

MULTI-MEDIA CONNECTOR

MULTILINE

1852 & 1862



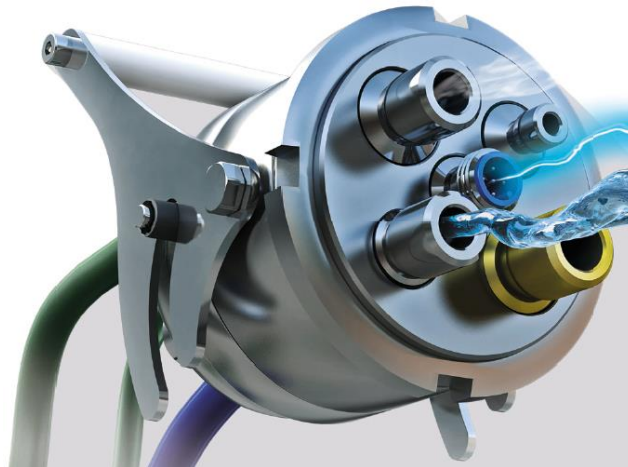
Planning and operating instructions

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DANGER

Please read this entire document carefully prior to operating this product, especially the safety information on page - 10 -. If you fail to observe this information, there will be an increased danger resulting from parts coming loose, fire and burns. Eisele Pneumatics GmbH & Co. KG will not be liable for damages resulting from failure to observe and comply with this document.

Notice: Note that only the most current version of this document is valid; you will find it on our website at www.eisele.eu.



1 Intended use

The MULTILINE 1852 and 1862 series comprise modular, multiple and multi-media connectors that make it possible to combine multiple operating media, such as compressed air, gases, fluids, electrical and electronic signals, in one interface. In addition, the series is intended only for industrial use and not for private use.

Due to the diverse possibilities, the design, assembly or operation of this product is permitted only by a system planner, system operator or mechanic. The person who selects the connection components is responsible for the suitability of the product and the production configuration. Modifications and alterations to the product are not permitted.

Intended use also includes that you have read and understood this document and the separately available assembly instructions, especially the safety information.

Observe the following operating conditions for use of the Multiline 1852 and 1862, as well as the separately available assembly instructions:

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1.1 Connection and disconnection

The Multiline 1852 / 1862 is suitable only for pressureless and voltage-free connection and disconnection. After connecting, the locking lever must be secured with the knurled thumb screw to prevent accidental opening of the connection.

1.2 Permissible temperature

Operating temperature	0 ... +40 °C
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Other operating temperatures on request.

1.3 Permissible media

Depending on the adaptive insert, the following media can be used:

- Compressed air (ISO 8573-1:2010 [7:-:-])

Other media on request.

1.4 Permissible operating pressure

- Observe the maximum permissible operating pressure for the respective adaptive inserts used.
- When configuring the adaptive inserts, make sure that the compressive load is evenly distributed on the connector.
- Observe the permissible total operating pressure for the Multiline 1852 / 1862 on the following pages.

1.5 Maximum permissible total operating pressure¹ per Multiline 1852 / 1862

1852	-0406	67 bar see example 1 on page - 5 -
	-0606	
	-0806	
	-1006	
	-0411	
1862	-00020100	20.5 bar The maximum permissible operating pressure ¹ must be determined by means of Diagram 1 , since adaptive inserts of bore type B and C can be used. See example 2 on page - 6 - and example 3 on page - 8 -.
	-00030200	
	-00040100	
	-00050200	
	-00060100	
	-00070200	
	-00090200	
	-00120200	

