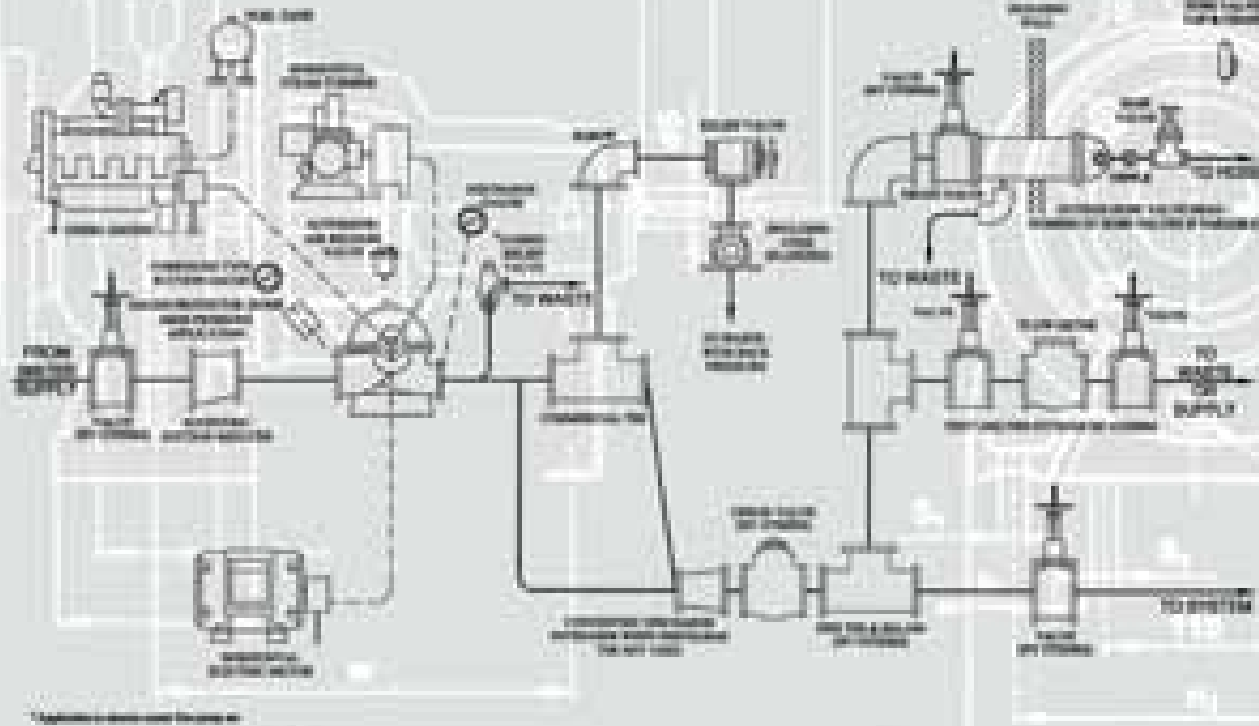
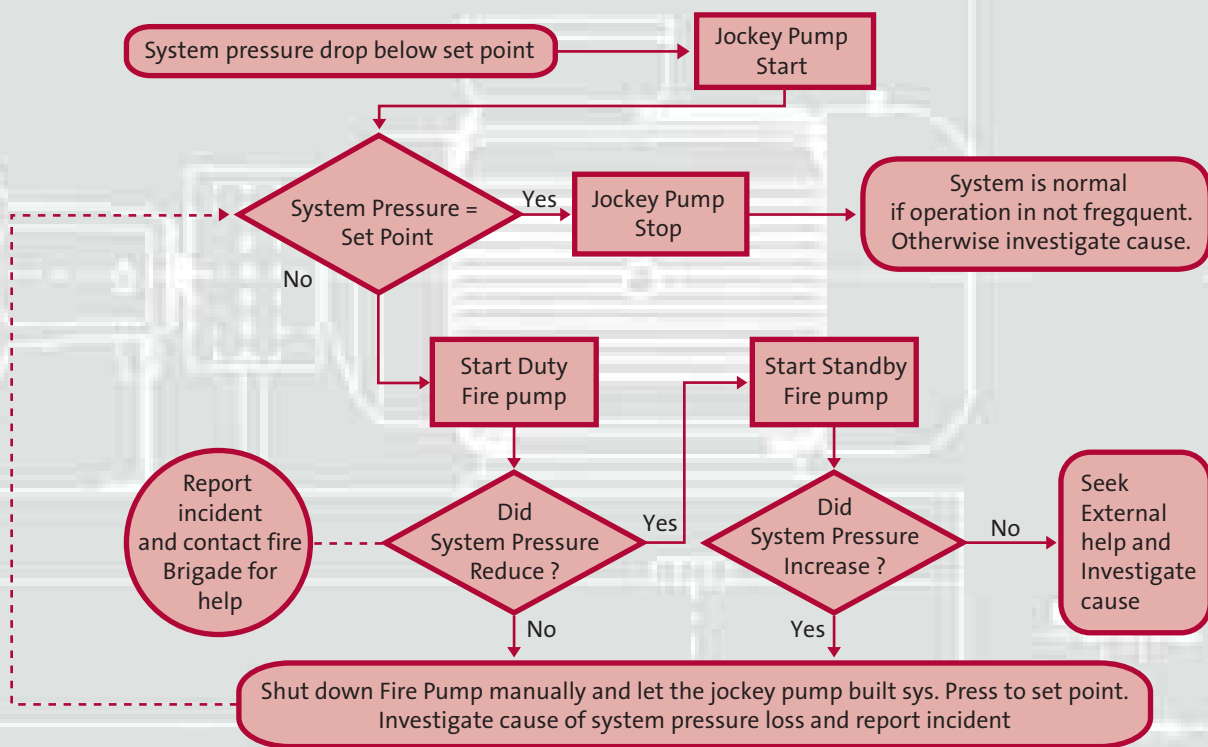


