

**WE ARE YOUR TRUSTED GUARDIAN  
GIVING YOU A TOTAL PEACE OF MIND**



<sup>®</sup>  
**COMBAT**

Lingjack Engineering Works Pte Ltd  
No. 1 Woodlands Terrace #03-01  
Lingjack Industrial Building  
Singapore 738471

Website [www.combat.com.sg](http://www.combat.com.sg)  
Email [combat@lingjack.com](mailto:combat@lingjack.com)  
Contact 65 6759 4163  
Facsimile 65 6758 7513  
Co. Reg. No. 199103053M



Version 2010E/01



# COMBAT®

## FIRE EXTINGUISHER

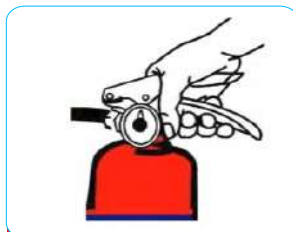
**COMBAT®** fire extinguishers come with an instruction label that contains information on how to use and the general maintenance of the fire extinguisher. All potential users should familiarized themselves with the instructions prior to use.

### HOW TO USE



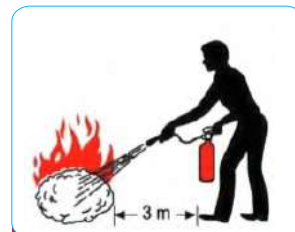
**STEP 1**

REMOVE SAFETY PIN



**STEP 2**

DIRECT NOZZLE AT THE  
BASE OF THE FIRE



**STEP 3**

SQUEEZE HANDLES.

SWING FROM SIDE TO SIDE  
TO ATTACK FIRE.

RELEASE TO STOP

### MAINTENANCE:

**A**

- Inspect the extinguisher monthly and service it annually
- Hydrostatic test to be conducted once every five or ten years
- Extinguisher must be recharged after complete or partial discharge.

**B**

- The extinguisher should be charged by the manufacturer
- OR
- A competent agent using materials specified by the manufacturer

### TYPE OF FIRE



**CLASS A**

**Solid matters forming  
glowing residues Eg.:**

- Wood,
- Paper
- Fabrics



**CLASS B**

**Flammable liquid solvents**

**Eg:**

- Petrol
- Oil
- Paints

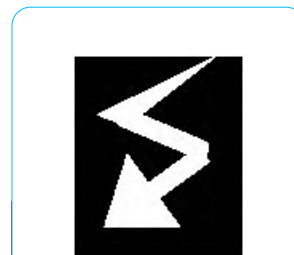


**CLASS C**

**Flammable Gases**

**Eg:**

- Propane
- or
- Butane



**ELECTRICAL**

**Live electrical equipment**

**Eg:**

- Electrical Main
- Transformer
- Electrical Appliances



# COMBAT®

## PORTABLE FIRE EXTINGUISHERS

**COMBAT®** ABC or Multi Purpose Fire Extinguishers is the most multi function extinguisher capable of extinguishing Class A and B Fires as well as those involving Gas or Electrical equipments. The full ranges achieved a higher fire rating compare to standard requirements which mean that per extinguisher coverage is wider than a standard fire extinguisher.

### ABC DRY POWDER STORED PRESSURE EXTINGUISHER

(Blue Colour Band)



- Approved to BS EN3 by LPCB (UK)
- TPED certified (CE Mark)
- MED certified (Wheel Mark)
- Top Quality Fire Extinguisher (480 hours salt spray test to ISO 9227 for maximum corrosion resistance protection)
- Effective Suppression for Class A, B, C, & E Fires
- Non-Conductive of Electricity
- Fast Knock out Effect
- Signal Red (RAL3000) Epoxy Polyester Powder Coating  
Widely Used in Commercial Buildings, Industrial  
Plant, Workshop, on board the ship, Engine Rooms,  
On & Offshore production facilities
- **Optional** : Excellent corrosion resistance models for extremely harsh environment is available

### ABC DRY POWDER STORED PRESSURE EXTINGUISHER

(Blue Colour Band)

| Extinguishing Model         | C-1ASE                  | C-2ASE  | C-3ASE  | C-4ASE   | C-6ASE   | C-9ASE   | C-9PKSE          |
|-----------------------------|-------------------------|---------|---------|----------|----------|----------|------------------|
| Capacity                    | 1.0kg                   | 2.0kg   | 3.0kg   | 4.0kg    | 6.0kg    | 9.0kg    | 9.0kg            |
| Extinguishing Medium        | ABC Dry Chemical Powder |         |         |          |          |          | Purple K         |
| Propellant Type             | Nitrogen                |         |         |          |          |          |                  |
| Fire Rating                 | 5A/55B                  | 13A/55B | 13A/55B | 21A/144B | 34A/233B | 43A/233B | 233B             |
| Class of Fire               | A,B,C & Electrical      |         |         |          |          |          | B,C & Electrical |
| Test Pressure               | 25 kgf/cm <sup>2</sup>  |         |         |          |          |          |                  |
| Max Working Pressure        | 14 kgf/cm <sup>2</sup>  |         |         |          |          |          |                  |
| Overall Height (mm)         | 313                     | 445     | 460     | 473      | 503      | 610      | 610              |
| Diameter (mm)               | 85                      | 98      | 115     | 139      | 181      | 181      | 181              |
| Width (mm)                  | 90                      | 100     | 110     | 185      | 232      | 232      | 232              |
| Empty Weight (kg)           | 1.01                    | 1.60    | 1.97    | 2.43     | 3.39     | 4.01     | 4.01             |
| Full Weight (kg)            | 2.01                    | 3.60    | 4.97    | 6.43     | 9.39     | 13.01    | 13.01            |
| Min. Discharge Time (Sec)   | 6.1                     | 6.9     | 11.7    | 15       | 16       | 17       | 13.3             |
| Operating Temperature Range | -20°C to +60°C          |         |         |          |          |          |                  |
| Safe Operating Distance     | 2 meters                |         |         |          |          |          |                  |
| Cylinder Material           | Cold Roll Steel Sheet   |         |         |          |          |          |                  |
| LPCB (UK)                   | ✓                       | ✓       | ✓       | ✓        | ✓        | ✓        | ✓                |
| TPED (CE Mark)              | ✓                       | ✓       | ✓       | ✓        | ✓        | ✓        | ✓                |
| MED (Wheel Mark)            | ✓                       | ✓       | -       | ✓        | ✓        | ✓        | -                |

