

Electric Drives
and Controls

Hydraulics

Linear Motion and
Assembly Technologies

Pneumatics

Service

Rexroth
Bosch Group

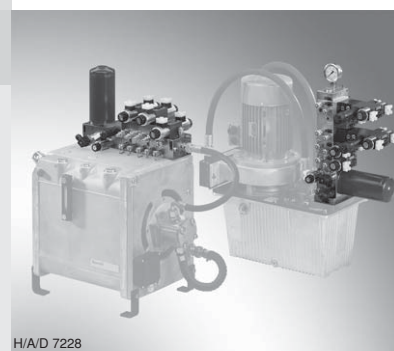
Control module

RE 51156/05.13
Replaces: 09.11

1/96

Type IH15B

Component series 1X
Maximum operating pressure 350 bar
Maximum flow 30 l/min



H/A/D 7228

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| • Tank connection module for sandwich module with threaded connection | 77 | • Filter element | 94 |
| • Sandwich module with threaded connection | 78 to 79 | • Assembly tool for filter cartridge | 94 |
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Features

- Compact design
- No piping of the control
- Few joints
- Variable set-up
- Can be combined individually
- Direct mounting on power unit tank cover; external set-up possible, as well
- Ready for connection

Description, general

The IH15B control modules serves the realization of complete hydraulic controls. They can be fitted and mounted individually. The directional valve modules and seat valve modules can be combined.

Using the tank connection modules, the control modules can be directly mounted to the tank cover of the oil tank. Using the modules for external attachment, the control modules can,

however, also be installed arbitrarily into every system. The reducing modules allow for attachment of the IH15B modules to IH15A and IH20B modules.

The modules have preferably been designed for hydraulic controls for low-flow actuators up to a flow of 30 l/min. They are connected by means of three tie rods.

Technical data (For applications outside these parameters, please consult us!)

hydraulic

| | | | |
|--|---|---|--|
| Installation position | Any ¹⁾ | | |
| Hydraulic fluid | Mineral oil (HL, HLP) according to DIN 51524 part 2 ²⁾ ; fast biodegradable hydraulic fluids according to VDMA 24568 (see 90221); HETG (rape seed oil) ²⁾ ; HEPG (polyglycols); HEES (synthetic esters) ³⁾ ; other hydraulic fluids upon request | | |
| Hydraulic fluid temperature range | °C | -30 to +80 (with NBR seals) -20 to +80 (with FKM seals) (observe the admissible viscosity range of the valves!) | |
| Ambient temperature range | °C | -30 to +50 | |
| Viscosity range | mm ² /s | 2.8 to 500 ¹⁾ | |
| Maximum admissible degree of contamination of the hydraulic fluid, cleanliness class according to ISO 4406 (c) | Class 20/18/15 ¹⁾ | | |
| Valve pressure rating | Refer to the related data sheet | | |
| Maximum flow of the directional seat valves type: KSER1... | q_v | l/min | 20 (2/2 directional seat valve) 12 (3/2 directional seat valve) |

electric

| | | | |
|---|----------------|---|----------------------------|
| Voltage type | Direct voltage | | |
| Available voltage ⁴⁾ | U | V | 24 |
| Voltage tolerance (nominal voltage) | | | % ±10 |
| Power consumption | P | W | 19 and/or 30 ¹⁾ |
| Switching time according to ISO 6403 | On | T | ms 25 to ≤ 80 |
| | Off | T | ms 10 to 25 |
| Switching frequency | | | cy/h up to 15,000 |
| Protection class according to EN 60529 ⁵⁾ (VDE 0470-1) DIN 40050-9 | IP 65 | | |
| Coil temperature ⁶⁾ | | | °C 150 |

¹⁾ Observe the valve details

²⁾ Suitable for NBR **and** FKM seals

³⁾ Suitable **only** for FKM seals

⁴⁾ Special voltage on request

⁵⁾ With mating connector mounted and locked

⁶⁾ Due to the temperatures occurring at the surfaces of the solenoid coils, the European standards EN563 and EN982 need to be adhered to!

Project planning information

When designing the control with accumulator you have to make sure that the accumulator is protected against inadmissible overpressure by means of a type examination-tested pressure relief valve. The type-examination tested pressure relief valve must not assume control tasks. The set pressure of the type-examination tested pressure relief valve must be less than or equal to the maximum admissible operating pressure of the accumulator.

In order to achieve the best utilization of the accumulator volume possible as well as long service life, compliance with the following nitrogen filling pressure value is recommended:

$$p_o = 0.9 \times p_{(\text{minimum operating pressure})}$$

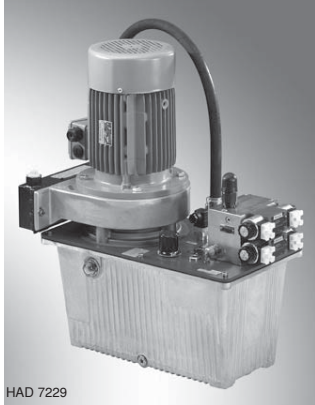
When attaching the IH15B control to a UPE5 drive module, the following has to be observed:

The total length of the IH15B control should not be longer than the UPE5 drive module.

Maximum recommended total length $l = 500$ mm.

Please consult us if the total length of the required control should be longer.

Overview of the modules

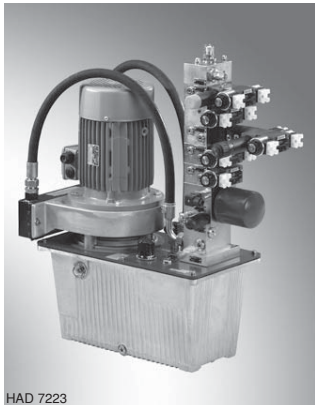


HAD 7229

Basic module "G"

Basic module "G"

- Basic module with integrated pressure relief valve for pressure setting
- Basic module with two valve stations and integrated pressure relief valve
- if the "G" basic modules are used, no further stacking is possible
- For more information see page 8

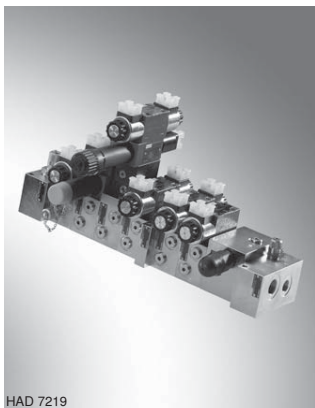


HAD 7223

Directional seat valve module "W", "S"