FIRE FIGHTING PUMP SETS

Accessories



Typical Fire Pump Operation



Putting out fire comes easy with Grundfos complete fire pump system

Grundfos, one of the world's leading pump manufacturers, is introducing the largest range of quality pumping systems for fire-fighting. Using the finest quality and technology. Grundfos fire-fighting pumping systems are reliable, durable and cost efficient.

As a total solution provider, we provide customers with complete fire pump sets combining pumps, drivers, controllers and accessories. Our robustly-built pump types included end-suction pumps and horizontal split casing pumps - compatible to both electric and diesel driven fire pumps - are compliant to international fire-fighting codes and standards like LPC, NFPA, CP-52, AS2941. What's more, we provide customers with prompt after sales service.

Always with our customers in mind, we offer them absolute flexibility in terms of customized approach in products and services.

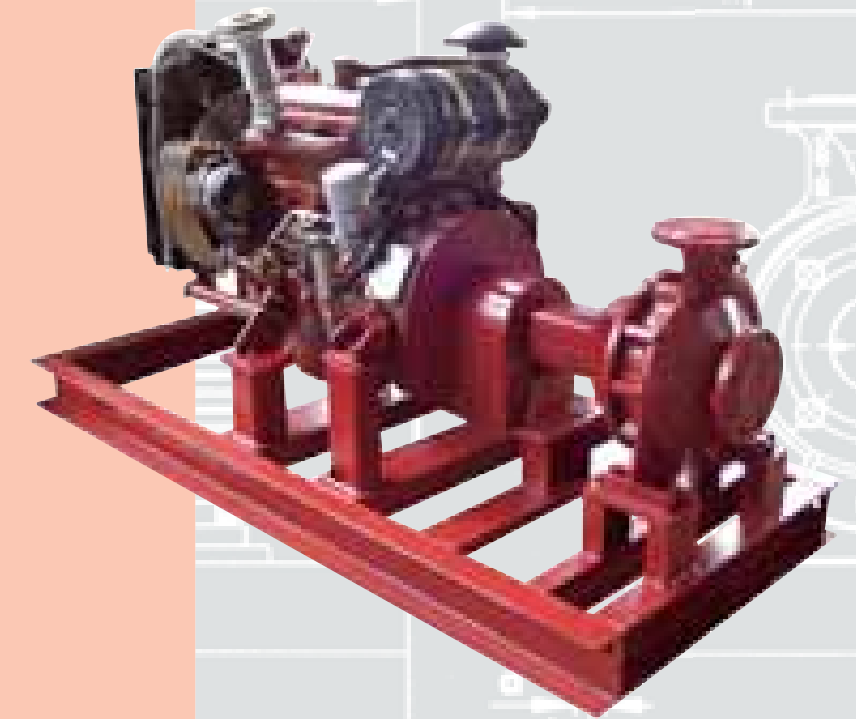


Features:

