



EPO PATENT APPLICATION EP22151377.3

air handling intelligence



open in  
PartShelf24

# Fire Damper CX-5 +SMN

in libraries of  
**Fluid Desk**  
Building Information Modeling

EI 120 (v<sub>e</sub>-h<sub>o</sub>-i↔o) S

EN 13501-3+A1:2010  
EN 15650:2010

Certificate of Constancy  
of Performance

CE 1488-CPD-0280/W

## FUNCTION

The CX-5 + SMN fire dampers are designed for buildings where in the event of a fire the affected zone should be isolated from the other zones, by among others, closing fire dampers, while the ventilation and air conditioning systems should operate normally in the other non-affected zones of the building. The performance criteria are satisfied in case of fire from inside to outside as well as outside to inside or both, respectively.

## APPLICATION

The CX-5 + SMN fire dampers are designed for dry on partition installation with only 4 anchors. Once the blade of the damper has been closed, the fire-affected zone is isolated - fire resistance of partition is maintained what prevents the spread of fire into the adjoining compartments. Fire damper closes as a result of rise in temperature in ventilation duct above 72°C or 95°C and activation of fuse or by control signal transmitted from the fire alarm control panel if damper is equipped with remote control mechanism.

## DESCRIPTION

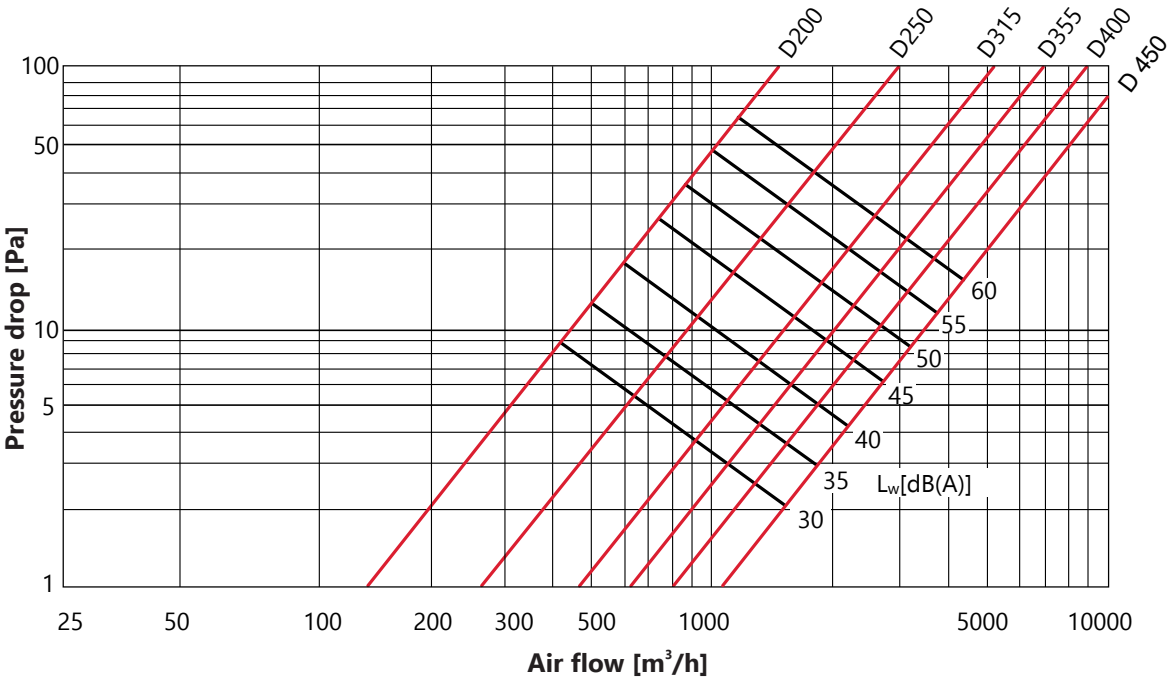
The CX-5 consists of:

- circular casing made of galvanized steel sheet alternatively stainless or acid proof steel,
- round insulating collar made of fire resistant board with installation brackets to be folded before assembly,
- movable damper blade made of fire resistant board,
- combination of smoke and fire proof seals of damper blade,
- control mechanism and optional EMS module enabling fire damper assessment with the TZ tester,
- optional access door provided with a gasket and a cover with quick clamp lever.



