

**PACIFIC**

# G-Series



*THE CUTTING  
EDGE OF  
INDUSTRY*

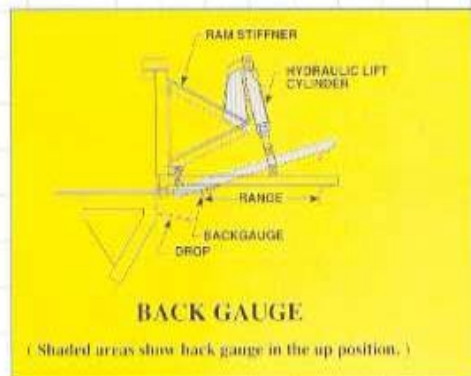
# Pacific G-Series

## Hydraulic Plate Shears

### *The Industry Pacesetter*

**B**eginning with the introduction of the industry's first hydraulic plate shear in 1953, PACIFIC shears have been leaders in hydraulic shearing technology. Over the years continuous innovations and product development have maintained PACIFIC's world-wide recognition for ruggedness, reliability and accuracy in almost every area of the metalworking industry.

**T**he G-Series shear of today more than upholds that reputation. It is a modern, thoroughly tested and proven machine embodying all of the advanced engineering and construction skills that can be designed into the product. As a result, built in rigidity, hydraulic reliability and accuracy provides the G-Series with the widest range of shearing capacity possible...from thin sheet to maximum plate capacity...from aluminum to steel, to titanium. It's system of controls not only assures ease of operation but provides optimum edge condition of the cut through the separate and independent adjustment of all shearing variables including rake angle, knife clearance, stroke and holddowns. Additionally, two-speed shearing and a hydraulic lift back gauge are exclusive features that can aid in higher productivity for numerous shearing operations.



# Outstanding Features

## G-Series

### Interlocked Construction

**H**heavy steel plate fabrications are utilized for the ram, bed and extra deep side housings to provide maximum rigidity and resistance to deflection. Main frame members are designed to assure that each G-Series more than adequately absorbs and uniformly distributes the tremendous forces inherent in plate shearing.

Deep side housings are interlocked with the bed so that forces are exerted on parent metal throughout the frame. Cylinders are keyed to large backing plates which are interlocked to the side housings to provide true centerline loading. Tapered, pre-loaded, wedge type keys are set in place with the shear under full load to ensure "zero clearance" between these major components and to prevent any operational movement.

### Ram Guiding System

**H**heavy-duty, non-binding guides maintain maximum contact with extra long, hardened steel slideways throughout the stroke. Pullbacks keep the ram guides in full contact with the slideways while the cut is in progress. Pullbacks are designed to provide a constant load on the slideways and eliminate guide clearances, which could be added to the present knife clearance during the cut.

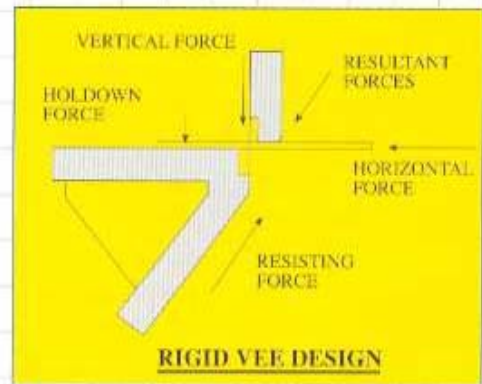
### Production Shearing

**T**he G-Series hydraulic system automatically transfers force from one cylinder to the other as the cut progresses. The smooth, full power stroke is made at constant speed and provides a cushioned shearing action that is noiseless and shock free. This is important for longer knife life.

G-Series shears feature complete control of all the variables of shearing. Knife clearance, rake angle, and stroke can all be quickly and easily adjusted to accommodate the requirements of almost any shearing operation and to assure maximum production efficiency. In addition the two speed shearing feature provides the advantage of shearing material 2/3 or less of the rated thickness at increased strokes per minute... Consequently production is increased.