- Relay logic controller
- System pressure switch
- Manual start and stop push buttons
- Auto-Manual-Off selection switch
- Audible and visual alarms
- Voltmeter and ammeter
- Alarm reset push button
- Contacts for remote indications
- Two independent fully automatic constant voltage battery charger

Diesel Engine Driven Pump Sets

Grundfos offer a range of diesel engine driven fire pump sets offering a compact modular design which include integrated control panel, fuel tank and dual battery sets. Operating in 12 V / 24 V DC electric current starting system, the engine can be cooled by air, radiator, heat exchanger.

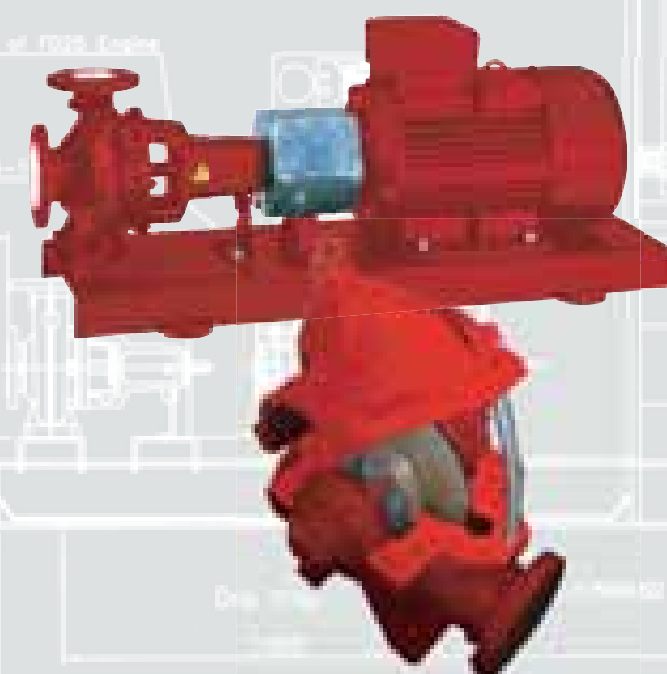


Electric Driven Pump Sets

Our versatile range of electric meter fire pump controller are suitable for various types of operations 50Hz or 60Hz, low voltage depending on customers' requirements. These controllers are supplied with Nema 2 enclosure, either wall-mounted or free standing. Starting methods include DOL (Direct on Line or accros the line) starting, Star-delta starting, part winding starting and auto-transformer starting or soft-starting

The pumps provide a long coupled option, complete with back pull out arrangement and a horizontal split case with double-suction design. Available with bronze impeller and cast iron casing as a standard. All pumps are dynamically balanced according to ISO 1940 class 6.3 and impellers are hydraulically balanced.

- Features :**
- Cabinet lock
 - Mechanical emergency switch with latch (NFPA only)
 - Auto manual off switch
 - System pressure switch
 - Minimum run timer
 - Ammeter
 - Manual start and stop push button
 - Status indicating lamps
 - Contact for remote indications



Jockey Pumps

Grundfos CR range pumps provide a quiet, compact in line multistage unit which acts to defer the action of the main electric or diesel set in the even of a small pressure loss or leakage from the sprinkler system.

The CR has always been renowned for its high reliability. It has now been leading the way for more than 25 years.

The capacity of the pump is such that in the even of splinker head being activated the system pressure drop would activate one of the main fire pumps

- Features :**
- Improved catridge shaft seal
 - Dry running sensor
 - High performance hydraulics
 - Durable bearing
 - Superior reliability
 - Unmatched cost of ownership
 - The most extensive range on the market
 - A broad range of connection options