Directional seat valve module, "W", "S"

- Directional valve modules
 - Allow the design of controls using valves with porting pattern according to DIN 24340 form A
- Seat valve modules basically consist of:
 - A pressure relief module
 - One or several control modules
 - One end module
- The control is designed depending on the relevant application
- For more information see page 14



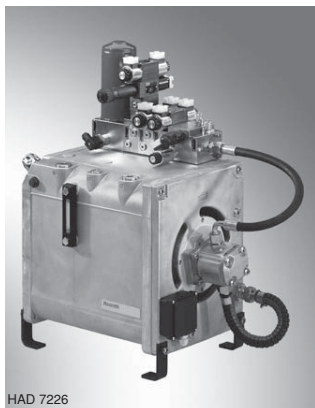
HAD 7219

Module for external attachment

Module for external attachment

- Allows for the attachment of the directional seat valve modules to any hydraulic system or any machine
- For more information see page 63

Overview of the modules



HAD 7226

Module for drive module UPE5

Module for drive module UPE5

- Allows for the attachment of the modules to the UPE5 drive module (catalog 51145)
- For more information see page 80

| Short designation | Basic module, type "G" | Page |
|-------------------|---|------|
| BA | Tank connection module | 9 |
| BAP | Tank connection module with external P connection at the front side | 9 |
| BAP-2PT | Tank connection module with two external 2x P and T connections at the front side | 10 |
| BAY | Tank connection module with Y channel | 11 |
| GDB | Pressure relief module | 12 |
| G2AABTDB | Module AA - B - T with pressure relief valve and 2 valve stations | 13 |

| Short designation | Directional seat valve module, type "W", "S" | Page |
|-------------------|---|------|
| BA | Tank connection module | 15 |
| BAP | Tank connection module with external P connection at the front side | 15 |
| BAY | Tank connection module with Y channel | 16 |
| BAZG | Tank connection module for sandwich module with threaded connection | 77 |
| DF40 | Pressure filter module (P line $p_{max} = 250$ bar) | 20 |
| DF40Y | Pressure filter module with Y channel (P line $p_{max} = 250$ bar) | 20 |
| DFS40 | Pressure filter module filter bowl vertical (P line $p_{max} = 250$ bar) | 21 |
| F30DB | Filter module with pressure relief valve (T line $p_{max} = 7$ bar) | 22 |
| F30DBU | Filter module with pressure relief valve and circulation valve (T line $p_{max} = 7$ bar) | 24 |
| F60DB | Filter module with pressure relief valve (T line $p_{max} = 7$ bar) | 22 |
| F60DBU | Filter module with pressure relief valve and circulation valve (T line $p_{max} = 7$ bar) | 24 |
| SDA | Pressure cut-off module | 28 |
| SDB | Pressure relief module | 26 |
| SDBU | Pressure relief module with circulation valve | 27 |
| SEDBSA | End module with pressure relief valve, accumulator and stop valve | 59 |
| SEDBSAP1 | End module with pressure relief valve, accumulator and stop valve with P1 channel | 59 |
| SP | Control module P | 46 |
| SPDV | Control module P with throttle valve | 49 |
| SPA3 | Control module SPA3 | 51 |
| SPA3P1 | Control module SPA3 with P1 channel | 51 |
| SPBAT2DB | Control module SPBAT2DB | 50 |
| SPP1 | Control module P with P1 channel | 46 |
| SPDVP1 | Control module P with throttle valve and P1 channel | 49 |

Overview of the modules

| Short designation | Directional seat valve module, type "W", "S" | Page |
|-------------------|---|------|
| SR | Control module with check valve | 53 |
| SR2 | Control module with check valve | 55 |
| SRP1 | Control module P with check valve with P1 channel | 53 |
| SR2P1 | Control module P with check valve with P1 channel | 55 |
| ST | Control module T | 48 |
| STP1 | Control module T with P1 channel | 48 |
| SSB | Accumulator shut-off module | 61 |
| SSBP1 | Accumulator shut-off module with P1 channel | 61 |
| SU | Circulation module | 45 |
| SUP1 | Circulation module with P1 channel | 45 |
| WDB | Pressure relief module with one valve station | 17 |
| WDR | Pressure reducing module | 29 |
| WDRP1 | Pressure reducing module with P1 channel | 29 |
| WZDR-A | Sandwich module with pressure reducing valve in channel A | 31 |
| WZDR-A/A | Sandwich module with pressure reducing valve in channel A and drain cock | 31 |
| WZDR-AB | Sandwich module with pressure reducing valve in channel AB | 31 |
| WZDR-AB/A | Sandwich module with pressure reducing valve in channel AB and drain cock | 31 |
| WZDR-P | Sandwich module with pressure reducing valve in channel P | 32 |
| WSE | Directional seat valve module | 58 |
| WSEP1 | Directional seat valve module with P1 channel | 58 |
| WSK | Directional valve seat valve cooler module | 18 |
| WSKB | Directional valve seat valve cooler module with bypass | 19 |
| WSKY | Directional valve seat valve cooler module with Y channel | 18 |
| WSKYB | Directional valve seat valve cooler module with Y channel and bypass | 19 |
| WZ | Sandwich module (for directional valve size 6) | 35 |
| WZ-008 | Sandwich module in special design -008 (for directional valve size 6) | 39 |
| WZ2AABB | Sandwich module, 2 valve stations, AA and BB channel connected (for directional valve size 6) | 41 |
| WZ2AP | Sandwich module, 2 valve stations, AP channel connected (for directional valve size 6) | 41 |
| WZ3 | Sandwich module with 3 valve stations (for directional valve size 6) | 37 |
| WZ4 | Sandwich module with 4 valve stations (for directional valve size 6) | 37 |
| WZ4-008 | Sandwich module with 4 valve stations in special design -008 (for directional valve size 6) | 39 |
| WZE | Sandwich module with cartridge valves (for directional valve size 6) | 42 |
| WZEP1 | Sandwich module with cartridge valves with P1 channel (for directional valve size 6) | 43 |
| WZG | Sandwich module with threaded connection for pipeline installation | 78 |
| WZP1 | Sandwich module with P1 channel (for directional valve size 6) | 35 |
| WZSB | Sandwich module with lowering brake valve | 33 |
| ZSSB | Sandwich module with accumulator shut-off block | 56 |
| ZSSBP1 | Sandwich module with accumulator shut-off module with P1 channel | 56 |