**Interlocked Cylinder Mounting**

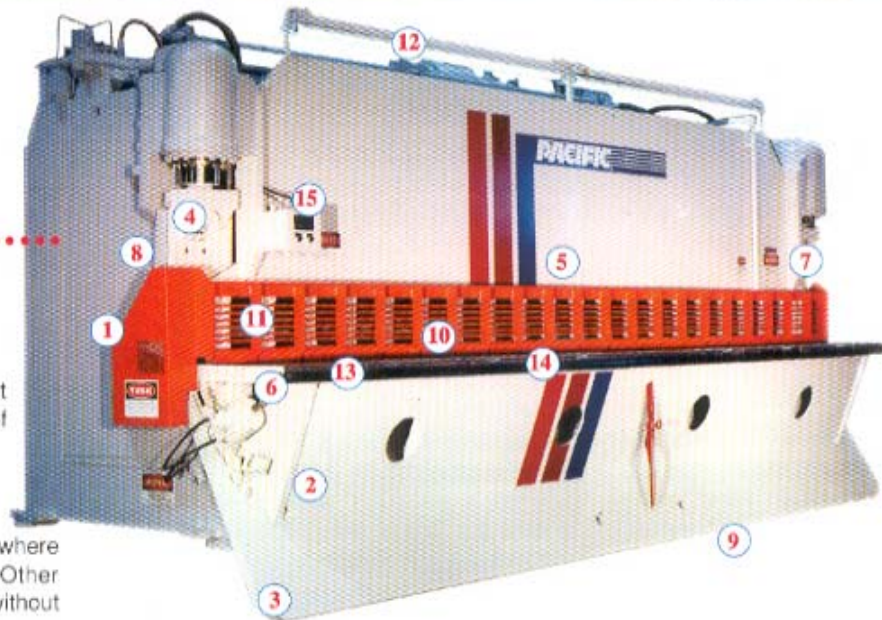


**Back Gauge with Adjustable Ram Stiffener**

# G-Series

*the choice*

*is clear.....*



( 1 ) **DEEP THROAT** PACIFIC's deep throat accommodates operations such as the slitting of wider parts. ( 18" is standard. )

( 2 ) **RIGID VEE DESIGN** Concentrates strength where the cutting force is directed, on the diagonal. Other shear designs cannot resist the diagonal force without excessive deflection.

( 3 ) **HEAVY STEEL PLATE CONSTRUCTION** Interlocked and welded to form the most rigid shear available.

( 4 ) **TRUE CENTER LINE LOADING** Interlocked cylinders and bed are mounted accurately on side housing centerlines, eliminating left-to-right deflection. Shearing force is transmitted directly downward.

( 5 ) **INCLINED RAM** Presents the knife to the work at a slight angle. Reduces knife load and produces a square cut.

( 6 ) **ADJUSTABLE KNIFE CLEARANCE** Operator can quickly and easily change knife clearance for thick or thin sheets. Clearance indicators are direct reading and calibrated in thousandths.

( 7 ) **ADJUSTABLE RAKE ANGLE** Operator can change the rake in seconds to suit the material being sheared or to minimize bow and twist when shearing narrow parts. Hydraulic system automatically maintains the selected rake angle regardless of the position or thickness of the material.

( 8 ) **NON-BINDING DESIGN** As the rake is changed, PACIFIC's pivoted upper blade holder suspension allows one end to "float free". There are no left-to-right side forces to bind the slideways and twist the frame.

( 9 ) **PORTABLE ELECTRIC FOOTSWITCH** A two-position portable footswitch with anti-trip control, side guards and long cable enables the operation of the shear from the operator's most convenient location. Ram automatically returns to its top position when footswitch is released.

## G-Series Shear shown with optional equipment

( 10 ) **HOLDDOWNS** Separate holddown pump maintains constant tonnage throughout the cut. Holddown advance feature enables operator to hold and recheck material position prior to cut. Hardened steel holddown feet are pivoted to reduce marking of material. Extra cylinder on right end facilitates shearing of narrow pieces.

( 11 ) **ROD-TYPE KNIFE AND HOLDDOWN GUARD** Includes roller-type awareness barrier to protect the operator from the knife and holddowns.

( 12 ) **CUT LIGHTING** G.E. power grooved fluorescent lights are mounted on the holddown beam to illuminate cut area between the rear of the holddown and the knife edge.

( 13 ) **FRONT AND SIDE GAUGES** Easy to read, corrosion resistant scales are embedded on each end of the table. Heavy duty side gauge enables squaring and positioning of the plate prior to cut.

