

DC Door Drives for Hinged Doors

DICTAMAT 204B for Fire Protection Doors

The DICTAMAT 204B is an electro-mechanical door operator with a microprocessor control system for hinged fire protection doors. It is ideally suited to make doors operable also for disabled persons. The integrated spring assures the reliable closing of the door even in case of an alarm and a power failure.

Its major advantages:

- Adjustable spring force (door closer forces EN 4 - EN 6)
- Very low noise level
- Control panel with LCD-display and menu-control for the adjustment of a large variety of additional functions
- Compact design, reduced height

The standard execution of the door operator has a stainless steel cover.

The DICTAMAT 204B has been tested and approved as a door operator in hold-open systems for fire protection doors in combination with the DICTATOR RM 2000 smoke detector (German approval no. Z-6.5-1944).



Selection Criteria

• Width of door leaf	max. 1.4 m (at a door weight of 100 kg)
• Door weight	depending on door width, see diagram on the following page
• Motor force	50 Nm
• Suitable	for continuous operation
• Opening angle	adjustable between 70° and 115°
• Position control	automatic learning of the positions
• Motor without current	easy to move, operates like normal door closer
• Basic functions	OPEN, automatic closing, reverse function; further functions adjustable with a separate BDE-D control panel



Applications, Dimensions

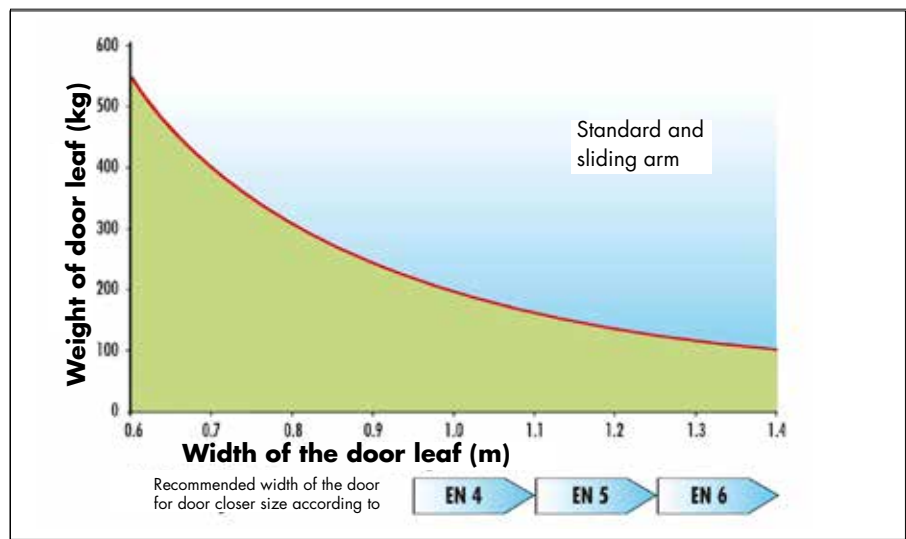
The diagram below indicates the maximum door weight - depending on the width of the door - up to which the DICTAMAT 204B door operator can be used

There are 2 different sets of arms available for the DICTAMAT 204B: standard and sliding arm. The choice of the arm depends among others on the mounting situation.