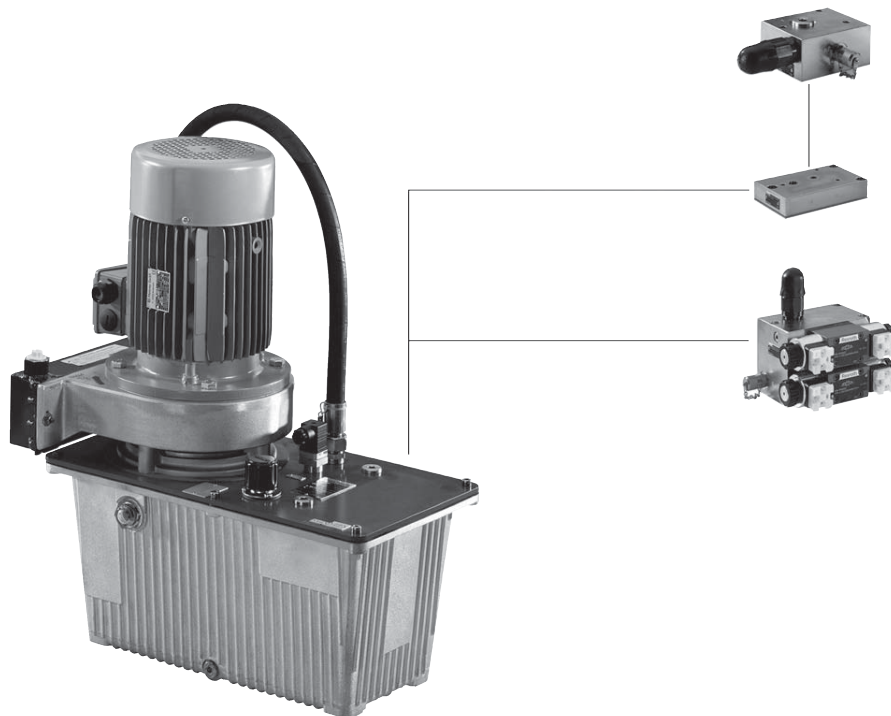
Overview of the modules

| Short designation | Module for external attachment | Page |
|-------------------|--|------|
| A | Connection module | 65 |
| AD | Connection module with through holes | 66 |
| ADB | Connection module with pressure relief valve | 67 |
| AY | Connection module with Y channel | 65 |
| E | End module | 72 |
| EP1 | End module with P1 channel | 72 |
| Z | Sandwich module | 68 |
| ZG | Sandwich module with mounting thread for threaded bolt | 70 |
| ZGP1 | Sandwich module with mounting thread for threaded bolt and P1 channel | 70 |
| ZGPT | Sandwich module with PT interruption and mounting thread for threaded bolt | 71 |
| ZGPTP1 | Sandwich module with PTP1 interruption and mounting thread for threaded bolt | 71 |

| Short designation | Reducing module, type "R" | Page |
|-------------------|---|------|
| ZPT | Sandwich module with PT interruption | 69 |
| ZP1 | Sandwich module with P1 channel | 68 |
| RBAIH15A | Tank connection module with reduction from IH15B to IH15A | 73 |
| RIH15AR | Reducing module IH15B to IH15A (right) | 75 |
| RIH20BL | Reducing module IH15B to IH20B (left) | 74 |
| RIH20BR | Reducing module IH15B to IH20B (right) | 76 |

| Short designation | Module for drive module UPE5, type "UPE5" | Page |
|-------------------|--|-------------------------------|
| UPE5A | Connection module | 81 |
| UPE5AR | Connection module with check valve | 82 |
| UPE5AY | Connection module with Y channel | 81 |
| UPE5AYR | Connection module with Y channel and check valve | 82 |
| UPE5BA | Tank connection module | 83 |
| UPE5BAP1 | Tank connection module with P1 channel | 83 |
| UPE5F30 | Filter module | (T line $p_{max} = 7$ bar) 84 |
| UPE5F30P1 | Filter module with P1 channel | (T line $p_{max} = 7$ bar) 84 |
| UPE5F60 | Filter module | (T line $p_{max} = 7$ bar) 84 |
| UPE5F60P1 | Filter module with P1 channel | (T line $p_{max} = 7$ bar) 84 |
| UPE5SSB | Accumulator shut-off module | 86 |
| UPE5SSBP1 | Accumulator shut-off module with P1 channel | 86 |

Basic module, type "G": Attachment



Basic module, type "G" (dimensions in mm)

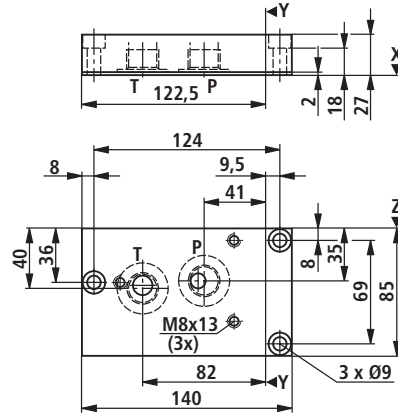
Tank connection module, type "BA"

Symbol



Unit dimensions

Dimension Z = 85 mm



| Material no. | Device designation | Type designation |
|--------------|------------------------|------------------|
| R904101347 | Tank connection module | IH15MB-1X/BA |

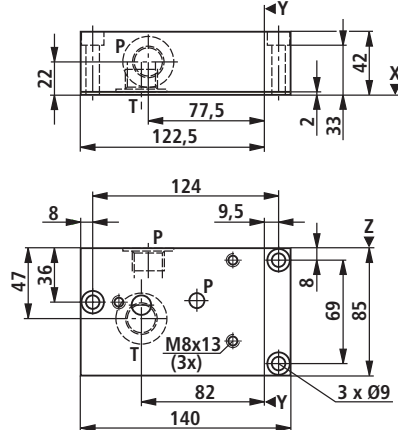
Tank connection module with P connection at the front side, type "BAP"

Symbol



Unit dimensions

Dimension Z = 85 mm



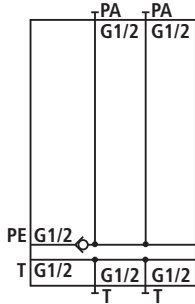
| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Tank connection module with external P connection at the front side | IH15MB-1X/BAP- <input type="text" value="26"/> |
| R904101844 | | IH15MB-1X/BAP-V |

| | | | | |
|---------------------------------|------|---------------|-----|-----|
| <input type="text" value="26"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

