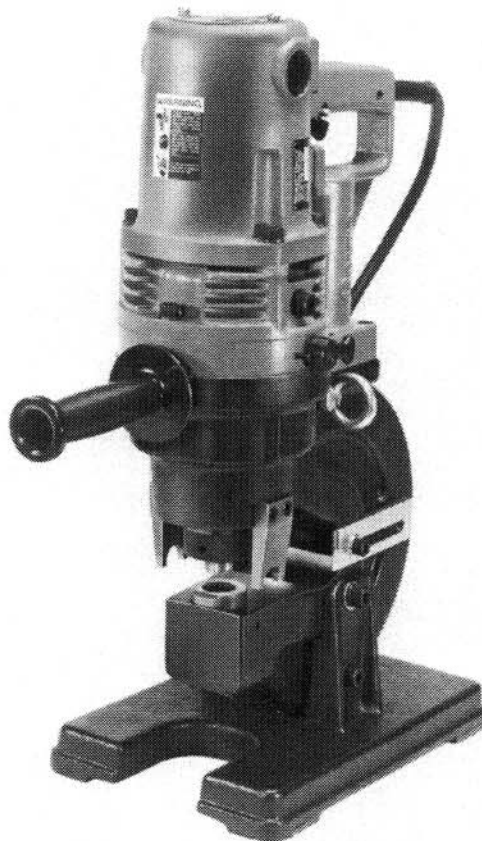


# ***HOUGEN*<sup>®</sup> - OGURA<sup>™</sup>**

**PUNCH PRO<sup>™</sup> ELECTRO-HYDRAULIC HOLE PUNCHER**

## **OPERATOR'S MANUAL 75005**



## Round Punches and Dies for Model 75005

| ROUND PUNCHES |             |             | MATERIAL |                             | DIES  |             |          |
|---------------|-------------|-------------|----------|-----------------------------|-------|-------------|----------|
| Nominal Size  | Actual Size | Metric Size | Part No. | Thickness                   | Style | Size        | Part No. |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 7/16 A  | 75541    |
| 7/16"         | 0.433       | 11mm        | 75532    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 7/16 B  | 75542    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 7/16 C  | 75559    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 1/2 A   | 75543    |
| 1/2"          | 0.512       | 13mm        | 75533    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 1/2 B   | 75544    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 1/2 C   | 75560    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 9/16 A  | 75545    |
| 9/16"         | 0.551       | 14mm        | 75534    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 9/16 B  | 75546    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 9/16 C  | 75561    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 5/8 A   | 75547    |
| 5/8"          | 0.625       | 15.9mm      | 75535    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 5/8 B   | 75548    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 5/8 C   | 75562    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 11/16 A | 75549    |
| 11/16"        | 0.688       | 17.5mm      | 75536    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 11/16 B | 75550    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 11/16 C | 75563    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 3/4 A   | 75551    |
| 3/4"          | 0.75        | 19mm        | 75537    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 3/4 B   | 75552    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 3/4 C   | 75564    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 25/32 A | 75553    |
| 25/32"        | 0.787       | 20mm        | 75538    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 25/32 B | 75554    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 25/32 C | 75565    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 13/16 A | 75555    |
| 13/16"        | 0.812       | 20.6mm      | 75539    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 13/16 B | 75556    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 13/16 C | 75566    |
|               |             |             |          | >1/8" (.125) to 1/4" (.250) | A,H   | Die 7/8 A   | 75557    |
| 7/8"          | 0.875       | 22.2mm      | 75540    | >1/4" (.250) to 3/8" (.375) | A,H   | Die 7/8 B   | 75558    |
|               |             |             |          | 5/16" (.312) Max.           | C     | Die 7/8 C   | 75567    |

