

**Small size Hydraulic Breakers**  
Hydraulic operating system  
F1 to F5



No back head gas charging for ease of maintenance.  
Through bolt design with large CD threads for added strength.  
Increased front head wall thickness for added service life.

**Medium size Hydraulic Breakers**  
Hydraulic + gas operating system  
F6 and F9

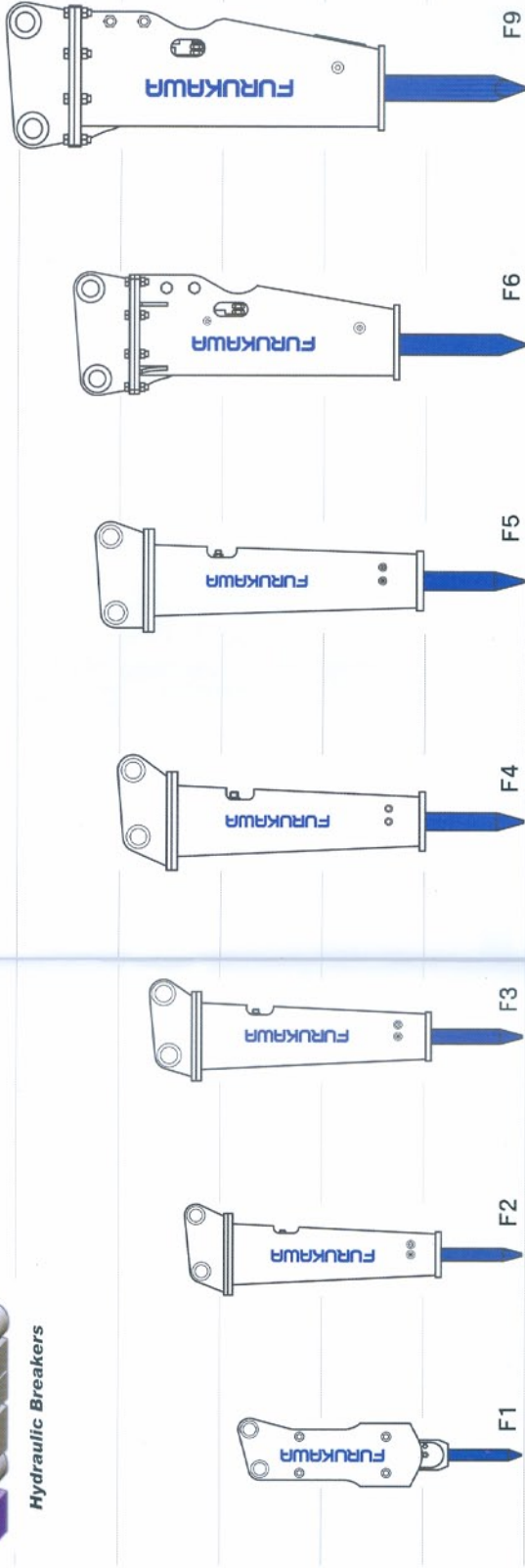


Increase in back head pressure and large piston diameter results in 25% greater impact energy.  
Longer thrust bushing improves piston alignment during impact and incorporates grease holes to evenly distribute grease in the front head.  
Through bolt design with large CD threads for added strength.  
Increased front head wall thickness for added service life.

**F SERIES**  
Hydraulic Breakers

**Hydraulic Direct-Acting System contributes to reduced maintenance costs!**

Furukawa's extensive experience and technological advancements lead to high operating reliability.