Basic module, type "G" (dimensions in mm)

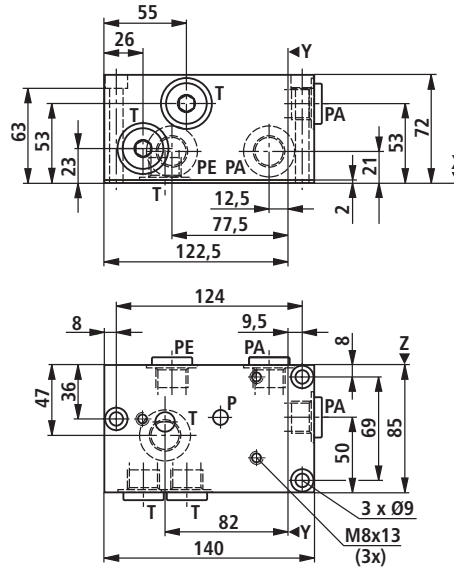
Tank connection module with 2x P and T connection at the front side, type "BAP-2PT"

Symbol



Unit dimensions

Dimension Z = 85 mm



| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Tank connection module with 2x external PT connections at the front side | IH15MB-1X/BAP-2PT- ²⁶ <input type="checkbox"/> |
| R901134710 | | IH15MB-1X/BAP-2PT/V |

| | | | | |
|--|------|---------------|-----|-----|
| ²⁶ <input type="checkbox"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

Basic module, type "G" (dimensions in mm)

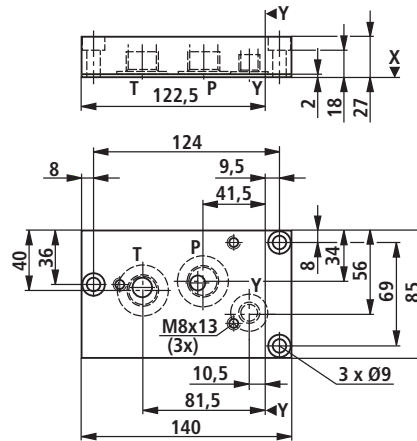
Tank connection module with Y channel, type "BAY"

Symbol

| | |
|---|------|
| Y | G1/4 |
| P | G1/2 |
| T | G1/2 |

Unit dimensions

Dimension Z = 85 mm

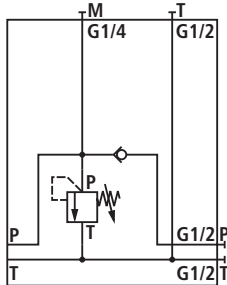


| Material no. | Device designation | Type designation |
|--------------|---------------------------------------|------------------|
| | Tank connection module with Y channel | IH15MB-1X/BAY |
| R904101843 | | IH15MB-1X/BAY |

Basic module, type "G" (dimensions in mm)

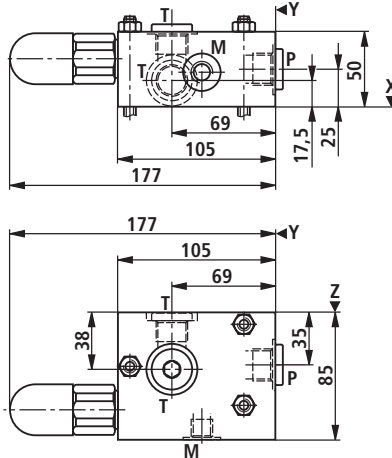
Pressure relief module, type "GDB"

Symbol



Unit dimensions

Dimension Z = 85 mm



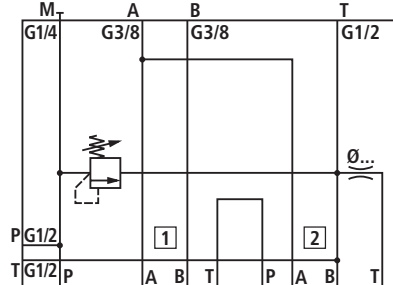
| Material no. | Device designation | Type designation |
|--------------|------------------------|--|
| | Pressure relief module | IH15EB-1X/GDB- <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> |
| R904101893 | | IH15EB-1X/GDB-S100/M/V |
| R904101842 | | IH15EB-1X/GDB-S200/M/V |

| | | | |
|---|---|--|--|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | = S = H = A |
| <input type="checkbox"/> 2 | Pressure rating of the pressure relief valve | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 25 bar = 25 50 bar = 50 100 bar = 100 200 bar = 200 315 bar = 315 400 bar = 400 |
| Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | | | |
| | | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 50 bar = 50E 100 bar = 100E 140 bar = 140E 210 bar = 210E 330 bar = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../.E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 88 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 26 | Seal | Seal material Seal material | FKM = V NBR = M |

Basic module, type "G" (dimensions in mm)

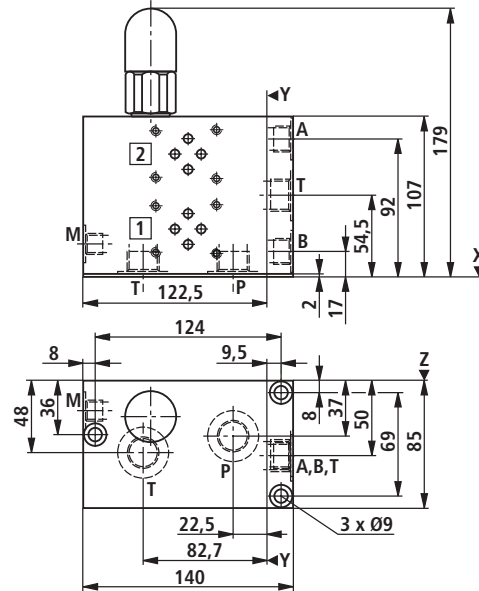
Module block AA - B - T, type "G2AABTDB"