TECHNICAL SPECIFICATION



The company reserves the right to change the specification without prior notice.

LINGJACK ENGINEERING WORKS PTE LTD

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)



# COMBAT®

## PORTABLE FIRE EXTINGUISHERS

**COMBAT®** Biodegradable Foam Fire Extinguisher utilizes the best foam SC-1 in its class. It is very effective on class A & B Fires. SC-1 has the ability to form an aqueous film which flows quickly over water-insoluble hydrocarbon fuel surfaces causing rapid fire extinguishment and vapour suppression for Class B Fires. Also it provides excellent penetrating and wetting qualities when used on Class A Fires.

### FOAM STORED PRESSURE EXTINGUISHER

(Cream Colour Band)

- Approved to BS EN3 by LPCB (UK)
- TPED certified (CE Mark)
- MED certified (Wheel Mark)
- Top Quality Fire Extinguisher (480 hours salt spray test to ISO 9227 for maximum corrosion resistance protection)
- Effective Suppression for Class A,B Fires (Hydrocarbon Fires)
- Not Applicable for fires involving live electrical equipments
- Signal Red (RAL3000) Epoxy Polyester Powder Coating
- Widely Used for Class B Fires protection such as Paint Shop, Diesel storage, Petrol Tank
- **Optional** : Excellent corrosion resistance models for extremely harsh environment is available

### FOAM STORED PRESSURE EXTINGUISHER

(Cream Colour Band)

| Extinguishing Model         | C-6FSE                 | C-9FSE   |
|-----------------------------|------------------------|----------|
| Capacity                    | 6.0Ltr                 | 9.0Ltr   |
| Extinguishing Medium        | 1% Foam                |          |
| Propellant Type             | Nitrogen               |          |
| Fire Rating                 | 8A/113B                | 34A/233B |
| Class of Fire               | A,B                    |          |
| Test Pressure               | 25 kgf/cm <sup>2</sup> |          |
| Max Working Pressure        | 14 kgf/cm <sup>2</sup> |          |
| Overall Height (mm)         | 503                    | 610      |
| Diameter (mm)               | 181                    | 181      |
| Width (mm)                  | 232                    | 232      |
| Empty Weight (kg)           | 4.06                   | 4.36     |
| Full Weight (kg)            | 10.04                  | 13.36    |
| Min. Discharge Time (Sec)   | 40                     | 60       |
| Operating Temperature Range | +5°C to +60°C          |          |
| Safe Operating Distance     | 2 Meters               |          |
| Cylinder Material           | Cold Roll Steel Sheet  |          |
| LPCB (UK)                   | ✓                      | ✓        |
| TPED (CE Mark)              | ✓                      | ✓        |
| MED (Wheel Mark)            | -                      | ✓        |

TECHNICAL SPECIFICATION



The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)



# COMBAT®

## PORTABLE FIRE EXTINGUISHERS

**COMBAT®** Water Fire Extinguishers utilizes the penetrating, soaking and cooling effective of a 4 meters concentrated water stream for effective suppression of Class A Fires. It is an ideal low cost solution to provide Class A protection from all fire involving freely burning materials such as wood, paper or fabric.

### WATER STORED PRESSURE EXTINGUISHER

(Red Colour Band)



- Approved to BS EN3 by LPCB (UK)
- TPED certified (CE Mark)
- MED certified (Wheel Mark)
- Top Quality Fire Extinguisher (480 hours salt spray test to ISO 9227 for maximum corrosion resistance protection)
- Effective Suppression for Class A Fires
- Not Applicable for fires involving live electrical equipment
- Signal Red (RAL 3000) Epoxy Polyested Powder Coating
- Widely Used for class A Fires protection such as Retail Shop, Printing Company, Wood Working Workshop
- **Optional** : Excellent corrosion resistance models for extremely harsh environment is available

### WATER STORED PRESSURE EXTINGUISHER

(Red Colour Band)

| Extinguishing Model         | C-6WSE                 | C-9WSE |
|-----------------------------|------------------------|--------|
| Capacity                    | 6.0Ltr                 | 9.0Ltr |
| Extinguishing Medium        | Water                  |        |
| Propellant Type             | Nitrogen               |        |
| Fire Rating                 | 8A                     | 13A    |
| Class of Fire               | A                      |        |
| Test Pressure               | 25 kgf/cm <sup>2</sup> |        |
| Max Working Pressure        | 14 kgf/cm <sup>2</sup> |        |
| Overall Height (mm)         | 503                    | 503    |
| Diameter (mm)               | 181                    | 181    |
| Width (mm)                  | 232                    | 232    |
| Empty Weight (kg)           | 3.76                   | 4.43   |
| Full Weight (kg)            | 9.76                   | 13.43  |
| Min. Discharge Time (Sec)   | 40                     | 83     |
| Operating Temperature Range | +5°C to +60°C          |        |
| Safe Operating Distance     | 2 Meters               |        |
| Cylinder Material           | Cold Roll Steel Sheet  |        |
| LPCB (UK)                   | ✓                      | ✓      |
| TPED (CE Mark)              | ✓                      | ✓      |
| MED (Wheel Mark)            | -                      | ✓      |

TECHNICAL SPECIFICATION



The company reserves the right to change the specification without prior notice.