GRUNDFOS FIREPUMPS - NFPA 20 STD SELECTION CHART

GRUNDFOS FIRE PUMPS - LPC STD SELECTION CHART

| Fire Duty Usgpm | Range Psig | Range (Meter) | Pump Model | Pump Item No. | Diesel Engine KW/rpm | Motor KW/rpm |
|--------------------|---------------|---------------|------------|---------------|-------------------------|-----------------|
| 100 Usgpm | 54 - 56.8 | 37 - 39 | 40 - 200 | K231A000 | 6.1/2900 | 5.55/2900 |
| | 59.8 - 68.2 | 41 - 47 | | | 7.4/2900 | 7.5/2900 |
| | 68.2 - 80.2 | 47 - 55 | | | 10.98/2900 | 11/2900 |
| | 85.2 - 93.7 | 59 - 65 | 40 - 250 | K241A000 | 10.98/2900 | 11/2900 |
| | 93.8 - 119.9 | 65 - 83 | | | 15.0/2900 | 15/2900 |
| 150 Usgpm | 118 - 130.6 | 81 - 90 | | | 18.1/2900 | 18.5/2900 |
| | 69.9 - 80.9 | 48 - 56 | 40 - 200 | K451A000 | 10.98/2900 | 11/2900 |
| | 59.6 - 63.9 | 41 - 44 | 50 - 200 | K331A000 | 10.98/2900 | 11/2900 |
| | 64 - 80.9 | 44 - 56 | | | 15.0/2900 | 15/2900 |
| | 81 - 89.5 | 56 - 62 | | | 18.1/2900 | 18.5/2900 |
| 200 Usgpm | 90.9 - 96.6 | 63 - 67 | 50 - 250 | K341A000 | 15.0/2900 | 15/2900 |
| | 96.7 - 103.7 | 67 - 72 | | | 18.1/2900 | 18.5/2900 |
| | 103.8 - 119.3 | 72 - 82 | | | 23.4/2900 | 22/2900 |
| | 119.4 - 129.2 | 82 - 89 | | | 53.9/2900 | 30/2900 |
| | 56.8 - 62.5 | 39 - 43 | 50 - 200 | K221A000 | 10.98/2900 | 11/2900 |
| 250 Usgpm | 62.6 - 78.1 | 43 - 54 | | | 15.0/2900 | 15/2900 |
| | 78.2 - 88 | 54 - 61 | | | 18.1/2900 | 18.5/2900 |
| | 86.6 - 90.9 | 60 - 63 | 50 - 250 | K341A000 | 15.0/2900 | 15/2900 |
| | 91 - 99.4 | 63 - 69 | | | 18.1/2900 | 18.5/2900 |
| | 99.5 - 113.6 | 69 - 78 | | | 23.4/2900 | 22/2900 |
| 300 Usgpm | 113.7 - 127.8 | 78 - 88 | | | 53.9/2900 | 30/2900 |
| | 62.5 - 66.7 | 43 - 46 | 65 - 200 | K431A000 | 18.1/2900 | 18.5/2900 |
| | 66.8 - 75.3 | 46 - 52 | | | 23.4/2900 | 22/2900 |
| | 75.4 - 80.9 | 52 - 56 | | | 53.9/2900 | 30/2900 |
| | 86.6 - 98 | 60 - 68 | 65 - 250 | K441A000 | 53.9/2900 | 18.5/2900 |
| 400 Usgpm | 98.1 - 115 | 68 - 79 | | | 53.9/2900 | 22/2900 |
| | 115.1 - 122.1 | 79 - 84 | | | 53.9/2900 | 30/2900 |
| | 123.5 - 143.4 | 85 - 99 | 65 - 315 | K451A000 | 53.9/2900 | 45/2900 |
| | 143.5 - 164.7 | 99 - 114 | | | 62.1/2900 | 55/2900 |
| | 164.8 - 193.1 | 114 - 133 | | | 82.4/2900 | 75/2900 |