Symbol



Unit dimensions

Dimension Z = 85 mm



| Material no. | Device designation | Type designation |
|--------------|---|---|
| | Module block AA - B - T with pressure relief valve | IH15EB-1X/G2AABTDB- 1 2 / 14 27 / 26 |
| R904101796 | | IH15EB-1X/G2AABTDB-S200/M/B10/V |

| | | | |
|---|---|---|---------------|
| 1 | Adjustment element at the pressure relief valve | Set screw with hexagon and protective cap | = S |
| | | Rotary knob | = H |
| | | Lockable rotary knob | = A |
| 2 | Pressure rating of the pressure relief valve | Setting pressure up to max. | 25 bar = 25 |
| | | Setting pressure up to max. | 50 bar = 50 |
| | | Setting pressure up to max. | 100 bar = 100 |
| | | Setting pressure up to max. | 200 bar = 200 |
| | | Setting pressure up to max. | 315 bar = 315 |
| | | Setting pressure up to max. | 400 bar = 400 |

Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive)

More pressure ratings on request!

| | | | |
|--|-----------------------------|---------|--------|
| | Setting pressure up to max. | 50 bar | = 50E |
| | Setting pressure up to max. | 100 bar | = 100E |
| | Setting pressure up to max. | 140 bar | = 140E |
| | Setting pressure up to max. | 210 bar | = 210E |
| | Setting pressure up to max. | 330 bar | = 330E |

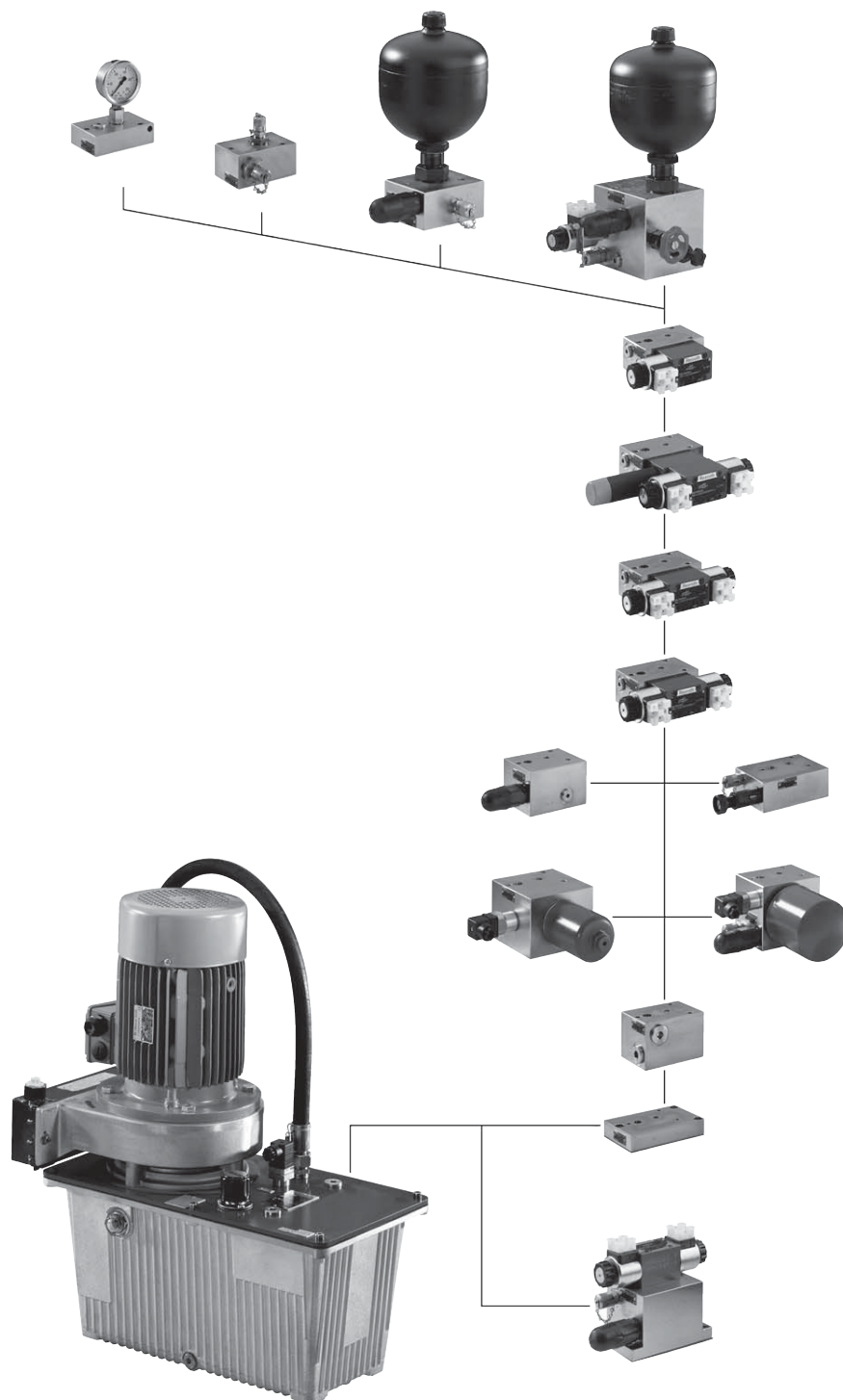
Characteristic curve for type-examination tested pressure relief valves type: DBD.../..E

Type testing according to Pressure Equipment Directive 97/23/EC

See page 88

| | | | |
|----|---------------------|-----------------------------|----------------|
| 14 | Pressure monitoring | With measuring port | = M |
| | | Without pressure monitoring | = O |
| 26 | Seal | Seal material | FKM = V |
| | | Seal material | NBR = M |
| 27 | Throttle | Without throttle | = no code |
| | | Throttle diameter | Ø 1.0 mm = B10 |
| | | Throttle diameter | Ø 2.5 mm = B25 |

Directional seat valve module, type "W", "S": Attachment



Directional seat valve module, type "W", "S" (dimensions in mm)

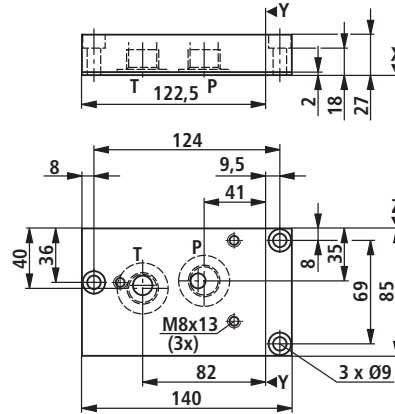
Tank connection module, type "BA"

Symbol



Unit dimensions

Dimension Z = 85 mm



| Material no. | Device designation | Type designation |
|--------------|------------------------|------------------|
| R904101347 | Tank connection module | IH15MB-1X/BA |