LINGJACK ENGINEERING WORKS PTE LTD

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)





# COMBAT®

## PORTABLE FIRE EXTINGUISHERS

**COMBAT®** Carbon Dioxide Fire Extinguishers are used on or near electrical equipment because they leave no mess and do not cause any damage. They are effective on Class B, C & E Fires.



### CARBON DIOXIDE EXTINGUISHER

(Black Colour Band)

- Approved to BS EN3 by LPCB (UK)
- TPED certified (CE Mark)
- MED certified (Wheel Mark)
- Top Quality Fire Extinguisher (480 hours salt spray test to ISO 9227 for maximum corrosion resistance protection)
- Effective Suppression for Class B,C & E Fires
- Non-Conductive of Electricity
- High Pressure Hardware
- Signal Red (RAL 3000) Epoxy Polyester Powder Coating
- Used for clean area only
- **Optional** : Excellent corrosion resistance models for extremely harsh environment is available

### CARBON DIOXIDE EXTINGUISHER

(Black Colour Band)

| Extinguishing Model         | C-2CSEC                      | C-5CSEC |
|-----------------------------|------------------------------|---------|
| Capacity (kg)               | 2.0                          | 5.0     |
| Extinguishing Medium        | Carbon Dioxide               |         |
| Propellant Type             | Carbon Dioxide               |         |
| Fire Rating                 | 34B                          | 55B     |
| Class of Fire               | B,C & Electircal             |         |
| Test Pressure               | 250 kgf/cm <sup>2</sup>      |         |
| Max Working Pressure        | 60 kgf/cm <sup>2</sup>       |         |
| Overall Height (mm) +/- 3mm | 490                          | 650     |
| Diameter (mm)               | 114                          | 152     |
| Width (mm)                  | 158                          | 175     |
| Empty Weight (kg)           | 5.41                         | 12.07   |
| Full Weight (kg)            | 7.41                         | 17.05   |
| Min. Discharge Time (Sec)   | 9.4                          | 13.1    |
| Operating Temperature Range | 20° C to + 60° C             |         |
| Safe Operating Distance     | 2 meters                     |         |
| Cylinder Material           | Carbon Manganese Steel (CMS) |         |
| LPCB (UK)                   | ✓                            | ✓       |
| MED (Wheel Mark)            | ✓                            | ✓       |

TECHNICAL SPECIFICATION



The company reserves the right to change the specification without prior notice.

LINGJACK ENGINEERING WORKS PTE LTD

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)



# COMBAT®

## CARTRIDGE FIRE EXTINGUISHERS

**COMBAT®** Manufacture a full range of cartridge operated Fire Extinguishers for Dry Powder, Water, Foam etc. They are mainly use in isolated Area, On Board the Ship, On & Off shore facilities. The refilling can be done easily by the operators by following the instruction given.



### FULL RANGE OF CATRIDGE FIRE EXTINGUISHER

- Approved to BS EN3 by LPCB (UK)
- TPED certified (CE Mark)
- MED certified (Wheel Mark)
- Top Quality Fire Extinguisher (480 hours salt spray test to ISO 9227 for maximum corrosion resistance protection)
- Easy maintenance
- **Optional** : Excellent corrosion resistance models for extremelys harsh environment is available

| Extinguishing Model                         | C-6ACE                   | C-9ACE   | C-12ACE  | C-9WCE | C-9FCE   |
|---|--------------------------|----------|----------|--------|----------|
| Capacity                                    | 6kg                      | 9kg      | 12kg     | 9ltr   | 9ltr     |
| Extinguishing Medium                        | ABC                      | ABC      | ABC      | WATER  | AFFF     |
| Propellant Type (CO <sup>2</sup> Cartridge) | 110g                     | 150g     | 225g     | 55g    | 75g      |
| Method Pressurization                       | Cartridge Open Type      |          |          |        |          |
| Fire Rating                                 | 34A/233B                 | 43A/233B | 55A/233B | 21A    | 34A/233B |
| Class of Fire                               | A, B, C & Electrical     |          |          | A      | A&B      |
| Test Pressure                               | 22.5 kgf/cm <sup>2</sup> |          |          |        |          |
| Max Working Pressure                        | 14 kgf/cm <sup>2</sup>   |          |          |        |          |
| Overall Height (mm)                         | 525                      | 612      | 612      | 612    | 612      |
| Diameter (mm)                               | 181                      | 181      | 181      | 181    | 181      |
| Empty Weight (kg)                           | 4.8                      | 5.5      | 5.8      | 5.7    | 5.7      |
| Full Weight (kg)                            | 10.8                     | 14.5     | 17.8     | 14.7   | 14.7     |
| Min. Discharge Time (Sec)                   | 15                       | 18       | 24       | 60     | 60       |
| Cylinder Material                           | Cold Roll Steel Sheet    |          |          |        |          |
| LPCB (UK)                                   | ✓                        | ✓        | ✓        | ✓      | ✓        |
| TPED (CE Mark)                              | ✓                        | ✓        | ✓        | ✓      | ✓        |
| MED (Wheel Mark)                            | ✓                        | ✓        | ✓        | ✓      | ✓        |

TECHNICAL SPECIFICATION



The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)



# COMBAT®

## TROLLEY FIRE EXTINGUISHER

**COMBAT®** Mobile fire extinguishers are used to provide additional protection to high risk areas, e.g. On & Offshore facility, processing plant, warehouse etc. They are made of highest quality materials, tested and approved to BS EN 1866-1 LPCB (UK); certified to CE & MED Directive. These mobile extinguishers are easily handled by one person and can be filled with ABC Dry Powder, AFFF Foam, Carbon Dioxide, Halotron I depending on the usage & application.