TABLE 1

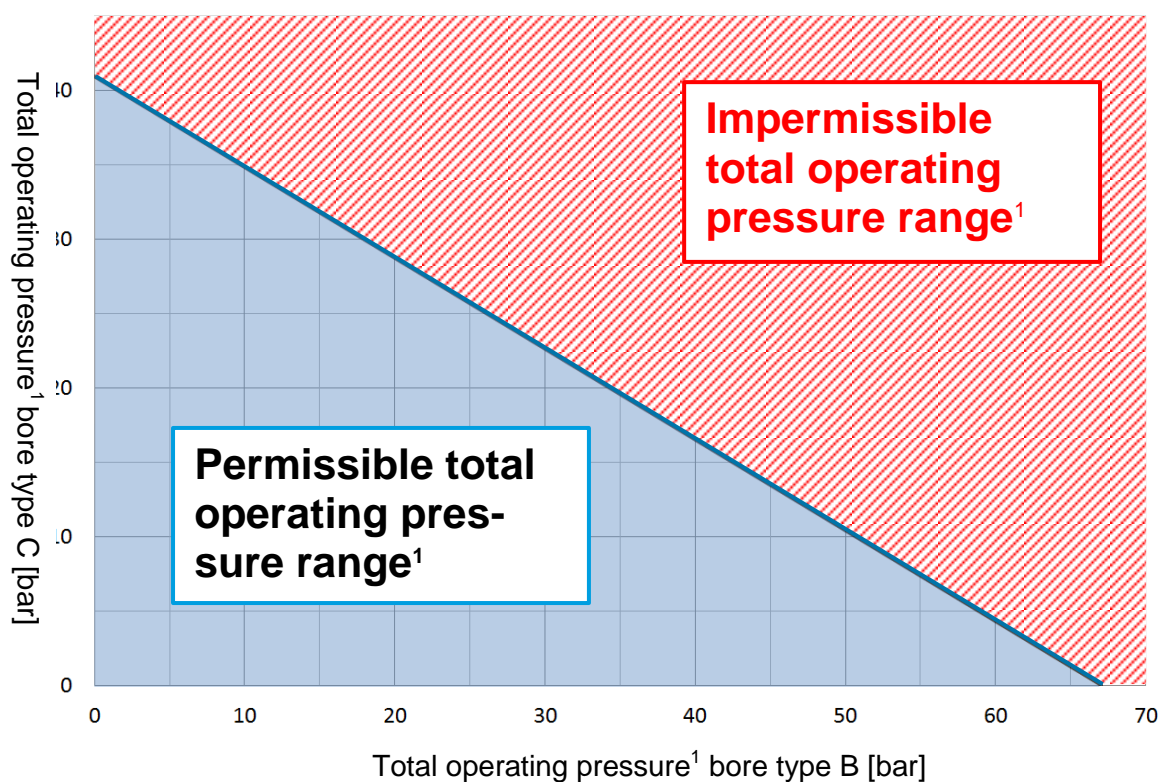


DIAGRAM 1

OBSERVE THE INFORMATION ABOUT THE TOTAL OPERATING PRESSURE ON PAGE - 4 -

1.6 Permissible number of adaptive inserts

To ensure easy and safe connection and disconnection, only a limited number of drip-free adaptive inserts (1825) and shut-off vacuum adaptive inserts (1822) is permissible; see Table 2. The adaptive insert types 1820, 1821 and 1830 can be used in unlimited numbers, the adaptive insert type 1831 (M12-Power version) is limited to two inserts.

Permissible number 1822 and 1825

	Bore type B	+	Bore type C
Permissible number per connector	4	+	0
	2	+	1
	0	+	2

TABLE 2

1.7 Correction pressure per adaptive insert

Type	Bore type	Correction pressure
1820 (with shut-off)	B	+ 0.8 bar
	C	+ 0.8 bar
	D	+ 0.8 bar
1825 (drip-free)	B	+ 3.8 bar
	C	+ 4.0 bar
1822 (with shut-off for vacuum)	B	+3.0 bar
	C	+3.8 bar

TABLE 3

DANGER! – Information about the total operating pressure

The total operating pressure is the sum of the single operating pressures of the adaptive inserts used. The maximum permissible total operating pressure refers to the overall Multiline 1852 / 1862 with adaptive inserts of type 1821 (without shut-off)!

When using adaptive inserts of type 1820 (with shut-off), 1822 (with shut-off for vacuum) and 1825 (drip-free), the correction pressure **Table 3** must be added to the operating pressure for each adaptive insert. The electrical inserts 1830 and 1831 do not have to be included in the calculation.