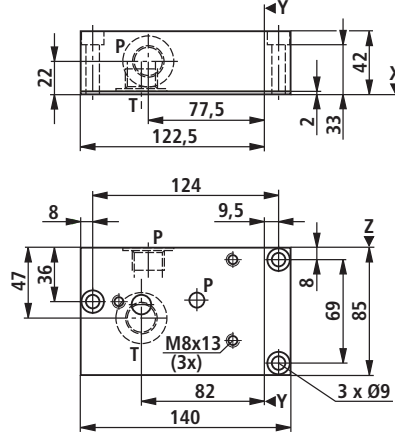
Tank connection module with P connection at the front side, type "BAP"

Symbol



Unit dimensions

Dimension Z = 85 mm



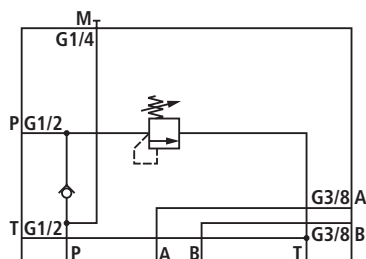
| Material no. | Device designation | Type designation |
|--------------|---|------------------------------|
| | Tank connection module with external P connection at the front side | IH15MB-1X/BAP- ²⁶ |
| R904101844 | | IH15MB-1X/BAP-V |

| | | | | |
|---------------|------|---------------|-----|-----|
| ²⁶ | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

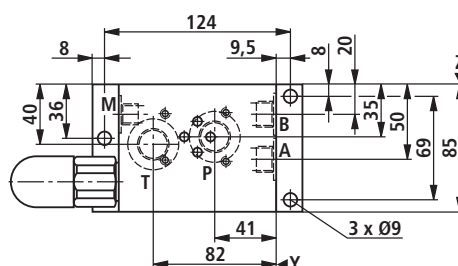
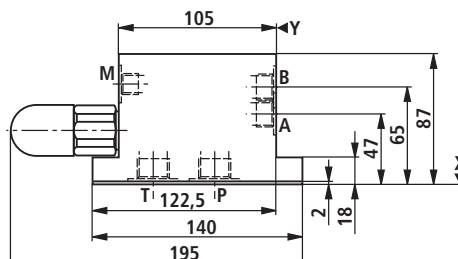
Pressure relief module, type "WDB"

Symbol



Unit dimensions

Dimension Z = 85 mm



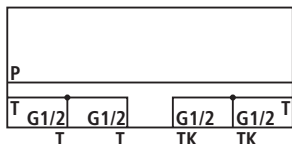
| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Pressure relief module with one valve station | IH15EB-1X/WDB- <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> |
| R904101759 | | IH15EB-1X/WDB-S200/M/V |
| R901042115 | | IH15EB-1X/WDB-S200/O/V |

| | | | |
|---|---|--|--|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | = S = H = A |
| <input type="checkbox"/> 2 | Pressure rating of the pressure relief valve | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 25 bar = 25 50 bar = 50 100 bar = 100 200 bar = 200 315 bar = 315 400 bar = 400 |
| Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | | | |
| | | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 50 bar = 50E 100 bar = 100E 140 bar = 140E 210 bar = 210E 330 bar = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../..E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 88 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 26 | Seal | Seal material Seal material | FKM = V NBR = M |

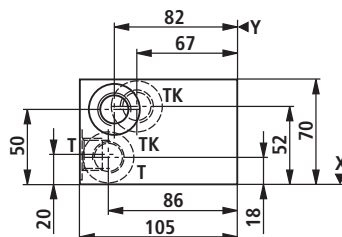
Directional seat valve module, type "W", "S" (dimensions in mm)

Cooler module, type "WSK"

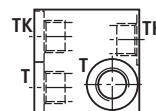
Symbol



Unit dimensions

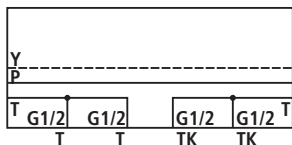


Dimension Z = 70 mm



Cooler module with Y channel, type "WSKY"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Cooler module | IH15MB-1X/WSK- <input type="text" value="26"/> |
| R904101577 | | IH15MB-1X/WSK-V |

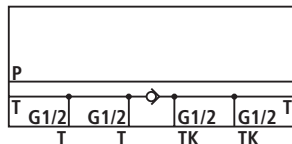
| Material no. | Device designation | Type designation |
|--------------|------------------------------|---|
| | Cooler module with Y channel | IH15MB-1X/WSKY- <input type="text" value="26"/> |
| R904101753 | | IH15MB-1X/WSKY-V |

| | | | | |
|---------------------------------|------|---------------|-----|-----|
| <input type="text" value="26"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

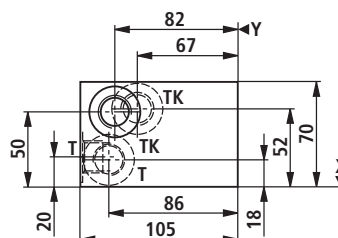
Directional seat valve module, type "W", "S" (dimensions in mm)

Cooler module with bypass, type "WSKB"
(cracking pressure 3 bar)

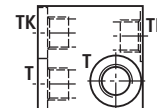
Symbol



Unit dimensions

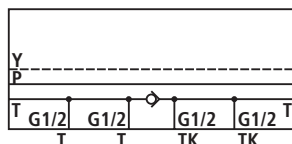


Dimension Z = 70 mm



Cooler module with Y channel and bypass,
type "WSKYB" (cracking pressure 3 bar)

Symbol



| Material no. | Device designation | Type designation |
|--------------|---------------------------|---|
| | Cooler module with bypass | IH15MB-1X/WSKB- <input type="text" value="26"/> |
| R901165376 | | IH15MB-1X/WSKB-V |

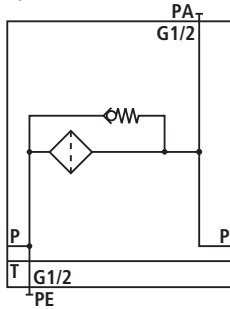
| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Cooler module with Y channel and bypass | IH15MB-1X/WSKYB- <input type="text" value="26"/> |
| R901165377 | | IH15MB-1X/WSKYB-V |

| | | | | |
|---------------------------------|------|---------------|-----|-----|
| <input type="text" value="26"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

