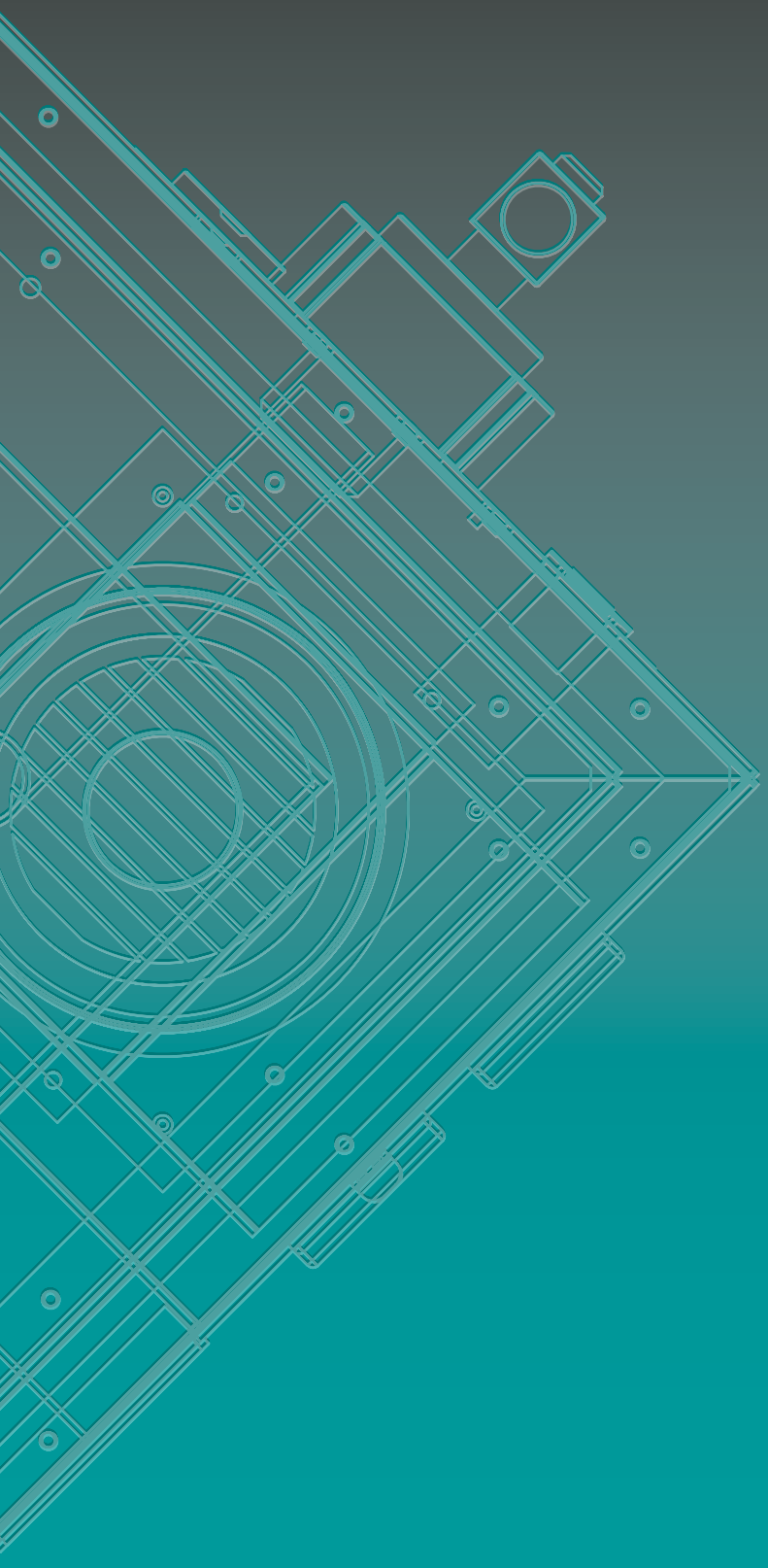
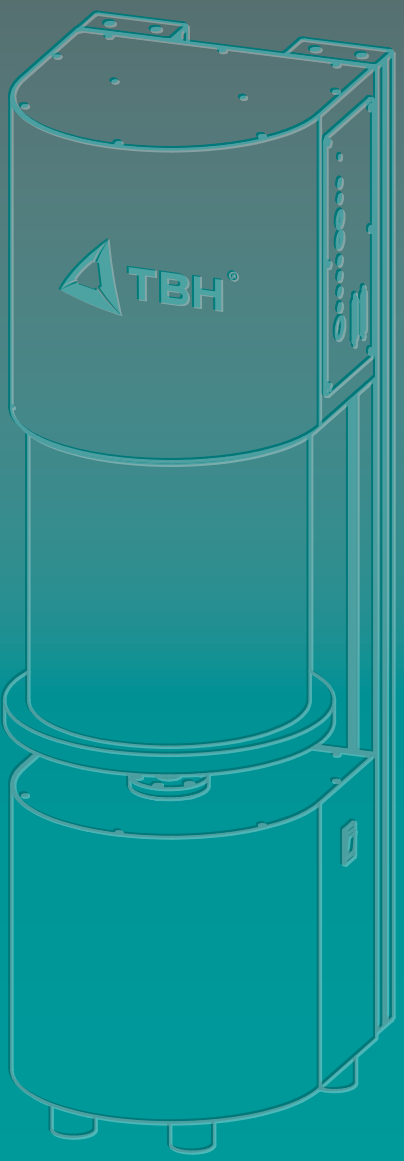
TBH®