( 14 ) **BALL TRANSFERS** Two rows of ball transfers are located in the shearing table to facilitate the positioning of plate. Standard spacing is on 32" centers along the length of the shear table. 16" spacing and air actuated balls are available as optional features. Balls can be easily removed for clean out.

( 15 ) **POWERED, FRONT OPERATED BACK GAUGE** A control panel on front of the shear has digital read-out in inches and fractions of an inch with "IN" and "OUT" push buttons. Two speed operation enables fast and accurate settings.

( Not Shown )

( 16 ) **OPTIONAL HYDRAULIC FRONT ROLL**

( 17 ) **OPTIONAL DNC 10 CONTROL**

# Features

## G-Series



( 18 ) **HIGH SPEED HYDRAULIC SYSTEM** Efficient, self contained, low heat power unit does not require an oil cooler under normal operating conditions.

( 19 ) **LARGE CAPACITY OIL RESERVOIR** Ample capacity to minimize heat build-up and turbulence. PACIFIC does not use the tank as a structural member. Instead, it is mounted so that tank expansion and contraction forces are not transmitted to the slideways assemblies.

( 20 ) **PRE-SET LEVELING BUTTONS** Permanently mounted on side housings. Enables quick level check for slideway alignment.

( 21 ) **TWO SPEED SHEARING** G-Series shears have two advance speeds and a fast run speed. With PACIFIC's exclusive two-speed shearing, the shear starts each cut in fast speed, which is approximately 50% faster than its normal shearing speed. If the shear encounters a shearing requirement of 2/3 or less its rated capacity, it will continue to make the cut in fast speed. If the shearing requirement is greater than 2/3 of capacity, the shear will then automatically shift down to its normal shearing speed for the cut. This is especially valuable to a customer who does not use the shear to its full rated capacity at all times. The reduced handling time for lighter material plus faster shearing time can be a time saving benefit for numerous production jobs. A selector switch gives the operator a choice between normal and two speed operation.

( 22 ) **NO IMPACT LOADS** PACIFIC's smooth hydraulic shearing action eliminates shock and impact load.

( 23 ) **MODULAR STACKED VALVES** Minimizes piping and special manifolding.

( 24 ) **ADJUSTABLE STROKE** The stroke control allows quick adjustment of the cutting stroke length, and consequently the cycling speed of the shear. This, together with two speed shearing capability, enables the PACIFIC shear to give optimum high speed operation. Both top and bottom stroke settings are completely adjustable to allow short stroke operations at any point along the full length of the shear. This flexibility of stroke length adjustment allows precision slitting and notching operations.

( 25 ) **ADJUSTABLE RAM STIFFENERS** A heavy duty fabricated unit that is designed for easy access to the back of the shear. Knife life is lengthened by this structure preventing excessive deflections front-to-back of the knife holder. The v-type construction of PACIFIC's ram stiffener resists diagonal cutting forces inherent in shearing.

( 26 ) **BLADES ALWAYS IN ALIGNMENT** Broad, hardened and ground steel slideways are teamed with automatic slide assembly clearance take up units ("pull-back"). Slide assemblies are grease lubricated to properly withstand the heavy horizontal forces inherent in plate shearing.

( 27 ) **HYDRAULIC LIFT BACK GAUGE** The rigid one-piece backstop of the front operated back gauge is non-wedging. A hydraulic cylinder automatically swings the entire unit up out of the way when the cut is made. This is an exclusive PACIFIC feature.

( 28 ) **INCH CONTROL** A selector switch is provided with every G-Series to permit the operator to "inch" the ram. The inching feature allows the ram to hold its place when the foot switch is released, thereby allowing the ram to be "inched" down in increments. This is an important advantage when installing knives and initially setting knife clearance.

( 29 ) **MOTOR STARTERS** Magnetic, non-reversing, across-the-line type with overload and low voltage protection. Wired to the motor with heaters, push button station, control transformer, main circuit breaker, control power switch and fuses. Mounted and wired in a single NEMA 12 (oil-tight) enclosure.