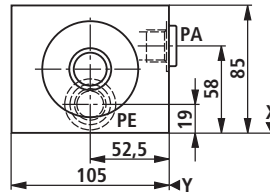
Directional seat valve module, type "W", "S" (dimensions in mm)

Pressure filter module, type "DF40" ($q_{Vmax} = 40$ l/min, $p_{max} = 250$ bar)

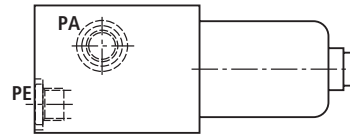
Symbol



Unit dimensions



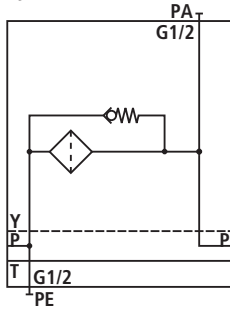
Dimension Z = 213 mm



Pressure filter module with Y channel, type "DF40Y"

($q_{Vmax} = 40$ l/min, $p_{max} = 250$ bar)

Symbol



Installation information:

Wind the filter cartridge as tight as possible on the block.
Then, wind it back by 1/8 to 1/4 of a rotation.

| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Pressure filter module ($p_{max} = 250$ bar) | IH15EB-1X/DF40- <input type="checkbox"/> ¹⁹ / <input type="checkbox"/> ²⁰ / <input type="checkbox"/> ²⁶ |
| R901278451 | | IH15EB-1X/DF40-06/E/V |
| R901278454 | | IH15EB-1X/DF40-10/E/V |

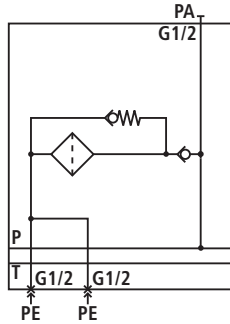
| Material no. | Device designation | Type designation |
|--------------|---|---|
| | Pressure filter module with Y channel ($p_{max} = 250$ bar) | IH15EB-1X/DF40Y- <input type="checkbox"/> ¹⁹ / <input type="checkbox"/> ²⁰ / <input type="checkbox"/> ²⁶ |
| R901278455 | | IH15EB-1X/DF40Y-06/E/V |

| | | | |
|--|--------------------|--|-------------------|
| <input type="checkbox"/> ¹⁹ | Filter rating | 06 μ m 10 μ m | = 06 = 10 |
| <input type="checkbox"/> ²⁰ | Clogging indicator | Without clogging indicator Visual clogging indicator Electric clogging indicator | = A = O = E |
| <input type="checkbox"/> ²⁶ | Seal | Seal material | FKM NBR |
| | | | = V = M |

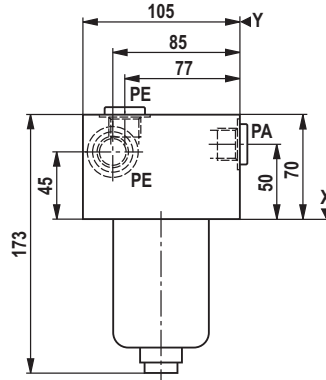
Directional seat valve module, type "W", "S" (dimensions in mm)

Pressure filter module for vertical installation position,
type "DFS40" ($q_{Vmax} = 40 \text{ l/min}$, $p_{max} = 250 \text{ bar}$)

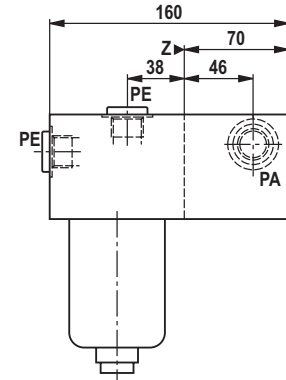
Symbol



Unit dimensions



Dimension Z = 70 mm



Installation information:

Wind the filter cartridge as tight as possible on the block.
Then, wind it back by 1/8 to 1/4 of a rotation.

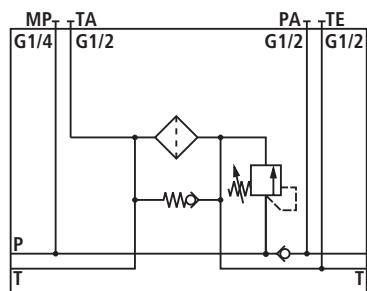
| Material no. | Device designation | Type designation |
|--------------|---|---|
| | Pressure filter module for vertical installation position ($p_{max} = 250 \text{ bar}$) | IH15EB-1X/DFS40- <input type="checkbox"/> ¹⁹ / <input type="checkbox"/> ²⁰ / <input type="checkbox"/> ²⁶ |
| R901278456 | | IH15EB-1X/DFS40-10/A/V |
| R901278457 | | IH15EB-1X/DFS40-10/E/V |
| R901278458 | | IH15EB-1X/DFS40-10/O/V |
| R901278459 | | IH15EB-1X/DFS40-06/E/V |

| | | | |
|--|--------------------|--|-------------------|
| <input type="checkbox"/> ¹⁹ | Filter rating | 06 μm 10 μm | = 06 = 10 |
| <input type="checkbox"/> ²⁰ | Clogging indicator | Without clogging indicator Visual clogging indicator Electric clogging indicator | = A = O = E |
| <input type="checkbox"/> ²⁶ | Seal | Seal material | FKM NBR |
| | | | = V = M |

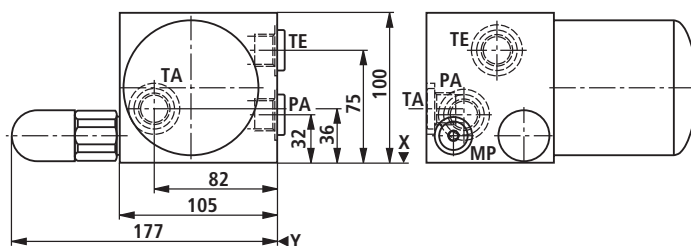
Directional seat valve module, type "W", "S" (dimensions in mm)

Filter module with pressure relief valve,
type "F30DB", "F60DB" ($p_{max} = 7 \text{ bar}$) –
Filter module with pressure relief valve cannot be directly
attached to the UPE5 drive module.