| 500 Usgpm | 193.2 - 204.5 | 133 - 141 | | | 94.5/2900 | 90/2900 |
| | 59.6 - 65.3 | 41 - 45 | 65 - 200 | K451A000 | 18.1/2900 | 18.5/2900 |
| | 65.4 - 73.8 | 45 - 51 | | | 23.4/2900 | 22/2900 |
| | 73.9 - 80.9 | 51 - 56 | | | 53.9/2900 | 30/2900 |
| | 83.8 - 96.6 | 58 - 67 | 65 - 250 | K431A000 | 53.9/2900 | 30/2900 |
| 750 Usgpm | 96.7 - 113.6 | 67 - 78 | | | 53.9/2900 | 37/2900 |
| | 113.7 - 120.7 | 78 - 83 | | | 53.9/2900 | 45/2900 |
| | 129.2 - 142 | 89 - 98 | 65 - 315 | K451A000 | 53.9/2900 | 45/2900 |
| | 142.1 - 159 | 98 - 110 | | | 62.1/2900 | 55/2900 |
| | 159.1 - 188.9 | 110 - 130 | | | 82.4/2900 | 75/2900 |
| 1000 Usgpm | 189 - 203.1 | 130 - 140 | | | 94.5/2900 | 90/2900 |
| | 53.9 - 62.5 | 37 - 43 | 65 - 200 | K431A000 | 18.1/2900 | 18.5/2900 |
| | 62.6 - 69.6 | 43 - 48 | | | 23.4/2900 | 22/2900 |
| | 69.7 - 79.5 | 48 - 55 | | | 53.9/2900 | 30/2900 |
| | 120.7 - 130.6 | 83 - 90 | 65 - 315 | K451A000 | 53.9/2900 | 45/2900 |
| 1500 Usgpm | 130.7 - 156.2 | 90 - 108 | | | 62.1/2900 | 55/2900 |
| | 156.3 - 184.6 | 108 - 127 | | | 82.4/2900 | 75/2900 |
| | 184.7 - 198.8 | 127 - 137 | | | 94.5/2900 | 90/2900 |
| | 56.8 - 69.5 | 39 - 48 | 80 - 200 | K531A000 | 53.9/2900 | 30/2900 |
| | 69.6 - 79.5 | 48 - 55 | | | 53.9/2900 | 37/2900 |
| 2000 Usgpm | 90.9 - 95.1 | 63 - 66 | 80 - 250 | K451A000 | 53.9/2900 | 37/2900 |
| | 95.2 - 106.5 | 66 - 73 | | | 53.9/2900 | 45/2900 |
| | 106.6 - 120.7 | 74 - 83 | | | 62.1/2900 | 55/2900 |
| | 120.8 - 123.5 | 83 - 85 | | | 82.4/2900 | 75/2900 |
| | 166.1 - 181.8 | 115 - 125 | 65 - 315 | K451A000 | 82.4/2900 | 75/2900 |
| 3000 Usgpm | 181.9 - 190.3 | 125 - 131 | | | 94.5/2900 | 90/2900 |
| | 51.1 - 59.6 | 35 - 41 | 100 - 200 | K631A000 | 53.9/2900 | 37/2900 |
| | 59.7 - 68.2 | 41 - 47 | | | 53.9/2900 | 45/2900 |
| | 68.3 - 79.5 | 47 - 55 | | | 62.1/2900 | 55/2900 |
| | 95.1 - 10.8 | 66 - 7 | 100 - 250 | K641A000 | 82.4/2900 | 75/2900 |
| 4000 Usgpm | 110.9 - 124.9 | 76 - 86 | | | 94.5/2900 | 90/2900 |
| | 124.9 - 142 | 86 - 98 | 100 - 315 | K451A000 | 94.4/2900 | 90/2900 |
| | 142.1 - 153.4 | 98 - 106 | | | 130/2900 | 110/2900 |
| | 153.5 - 176.1 | 106 - 121 | | | 130/2900 | 132/2900 |
| | 176.2 - 193.1 | 122 - 133 | | | 170/2900 | 150/2900 |
| 193.2 - 210.2 | 133 - 145 | | | 170/2900 | 185/2900 | |