( 30 ) **SHEAR KNIVES** Knives have large rectangular cross sections and four cutting edges for more re-grinds and longer knife life. These are the most efficient blades furnished for shears since the cutting edges may be rotated and re-ground for maximum use. Grade II Intermediate Alloy shock Resistant knives are standard. Grade I knives are high in chromium and carbon, thus extremely resistant to abrasion. Grade I is an option.

( 31 ) **10 MICRON OIL FILTRATION** Full-flow oil filter that filters out impurities to 10 microns. A visual indicator shows when "throw-away" replacement is necessary.

## G-Series



**Air Operated Ball Transfers**



**G-Series Shear Knives**



**Automatic  
Lubrication System**

### **AIR OPERATED BALL TRANSFERS**

This option is strongly recommended for handling heavy plate. When positioning plate, ball transfers support the plate above the table top for ease in movement. When hold-downs are activated, ball transfers recede into the table top leaving the plate firmly in position for shearing. Supplied in two rows on 16" centers.

### **SHEAR KNIFES**

Grade 1 High Carbon-High Alloy for special applications. Knives have large rectangular cross sections and four cutting edges for more re-grinds and longer knife life. These are the most efficient blades furnished for shears since the cutting edges may be rotated and re-ground for maximum use.

### **AUTOMATIC CENTRALIZED OR MANUAL ONE-SHOT LUBRICATION SYSTEM**

Automatic Centralized Lubrication system is equipped with a timer and a power operated grease pump to lubricate the slideways. This can be preset to automatically lubricate the job whenever necessary. Manual One-Shot Lubrication system is for manual grease lubrication of slideways from a centralized location.

*Not shown with photo*

### **SLITTING GAUGE**

Allows the progressive alignment of the plate when slitting material longer than the length of the shear.

### **DUAL FOOTSWITCHES**

A PACIFIC G-Series shear can be equipped with two footswitches for two man operation. A 3-position keyed selector switch allows operation by footswitch one, footswitch two, or both footswitches simultaneously.

# Features

## G-Series

### POWER KNIFE CLEARANCE ADJUSTMENT

A labor saving convenience for large or very long shears. The adjustment is fitted with hydraulic cylinders that move the lower knife holder to its desired position.

### HYDRAULIC FRONT ROLL

This material handling system has two front power rollers that can be manually operated to continually feed heavy material into the shear. Used with ball transfers, it can shear both ends of the material, turning the material around and then shearing the other side. Efficiency and safety are important benefits for using this system.

*Not shown with photo*

### HOLDDOWN TONNAGE CONTROL

Enables the holddown tonnage to be adjusted within a range of 30% to 100% of capacity. Soft or polished surfaces, which would normally be marred by maximum holddown tonnage, can be protected.

### DNC 10 CONTROL

Allows a novice operator without prior experience in using a shear or a computer controller to feel confident and competent. As little as one day of training by a PACIFIC technician can have a new operator confidently producing high production sheared parts of mixed sizes. The DNC controller has a memory capacity of 24,480 sequences and is capable of accuracy to  $\pm .005"$ . The DNC is additionally equipped with a 15 digit alpha/numerical LED display. As an aid to the operator there is a 2 digit product number and a 2 digit step number as well as the capability to be operated in either manual or automatic modes.



**Power Knife Clearance Adjustment**

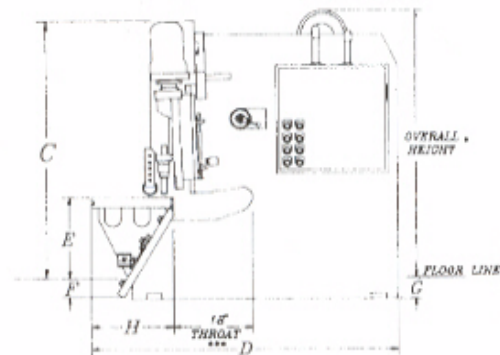
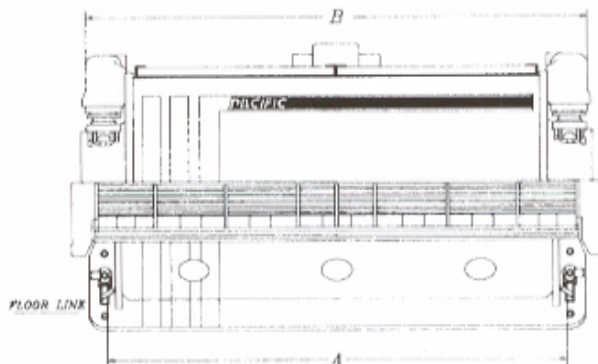


