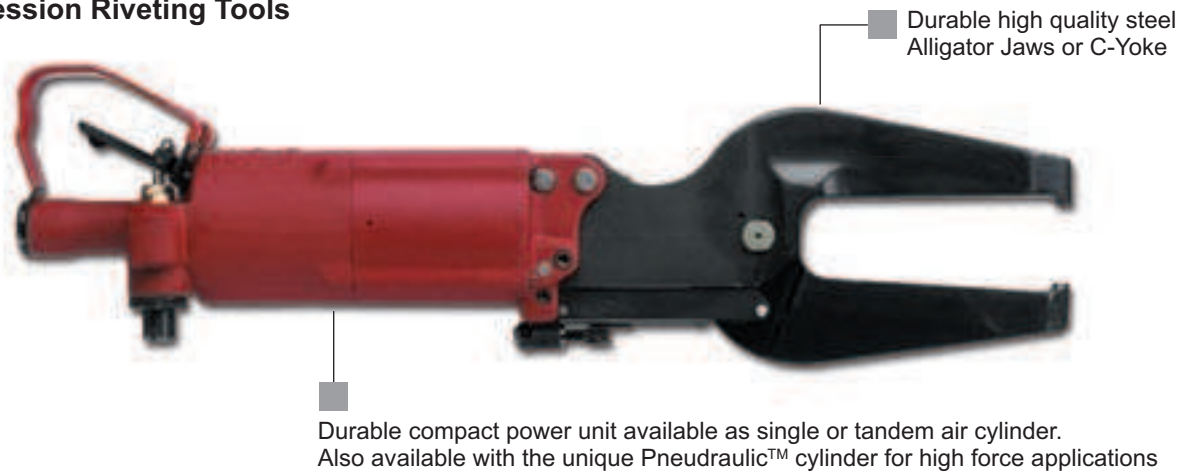


# Riveting Hammers, Compression Tools Riveting

*A complete range of riveting tools to accommodate many hand held applications, from compression riveters to riveting hammers, Desoutter can provide riveting tools to suit most needs*

## Compression Riveting Tools



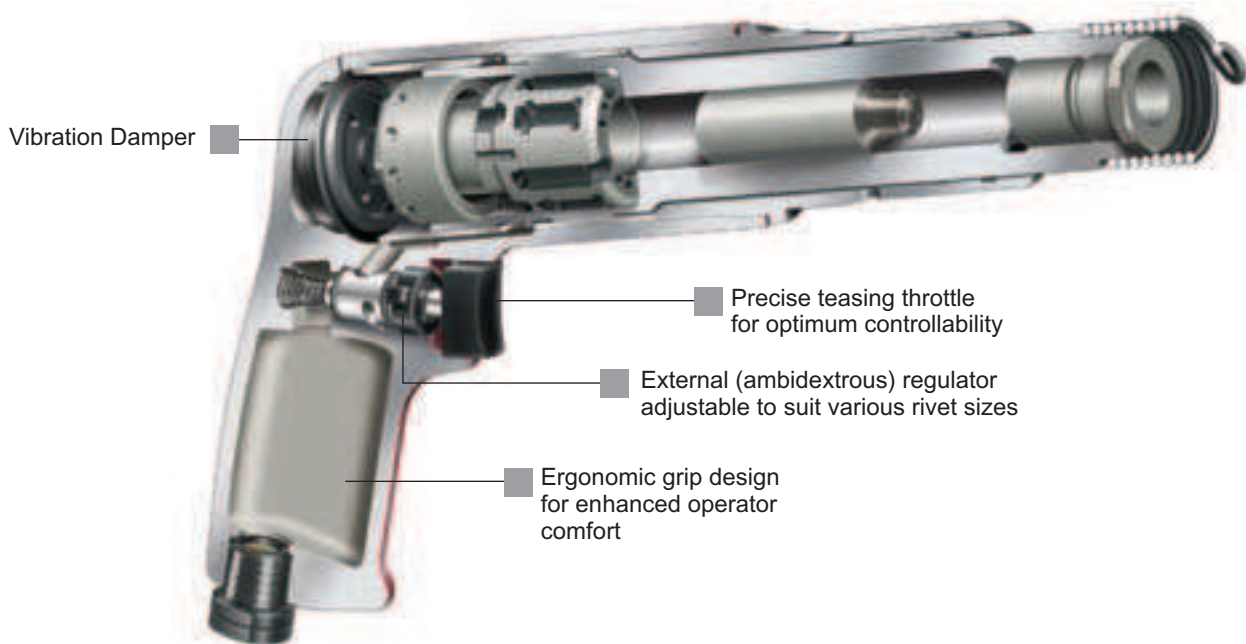
## Percussive Riveting Tools

Conventional riveting hammers CP4444 & CP4447 provide the power capable of upsetting aluminium rivets up to  $\varnothing 9.5\text{mm}$  (3/8") and steel rivets up to  $\varnothing 7.9\text{mm}$  (5/16").