# Oblong Punches and Dies for Model 75005

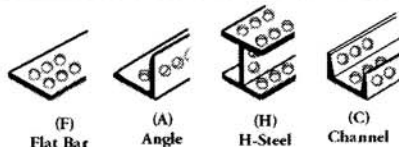
## PUNCHES

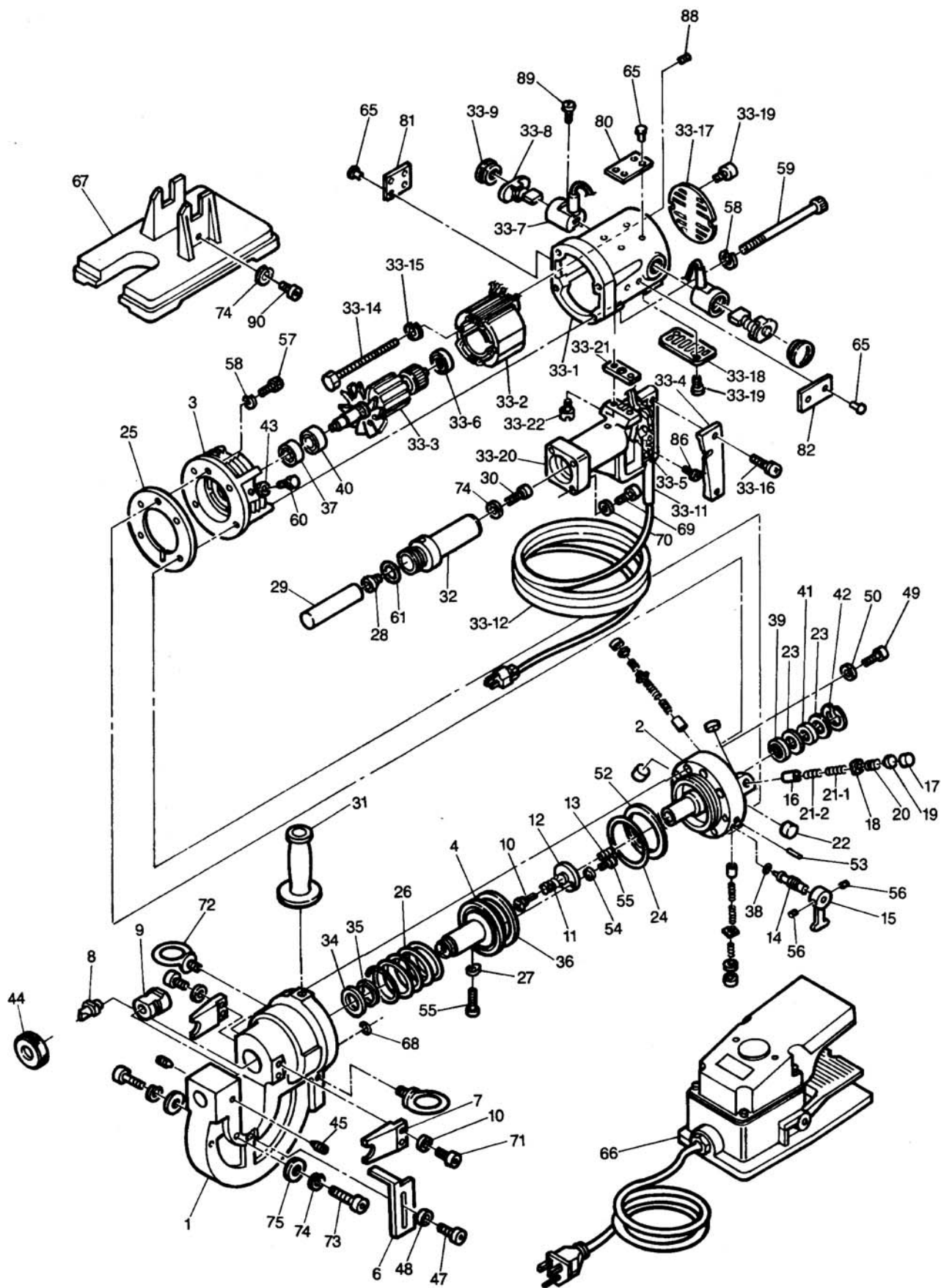
## MATERIAL

## DIES

| Nominal Size          | Actual Size       | Metric Size         | Part No. | Thickness                                  | Style | Size                | Part No. |
|-----------------------|-------------------|---------------------|----------|--------------------------------------------|-------|---------------------|----------|
|                       |                   |                     |          | >1/8" (.125) to 1/4" (.250)<br>10 to 3 GA. | A,H   | Die 7/16 x 5/8 A    | 75694    |
| 7/16"<br>x<br>5/8"    | .433<br>x<br>.650 | 11mm<br>x<br>16.5mm | 75690    | >1/4" (.250) to 3/8" (.375)                | A,H   | Die 7/16 x 5/8 B    | 75695    |
|                       |                   |                     |          | 5/16" (.312) Max                           | C     | Die 7/16 x 5/8 C    | 75702    |
|                       |                   |                     |          | >1/8" (.125) to 1/4" (.250)<br>10 to 3 GA. | A,H   | Die 1/2 x 3/4 A     | 75696    |
| 1/2"<br>x<br>3/4"     | .512<br>x<br>.768 | 13mm<br>x<br>19.5mm | 75691    | >1/4" (.250) to 3/8" (.375)                | A,H   | Die 1/2 x 3/4 B     | 75697    |
|                       |                   |                     |          | 5/16" (.312) Max                           | C     | Die 1/2 x 3/4 C     | 75703    |
|                       |                   |                     |          | >1/8" (.125) to 1/4" (.250)<br>10 to 3 GA. | A,H   | Die 9/16 x 13/16 A  | 75698    |
| 9/16"<br>x<br>13/16"  | .551<br>x<br>.827 | 14mm<br>x<br>21mm   | 75692    | >1/4" (.250) to 3/8" (.375)                | A,H   | Die 9/16 x 13/16 B  | 75699    |
|                       |                   |                     |          | 5/16" (.312) Max                           | C     | Die 9/16 x 13/16 C  | 75704    |
| 11/16"<br>x<br>13/16" | .709<br>x<br>.827 | 18mm<br>x<br>21mm   | 75693    | >1/8" (.125) to 1/4" (.250)                | A,H   | Die 11/16 x 13/16 A | 75700    |