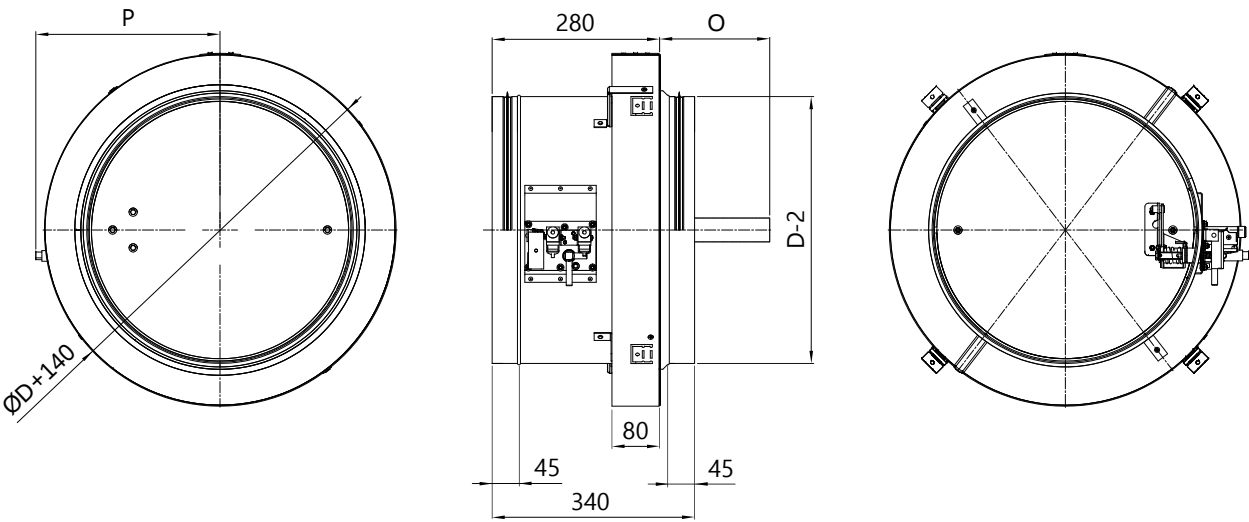
**SELECTION & DIMENSION**

**HYDRAULIC AND ACOUSTIC CHARACTERISTICS**



**DIMENSIONS**

**CX-5 + SMN fuse-only damper**



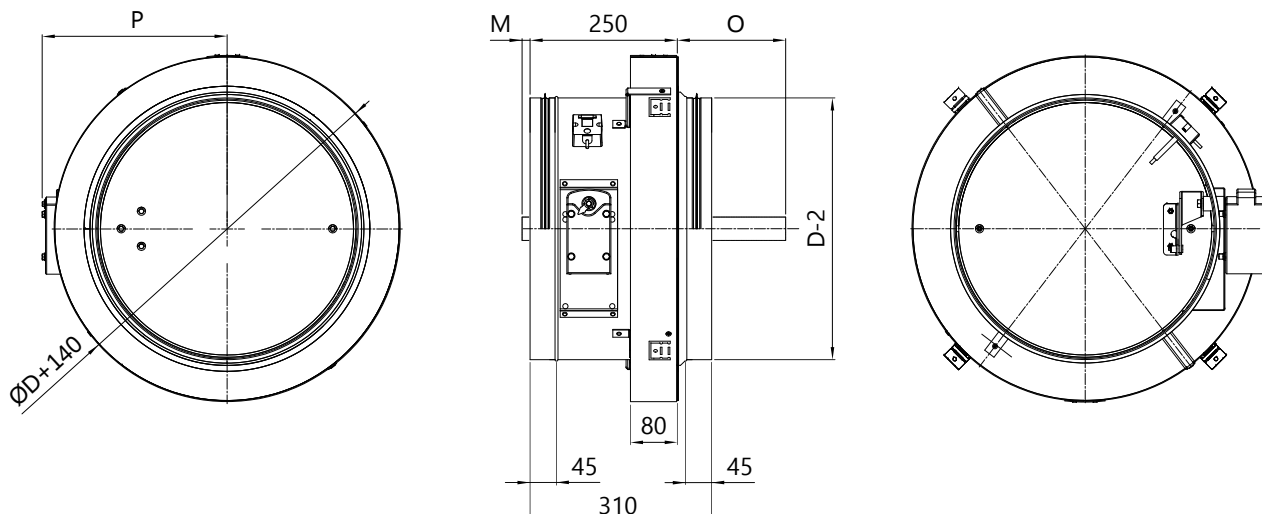
| D    | O     | P     | S     |
|------|-------|-------|-------|
| [mm] | [mm]  | [mm]  | [dm²] |
| 200  | 60,00 | 185,0 | 2,20  |
| 250  | 85,00 | 210,0 | 3,70  |
| 315  | 117,5 | 242,5 | 6,20  |
| 355  | 137,5 | 262,5 | 8,10  |
| 400  | 160,0 | 285,0 | 10,6  |
| 450  | 185,0 | 310,0 | 12,7  |