### 'Vibration Reduced' Percussive Riveting Tools

In pistol form the CP4450 with a capacity up to  $\varnothing 6.4\text{mm}$  (1/4") and the new high force CP4475 with a capacity up to  $\varnothing 9.5\text{mm}$  (3/8").

The CP4450-S in-line 'Vibration reduced' riveting hammer is ideal for over structure application when vertical application is necessary



# Compression Tools – Riveting – Selection



## CP0214 – C Yoke

- Single and Tandem cylinder options
- Riveting Capacity –
  - ø 3.2mm ( $\frac{1}{8}$ " (single cylinder)
  - ø 4.8mm ( $\frac{3}{16}$ " (tandem cylinder)
- Lock-off throttle – reduces the risk of accidental operation



## CP0341 – C Yoke

- Patented 'Pneudraulic™' air-hydraulic riveter
- Riveting Capacity –
  - ø 7.14mm ( $\frac{9}{32}$ "
- Lock-off throttle – reduces the risk of accidental operation
- Versatile – can accommodate various rivet lengths and joint thickness through the adjustment of air pressure (reducing setting times and eliminating the need to use set length spacer shims with the rivet sets)



## CP0351 – C Yoke

- Single and Tandem cylinder options
- Riveting Capacity –
  - ø 4.8mm ( $\frac{3}{16}$ " (single cylinder)
  - ø 6.4mm ( $\frac{1}{4}$ " (tandem cylinder)
- Actuation throttle guard – reduces the risk of accidental operation
- Short stroke adjustment – aids positioning of the tool (limits the return travel of the moving set of the tool on the rivet to reduce the starting clearance between rivet and rivet sets)



## CP0214 – Alligator Jaw

- Single and Tandem cylinder options
- Riveting Capacity –
  - ø 3.2mm ( $\frac{1}{8}$ " (single cylinder)
  - ø 4.8mm ( $\frac{3}{16}$ " (tandem cylinder)
- Lock-off throttle – reduces the risk of accidental operation



## CP0351 – Alligator Jaw

- Single and Tandem cylinder options
- Riveting Capacity –
  - ø 4.0mm ( $\frac{5}{32}$ " (single cylinder)
  - ø 6.4mm ( $\frac{1}{4}$ " (tandem cylinder)
- Actuation throttle guard – reduces the risk of accidental operation
- Short stroke adjustment – aids positioning of the tool (limits the return travel of the moving set of the tool on the rivet to reduce the starting clearance between rivet and rivet sets)

## Selection Criteria

### • Type of Rivet

- Rivet material
- Rivet body diameter
- Rivet length before and after compression
- Force required to compress rivet (if known)

### • What material is the rivet made from?

### • What size is the rivet?

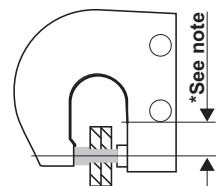
### • What is the form of the rivet head?

### • Components to assemble

- Access to rivet on assembly

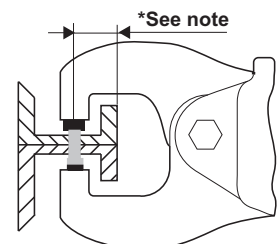
### • Open access (up to 54mm ( $2\frac{1}{8}$ " reach)

– 'C' Yoke tool



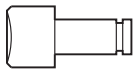
### • Restricted access (up to 232mm ( $9\frac{1}{8}$ " reach)

– 'Alligator' Jaw tool



- **Note:** the amount of reach required is determined by the distance from the rivet centerline to the accessible edge of the workpiece

# Compression Tools – Riveting – Selection



## Compression Rivet Sets

(Complete with retaining rings)

Minimum Order: 6 of any part number.