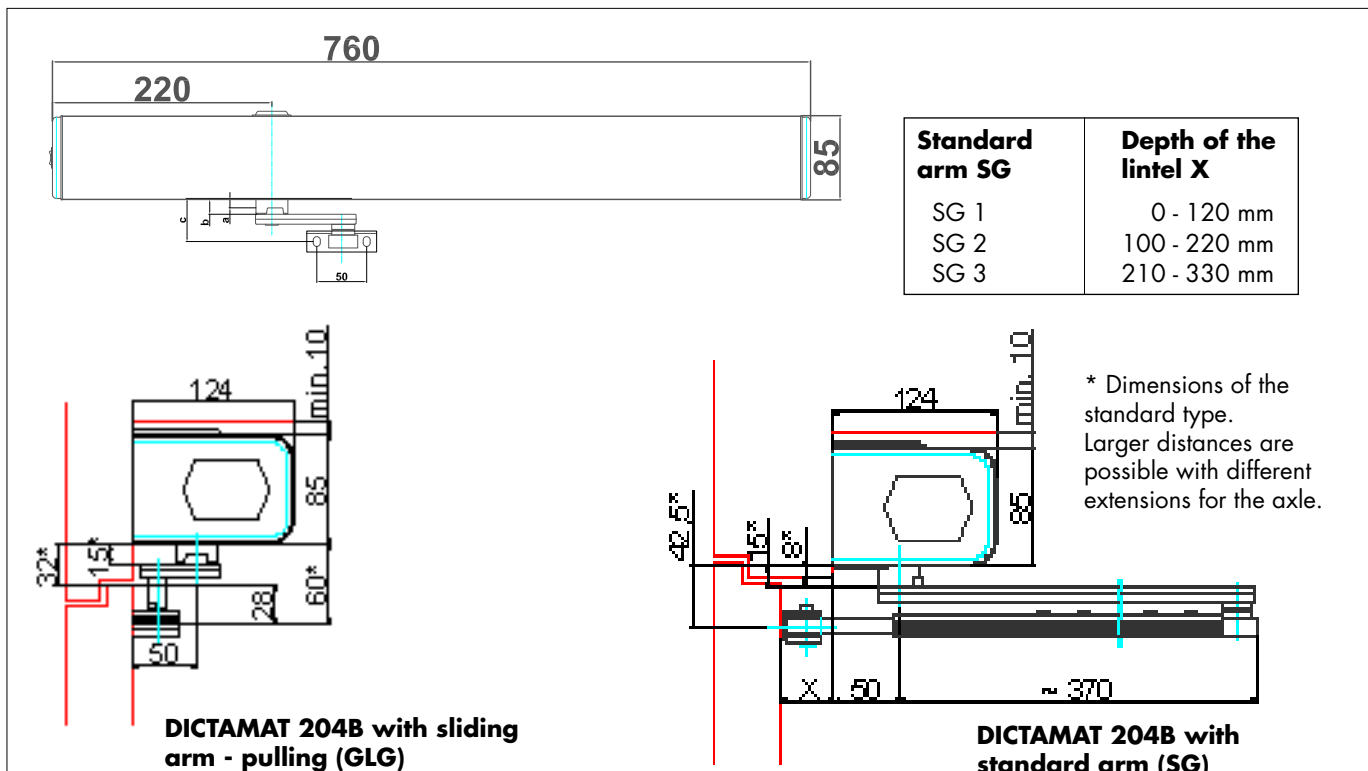
Ex factory the DICTAMAT 204B is set for a sliding arm (pull-type). If the DICTAMAT 204B is to be used with the standard arm, this has to be programmed with the BDE-D control panel.

The DICTAMAT 204B has to be mounted to the lintel. An installation on the door is not permissible.

Application



Dimensions





Technical Data / Operating Functions

The DICTAMAT 204B door operator offers basic operating functions that can be adjusted with switches integrated into the lateral part of the casing.

By using the separate, electronic BDE-D control panel additional functions can be activated and adjusted.

The door positions OPEN and CLOSED are automatically set during a calibration run. Separate limit switches are not required. A further adjustment is possible with the BDE-D control unit.

In case of alarm the power supply of the door operator is interrupted and the integrated spring automatically closes the door.