### SELECTION & DIMENSION

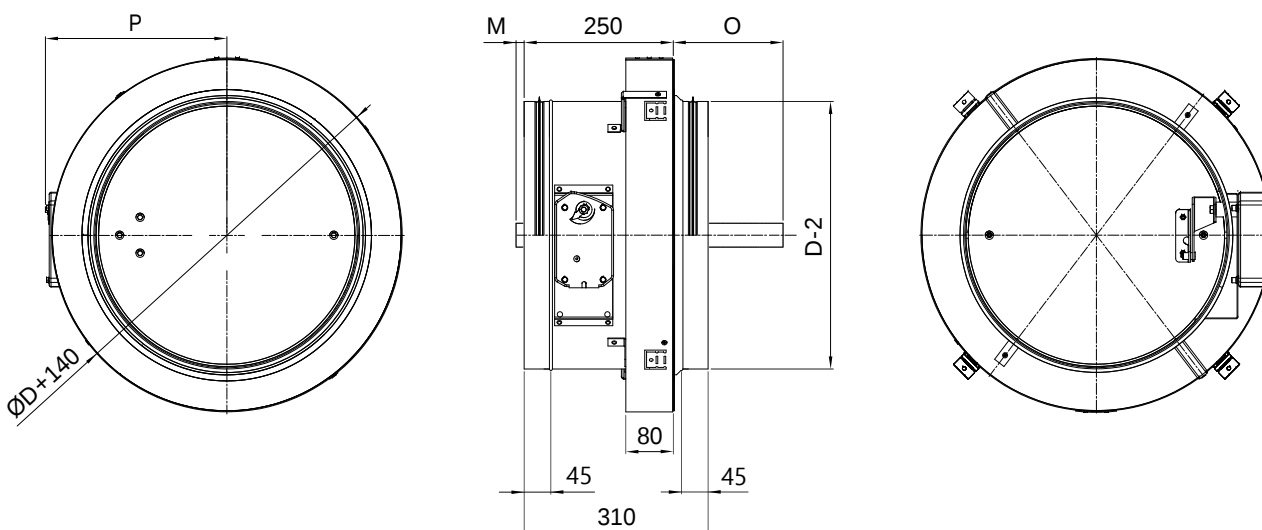
#### DIMENSIONS

CX-5 + SMN damper with FDG-WT-5 actuator



| D    | M    | O     | P     | S                  |
|------|------|-------|-------|--------------------|
| [mm] | [mm] | [mm]  | [mm]  | [dm <sup>2</sup> ] |
| 200  | 0    | 60,00 | 190,0 | 2,20               |
| 250  | 0    | 85,00 | 215,0 | 3,70               |
| 315  | 0    | 117,5 | 247,5 | 6,20               |
| 355  | 0    | 137,5 | 267,5 | 8,10               |
| 400  | 0    | 160,0 | 290,0 | 10,6               |
| 450  | 15   | 185,0 | 315,0 | 12,7               |