| Model                                   | F1                | F2                             | F3          | F4          | F5        | F6          | F9        |  |
|---|-------------------|--------------------------------|-------------|-------------|-----------|-------------|-----------|--|
| Body weight (incl. Rod)                 | kg                | 58                             | 81          | 106         | 152       | 195         | 300       |  |
| Operating weight                        |                   |                                |             |             |           |             |           |  |
| T-BOX incl. Top bracket                 | kg                | 122                            | 165         | 228         | 300       | 350         | 535       |  |
| Side plate incl. Top bracket            | kg                | 86                             | 129         | 172         | 225       | 365         | 550       |  |
| Height                                  |                   |                                |             |             |           |             |           |  |
| T-BOX excl. Top bracket                 | mm                | 1,050                          | 1,159       | 1,255       | 1,369     | 1,400       | 1,595     |  |
| Side plate excl. Top bracket            | mm                | 1,009                          | 1,255       | 1,355       | 1,458     | 1,413       | 1,615     |  |
| Width                                   |                   |                                |             |             |           |             |           |  |
| T-BOX excl. Top bracket                 | mm                | 180                            | 214         | 235         | 235       | 260         | 321       |  |
| Side plate excl. Top bracket            | mm                | 180                            | 214         | 235         | 235       | 260         | 321       |  |
| Back head sealed gas pressure (at 10°C) | MPa               | Hydraulic Direct-Acting system |             |             |           |             |           |  |
| Impact rate                             | min <sup>-1</sup> | 900 ~ 1,200                    | 850 ~ 1,200 | 750 ~ 1,000 | 700 ~ 900 | 550 ~ 1,050 | 550 ~ 900 |  |
| Oil flow rate                           | L/min             | 12 ~ 20                        | 25 ~ 40     | 32 ~ 48     | 42 ~ 62   | 50 ~ 90     | 65 ~ 110  |  |
| Operating oil pressure                  | MPa               | 10 ~ 14                        | 10 ~ 14     | 10 ~ 14     | 10 ~ 14   | 10 ~ 14     | 12 ~ 15   |  |
| Rod diameter                            | mm                | 36                             | 45          | 52          | 60        | 75          | 90        |  |
| Hose diameter                           | mm                | 9                              | 12          | 12          | 12        | 19          | 19        |  |
| Weight of base machine                  | ton               | 1.0 ~ 1.5                      | 1.5 ~ 2.5   | 2.5 ~ 3.5   | 3.5 ~ 4.5 | 4.5 ~ 5.5   | 5.5 ~ 6.5 |  |

\* Furukawa provide the following kinds of rod: moil point rod, flat rod, wedge point rod, and the carbide ball point rod (optional).

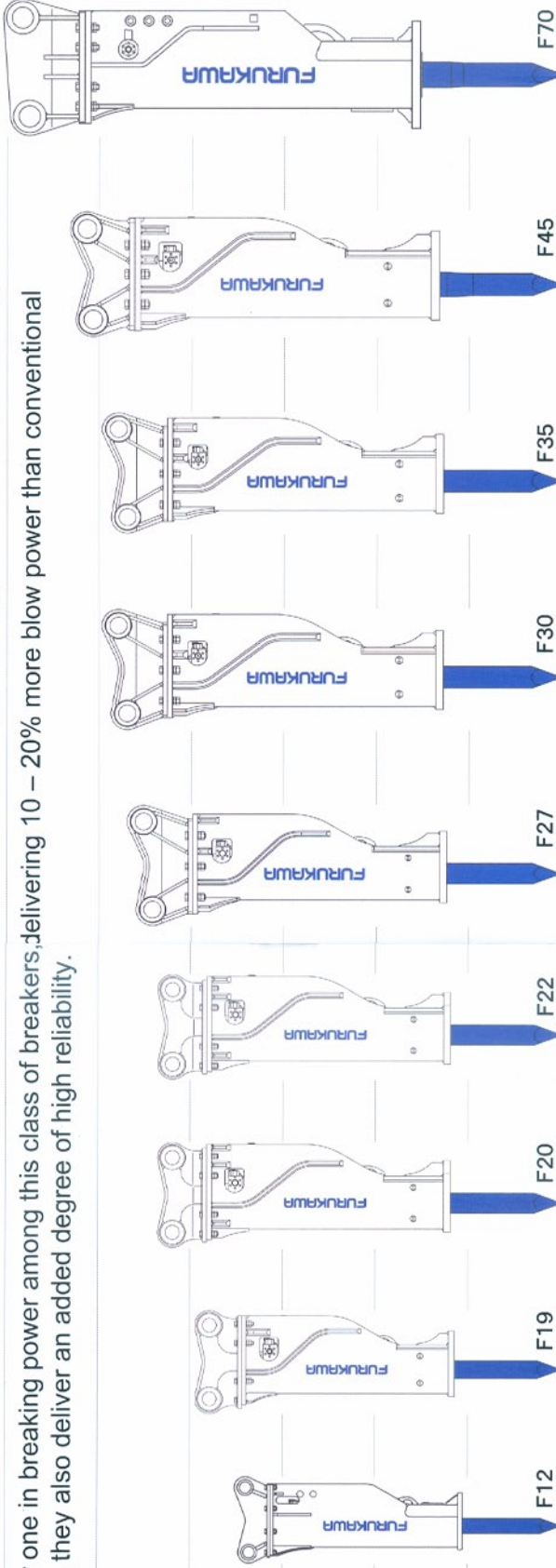


## Large size F series models responding to next generation needs by offering new functions and greater versatility!

Number one in breaking power among this class of breakers, delivering 10 – 20% more blow power than conventional models, they also deliver an added degree of high reliability.