**25kg ABC Stored Pressure**



**50ltr AFFF Foam Stored Pressure**



**50kg ABC Cartridge**



**50ltr AFFF Cartridge**



**20,30,50kg Carbon Dioxide**



The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)





# COMBAT®

## TROLLEY FIRE EXTINGUISHER

### ABC DRY POWDER TROLLEY

| Extinguishing Model               | C-25ATP   | C-50ATP | C-50ATC                                  | C-100ATC | C-150ATC |
|-----------------------------------|---|---------|--|----------|----------|
| Capacity                          | 25kg  | 50kg    | 50kg                                     | 100kg    | 150kg    |
| Extinguisher agent                | ABC 70% Dry Chemical Powder                         |         |  |          |          |
| Propellant Type                   | Stored Pressure                                     |         | CO <sup>2</sup> Gas Bottle               |          |          |
| Class of Fire                     | A,B,C & Electrical                                  |         |  |          |          |
| Working Temperature (°C)          | -20 to +60  |         |  |          |          |
| Test Pressure (Bar)               | 22.5  |         |  |          |          |
| Working Pressure (Bar)            | 14  |         |  |          |          |
| Height (mm)                       | 925   | 980     | 980                                      | 1145     | 1330     |
| Depth (mm)                        | 510   | 610     | 610                                      | 710      | 710      |
| Width (mm)                        | 445   | 545     | 545                                      | 635      | 635      |
| Approx. Empty Weight (kg)         | 24  | 39      | 44.5                                     | 68.5     | 77       |
| Approx. Full Weight (kg)          | 49  | 89      | 96                                       | 172      | 230      |
| Discharge Time (Sec)              | 32  | 60      | 70                                       | 170      | 200      |
| CO <sup>2</sup> Gas Capacity (kg) | Not Applicable                                      |         | 1.5                                      | 3.5      | 4        |
| Discharge Hose                    | 6-12 meters with controllable discharge gun         |         |  |          |          |
| Safe Operating Range (M)          | 6   |         |  |          |          |
| Operating Valve                   | Turn valve  |         | Gas Bottle Valve & Control Valve On Hose |          |          |
| Paint Finish                      | Signal Red (RAL3000) Epoxy Polyester Powder Coating |         |  |          |          |
| Approved by LPCB *                | ✓   | ✓       | ✓  | ✓        | ✓        |
| Approved by Wheel Mark *          | ✓   | ✓       | ✓  | ✓        | ✓        |
| Approved by CE Mark *             | ✓   | ✓       | ✓  | ✓        | ✓        |

TECHNICAL SPECIFICATION

### CARBON DIOXIDE & FOAM TROLLEY

| Extinguishing Model               | C-25FTP   |  | C-50FTP |  | C-50FTC                    |  | C-100FTC |  | C-135FTC |  | C-20C                             |  | C-30C |  |
|-----------------------------------|---|--|---------|--|----------------------------|--|----------|--|----------|--|-----------------------------------|--|-------|--|
| Capacity                          | 25ltr   |  | 50ltr   |  | 50ltr                      |  | 100ltr   |  | 135ltr   |  | 20kg                              |  | 30kg  |  |
| Extinguisher agent                | 1% Foam   |  |         |  |                            |  |          |  |          |  | Carbon Dioxide (CO <sup>2</sup> ) |  |       |  |
| Propellant Type                   | Stored Pressure                                     |  |         |  | CO <sup>2</sup> Gas Bottle |  |          |  |          |  | Stored Pressure                   |  |       |  |
| Class of Fire                     | A & B   |  |         |  |                            |  |          |  |          |  | B, C & Electrical                 |  |       |  |
| Working Temperature (°C)          | +5°C to +60   |  |         |  |                            |  |          |  |          |  | -20 to +60                        |  |       |  |
| Test Pressure (Bar)               | 22.5  |  |         |  |                            |  |          |  |          |  | 250                               |  |       |  |
| Working Pressure (Bar)            | 14  |  |         |  |                            |  |          |  |          |  | 60                                |  |       |  |
| Height (mm)                       | 925   |  | 980     |  | 980                        |  | 1145     |  | 1330     |  | 1470                              |  | 1470  |  |
| Depth (mm)                        | 510   |  | 610     |  | 610                        |  | 710      |  | 710      |  | 640                               |  | 640   |  |
| Width (mm)                        | 445   |  | 545     |  | 545                        |  | 635      |  | 635      |  | 590                               |  | 590   |  |
| Approx. Empty Weight (kg)         | 23  |  | 38      |  | 44                         |  | 60       |  | 68       |  | 70                                |  | 70    |  |
| Approx. Full Weight (kg)          | 48  |  | 88      |  | 94                         |  | 160      |  | 203      |  | 90                                |  | 100   |  |
| Discharge Time (Sec)              | 50  |  | 100     |  | 75                         |  | 150      |  | 175      |  | 24                                |  | 41    |  |
| CO <sup>2</sup> Gas Capacity (kg) | Not Applicable                                      |  |         |  | 1                          |  | 2        |  | 2        |  | Not Applicable                    |  |       |  |
| Discharge Hose                    | 6 meters with controllable discharge gun            |  |         |  |                            |  |          |  |          |  |                                   |  |       |  |
| Safe Operating Range (M)          | 6   |  |         |  |                            |  |          |  |          |  | 2                                 |  |       |  |
| Operating Valve                   | Turn Valve on Body                                  |  |         |  |                            |  |          |  |          |  | Turn Valve on Gas Bottle          |  |       |  |
| Paint Finish                      | Signal Red (RAL3000) Epoxy Polyester Powder Coating |  |         |  |                            |  |          |  |          |  |                                   |  |       |  |
| Approved by LPCB                  | ✓   |  | ✓       |  | ✓                          |  | ✓        |  | ✓        |  | ✓                                 |  | ✓     |  |
| Approved by Wheel Mark *          | ✓   |  | ✓       |  | ✓                          |  | ✓        |  | ✓        |  | ✓                                 |  | ✓     |  |
| Approved by CE Mark *             | ✓   |  | ✓       |  | ✓                          |  | ✓        |  | ✓        |  | ✓                                 |  | ✓     |  |