PRECOTECH 200

EXTRACTION / FILTER / POLLUTION CONTROL // TECHNOLOGY





AUTOMATIC PRECOATING SYSTEM PRECOTECH 200

APPLICATION

To extend the range of applications for extraction systems with cleanable filter cartridges and increase filter service life, TBH GmbH has long used what is known as the precoating process. The Precotech 200 was developed so that the precoating process can be optimally integrated in automated processes. Depending on the application, the system can be operated with the FP 211/213 extraction and filter systems or the FPV 180/202 filter cartridge pre-separators.

Similar to image

AREAS OF APPLICATION:

- Fully automatic precoating of an FPV 180/202 or FP 211/213 system
- Automated production plants
- 24/7 processes
- Applications that require a reduction in the amount of maintenance
- Plasma/laser cutting
- Applications in which oily/sticky particles are produced

THE SYSTEM INCLUDES NUMEROUS FEATURES:

- Fully automatic precoating, depending on the operating state of the TBH extraction system
- Fill level monitoring of the precoating material cartridge
- Easy to adapt to a TBH extraction system
- Intelligent interface

Figure 1

METHOD OF OPERATION

The Precotech 200 was developed so that the precoating process can also be integrated in automated processes. The precoating system automatically supplies the extraction system with the necessary quantity of Precofix 200 according to the filter area. To do so, a clocked burst of compressed air is injected into the replaceable cartridge to disperse the powder. This dust cloud is then routed to the extraction and filter system. In contrast to manual precoating, Precofix 200 is very finely sprayed, which reduces the amount of precoating material that is needed by up to 50%.*

The precoating process - Precofix 200 precoating powder creates a thin layer separating the filter medium from the extracted particles of dirt. This protects the surface of the filter cartridge and makes it easier to clean even sticky and moist particles (Figure 1). This significantly expands the range of applications for cartridge filter systems of the FPV and FP series. Filter service life under difficult conditions is also greatly increased.

** This and the system's ability to dispense precoating material with an accuracy within a few grams results in significant savings compared to systems that have been available on the market so far.*

PRODUCT FEATURES

FULLY AUTOMATIC PRECOATING

Depending on the requirement, the Precotech 200 can automatically switch back and forth between three modes (Figure 2 (1)):

Initial precoating - This is started when maintenance personnel press the key switch (Figure 2 (4)) directly on the system. During initial precoating, a basic protective layer is formed on the filter cartridge. Initial precoating is only started after a filter cartridge change.

Maintenance precoating - Maintenance precoating is started after each cleaning cycle or after the extraction system has been stopped. This mode restores the separating layer that was destroyed when the system was cleaned or stopped. The Precotech 200 can perform both maintenance precoating after cleaning or after the system was stopped and adjusts the precoating quantity individually.

Adcoat - After an initial or maintenance precoating has been applied, the Precotech 200 automatically switches to the adcoat function. In this mode, a small quantity of Precofix 200 is supplied at regular intervals while the extraction system is operating. This causes dirt particles to bind to the precoating material and makes it easier to clean the extraction system. Depending on the application, the adcoat function can be activated or deactivated.