CX-5 + SMN damper with FDG-WT-8 actuator



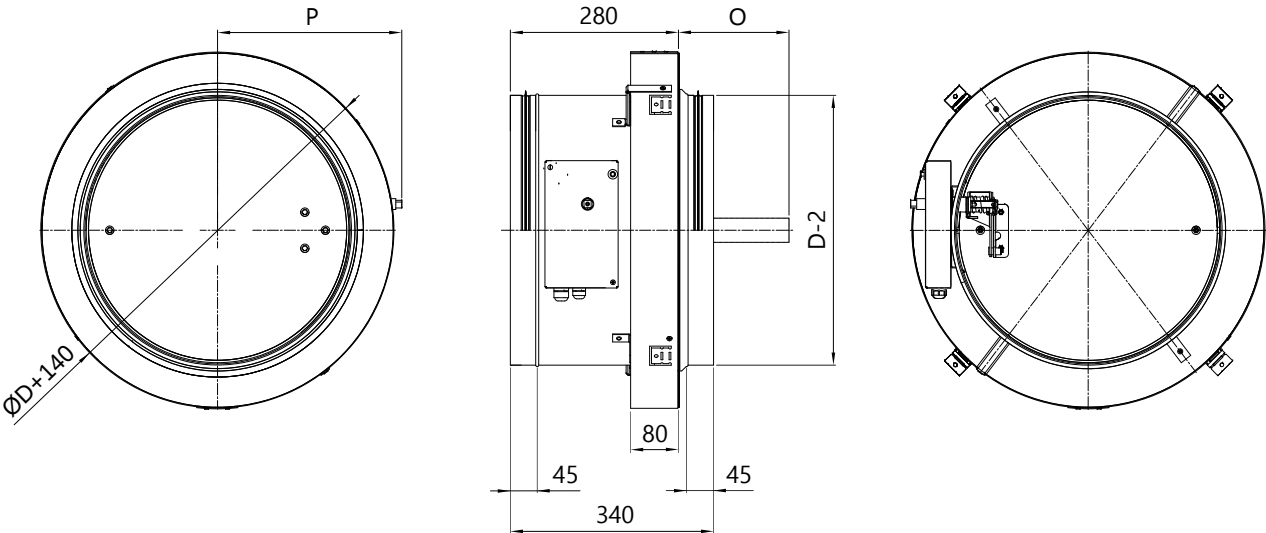
| D    | M    | O     | P     | S                  |
|------|------|-------|-------|--------------------|
| [mm] | [mm] | [mm]  | [mm]  | [dm <sup>2</sup> ] |
| 200  | 0    | 60,00 | 178,0 | 2,20               |
| 250  | 0    | 85,00 | 203,0 | 3,70               |
| 315  | 0    | 117,5 | 235,5 | 6,20               |
| 355  | 0    | 137,5 | 255,5 | 8,10               |
| 400  | 0    | 160,0 | 278,0 | 10,6               |
| 450  | 15   | 185,0 | 303,0 | 12,7               |