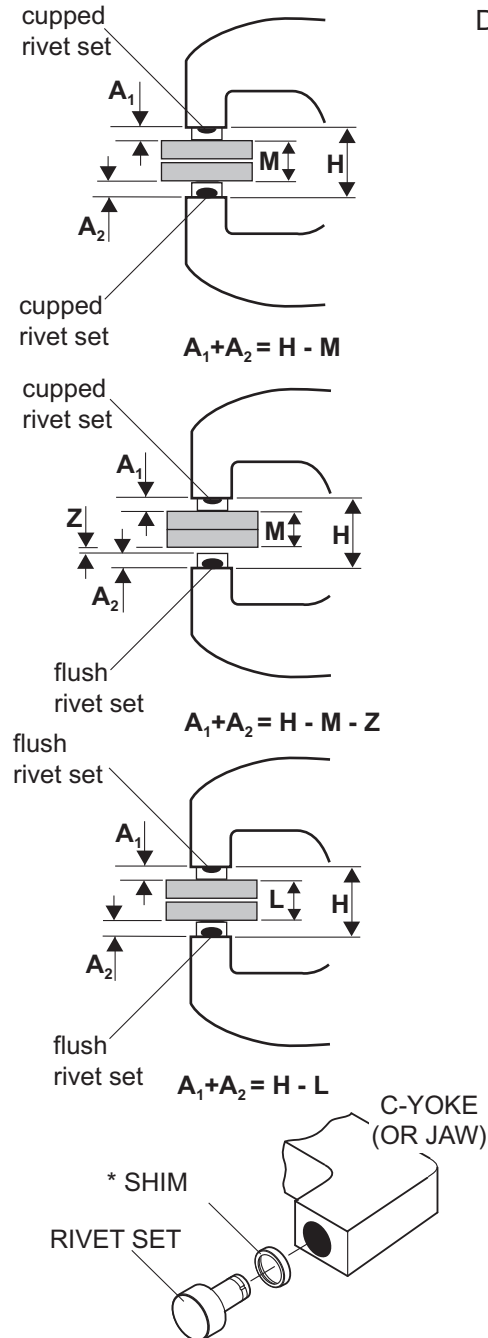
**Note:** The illustration above shows one rivet set. Two rivet sets are required to be used per tool. Part numbers are for one rivet set only.

## SELECTING RIVET SETS TO FIT CP0214, CP0341 and CP0351 RIVETERS

To develop maximum power, the riveter must drive (set) the rivet at the end of the riveter's stroke (with the exception of the CP0341 which develops max power throughout its full stroke).

For maximum power the combined length of the two rivet sets must be of the correct length.

Determine the correct lengths as follows:



### 1) When two cupped rivet sets are used:

The length of the body dimensions of the rivet sets (A1, A2) should equal the closed height dimension of the yoke (H) minus the total thickness of material being riveted together.

### 2) When one cupped set and one flush set are used:

The length of the body dimensions of the two rivet sets (A1, A2) should equal the closed height dimension of the yoke (H) minus the total thickness of the material being riveted (M) and the height of the finished rivet head (Z) compressed by the flush set (A).

### 3) When two flush sets are used:

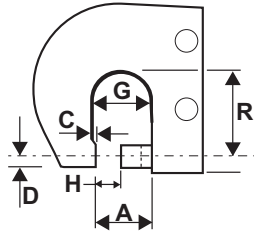
The length of the body dimensions of the two rivet sets (A1, A2) should equal the closed height dimension of the yoke (H) minus the overall length of the rivet (L) after it is compressed.

If necessary, select rivet sets a little short and shim to the correct length using spacer shims.

### \* Set Length Spacer Shims

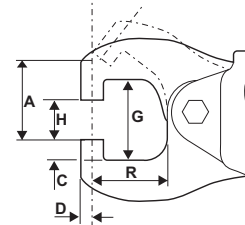
TYPE RIVET SET SHANK	PART NUMBERS OF HARDENED SHIMS		
	0.4mm thick (1/64")	0.8mm thick (1/32")	1.6mm thick (1/16")
CR-1	P083254	P083255	P083256
CR-2		P083257	P083258

# Compression Tools – Technical Data



**Jaw and Yoke Terminology:**  
(rivet sets are not in place in this illustration)

- A** Throat gap
- C** Anvil work clearance
- D** Lower offset
- G** Total yoke gap
- H** Closed height
- R** Reach



C Yoke Model	A		C		D		G		H		R	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
CP0214CELEL	32	1 1/4	-	-	5	3/16	32	1 1/4	17.5	11/16	38	1 1/2
CP0214FALEL	32	1 1/4	-	-	5	3/16	32	1 1/4	17.5	11/16	38	1 1/2
CP0214SETEL	32	1 1/4	-	-	6.4	1/4	32	1 1/4	17.5	11/16	38	1 1/2
CP0214KETEL	32	1 1/4	-	-	6.4	1/4	32	1 1/4	17.5	11/16	38	1 1/2
CP0351CUDEL	39	1 17/32	-	-	5.5	7/32	29	1 5/32	20	25/32	54	2 1/8
CP0351FUDEL	39	1 17/32	-	-	5.5	7/32	29	1 5/32	20	25/32	54	2 1/8
CP0341CUDEL	57	2 1/4	3	1/8	9	11/32	70	2 3/4	25	1	54	2 1/8