Figure 2

FILL LEVEL MONITORING OF THE PRECOATING MATERIAL CARTRIDGE

An ultrasonic sensor is used to monitor the fill level on the Precofix 200 replaceable cartridge. The “Cartridge empty” message (Figure 2 (2)) is displayed on the control panel of the Precotech 200 and output via the interface.

EASY TO ADAPT TO A TBH EXTRACTION SYSTEM

Various basic settings (Figure 2 (6)) can be made so that the Precotech 200 can be optimally adapted to the connected extraction system and application:

- Filter area selection for the TBH extraction system
- Adcoat function on/off
- Shut down cleaning *(To increase effectiveness, the extraction system switches to stand-by mode for the duration of the cleaning process.)*

INTELLIGENT INTERFACE

The system has numerous interface functions (Figure 2 (5)) for integration in the TBH extraction system:

- Filter full monitoring of the extraction system
- Start/stop the extraction system
- Speed signal for the extraction system
- External speed control for the extraction system
- Collective fault
- FPV filter full *(depending on the TBH extraction system)*
- FP/FPV filter change
- Cleaning active
- Start cleaning
- Precofix 200 cartridge empty

OPERATION:

- Start/stop the TBH extraction system (Figure 2 (3))
- Start initial precoating (Figure 2 (4))
- Selector switch for filter area selection (Figure 2 (6))
- Adcoat function on/off (Figure 2 (6))
- Shut down cleaning (Figure 2 (6))

All other functions are automatically controlled.

INDICATORS:

- Malfunction
- Precofix 200 cartridge empty
- Initial precoating active
- Maintenance precoating active
- Adcoat active
- Cleaning active

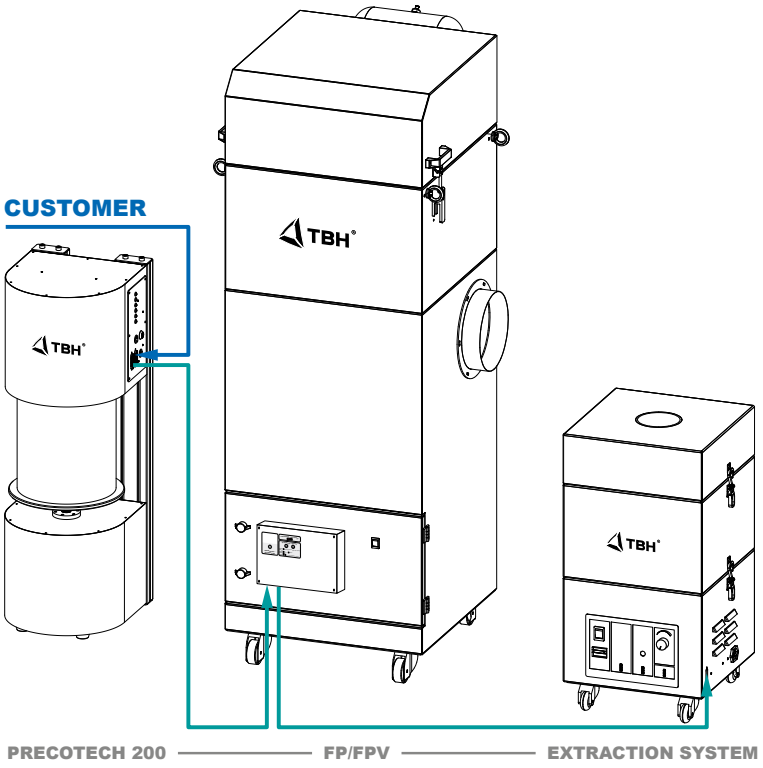
The filter full indicator for the TBH extraction system remains active.

INTERCONNECTION:

The Precotech 200 provides for fully automatic precoating of the downstream TBH FP 211/213 extraction and filter system or an FPV 180/202 filter cartridge pre-separator.

The extraction system can be customised according to the specific application.

** See the TBH extraction system catalogue for more application examples.*



FP/FPV CLEANING CONTROLLER UPGRADE KIT:

Depending on the version of your existing FP 211/213 or FPV 202, a cleaning controller may need to be added to it in order for it operate with a Precotech 200. It enhances the cleaning functions and makes it easier to operate the system.