|                       |                   |                     |          | >1/4" (.250) to 3/8" (.375)                | A,H   | Die 11/16 x 13/16 B | 75701    |

## Legend





## PARTS LIST - 75005

| Detail No. | Description          | Part No. | No. Req. |
|------------|----------------------|----------|----------|
| 1          | "C" Frame            | 75260    | 1        |
| 2          | Cylinder             | 75261    | 1        |
| 3          | Pump Housing         | 75262    | 1        |
| 4          | Punch Piston (old)   | 75263    | 1        |
|            | Punch Piston (new)   | 75263A   | 1        |
| 6          | Hole Locator         | 75264    | 1        |
| 7          | Stripper             | 75265    | 2        |
| 8          | Punch 13/16 Dia.     | 75539    | 1        |
| 9          | Die 13/16 A type     | 75555    | 1        |
|            | Die 13/16 B Type     | 75556    | 1        |
| 10         | Release Valve        | 75266    | 1        |
| 11         | Valve Return Spring  | 75267    | 1        |
| 12         | Stop Plate           | 75268    | 1        |
| 13         | Valve Return Spring  | 75269    | 1        |
| 14         | Return Valve         | 75046    | 1        |
| 15         | Return Lever         | 75047    | 1        |
| 16         | Pump Piston          | 75270    | 3        |
| 17         | Rubber Packing       | 75049    | 3        |
| 18         | Check Valve          | 75050    | 3        |
| 19         | Spring Retainer      | 75051    | 3        |
| 20         | Check Valve Spring   | 75052    | 3        |
| 21-1       | Piston Return Spring | 75340    | 3        |
| 21-2       | Piston Return Spring | 75341    | 3        |
| 22         | Magnet               | 75054    | 3        |
| 23         | Spacer               | 75271    | 2        |
| 24         | O-Ring               | 75272    | 1        |
| 25         | Gasket               | 75273    | 1        |
| 26         | Punch Return Spring  | 75274    | 1        |
| 27         | Punch Piston Key     | 75275    | 1        |