Alligator Jaw Model	A		C		D		G		H		R	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
CP0214ANGEL	54	2 1/8	-	-	5.5	7/32	54	2 1/8	22	7/8	76	3
CP0214ENGEL	54	2 1/8	-	-	5.5	7/32	54	2 1/8	22	7/8	76	3
CP0214ANFEL	48	1 7/8	-	-	5.5	7/32	54	2 1/8	22	7/8	57	2 1/4
CP0214EFEL	48	1 7/8	-	-	5.5	7/32	54	2 1/8	22	7/8	57	2 1/4
CP0214ANBEL	38	1 1/2	-	-	5.5	7/32	41	1 5/8	22	7/8	38	1 1/2
CP0214ENBEL	38	1 1/2	-	-	5.5	7/32	41	1 5/8	22	7/8	38	1 1/2
CP0351ASVEL	62	2 7/16	-	-	5.5	7/32	56	2 3/16	19	3/4	232	9 1/8
CP0351ESVEL	62	2 7/16	-	-	5.5	7/32	56	2 3/16	19	3/4	232	9 1/8
CP0351ESREL	81	3 3/16	-	-	5.5	7/32	51	2	38	1 1/2	178	7
CP0351ASKEL	57	2 1/4	-	-	5.5	7/32	41	1 5/8	22	7/8	127	5
CP0351ESKEL	57	2 1/4	-	-	5.5	7/32	41	1 5/8	22	7/8	127	5
CP0351ASGEL	38	1 1/2	-	-	5.5	7/32	41	1 5/8	22	7/8	73	2 7/8
CP0351ESGEL	38	1 1/2	-	-	5.5	7/32	41	1 5/8	22	7/8	73	2 7/8

Air inlet: 1/4" NPTF

MODEL	CYLINDER TYPE	RIVET SET TYPE	LENGTH		WEIGHT		SOUND LEVEL	SOUND POWER
			mm	in.	kg	lb		
CP0214ANBEL	Single	CR-1 (ø 4.8mm 3/16")	233	9 3/16	1.7	3 3/4	90	101
CP0214ANFEL	Single	CR-1 (ø 4.8mm 3/16")	254	10	1.9	4 1/4	90	101
CP0214ANGEL	Single	CR-1 (ø 4.8mm 3/16")	273	10 3/4	2.0	4 1/2	90	101
CP0214CELEL	Single	CR-1 (ø 4.8mm 3/16")	262	10 5/16	2.0	4 1/2	90	101
CP0214ENBEL	Tandem	CR-1 (ø 4.8mm 3/16")	303	11 15/16	2.2	4 3/4	90	101
CP0214ENFEL	Tandem	CR-1 (ø 4.8mm 3/16")	324	12 3/4	2.4	5 1/4	90	101
CP0214ENGEL	Tandem	CR-1 (ø 4.8mm 3/16")	343	13 1/2	2.5	5 1/2	90	101
CP0214FALEL	Tandem	CR-1 (ø 4.8mm 3/16")	356	14	2.5	5 1/2	90	101
CP0214KETEL	Tandem	CR-2 (ø 6.4mm 1/4")	356	14	2.5	5 1/2	90	101
CP0214SETEL	Single	CR-2 (ø 6.4mm 1/4")	262	10 5/16	2.0	4 1/2	90	101
CP0341CUDEL	Pneudraulic™	CR-2 (ø 6.4mm 1/4")	505	19 7/8	6.1	13 1/2	85	-
CP0351ASGEL	Single	CR-1 (ø 4.8mm 3/16")	495	19 1/2	7.1	15 3/4	96	107
CP0351ASKEL	Single	CR-1 (ø 4.8mm 3/16")	549	21 5/8	9.0	19 3/4	96	107
CP0351ASVEL	Single	CR-1 (ø 4.8mm 3/16")	654	25 3/4	11.9	26 1/4	96	106
CP0351CUDEL	Single	CR-1 (ø 4.8mm 3/16")	445	17 1/2	5.7	12 1/2	96	107
CP0351ESGEL	Tandem	CR-1 (ø 4.8mm 3/16")	603	23 3/4	8.4	18 1/2	96	107
CP0351ESKEL	Tandem	CR-1 (ø 4.8mm 3/16")	657	25 7/8	10.2	22 1/2	96	107
CP0351ESREL	Tandem	CR-1 (ø 4.8mm 3/16")	708	27 7/8	12.2	27	96	107
CP0351ESVEL	Tandem	CR-1 (ø 4.8mm 3/16")	762	30	13.2	29	96	107
CP0351FUDEL	Tandem	CR-1 (ø 4.8mm 3/16")	552	21 3/4	6.9	15 1/4	96	107
CP0351PU	Single	n/a	546	21 1/2	9.3	20 1/2	96	107
CP0351CABHDY	Single	n/a	445	17 1/2	9.2	20 5/16	96	107