FUNCTIONS:

- Various cleaning modes can be selected (interval cleaning, differential pressure cleaning, manual cleaning, coastdown cleaning).
- Integrated control for the optionally available pneumatic slide valve
- Filter change message on FP/FPV

INTERFACE FUNCTIONS:

- All interface functions of the previous system are retained.
- FP/FPV filter full
- FP/FPV filter change
- Start cleaning externally
- Cleaning active

INFO

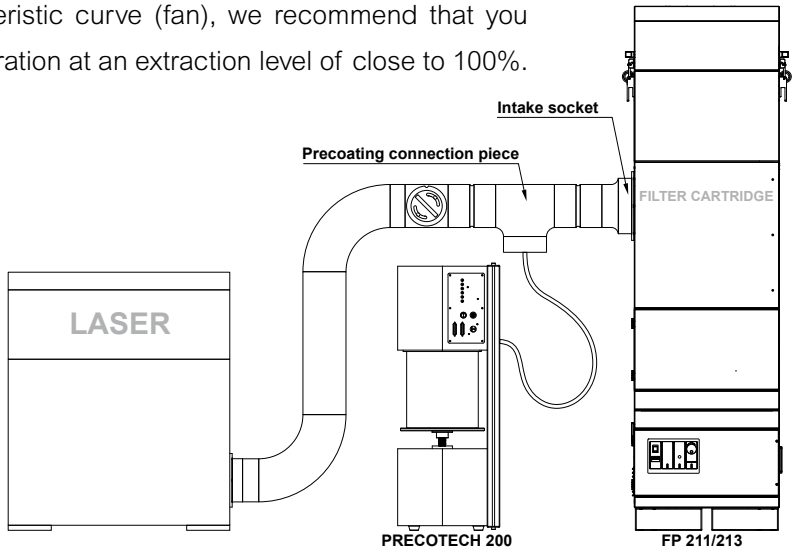
CONFIGURATION/APPLICATION AID FOR THE PRECOTECH 200

The following table shows the recommended precoating connection pieces/pipe diameters and the resulting reduction in the effective air flow rate.

PRECOTECH 200 + FP 211	Reduction in effect air flow rate for DN		
	DN 250	DN 200	DN 160
100% extraction level	-15%	-12%	-12%*
75% extraction level	-47%	-47%	-53%

** best recommended system design/operating point*

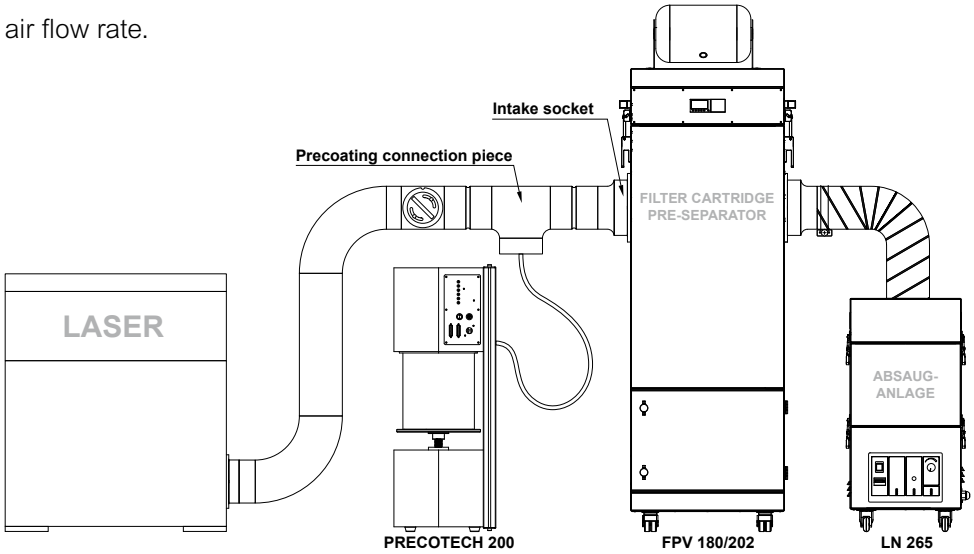
Due to the motor characteristic curve (fan), we recommend that you operate the overall configuration at an extraction level of close to 100%.