**SELECTION & DIMENSION**

**DIMENSIONS**

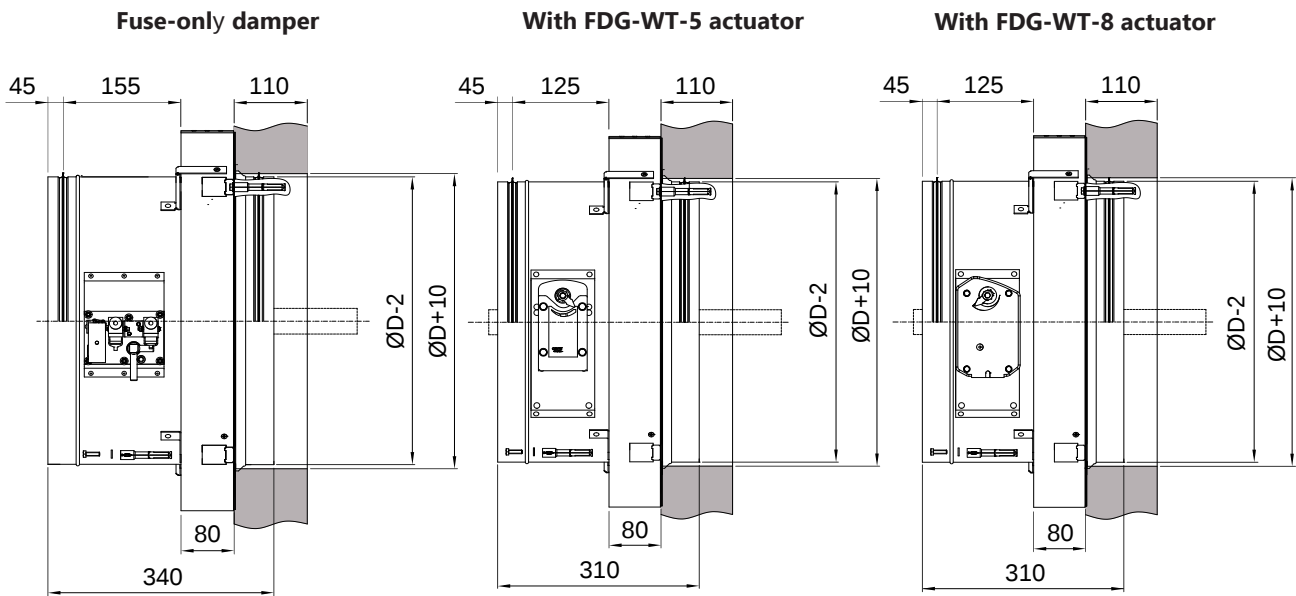
CX-5 + SMN damper with electromagnet



| D    | O     | P     | S                  |
|------|-------|-------|--------------------|
| [mm] | [mm]  | [mm]  | [dm <sup>2</sup> ] |
| 200  | 60,00 | 185,0 | 2,20               |
| 250  | 85,00 | 210,0 | 3,70               |
| 315  | 117,5 | 242,5 | 6,20               |
| 355  | 137,5 | 262,5 | 8,10               |
| 400  | 160,0 | 285,0 | 10,6               |
| 450  | 185,0 | 310,0 | 12,7               |

**DIMENSIONS AND INSTALLATION METHOD**

**VERTICAL PARTITION**





### ACCESSORIES

#### ACCESSORIES

##### Installation brackets, access door and T-type EPDM gaskets

- set of installation brackets UM,
- access door AD,
- T-type EPDM gaskets,

##### Microswitches

- microswitch indicating "closed" position 1WKK,
- microswitch indicating "open" position 1WKP,
- microswitches indicating "open" and "closed" position 1WKKP,

##### Microswitches, electromagnet and actuator

- electromagnet de-energized EP,
- electromagnet impulse EI,
- actuator FDG-5,
- actuator FDG-8.

#### EMS Module

Easy Maintenance System module guarantee quick and correct connection of the portable TZ tester that enables delivery of suitable control – impulse or deenergizing of a selected voltage – 24 V or 230 V, in purpose of functionality assessment during the installation work, commissioning process of the installation and during normal management of the building. Use of the EMS system together with the TZ tester speeds up commissioning of the installation considerably and leaves no doubt as regards to its correct performance.



### ELECTRICAL WIRING DIAGRAM

| CHARACTERISTICS OF ELECTRO-MAGNET |                        |                  |                             |                       |
|-----------------------------------|------------------------|------------------|-----------------------------|-----------------------|
| Supply voltage                    | 24 lub 48 V DC impulse | 230 V AC impulse | 24 lub 48 V DC de-energized | 230 V AC de-energized |
| Power input                       | 3,5 W                  | 5,5 VA           | 1,6 W                       | 4 VA                  |

| CHARACTERISTICS OF ACTUATOR                  | FDG-WT-5-230 | FDG-WT-5-24 |
|----------------------------------------------|--------------|-------------|
| Supply voltage [V]                           | 230V AC      | 24V AC/DC   |
| Power input during tensioning the spring [W] | 4 W          | 4 W         |
| Power input during stand-by [W]              | 1 W          | 1 W         |
| Time of movement – engine [s]                | <40 s        | <40 s       |
| Time of movement – spring [s]                | <20 s        | <20 s       |
| Torque motor [Nm]                            | >3 Nm        | >3 Nm       |
| Protection class IP                          | IP54         | IP54        |
| Sound power level – actuator dB(A)           | <45 dB(A)    | <45 dB(A)   |
| Sound power level – spring dB(A)             | <65 dB(A)    | <65 dB(A)   |

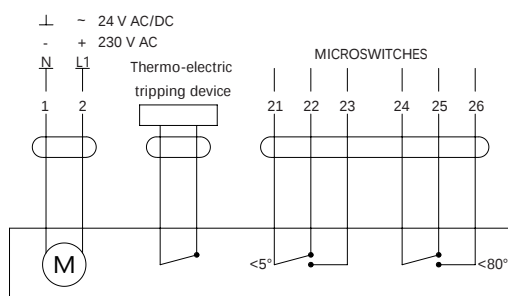
| CHARACTERISTICS OF ACTUATOR                  | FDG-WT-8-230 | FDG-WT-8-24 |
|----------------------------------------------|--------------|-------------|
| Supply voltage [V]                           | 230V AC      | 24V AC/DC   |
| Power input during tensioning the spring [W] | 9,2 VA       | 3,5 W       |
| Power input during stand-by [W]              | 6,9 VA       | 0,5 W       |
| Time of movement – engine [s]                | 55-71 s      | 55-71 s     |
| Time of movement – spring [s]                | 21 s         | 21 s        |
| Torque motor [Nm]                            | 8 Nm         | 8 Nm        |
| Protection class IP                          | IP54         | IP54        |
| Sound power level – actuator dB(A)           | 47 dB(A)     | 47 dB(A)    |
| Sound power level – spring dB(A)             | 52 dB(A)     | 52 dB(A)    |