Technical Data DICTAMAT 204B

Force of the motor	driving torque max. 50 Nm
Closing force spring (force according to EN)	EN 4 to EN 6, adjustable
Opening speed	adjustable from 3 to 20 sec./ 90° (16)
Closing speed	adjustable from 5 to 20 sec./ 90° (7)
Opening angle	70 - 115°
Hold-open time	adjustable between 0 and 60 sec. (2)
Voltage / Nominal current	230 VAC, 50/60 Hz
Output voltage/Power supply (secondary)	24 VDC / max. 1 A
Motor rating	67 W (standby: consumption 13 W)
Duty cycle	100 % ED
IP rating	IP 40 / max. 85 % rel. humidity, no bedewing
Noise level	max. 18 db
Operating temperature	-15° to +50 °C
Weight (without accessories)	12 kg

(The values in brackets represent the standard values set in production.)

Basic Operating Functions

The following basic functions are adjusted directly on the DICTAMAT 204B door operator:

- Automatic: An OPEN command opens the door; automatic closing after the preset time (standard time 2 seconds).
- Continuously open: Door opens automatically and stays in the OPEN position (e.g. for airing).
- Manual operation: Door operator works just like a normal door closer, manual opening, closing by integrated spring.

For the OPEN command there are various possibilities: motion detector, push button, remote control etc. They must be equipped with a potential-free contact (NO).

BDE-D Control Panel



The external electronic control unit BDE-D is required for the adjustments and the starting of the DICTAMAT 204B. It also allows the adjustment of further operating functions. The following options can be programmed with a **mobile BDE-D unit**:

- Adjustment of the opening and closing speed, the hold-open time, the reverse level, the closing force and the opening angle
- Push-and-Go: Actuation of the operator by pushing the door lightly (response after 0,5 - 1°); door closes after the pre-set time. No operating equipment necessary.
- One-way/night operation: Door only opens from inside (to leave the building).
- Locking of the door: connection possibility for an electric door lock (24 VDC)
- Different levels of manual operation (e.g.: door normally opened by hand; using a remote control the door opens automatically)
- Doors with two leaves: closing sequence control



Fire Protection Components

It has to be assured that fire protection doors always close immediately in case of fire. In combination with the DICTAMAT 204B door operator the DICTATOR RM 2000 smoke detector is used. As to the required number of smoke detectors please follow the recommendations of the Deutsches Institut für Bautechnik (see chapter Fire Door Control Solutions for further information). For a manual release of the fire protection door an additional hand release switch "CLOSE DOOR" is required.

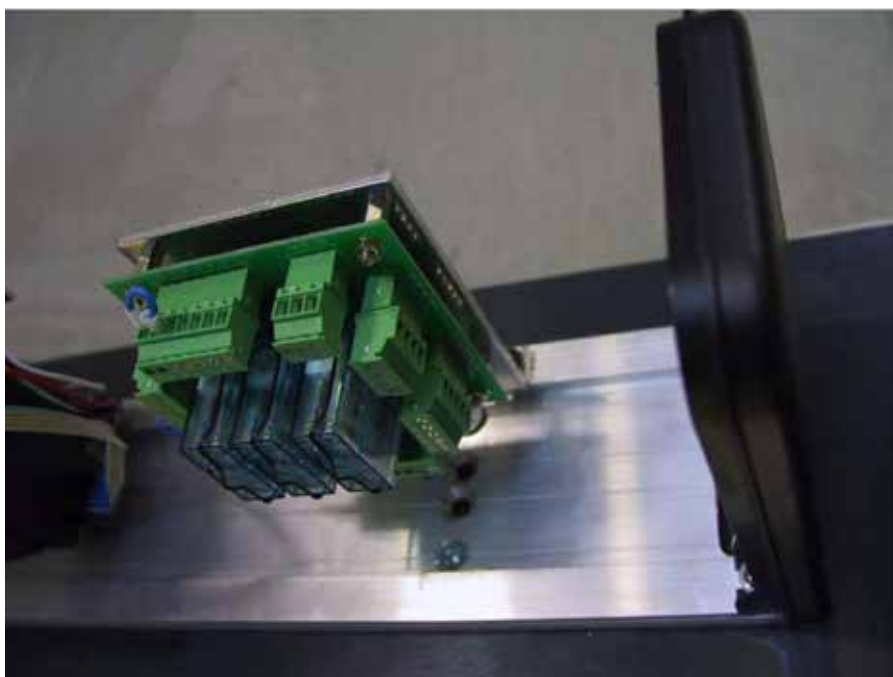
In case of doors with two leaves the SR 2000 door sequence selector is also necessary.