### Large size Hydraulic Breakers Hydraulic + gas operating system

- Advanced technology supporting new functions
- Patented dust intake prevention system.
- Improved lubrication greases front head and thrust bushing.
- Higher back head pressure results in a 20% increase in impact energy over previous models.
- Free spinning front head bushing ensures uniform wear.
- Built-in hydraulic safety valve actuates when it exceeds the maximum pressure.



| Model                                     | F12               | F19       | F20       | F22       | F27       | F30       | F35       | F45       | F70       |
|---|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Body weight                               | kg                | 500       | 640       | 860       | 865       | 960       | 1,200     | 1,210     | 1,590     |
| Operating weight                          | kg                | 860       | 1,290     | 1,635     | 1,580     | 1,800     | 2,295     | 2,305     | 2,985     |
| *T-BOX / NT-Box incl. Top bracket         | kg                | 910       | 1,390     | 1,770     | 1,775     | 2,200     | 2,515     | 2,525     | 3,325     |
| Side plate incl. Top bracket              | mm                | 1,970     | 2,270     | 2,338     | 2,338     | 2,455     | 2,648     | 2,648     | 2,850     |
| Height                                    | mm                | 1,985     | 2,170     | 2,355     | 2,355     | 2,485     | 2,650     | 2,650     | 2,840     |
| **T-BOX / NT-Box excl. Top bracket        | mm                | 391       | 500       | 500       | 500       | 600       | 600       | 600       | 600       |
| Side plate excl. Top bracket              | mm                | 391       | 500       | 500       | 500       | 600       | 600       | 600       | 600       |
| Back head sealed gas pressure (at 10°C)   | MPa               | 0.9       | 0.9       | 0.6       | 0.6       | 0.9       | 0.6       | 0.6       | 0.9       |
| Impact rate                               | min <sup>-1</sup> | 450 ~ 625 | 400 ~ 525 | 400 ~ 500 | 360 ~ 460 | 340 ~ 440 | 350 ~ 450 | 320 ~ 400 | 300 ~ 350 |
| Oil flow rate                             | L/min             | 100 ~ 130 | 120 ~ 155 | 125 ~ 160 | 145 ~ 180 | 155 ~ 190 | 160 ~ 210 | 175 ~ 220 | 200 ~ 250 |
| Operating oil pressure                    | MPa               | 16 ~ 18   | 16 ~ 18   | 14.5 ~ 18 | 16 ~ 18   | 16 ~ 18   | 14.5 ~ 18 | 16 ~ 18   | 16 ~ 18   |
| Rod diameter                              | mm                | 105       | 120       | 135       | 135       | 140       | 150       | 150       | 165       |
| Hose diameter                             | mm                | 19        | 25        | 25        | 25        | 25        | 25        | 25        | 32        |
| Weight of base machine                    | ton               | 9.0 ~ 14  | 14 ~ 19   | 16 ~ 20   | 19 ~ 22   | 22 ~ 26   | 26 ~ 32   | 26 ~ 32   | 32 ~ 44   |
| Standard provision                        |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| Piston idle blow enabling function        |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| High pressure protector function          |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| Manual stroke adjustment function         |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| Two-way back head                         |                   | ○         | ○         | Optional  | ○         | ○         | Optional  | ○         | ○         |
| Dust intake prevention function           |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| Optional                                  |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| Piston idle blow prevention function      |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| Remote control stroke adjustment function |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| IN/OUT swivel adaptor                     |                   | ○         | ○         | Optional  | ○         | ○         | Optional  | ○         | ○         |
| **Tunneling specifications                |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| **Underwater specifications               |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |
| Remarks                                   |                   | ○         | ○         | ○         | ○         | ○         | ○         | ○         | ○         |

\* Mark is shown as T-BOX for F12 & F70, NT-Box for F19 – F45

\*\* Marks are special applications, please consult with FURUKAWA or FURUKAWA authorized Distributor.