| Fire Duty | Sprinkler Height (m) | Nominal Rating | | Minimum Characteristic | | Electric Motor | | Diesel Engine KW/Rpm |
|--------------------|-------------------------|----------------|------------|------------------------|------------|----------------|---------------|-------------------------|
| | | Pressure (kPa) | Flow (L/m) | Pressure (kPa) | Flow (L/m) | Model | KW/Rpm | |
| Extra Light 15m | 15 | 180 | 680 | 320 | 400 | 32 - 200 | 5.5kw / IP55 | 5.6 / 3000 |
| Extra Light 30m | 30 | 260 | 800 | 370 | 225 | | | |
| | | | | 470 | 400 | 40 - 250 | 11kw / IP55 | 8.2 / 3000 |
| Extra Light 45m | 45 | 340 | 900 | 520 | 225 | | | |
| | | | | 620 | 400 | 40 - 250 | 15kw / IP55 | 11.4 / 3000 |
| OH 1 : 15m | 15 | 120 | 900 | 220 | 540 | 50 - 160 | 5.5kw / IP55 | 5.6 / 3000 |
| | | | | 250 | 375 | | | |
| OH 1 : 30m | 30 | 190 | 1150 | 370 | 540 | 50 - 200 | 11kw / IP55 | 9.2 / 3000 |
| | | | | 400 | 375 | | | |
| OH 1 : 45m | 45 | 260 | 1340 | 520 | 540 | 50 - 200 | 15kw / IP55 | 15.5 / 3000 |
| | | | | 550 | 375 | | | |
| OH 1 : 60m | 60 | 330 | 1500 | 670 | 540 | 65 - 250 | 30kw / IP55 | 18.6 / 3000 |
| | | | | 700 | 375 | | | |
| OH 1 : 75m | 75 | 400 | 1650 | 820 | 540 | 65 - 250 | 37kw / IP55 | 63.0 / 2940 |
| | | | | 850 | 375 | | | |
| OH 2 : 15m | 15 | 130 | 1700 | 250 | 100 | 65 - 160 | 11kw / IP55 | 11.4 / 3000 |
| | | | | 290 | 750 | | | |
| OH 2 : 30m | 30 | 200 | 2050 | 400 | 1000 | 65 - 200 | 18.5kw / IP55 | 18.6 / 3000 |
| | | | | 440 | 725 | | | |
| OH 2 : 45m | 45 | 260 | 2350 | 550 | 1000 | 80 - 200 | 30kw / IP55 | 63.0 / 2940 |
| | | | | 590 | 725 | | | |
| OH 2 : 60m | 60 | 320 | 2650 | 700 | 1000 | 80 - 250 | 45kw / IP55 | 63.0 / 2940 |
| | | | | 740 | 725 | | | |
| OH 2 : 75m | 75 | 380 | 2900 | 850 | 1000 | 100 - 250 | 75kw / IP55 | 63.0 / 2940 |
| | | | | 890 | 725 | | | |
| OH 3 : 15m | 15 | 140 | 2250 | 290 | 1350 | 65 - 160 | 15kw / IP55 | 15.5 / 3000 |
| | | | | 320 | 1100 | | | |
| OH 3 : 30m | 30 | 200 | 2700 | 440 | 1350 | 65 - 200 | 30kw / IP55 | 63.0 / 2940 |
| | | | | 470 | 1100 | | | |
| OH 3 : 45m | 45 | 250 | 3100 | 590 | 1350 | 80 - 250 | 37kw / IP55 | 63.0 / 2940 |
| | | | | 620 | 1100 | | | |
| OH 3 : 60m | 60 | 320 | 3400 | 740 | 1350 | 80 - 250 | 55kw / IP55 | 63.0 / 2940 |
| | | | | 770 | 1100 | | | |
| OH 3 : 75m | 75 | 380 | 3700 | 890 | 1350 | 100 - 315 | 90kw / IP55 | 96.0 / 2940 |
| | | | | 920 | 1100 | | | |
| OH 3 special : 15m | 15 | 190 | 2650 | 300 | 2100 | 80 - 160 | 22kw / IP55 | 18.6 / 3000 |
| | | | | 350 | 1800 | | | |
| OH 3 special : 30m | 30 | 240 | 6050 | 450 | 2100 | 80 - 200 | 37kw / IP55 | 63.0 / 2940 |
| | | | | 500 | 1800 | | | |
| OH 3 special : 45m | 45 | 310 | 3400 | 600 | 2100 | 80 - 250 | 45kw / IP55 | 63.0 / 2940 |
| | | | | 650 | 1800 | | | |
| OH 3 special : 60m | 60 | 370 | 3750 | 750 | 2100 | 100 - 250 | 75kw / IP55 | 96.0 / 2940 |
| | | | | 800 | 1800 | | | |
| OH 3 special : 75m | 75 | 430 | 4050 | 900 | 2100 | 100 - 315 | 90kw / IP55 | 96.0 / 2940 |
| | | | | 950 | 1800 | | | |

Notes : Available with options of IVECO, CATERPILLAR, CUMMINS, RUGGERINI, HATZ and other standard fire pump engines. Also UL/FM approved engines.