PRECOTECH 200 +		Reduction in effect air flow rate for DN		
FP 213	FPV 180/202 + LN265	DN 125	DN 100	DN 80
100% extraction level		-16%	-16%*	-16%*
75% extraction level		-25%	-14%	-14%

** best recommended system design/operating point*

Due to the motor characteristic curve (turbine), the overall configuration can also be operated at a suction level of 75% without suffering a significant loss in the effective air flow rate.

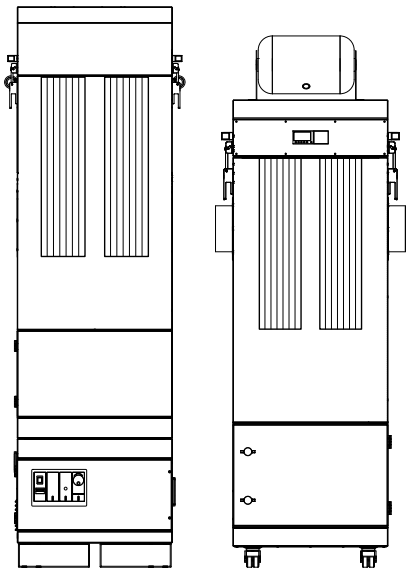


DEVICE CONFIGURATION

For easy configuration of your desired TBH extraction and filter system, please perform the following steps:

A. Selecting the TBH extraction system

First select the required FP211/FP213 extraction and filter system or an FPV180/FPV202 filter cartridge pre-separator (Figure 1) and the appropriate extraction system, such as the LN265. The choice depends on your application. For more information, please consult the relevant product catalogue.



FP 211/213 ODER FPV 180/202

Figure 1

B. Selecting the Precotech 200

Now select the Precotech 200 automatic precoating system.

C. Selecting precoating connection pieces

Then select the appropriate precoating connection piece (Figure 2) according to the required pipe diameter. Please note the configuration aid on page 6 of this catalogue, or contact the TBH sales team.

D. Selecting the control for the TBH extraction system

Depending on the extraction system or filter cartridge pre-separator that you selected, you then have to order the appropriate cleaning control unit to connect the Precotech 200. For more information, please consult the product catalogue for cleaning control units.

CLEANING CONTROLLER

D	USE	ART.-NO.
	FP - backfitting	15278*
	FPV - backfitting	15279**
	FP - factory equipped	15348*
	FPV - factory equipped	15350**

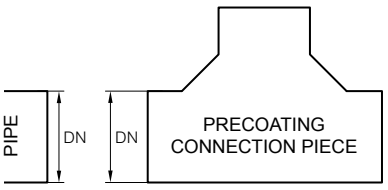


Figure 2

E. Selecting replacement parts for the Precotech 200

Now select the required number of replaceable cartridges.

F. Selecting pneumatic slide valves

If necessary, you can choose from various pneumatic slide valves (Figure 3) (according to the pipe diameter that is used). These are used to prevent compressed air from being blown back onto the process when cleaning the filter cartridges.

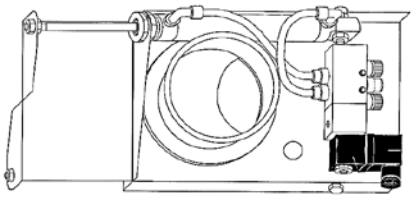


Figure 3

As a last step, select any piping components that may be needed. For an overview, check the accessories catalogue or contact the TBH sales team.

TECHNICAL SPECIFICATIONS

Similar to image

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- Fully automatic precoating of an FPV 180/202 or FP 211/213 system
- Automated production plants
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- Plasma/laser cutting
- Applications in which oily/sticky particles are produced

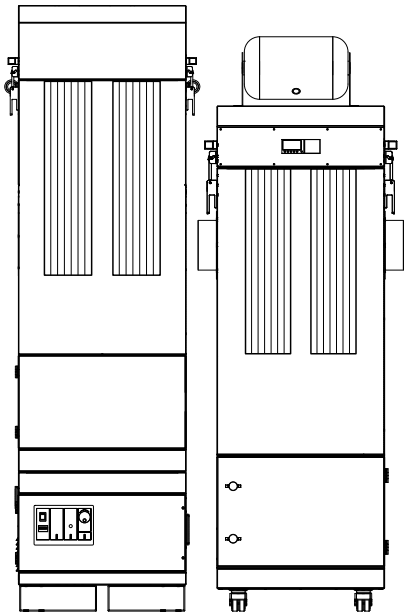
INCLUDED:

- Fully assembled, including a Precofix 200 replaceable cartridge
- Control electronics
- Device feet

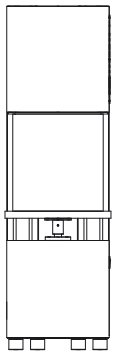
TECHNICAL SPECIFICATIONS	UNIT	PRECOTECH 200
Use	-	FP 211/213, FPV 180/202
Voltage	V	Power supplied via FP/FPV
Protection class	-	3
Noise level	db(A)	50
Serial interface	D-sub	25-pin
Weight	kg	Approx. 35
Dimensions (HxWxD)	mm	950x320x365
Device feet	-	✓
Connection for extraction system	-	Precoating connection piece can be freely selected
Connection for compressed air	-	1 bar*
Colour	RAL	7037

**DN 7.2 mm quick-release coupling*

ORDER DATA



FP 211/213 FPV 180/202



PRECOTECH 200

A	DESCRIPTION	
	FP/FPV system	see Catalog*

* *for more information, please consult the relevant product catalogue*

B	DESCRIPTION	ART.-NO.
	Precotech 200	90342

INTAKE SOCKET / PRECOATING CONNECTION PIECE

C	DN (mm)	ART.-NO.
	DN 63	15018
	DN 80	15019
	DN 100	15020
	DN 125	15021
	DN 160	15022
	DN 200	15023
	DN 250	15024

ACCESSORIES

CLEANING CONTROLLER

D	USE	ART.-NO.
	FP - backfitting	15278*
	FPV - backfitting	15279**
	FP - factory equipped	15348*
	FPV - factory equipped	15350**

* *FP 211-213 with a Precotech 200*

** *FPV 202 with a Precotech 200*

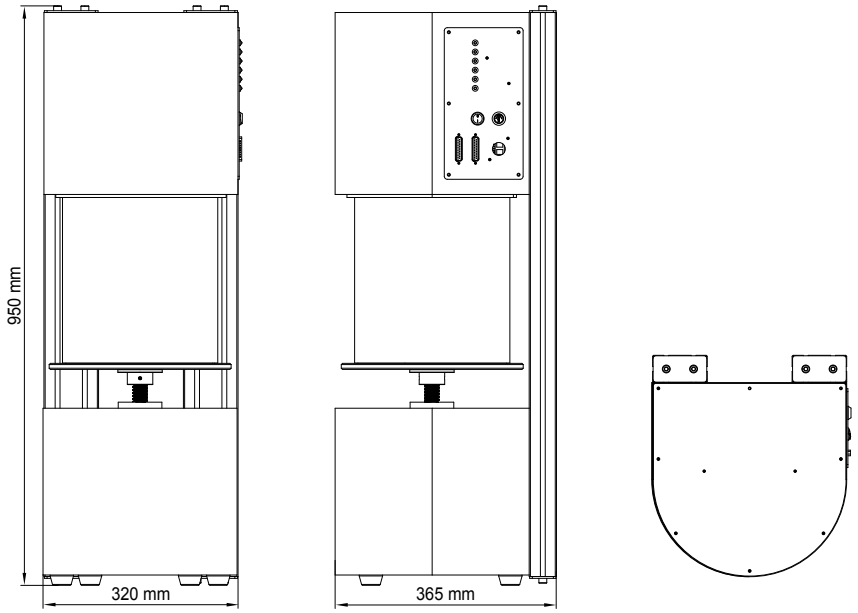
REPLACEMENT PARTS

E	DESCRIPTION	ART.-NO.
	1 Precofix 200 replaceable cartridge	15025
	6 Precofix 200 replaceable cartridges	15026

PNEUMATIC SLIDE VALVE

F	DN (mm)	ART.-NO.
	DN 80	15286
	DN 100	15287
	DN 125	15288
	DN 160	15289
	DN 200	15290
	DN 250	15291

TECHNICAL DRAWINGS



Precotech 200

TBH GmbH

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