### ELECTRICAL WIRING DIAGRAM

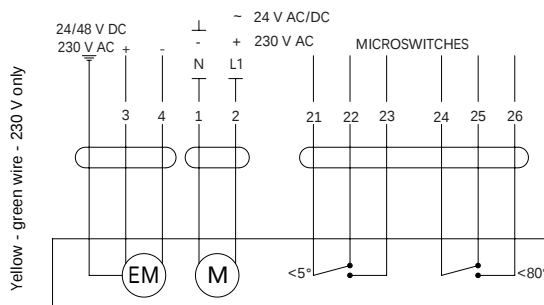
#### Damper with FDG-WT-8 actuator or FDG-WT-5\*

Optional actuators: FDG-WT-8-24, FDG-WT-8-230, FDG-WT-5-24\* and FDG-WT-5-230\*.



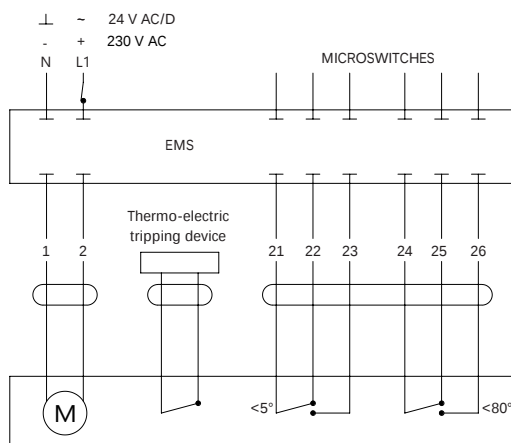
#### Damper with mechanism H

Optional actuators: FDG-8-24, FDG-8-230, optional electromagnets: EI24, EI230, EP24 or EP230.



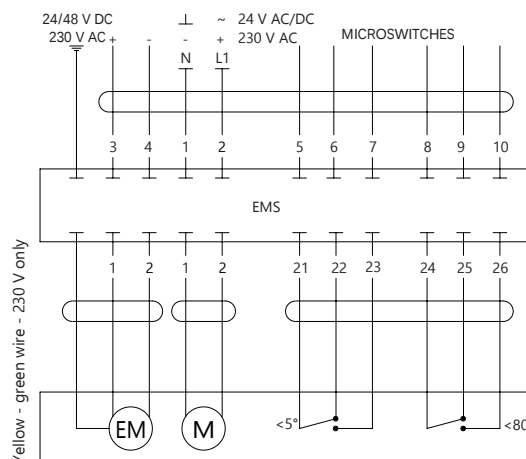
#### Damper with FDG-WT-8 actuator and EMS or FDG-WT-5\* and EMS

Optional actuators: FDG-WT-8-24, FDG-WT-8-230, FDG-WT-5-24\* and FDG-WT-5-230\*.



#### Damper with mechanism H and EMS

Optional actuators: FDG-8-24, FDG-8-230, optional electromagnets: EI24, EI230, EP24 or EP230.



\*FDG-WT-5-24 and FDG-WT-5-230 actuators are applicable for all sizes of CX-5 + SMN fire dampers.

### EXAMPLE OF SPECIFICATION AND PURCHASE ORDER

#### Enquiry:

Fire damper EIS120S GRYFIT CX-5 dry on partition installation, D=400  
+ Actuator 24/48V AC/DC FDG-WT-8-24 + Module EMS + EPDM gaskets

#### GRYFIT quotation:

GRYFIT CX-5 + SMN, D=400 + FDG-WT-8-24 + EMS + EPDM gaskets T

#### Enquiry:

Fire damper EIS120S GRYFIT CX-5 dry on partition installation, D=400 + Compact microswitches indicating open and closed position + EPDM gaskets

#### GRYFIT quotation:

GRYFIT CX-5 + SMN, D=400 + 1WKPP + EPDM gaskets T