| Detail No. | Description           | Part No. | No. Req. |
|------------|-----------------------|----------|----------|
| 25         | Gasket                | 75273    | 1        |
| 26         | Punch Return Spring   | 75274    | 1        |
| 27         | Punch Piston Spring   | 75275    | 1        |
| 28         | Screw Bladder         | 75136    | 1        |
| 29         | Oil Bladder           | 75137    | 1        |
| 30         | Bladder Ret. Screw    | 75138    | 1        |
| 31         | Punch Handle          | 75063    | 1        |
| 32         | Bladder Cover         | 75276    | 1        |
| 33-1       | Motor Housing         | 75277    | 1        |
| 33-2       | Field                 | 75278    | 1        |
| 33-3       | Armature              | 75279    | 1        |
| 33-4       | Switch Cover          | 75280    | 1        |
| 33-5       | Switch                | 75365    | 1        |
| 33-6       | Ball Bearing          | 75281    | 1        |
| 33-7       | Brush Cover           | 75282    | 2        |
| 33-8       | Carbon Brush (Pair)   | 75283    | 1        |
| 33-9       | Brush Cap             | 75284    | 2        |
| 33-11      | Strain Relief         | 75074    | 1        |
| 33-12      | Power Cord            | 75148    | 1        |
| 33-14      | Hex Head Bolt         | 75285    | 2        |
| 33-15      | Hex Lock washer       | 75150    | 2        |
| 33-16      | Pan Head Screw        | 75286    | 2        |
| 33-17      | Motor Top Grill       | 75287    | 1        |
| 33-18      | Motor Side Grill      | 75288    | 1        |
| 33-19      | Pan Head Screw        | 75289    | 4        |
| 33-20      | Adapter Plate         | 75290    | 1        |
| 33-21      | Switch Bracket Gasket | 75291    | 1        |
| 33-22      | Slotted Retainer      | 75292    | 2        |
| 34         | Back Up Ring          | 75293    | 1        |

## PARTS LIST - 75005 (Cont)

| Detail No. | Description          | Part No. | No. Req. |
|------------|----------------------|----------|----------|
| 35         | Rod Seal Packing     | 75294    | 1        |
| 36         | Packing              | 75295    | 1        |
| 37         | Oil Seal             | 75296    | 1        |
| 38         | O-Ring               | 75085    | 1        |
| 39         | Ball Bearing         | 75086    | 1        |
| 40         | Ball Bearing         | 75297    | 1        |
| 41         | Roller Bearing       | 75088    | 1        |
| 42         | Retaining Ring       | 75298    | 1        |
| 43         | Washer Seal          | 75090    | 1        |
| 44         | Punch Ret. Nut (Old) | 75299    | 1        |
|            | Punch Ret. Nut (New) | 75299A   | 1        |
| 45         | Soc. Set Screw       | 75300    | 1        |
| 47         | Soc. Head Screw      | 75301    | 1        |
| 48         | Flat washer          | 75302    | 1        |
| 49         | Soc. Head Screw      | 75303    | 8        |
| 50         | Flat washer          | 75304    | 8        |
| 51         | Spanner Nut (Old)    | 75305    | 1        |
| 52         | Back Up Ring         | 75306    | 1        |
| 53         | Roll Pin             | 75100    | 1        |
| 54         | Flat Washer          | 75105    | 3        |
| 55         | Soc. Head Screw      | 75307    | 3        |
| 56         | Soc. Head Screw      | 75103    | 2        |
| 57         | Soc. Head Screw      | 75236    | 1        |
| 58         | Heli Lock washer     | 75093    | 5        |
| 59         | Soc. Head Screw      | 75308    | 1        |
| 60         | Soc. Head Screw      | 75107    | 1        |
| 61         | O Ring               | 75309    | 1        |
| 65         | Rivet                | 75109    | 10       |
| 66         | Foot Switch          | 75110    | 1        |

| Detail No. | Description      | Part No. | No. Req. |
|------------|------------------|----------|----------|
| 67         | Work Stand       | 75311    | 1        |
| 68         | O Ring           | 75312    | 2        |
| 69         | Soc. Head Screw  | 75313    | 4        |
| 70         | Flat washer      | 75097    | 4        |
| 71         | Soc. Head Screw  | 75314    | 4        |
| 72         | Eye Bolt         | 75315    | 1        |
| 73         | Soc. Head Screw  | 75316    | 2        |
| 74         | Heli Lock washer | 75155    | 4        |
| 75         | Flat washer      | 75317    | 2        |
| 80         | Warning Tag      | 75033    | 1        |
| 81         | Caution Tag      | 75034    | 1        |
| 82         | Name Plate       | 75031    | 1        |
| 86         | Pan Head Screw   | 75350    | 1        |
| 88         | Soc. Set Screw   | 75318    | 2        |
| 89         | Pan Head Screw   | 75247    | 2        |
| 90         | Soc. Head Screw  | 75226    | 1        |