**Hydraulic Front Roll**

# SPECIFICATIONS AND DIMENSIONS

Shear Model Number	Rated Shear Capacity	Distance Between Housings	Overall Length	Cylinder		Table Height Above Floor	Bed Projection Below Floor	Housing Projection Below Floor	Table Width	Knife Size	Back Gauge Range	Hold Down Tonnage ( in tons )	Motor Horse Power	Est. Shipping Weight in Lbs.
				Top Height Above Floor	Width **									
A B C D E F G H														
300G 12	3/8"x12"	123"	13'-5-3/4"	81"	71"	34-3/4"	----	----	26-1/2"	1"x4"	36"	19	20	34,000
300G 14	3/8"x14"	143"	159"	94"	72"	35-1/2"	----	----	28-1/2"	1"x4"	36"	22	20	38,000
300G 16	3/8"x16"	163"	179"	94"	74"	32-3/4"	6-1/4"	----	28-1/2"	1"x4"	36"	25	20	46,000
300G 18	3/8"x18"	183"	199"	94"	76"	32-3/4"	10-1/4"	----	28-1/2"	1"x4"	48"	28	20	62,000
300G 20	3/8"x20"	203"	219"	94"	78"	3-3/4"	12-1/4"	----	28-1/2"	1"x4"	48"	31	20	77,000
400G 6	1/2"x6"	63"	7'-5-3/4"	81"	611"	34-3/4"	----	----	22-1/2"	1"x4"	36"	18	30	27,000
400G 8	1/2"x8"	83"	9'-5-3/4"	81"	611"	34-3/4"	----	----	24-1/2"	1"x4"	36"	23	30	30,000
400G 10	1/2"x10"	103"	11'-5-3/4"	81"	70"	34-3/4"	----	----	25-1/2"	1"x4"	36"	27	30	33,000
400G 12	1/2"x12"	123"	13'-5-3/4"	81"	71"	34-3/4"	----	----	26-1/2"	1"x4"	36"	32	30	39,000
400G 14	1/2"x14"	143"	139"	93"	7'-4-1/2"	34-3/4"	4-3/4"	----	29"	1"x4"	36"	36	25	44,000
400G 16	1/2"x16"	163"	179"	91"	711"	34-3/4"	8-3/4"	----	33-1/2"	1"x4"	48"	41	25	53,000
400G 18	1/2"x18"	183"	199"	102"	81"	36-3/4"	11-3/4"	----	34-1/2"	1"x4"	48"	46	25	66,000
400G 20	1/2"x20"	203"	219"	105"	83"	39"	14"	----	35-1/2"	1"x4"	48"	50	25	83,000
600G 6	3/4"x6"	63"	78"	94"	76"	36-3/4"	----	----	22-1/2"	1-1/8"x5"	36"	22	40	32,000
600G 8	3/4"x8"	83"	98"	94"	77"	36-3/4"	----	----	24-1/2"	1-1/8"x5"	36"	28	40	33,000
600G 10	3/4"x10"	103"	118"	810"	78"	36-3/4"	----	----	26-1/2"	1-1/8"x5"	36"	33	40	36,000
600G 12	3/4"x12"	123"	138"	810"	79"	36-3/4"	----	----	27-5/8"	1-1/8"x5"	36"	39	40	41,000
600G 14	3/4"x14"	143"	161"	104"	83"	37"	5"	----	28-5/8"	1-1/8"x5"	48"	45	40	49,000
600G 16	3/4"x16"	163"	181"	108"	87"	36"	11"	4"	35-5/8"	1-1/8"x5"	48"	51	40	65,000
600G 18	3/4"x18"	183"	201"	111"	811"	36"	11-1/2"	6"	37-1/2"	1-1/8"x5"	48"	57	40	74,000
600G 20	3/4"x20"	203"	227"	117"	9'-4-1/2"	36"	14-1/2"	8"	34-5/8"	1-1/8"x5"	48"	63	40	85,000
800G 6	1"x6"	63"	82"	10'-5 1/2"	82"	40"	----	----	29"	1-1/2"x5-1/2"	48"	26	40	46,000
800G 8	1"x8"	83"	102"	10'-5 1/2"	82"	40"	----	----	29"	1-1/2"x5-1/2"	48"	33	40	52,000