Fire Protection Module

The DICTAMAT 204B is based on the DICTAMAT 204, to which the fire protection module is added. All fire protection components such as the RM 2000 smoke detector, an electro lock, the hand release switch "CLOSE DOOR", the RESET push button and in case of doors with two leaves the closing sequence selector (if being with an integrated magnet) are connected to this module.

The RESET button is required to restore the door operator after an alarm to normal operation.

The wiring diagram is to be found on the following page.



Electro Lock, Door Opener

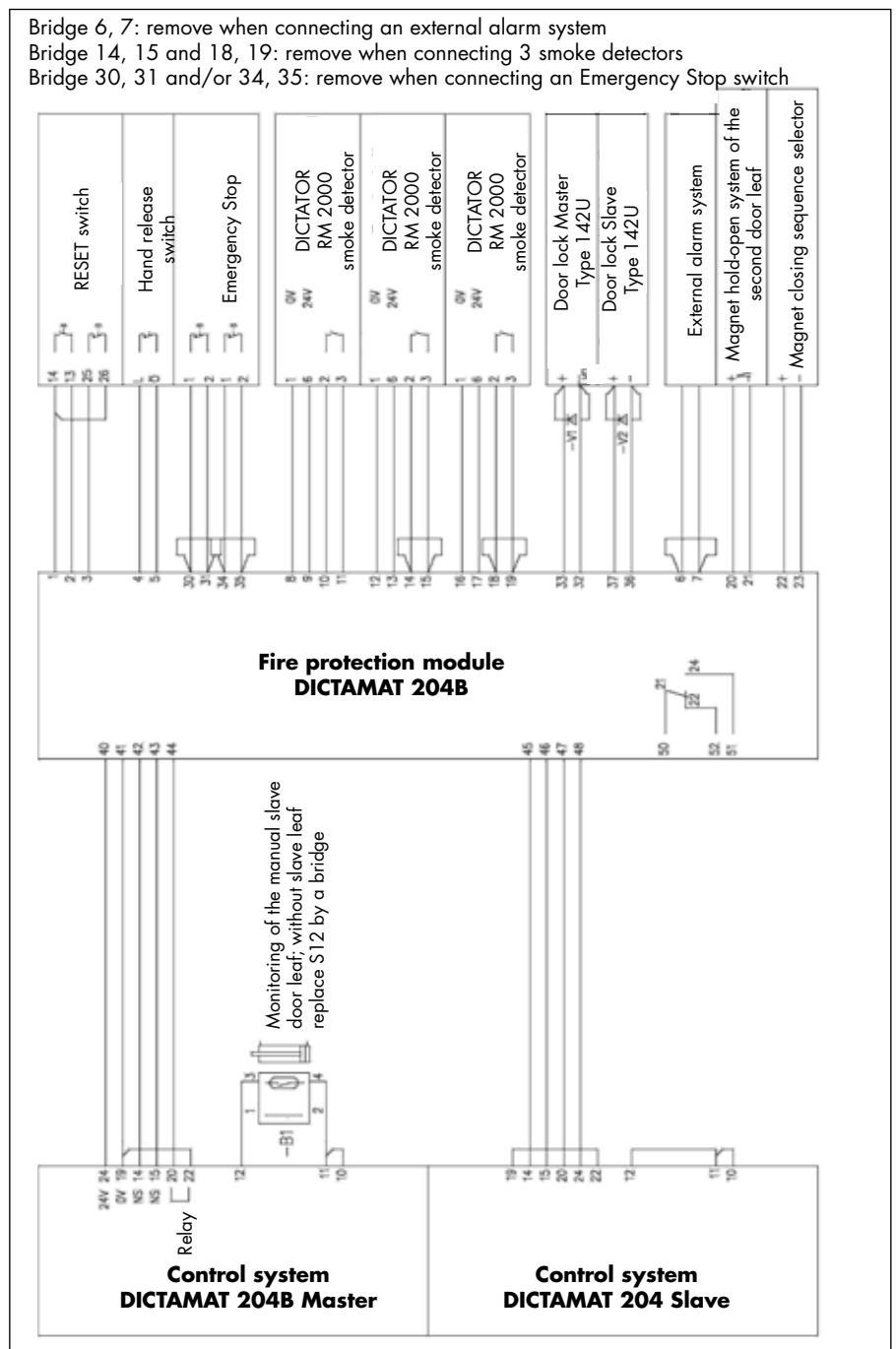
In addition to the smoke detectors a tested and for the door in question approved **door lock** has to be used in order to lock the door in its closed position. The door is locked without current, i.e. in case of an alarm the door stays safely closed and cannot be opened by the fire. When an OPEN impulse is given, the electro lock releases the door and the door can be opened by the door operator without any problem.