TECHNICAL SPECIFICATION

\* Pending for approval 2nd quarter 2012, please check for confirmation.



# COMBAT®

## FIRE HOSE REELS

**COMBAT®** Hose Reels are tested and approved to BS EN671-1 by LPCB (UK). They are elegantly designed and of rugged construction providing performance and reliability for fire fighting. These types of hose reels are designed for mounting on a flat wall where access is limited or even in a recess position.

➡ **STANDARD** Hose Reel

➡ **SLIM** Hose Reel

➡ **EXTRA SLIM** Hose Reel



### STANDARD HOSE REELS

Standard Hose Reel combines high performance and rugged construction, commonly use for general construction.

### SLIM FIRE HOSE REELS

Slim Hose Reel combines high performance and rugged construction with compact and elegant design. The slim enables this hose reel to be installed almost anywhere without the need for expensive associated building work.

### EXTRA SLIM FIRE HOSE REELS

With all the features of Slim Hose Reel, Extra Slim Hose Reel is designed with a larger diameter to produce much slimmer installations for similar capacities. They are ideally suited for installing in narrow areas without the need for deep recesses.

### Options available for all types of hose reels

- Swing & Fixed types
- Manual & Automatic versions
- Mild Steel & Stainless Steel material
- 19mm (3/4") & 25mm (1") dia Hoses
- 20m, 25m, 30m, 36m Hoses
- Jet/Jet Spray Brass Chrome Operated Nozzle

### AUTOMATIC FIRE HOSE REELS

An upgrade version of Fire Hose Reel that is more effective and easier to use.


The automatic valve is fully open after one revolution of the reel, ensuring immediate water flow at the nozzle.

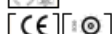
### Stainless Steel Hose Reels

It is made for harsh environments where corrossions resistance is most important. We offer full range of Hose Reel in stainless steel versions.

### HOSE REEL FLOW RATE TABLE

| Hose Size                | 1" x 30 Meter Hose                       | 3/4" x 30 Meter Hose |
|--------------------------|--|----------------------|
| Nozzle Diameter          | 6mm                                      | 6mm                  |
| Flow Rate at 6 Bar       | 46LPM                                    | 43LPM                |
| Flow Rate at 2 Bar       | 27LPM                                    | 26LPM                |
| Throw Range              | 11 Meter                                 | 11 Meter             |
| Test Pressure            | 18.0bar (kgf/cm <sup>2</sup> ) (260 PSI) |                      |
| Maximum Working Pressure | 12.0bar (kgf/cm <sup>2</sup> ) (180 PSI) |                      |

 LPCB approved to BS. EN 671-1



The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)

**COMBAT®****FIRE  
HOSE REELS ACCESSORIES****Model: C-25LSV****LOCK SHIELD VALVE**

|                          |         |
|--------------------------|---------|
| Test Pressure            | 25 bar  |
| Maximum Working Pressure | 15 bar  |
| End Connection           | 1" BSPT |
| Size                     | 25mm    |

**Model: C-25PRV****PRESSURE REDUCING VALVE**

|                               |                 |
|-------------------------------|-----------------|
| Maximum inlet Pressure        | 25bar           |
| Maximum Operating Temperature | Max 40°C        |
| Outlet Pressure               | 1.5 bar - 6 bar |
| Minimum Flow Rate             | 50 Ltr/Min      |
| Size                          | 25mm            |

**Model: DF1****PRESSURE REDUCING VALVE**

|                       |                 |
|-----------------------|-----------------|
| Inlet Pressure        | 25bar           |
| Operating Temperature | Max 40°C        |
| Outlet Pressure       | 1.5 bar - 6 bar |
| Peak Flow Rate        | 21.2 m³/h       |
| KVS Value             | 12              |
| Weight                | 4.5kgs          |
| Size                  | 25mm & 50mm     |

**Size of Fire  
Hose Reel**

| Model    | Description                             | Size                  | Carton Box                                | LPCB | MED |
|----------|---|-----------------------|---|------|-----|
|          |   | Diameter x Depth (mm) | (Length (mm) x Weight (mm) x Height (mm)) |      |     |
| HR-1SW   | Manual Swing / Mild Steel               | ø 525 x 305           | 570 x 315 x 530                           | ✓    | ✓   |
| HR-1SSW  | Manual Slim Swing / Mild Steel          | ø 585 x 245           | 570 x 315 x 530                           | ✓    | ✓   |
| HR-1SSWS | Manual Slim Swing / Stainless Steel     | ø 585 x 245           | 570 x 315 x 530                           | ✓    | ✓   |
| AHR-1SW  | Automatic Swing / Mild Steel            | ø 525 x 305           | 570 x 315 x 530                           | ✓    | ✓   |
| HR-1MSF  | Manual Fixed Super Slim / Mild Steel    | ø 700 x 185           | 700 x 188 x 700                           | ✓    | ✓   |
| HR-1ASF  | Automatic Fixed Super Slim / Mild Steel | ø 700 x 185           | 700 x 188 x 700                           | ✓    | ✓   |
| HR-1AS   | Automatic Swing Slim / Mild Steel       | ø 585 x 210           | 605 x 235 x 605                           | ✓    | ✓   |
| HR-1MS   | Manual Swing Slim / Mild Steel          | ø 585 x 210           | 605 x 235 x 605                           | ✓    | ✓   |
| HR-1MF   | Manual Fixed Slim / Mild Steel          | ø 585 x 210           | 605 x 235 x 605                           | ✓    | ✓   |
| HR-1AF   | Automatic Fixed Slim / Mild Steel       | ø 585 x 210           | 605 x 235 x 605                           | ✓    | ✓   |
| HR-19AF  | Automatic Fixed Swing Slim / Mild Steel | ø 525 x 210           | 605 x 235 x 605                           | ✓    | ✓   |

**Standard  
Material**

|                    |  |
|--------------------|--|
| Drum Plate         | Mild Steel Epoxy Powder Coated<br>Signal Red RAL3000 (Option 316L) |
| Center Hub         | 1.5mm Steel Epoxy Powder Coated (Option SS316L)                    |
| Arm Set (Waterway) | Aluminium Alloy (Optional Gunmetal LG2)                            |
| Inlet Pipe         | Internal Epoxy Coated Steel Pipe (Option SS316L)                   |

**Hose To  
En694**

| Hose Size              | ø 1"                       | ø 3/4"                     |
|------------------------|----------------------------|----------------------------|
| Construction           | Lining Reinforcement Cover | Lining Reinforcement Cover |
| ID (mm)                | 25                         | 19                         |
| OD (mm)                | 33.5                       | 26                         |
| Max. Working Pressure  | 12bar (kgf/cm²)            | 12bar (kgf/cm²)            |
| Minimum Burst Pressure | 42bar (kgf/cm²)            | 42bar (kgf/cm²)            |

The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)





# COMBAT®

## FIRE HOSES

**COMBAT®** Fire Hose is a covered fire hose designed to meet the requirements of industries which demand a high performance hose at an economical price.

**Fire Hose (Type 3)** approved to BS6391: Type 3. and certified to MED Directive (wheel mark) T3 hose is constructed from low density synthetic rubber with a textile reinforcement locked in. The thick outer cover gives extra protection against impact and abrasion resistance together with protection against oils and chemicals. They can be supplied with Aluminium Alloy coupling or Gunmetal BS1400 LG2 coupling as per your requirements.



**Model: T3**



### FEATURE

- Oil, Chemical Resistance
- Ozone Resistance
- Abrasion Resistance
- Highly Kink Resistance
- No Drying required
- Easily Repaired
- Light Weight

| Inner Dia/Inch | Inner Dia (mm) | Weight (kg) | Burst PR kgf/cm <sup>2</sup> /PSI | Work PR kgf/cm <sup>2</sup> /PSI | Test PR kgf/cm <sup>2</sup> /PSI |
|----------------|----------------|-------------|-----------------------------------|----------------------------------|----------------------------------|
| T3 1 1/2"      | 38             | 10.4        | 50 / 725                          | 17 / 250                         | 25 / 360                         |
| T3 2 1/2"      | 64             | 16.6        | 50 / 725                          | 17 / 250                         | 25 / 360                         |

### Fire Hose (Type 1)

Conforms to BS6391: Type 1. the hose weave jacket is made of polyester staple and polyester filaments. The internal lining is made of natural rubber. option. Fire Hose to EN14540 with MED Approval.



### FEATURE

- Flexible
- Abrasion Resistance
- Aging Resistance
- Good Quality
- Long Life

| Inner Dia/Inch | Inner Dia (mm) | Weight (kg) | Burst PR kgf/cm <sup>2</sup> /PSI | Work PR kgf/cm <sup>2</sup> /PSI | Test PR kgf/cm <sup>2</sup> /PSI |
|----------------|----------------|-------------|-----------------------------------|----------------------------------|----------------------------------|
| T1 1 1/2"      | 38             | 7.5         | 40/580                            | 12/174                           | 18/261                           |
| T1 2 1/2"      | 64             | 13.0        | 40/580                            | 12/174                           | 18/261                           |



**Model: 25 CFH**

## Fire Hose Accessories

**COMBAT®** 2 1/2" Jet Nozzle with control valve are designed and tested to meet the minimum flow requirement of a 2 1/2" Fire Hose.



**Model: C-65AJN**

### Technical Data

2 1/2" Jet Nozzle (Model: C-65AJN)

|                  |                                  |
|------------------|----------------------------------|
| Flow Rate        | 215 L/min @ 5kgf/cm <sup>2</sup> |
| Inlet            | 2 1/2" Instantaneous Coupling    |
| Material         | Aluminium Alloy                  |
| Test Pressure    | 18 Bars                          |
| Working Pressure | 12 Bars                          |

### Technical Data

2 1/2" Jet / Spray Nozzle (Model: C-65BJSN)

|                  |                               |
|------------------|-------------------------------|
| Flow Rate        | 90 GPM @ 5kgf/cm <sup>2</sup> |
| Inlet            | 2 1/2" Instantaneous Coupling |
| Material         | Brass                         |
| Test Pressure    | 18 Bars                       |
| Working Pressure | 12 Bars                       |



**Model: C-65BJSN**

The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)





# COMBAT®

## HYDRANT VALVES

**COMBAT®** Hydrant Valve is Produced and approved to BS5041 Part 1 & Part 2 by LPCB (UK). Standard material for the hydrant valves body is gunmetal BS1400 LG2/CC491K. Cast iron hand wheel & high tensile brass stem. Alternatively we can also produce valve in aluminum bronze materials for marine & navy application.

**OPTIONAL** : Third Party Endorsement by ABS

**APPLICATION** : Dry & Wet Riser System Hydrant Rising Mains • Hydrant Rising Mains • On & Offshore Applications

### FEATURES

Gunmetal valve, Cast Iron Hand Wheel.

- **INLET**
  - : Inlet Flanged 65mm BS4504 PN16
  - : Inlet Flanged 2.5" ANSI #150
  - : Inlet Flanged 65mm BS Table D
  - : Inlet Screwed 2.5" BSPT male
  - : Can be flanged or screwed to customer's requirements of international standards.
- **OUTLET**
  - : Instantaneous female 65mm c/w plastic blank cap & chain (Gunmetal blank caps are optional).



Oblique Pattern



Right Angle Pattern



Horizontal Pattern



Bid Nose Pattern

### SPECIFICATION

|  |  |
|--|--|
| Max. Working Pressure                  | 15 kgf/cm <sup>2</sup> (220 PSI)                     |
| Seat Test                              | 16.2 kgf/cm <sup>2</sup> (240 PSI)                   |
| Body Test                              | 22.5 kgf/cm <sup>2</sup> (330 PSI)                   |
| Body Material                          | Gunmetal BS1400 LG2 /CC491K                          |
| Friction Loss                          | 0.7 kgf/cm <sup>2</sup> at flow rate of 10.0 ltr/sec |
| * FRICTION LOSS (Dry Riser Gate Valve) | 0.2 kgf/cm <sup>2</sup> at flow rate of 10.0 ltr/sec |
| Flow Rate                              | 10.0 ltr/sec at 4.7 kgf/cm <sup>2</sup>              |
| Finishing                              | Red Colour :Wet Rising Main                          |
|  | Yellow Colour :Dry Rising Main                       |



All model : LPCB approved to BS 5041 Part 1 & 2



Dry Riser Gate Valve

The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)



# COMBAT®

## HIGH PRESSURE REDUCING VALVES

**COMBAT®** The DH6i fire hydrant pressure reducing valve is the latest evolution of the 'DH' range of hydrant reducing valves. As with all the predecessors the valve has been fully designed and tested in accordance with BS5041. This new design has been developed under our approved ISO 9001 design system. The valve is suitable for all fire fighting applications where pressure reduction is required; a balanced inlet design ensures a constant outlet pressure, regardless of any fluctuations in the inlet pressure.

These ranges of valves are manufactured in a variety of materials, which include Gunmetal, Stainless Steel, Duplex Stainless Steel and Titanium. The valve has a flanged inlet to customer's requirements, and a quick release instantaneous coupling outlet. The inlet pressure is 20.0 Barg maximum with an option of up to 30 Barg and reduced pressure range of 3.5 Barg to 8.0 Barg.

The reduced pressure can be adjusted via the adjusting cap; this design has several advantages over conventional adjusting screw designs. These include the fact that no threads are exposed, making it virtually impossible to damage them. It is also more robust and able to cope with accidental knocks. The valve is locked in position with a locking screw. This prevents the adjusting cap from moving, maintaining a specific reduced pressure. When the valve is in the closed position it has no water pocket. This means the valve is not affected by freezing, making it ideal for use in sub zero conditions.



Model: DH6i-SCREW


Model DH6i - FLANGE

MANUFACTURED TO BS5041 PART 1  
Produce Under License from Broady Flow Control (UK)