800G 10	1"x10"	103"	122"	10'-5 1/2"	82"	40"	----	----	29"	1-1/2"x5-1/2"	48"	39	40	58,000
800G 12	1"x12"	123"	142"	10'-5 1/2"	82"	43"	----	----	29"	1-1/2"x5-1/2"	48"	46	40	68,000
800G 14	1"x14"	143"	162"	10'-7 1/2"	8'-4-1/2"	34"	14"	8"	32"	1-1/2"x5-1/2"	48"	53	40	77,000
800G 16	1"x16"	163"	182"	109 1/2"	8'-4-1/2"	36"	15"	10-1/2"	34"	1-1/2"x5-1/2"	48"	59	40	90,000
1000G 6	1-1/4"x6"	63"	84"	126"	101"	36"	6"	7"	31-1/4"	1-3/4"x6-1/2"	48"	35	50	54,000
1000G 8	1-1/4"x8"	83"	104"	126"	101"	36"	13"	12"	31-1/4"	1-3/4"x6-1/2"	48"	43	50	69,000
1000G 10	1-1/4"x10"	103"	124"	1110"	103"	36"	18-1/4"	12"	31-1/4"	1-3/4"x6-1/2"	48"	52	50	78,000
1000G 12	1-1/4"x12"	123"	144"	1110"	103"	36"	15"	23"	31-1/4"	1-3/4"x6-1/2"	48"	60	50	90,000
1000G 14	1-1/4"x14"	143"	164"	1110"	106"	36"	27"	12"	34-1/4"	1-3/4"x6-1/2"	48"	69	50	104,000
1000G 16	1-1/4"x16"	163"	184"	1110"	109"	36"	20"	25"	35-3/4"	1-3/4"x6-1/2"	48"	77	50	121,000
1200G 8	1-1/2"x8"	83"	107"	130"	103"	36"	18"	12"	31-1/4"	1-3/4"x6-1/2"	48"	56	60	81,000
1200G 10	1-1/2"x10"	103"	127"	130"	105"	36"	14"	10"	31-1/4"	1-3/4"x6-1/2"	48"	67	60	90,000
1200G 12	1-1/2"x12"	123"	147"	130"	107"	36"	18-1/4"	12"	33-3/4"	1-3/4"x6-1/2"	48"	78	60	102,000
1200G 14	1-1/2"x14"	143"	167"	130"	1010"	36"	26"	14"	35"	1-3/4"x6-1/2"	48"	89	60	116,000
1200G 16	1-1/2"x16"	163"	187"	130"	112"	36"	33"	16"	36"	1-3/4"x6-1/2"	48"	101	60	132,000
1400G 8	1-3/4"x8"	83"	1011"	138"	111"	32"	22"	16"	33"	1-3/4"x6-1/2"	48"	64	75	117,000
1400G 10	1-3/4"x10"	103"	1211"	138"	111"	32"	22"	16"	35"	1-3/4"x6-1/2"	48"	78	75	126,000
1400G 12	1-3/4"x12"	123"	1411"	138"	111"	36"	22-1/4"	27"	37"	1-3/4"x6-1/2"	48"	91	75	136,000
1400G 14	1-3/4"x14"	143"	1611"	1310"	113"	36"	27"	18"	39"	1-3/4"x6-1/2"	54"	102	75	149,000
1400G 16	1-3/4"x16"	163"	1811"	140"	115"	36"	34"	41-1/2"	41"	1-3/4"x6-1/2"	54"	115	75	164,000

**NOTE: Capacities at various Rake angles are rated for A-36 ( 60,000 tensile strength) steel  
( for larger capacities contact the factory )**



\* Variations in power unit sizes, speeds, etc., may require the power unit to project above cylinders. If exact height is critical, consult factory.

\*\* Does not include back gauge protection at rear.

\*\*\* Throat - 18" standard. Consult factory for "C", "D", "E", "F", and "G" dimensions for other throat depths

**SPECIFICATIONS AND DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE**