4"

1-1/2" + 1-1/4" = 2-3/4" CLOSEST AVAILABLE LENGTH IS 3"

GOOD HOLDING POWER MAY BE OBTAINED USING THE FOLLOWING RECOMMENDED DEPTHS OF PENETRATION.

MATERIALS	PSI	9/64" SHANK DIAMETER
SOFT	2000 TO 2500	1-1/4"
AVERAGE	3500 TO 4000	1"
HARD	5000 TO 6000	3/4'-7/8"

STEEL



- DO NOT DRIVE FASTENERS IN AREAS WHICH HAVE BEEN TORCHED, WELDED OR HEAT TREATED.

- DO NOT USE FASTENERS LONGER THAN REQUIRED.

- DISTANCE BETWEEN FASTENERS SHOULD BE AT LEAST 1".

THE PROPER LENGTH OF FASTENER IS DETERMINED BY THE THICKNESS OF THE MATERIAL TO BE FASTENED, PLUS THE THICKNESS OF THE STEEL, PLUS THE POINT LENGTH.

EXAMPLE: 3/4" WOOD STRIP TO 1/4" STEEL USING A 9/64" DIAMETER PIN.

9/64" PIN HAS NO APPROXIMATE POINT LENGTH OF 3/16"

3/4" + 1/4" + 3/16" = 1-3/16"

NEAREST APPROX. PIN IS 1-1/4"

- TEST FIRE WITH THE LIGHTEST POWER LOAD RECOMMENDED FOR THE TOOL, INCREASING POWER LEVELS BY SINGLE STEPS UNTIL PROPER PENETRATION IS OBTAINED.