2 Example 1 – Check of the permissible total operating pressure for the Multiline 1852

Step 1: Conditions of use (based on an application example)

Assumed load: all adaptive inserts are under pressure simultaneously
 Configuration used:

- Multiline type: **1852-0606**
- Adaptive inserts used:

No.	Bore type	Adaptive insert [medium] (function)		Pressure [bar]
1	B	1830-A6B050000001/2	[Electric current] (electric)	0
2	B	VT1820-062406041/2	[Compressed air] (with shut-off)	16
3	B	VT1821-062406041/2	[Compressed air] (without shut-off)	6
4	B	VT1820-062406041/2	[Compressed air] (with shut-off)	16
5	B	VT1821-062406041/2	[Compressed air] (without shut-off)	6
6	B	VT1825-092406061/2	[Tap water] (drip-free)	4

Step 2: Calculation

No.	Bore type	Adaptive insert (function)	Pressure [bar]	Correction pressure [bar]	Resulting pressure [bar]
1	B	1830 (electric)	0	0	0
2	B	1820 (with shut-off)	16	+0.8	16.8
3	B	1821 (without shut-off)	6	0	6
4	B	1820 (with shut-off)	16	+0.8	16.8
5	B	1821 (without shut-off)	6	0	6
6	B	1825 (drip-free)	4	+3.8	7.8
Total					53.4

Step 3: Check of the permissible total operating pressure

Resulting total operating pressure (53.4 bar) < permissible total operating pressure (67 bar)

Step 4: Result

Operation of the application example is permissible, since the permissible total operating pressure is not exceeded.

2.1 Example 2 – Check of the permissible total operating pressure for the Multiline 1862

Step 1: Conditions of use (based on an application example)

Assumed load: all adaptive inserts are under pressure simultaneously

Configuration used:

- Multiline type: **1862-00050200**
- Adaptive inserts used:

No.	Bore type	Adaptive insert [medium] (function)		Pressure [bar]
1	C	1831-A6B05XXXXXX1/2	[Electric current] (electric)	0
2	C	VT1820-062408061/2	[Compressed air] (with shut-off)	12
3	B	VT1825-092406061/2	[Tap water] (drip-free)	4
4	B	VT1821-062406041/2	[Compressed air] (without shut-off)	6
5	B	1830-A6B050000001/2	[Electric current] (electric)	0
6	B	VT1825-092406061/2	[Tap water] (drip-free)	4
7	B	VT1820-062406041/2	[Compressed air] (with shut-off)	16

Step 2: Calculation

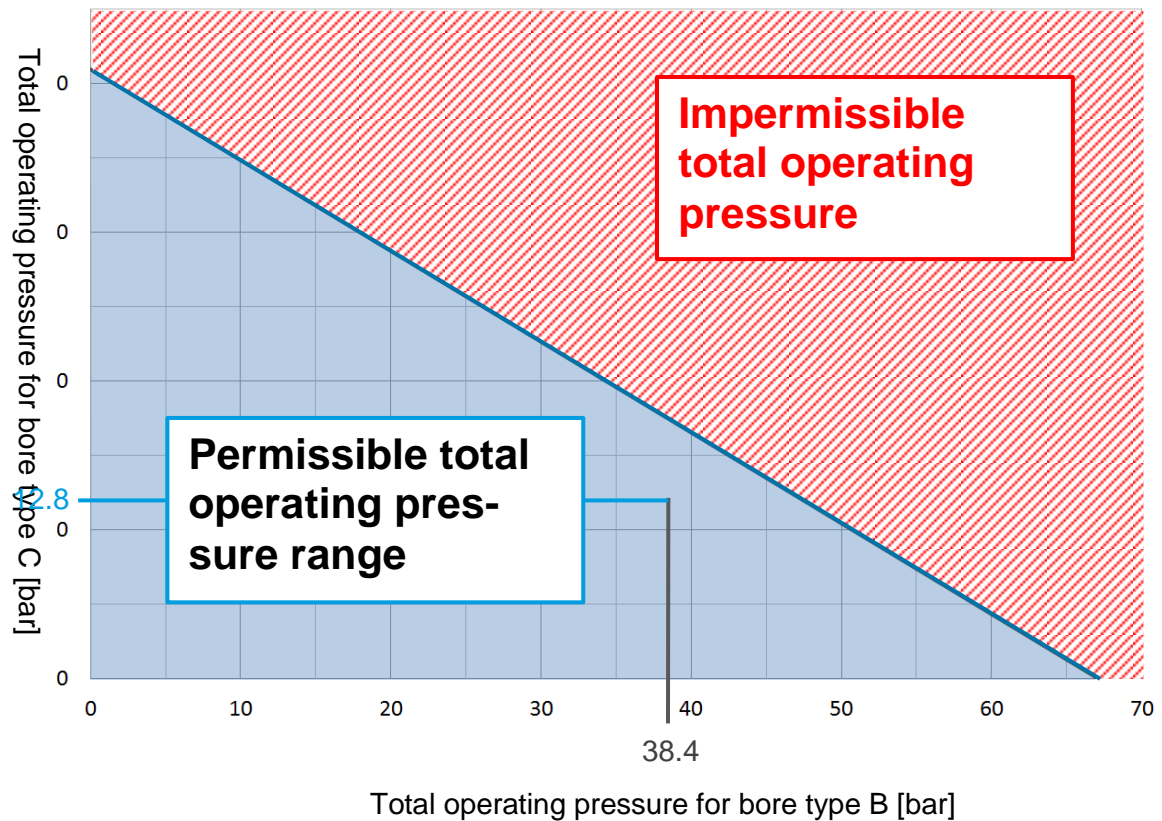
No.	Bore type	Adaptive insert (function)	Pressure [bar]	Correction pressure [bar]	Resulting pressure [bar]
1	C	1831 (electric)	0	0	0
2	C	1820 (with shut-off)	12	+0.8	12.8
3	B	1825 (drip-free)	4	+3.8	7.8
4	B	1821 (without shut-off)	6	0	6
5	B	1830 (electric)	0	0	0
6	B	1825 (drip-free)	4	+3.8	7.8
7	B	1820 (with shut-off)	16	+0.8	16.8

12.8 (for bore type C)
 38.4 (for bore type B)

Resulting pressure [bar] of the two bore types:

- Bore type C = \sum from no.1-2 = $0+12.8 = \underline{12.8 \text{ bar}}$
- Bore type B = \sum from no.3-7 = $7.8+6+0+7.8+16.8 = \underline{38.4 \text{ bar}}$

Step 3: Check of the permissible total operating pressure



Step 4: Result

Operation of the application example is permissible, since the permissible total operating pressure is not exceeded.

2.2 Example 3 – Check of the permissible total operating pressure for the Multiline 1862

Step 1: Conditions of use (based on an application example)

Assumed load: all adaptive inserts are under pressure simultaneously

Configuration used:

- Multiline type: **1862-00050200**
- Following adaptive inserts:

No.	Bore type	Adaptive insert [medium] (function)		Pressure [bar]
1	C	1831-A6B05XXXXXX1/2	[Electric current] (electric)	0
2	C	VT1820-062408061/2	[Compressed air] (with shut-off)	16
3	B	VT1820-062406041/2	[Compressed air] (with shut-off)	16
4	B	VT1825-092406061/2	[Tap water] (drip-free)	4
5	B	VT1825-092406061/2	[Tap water] (drip-free)	4
6	B	VT1821-062406041/2	[Compressed air] (without shut-off)	16
7	B	1830-A6B050000001/2	[Electric current] (electric)	0

Step 2: Calculation

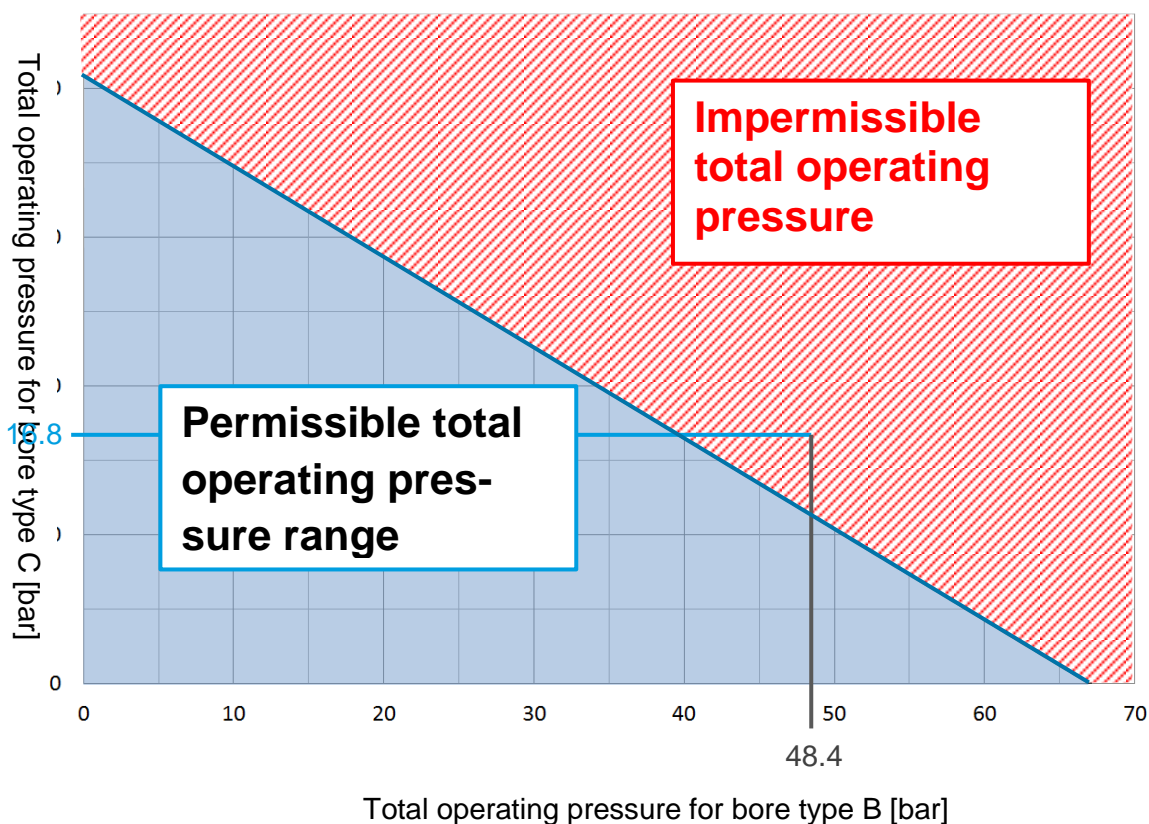
No.	Bore type	Adaptive insert (function)	Pressure [bar]	Correction pressure [bar]	Resulting pressure [bar]
1	C	1831 (electric)	0	0	0
2	C	1820 (with shut-off)	16	+0.8	16.8
3	B	1820 (with shut-off)	16	+0.8	16.8
4	B	1825 (drip-free)	4	+3.8	7.8
5	B	1825 (drip-free)	4	+3.8	7.8
6	B	1821 (without shut-off)	16	0	16
7	B	1830 (electric)	0	0	0

Resulting pressure for Bore type C: 16.8 bar (rows 1-2)
 Resulting pressure for Bore type B: 48.4 bar (rows 3-7)

Resulting pressure [bar] of the two bore types:

- Bore type C = \sum from no.1-2 = $0+16.8 = 16.8$ bar
- Bore type B = \sum from no.3-7 = $16.8+7.8+7.8+16+0 = 48.4$ bar

Step 3: Check of the permissible total operating pressure



Step 4: Result

Operation of the application example is not permissible, since the permissible total operating pressure is exceeded. If you do not have the capability to reduce the total operating pressure, contact us at info@eisele.eu.

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3 Safety information

To prevent potential damage, read and observe this document.

DANGER

The permissible ambient and media temperatures must never be exceeded. They must be observed in order to prevent burns to the operator.

Observe the maximum permissible number of adaptive inserts per adaptive insert type and the respective maximum permissible operating pressure.

The maximum permissible total operating pressure of the Multiline 1852 / 1862 must never be exceeded, not even temporarily. Failure to observe this information, especially with the use of compressed air, will result in increased risks to life and limb. With the use of electrical adaptive inserts there is an additional risk of fire.

After connecting, the locking lever must be secured with the knurled thumb screw to prevent accidental opening of the connection. Never operate a Multiline 1852 / 1862 that is not locked and secured. Never connect or disconnect when under pressure or voltage.

Modifications and alterations to the product are not permissible.

Work on the Multiline 1852 / 1862 may be carried out only in a pressureless and voltage-free state.

To prevent the risk of pinching, exercise care when locking the two halves of the connector.

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Subject to technical modifications