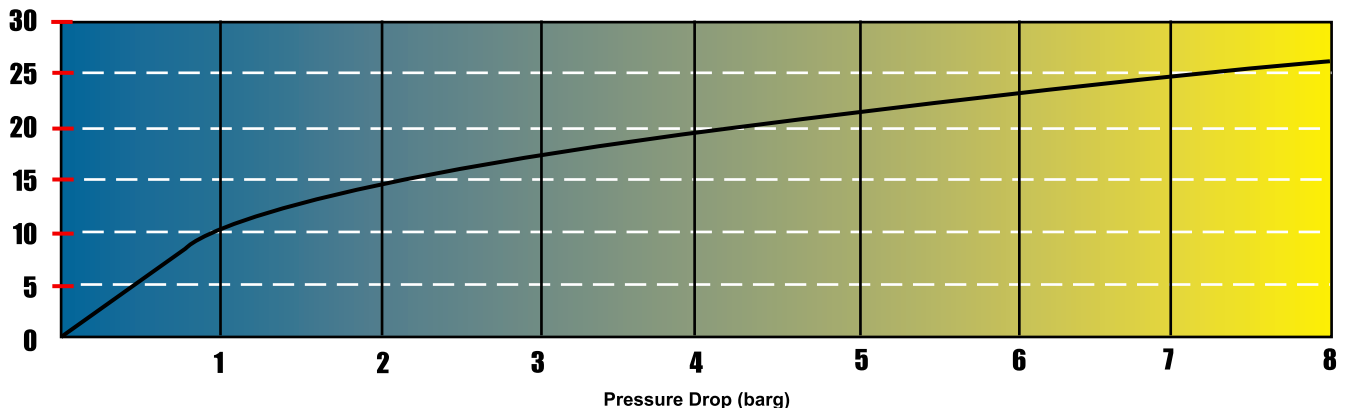
### TECHNICAL DATA

| Specification           | Standard Version                         | High Pressure Version   |
|-------------------------|--|-------------------------|
| Outlet                  | 2 1/2" Instantaneous female / BSP Thread |                         |
| Inlet                   | 2 1/2" BSPT male / Flanges               |                         |
| Max. Working Pressure   | 20 bars                                  | (optional 30 bars)      |
| Seat Test               | 22 bars                                  | (optional 35 bars)      |
| Body Test               | 30 bars                                  | (optional 45 bars)      |
| Body Material           | Gunmetal BS1400 LG2 / CC491K             |                         |
| Inlet Pressure          | 5 to 20 bar                              | (optional 5 to 30 bars) |
| Outlet Pressure Static  | 3.5 bars to 8.0 bars (adjustable)        |                         |
| Pre-Set Outlet Pressure | As per customer requirement              |                         |

 LPCB approved to BS 5041 Part 1

Flow (litre/second)

### FLOW FOR DH6i



The company reserves the right to change the specification without prior notice.

LINGJACK ENGINEERING WORKS PTE LTD

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)



# COMBAT®

## BREECHING INLETS AND AIR RELEASE VALVE

**COMBAT®** Breaching Inlets are tested & approved to BS5041 Part 3 and are designed to be used in either the horizontal or vertical position. The body is in Ductile iron with gunmetal components. Breaching inlets can be supplied with single, twin or quadruple inlets.



**Model: DR 095**



### 2 WAY BREECHING INLET

|           |  |
|-----------|--|
| Body      | Ductile Iron Flanged to Requirement  |
| Inlet     | Gunmetal Instantaneous Male to BS336 c/w Non Return Valves, Plastic Blanks Caps and Chains |
| Outlet    | 100mm PN16 / 4" ANSI # 150 RF / Table D / BSPT Male  |
| Drain     | 25mm Gate Valves with Plastic Cap  |
| Weight    | 16KG   |
| Finishing | Red Colour : Wet Rising Main<br>Yellow Colour : Dry Rising Main                            |



LPCB approved to BS 5041 Part 3



**Model: WR 115**



### 4 WAY BREECHING INLET

|           |  |
|-----------|--|
| Body      | Ductile Iron Flanged to Requirement  |
| Inlet     | Gunmetal Instantaneous Male to BS336 c/w Non Return Valves, Plastic Blanks Caps and Chains |
| Outlet    | 150mm PN16 / 6" ANSI # 150 RF  |
| Drain     | 25mm Gate Valve with Plastic Cap   |
| Weight    | 36KG   |
| Finishing | Red Colour : Wet Rising Main<br>Yellow Colour : Dry Rising Main                            |



LPCB approved to BS 5041 Part 3

### TECHNICAL SPEC FOR BREECHING INLET

|                      |                           |
|----------------------|---------------------------|
| Working Pressure     | 15.0 bars                 |
| Test Pressure        | 22.5 bars                 |
| Optional Requirement | Gunmetal Female Blank Cap |



LPCB approved to BS 5041 Part 3



### AUTOMATIC AIR RELEASE VALVE

|                  |                                       |
|------------------|---------------------------------------|
| Inlet            | Screwed 19mm BSP & 25mm BSP           |
| Working Pressure | Max 220PSI                            |
| Testing Pressure | 300PSI (25kgf/cm <sup>2</sup> @ 5min) |
| Material         | Brass                                 |

LPCB tested

The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)



# COMBAT®

## RANGE OF CABINETS

**COMBAT®** Range of cabinets is available in high quality Mild Steel, Stainless Steel (SS304 & SS316), Fibre Glass material. Cabinets of unique sizes and design can be custom made accordingly to your specific requirement. Different types of locking mechanism are also available.



### TECHNICAL SPECIFICATIONS

| Types                          | Size (mm)<br>(WxHxD) | Weight<br>(KG) | Material<br>Thickness | Option      |
|--------------------------------|----------------------|----------------|-----------------------|-------------|
| Vertical<br>Breeching<br>inlet | 595 x 395 x 295      | 15.1           | 1.2mm                 | Spring Lock |



### TECHNICAL SPECIFICATIONS

| Types                         | Size (mm)<br>(WxHxD) | Weight<br>(KG) | Material<br>Thickness | Option             |
|-------------------------------|----------------------|----------------|-----------------------|--------------------|
| Vertical<br>Double<br>Cabinet | 1100 x 800 x 350     | 44             | 1.5mm                 | Plastic<br>Camlock |



### TECHNICAL SPECIFICATIONS

| Types                           | Size (mm)<br>(WxHxD) | Weight<br>(KG) | Material<br>Thickness | Option               |
|---------------------------------|----------------------|----------------|-----------------------|----------------------|
| Horizontal<br>Double<br>Cabinet | 800 x 1500 x 300     | 44             | 1.2mm                 | Single Cup<br>Handle |

The company reserves the right to change the specification without prior notice.

**LINGJACK ENGINEERING WORKS PTE LTD**

Contact 65 6759 4163 • Facsimile 65 6758 7513 • Website [www.combat.com.sg](http://www.combat.com.sg) • Email [combat@lingjack.com](mailto:combat@lingjack.com)