When ordering the door lock, please indicate whether it is for a right or left handed door (right handed door: part no. 710279**R**; left-handed door: part no. 710279**L**).



Fire Protection Components - cont.

Wiring Diagram of the Fire Protection Module





DICTAMAT 204B For Single and Double-Leaved Hinged Doors

The DICTAMAT 204B is also used on doors with two leaves. In this case both door operators have to be connected with a CAN isolator. The opening and closing speed as well as the hold-open time are identical for both door operators; whereas the opening angle and the response levels can be set differently on both operators. Furthermore it can be chosen whether just one or generally both door leaves open on an OPEN impulse.

For fire protection doors with two leaves an approved mechanical closing sequence selector has to be installed.

To adjust the correct function of the door operators a mobile BDE-D unit is required.

Safety

The integrated overload detection of the DICTAMAT 204 assures a maximum of safety both for people and objects. Any obstacle within the door range is detected immediately. When opening the door operator stops and the next opening movement is done at creep rate. When closing the door operator reverses and opens again. The response level of the overload detection can be adjusted on site with the help of the BDE-D control unit.

It may be advisable to add further safety elements.

Components Included DICTAMAT 204

Door operator with 24 VDC motor and closing spring

Control system, fire protection module

The following components are not included in the delivery: arms and the BDE-D control panel. They have to be ordered separately as well as operating and safety elements.

Order Information

DICTAMAT 204B for standard and sliding arm (pulling) part no. 710105

Accessories Required

Standard arm SG 1, depth of lintel 0 to 120 mm part no. 710115

Standard arm SG 2, depth of lintel 100 - 220 mm part no. 710116

Standard arm SG 3, depth of lintel 210 - 330 mm part no. 710117

Sliding arm GLG part no. 710118

RESET push button part no. 710113

Further Accessories

BDE-D control unit, for surface installation part no. 710119

BDE-D control unit, for flush mounting part no. 710121

CAN isolator, for doors with two leaves part no. 710123

Extension for standard arm 65 (see page 05.032.00: *+ 45 mm) part no. 710126

Extension for standard arm 80 (see page 05.032.00: *+ 60 mm) part no. 710127

Electro lock 142U (indicate whether right- or left-handed door R/L) part no. 710279

RM 2000 smoke detector with base part no. 040500Set

Hand release switch "CLOSE DOOR" part no. 040005

Radar motion detector "Eagle One" part no. 700389

Finger guard blind (L = 1.95 m) part no. 710132

Safety contact switch 4 Safe in different lengths**

**See information on the safety and operating elements in the chapter Door & Gate Operators, page 04.049.00.