Symbol



Unit dimensions



Dimension Z = 180 mm F30DB
Dimension Z = 290 mm F60DB

Installation information:

Wind the filter cartridge as tight as possible on the block.
Then, wind the filter cartridge by further 1/3 of a rotation.

| Material no. | Device designation | Type designation |
|--------------|---|---|
| | Filter module with pressure relief valve | IH15EB-1X/F30DB- 1 2 14 19 20 26 <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> |
| R901068157 | | IH15EB-1X/F30DB-S100/M/10/A/V |
| R904101858 | | IH15EB-1X/F30DB-S100/M/10/E/V |
| R904101859 | | IH15EB-1X/F30DB-S100/M/10/O/V |
| R901068229 | | IH15EB-1X/F30DB-S100/O/10/A/V |
| R901068227 | | IH15EB-1X/F30DB-S100/O/10/E/V |
| R901068228 | | IH15EB-1X/F30DB-S100/O/10/O/V |

| Material no. | Device designation | Type designation |
|--------------|---|---|
| | Filter module with pressure relief valve | IH15EB-1X/F60DB- 1 2 14 19 20 26 <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> |
| R901068161 | | IH15EB-1X/F60DB-S100/M/10/A/V |
| R904101881 | | IH15EB-1X/F60DB-S100/M/10/E/V |
| R904101880 | | IH15EB-1X/F60DB-S100/M/10/O/V |
| R901068225 | | IH15EB-1X/F60DB-S100/O/10/A/V |
| R901068223 | | IH15EB-1X/F60DB-S100/O/10/E/V |
| R901068224 | | IH15EB-1X/F60DB-S100/O/10/O/V |

Directional seat valve module, type "W", "S"

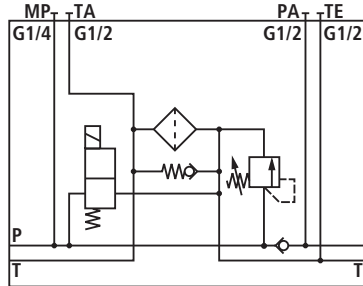
| | | | | |
|---|--|--|--|--|
| <input type="checkbox"/> | ¹ Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | | = S = H = A |
| <input type="checkbox"/> | ² Pressure rating of the pressure relief valve | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 25 bar 50 bar 100 bar 200 bar 315 bar 400 bar | = 25 = 50 = 100 = 200 = 315 = 400 |
| Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | | | | |
| | | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 50 bar 100 bar 140 bar 210 bar 330 bar | = 50E = 100E = 140E = 210E = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../..E Type testing according to Pressure Equipment Directive 97/23/EC | | | | See page 88 |
| <input type="checkbox"/> | ¹⁴ Pressure monitoring | With measuring port Without pressure monitoring | | = M = O |
| <input type="checkbox"/> | ¹⁹ Filter rating | 06 µm 10 µm | | = 06 = 10 |
| <input type="checkbox"/> | ²⁰ Clogging indicator | Without clogging indicator Visual clogging indicator Electric clogging indicator | | = A = O = E |
| <input type="checkbox"/> | ²⁶ Seal | Seal material Seal material | FKM NBR | = V = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

Filter module with pressure relief valve and circulation valve, type "F30DBU", "F60DBU" ($p_{max} = 7 \text{ bar}$) –

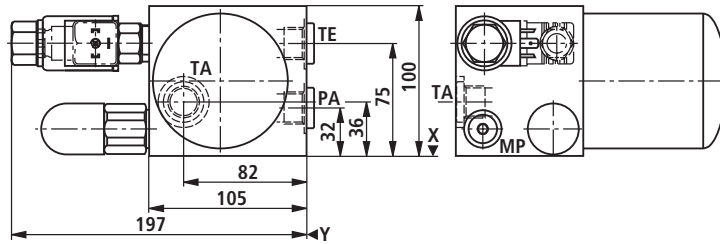
Filter module with pressure relief valve and circulation valve cannot be directly attached to the UPE5 drive module.

Symbol



Unit dimensions

Dimension Z = 180 mm F30DBU
Dimension Z = 290 mm F60DBU



Installation information:

Wind the filter cartridge as tight as possible on the block. Then, wind the filter cartridge by further 1/3 of a rotation.

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Filter module with pressure relief valve and circulation valve | IH15EB-1X/F30DBU- <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| R901070590 | | IH15EB-1X/F30DBU-S100/MPG24/10/A/V |
| R904101867 | | IH15EB-1X/F30DBU-S100/MPG24/10/E/V |
| R904101868 | | IH15EB-1X/F30DBU-S100/MPG24/10/O/V |
| R901070591 | | IH15EB-1X/F30DBU-S200/MPG24/10/A/V |
| R904101869 | | IH15EB-1X/F30DBU-S200/MPG24/10/E/V |
| R904101870 | | IH15EB-1X/F30DBU-S200/MPG24/10/O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Filter module with pressure relief valve and circulation valve | IH15EB-1X/F60DBU- <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| R901070592 | | IH15EB-1X/F60DBU-S100/MPG24/10/A/V |
| R904101348 | | IH15EB-1X/F60DBU-S100/MPG24/10/E/V |
| R904101873 | | IH15EB-1X/F60DBU-S100/MPG24/10/O/V |
| R901070593 | | IH15EB-1X/F60DBU-S200/MPG24/10/A/V |
| R904101872 | | IH15EB-1X/F60DBU-S200/MPG24/10/E/V |
| R904101871 | | IH15EB-1X/F60DBU-S200/MPG24/10/O/V |

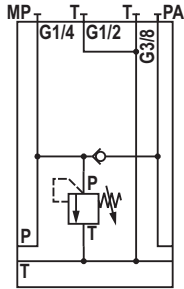
Directional seat valve module, type "W", "S"

| | | | | | |
|---|----|---|--|--|--|
| <input type="checkbox"/> | 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | | = S = H = A |
| <input type="checkbox"/> | 2 | Pressure rating of the pressure relief valve | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 25 bar 50 bar 100 bar 200 bar 315 bar 400 bar | = 25 = 50 = 100 = 200 = 315 = 400 |
| <p>Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request!</p> | | | | | |
| | | | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 50 bar 100 bar 140 bar 210 bar 330 bar | = 50E = 100E = 140E = 210E = 330E |
| <p>Characteristic curve for type-examination tested pressure relief valves type: DBD../..E Type testing according to Pressure Equipment Directive 97/23/EC</p> | | | | | See page 88 |
| <input type="checkbox"/> | 4 | Designation of the 2/2 seat valve | Normally closed Normally open | | = N = P |
| <input type="checkbox"/> | 8 | Solenoid voltage of the seat valves | Volt | 24 V DC | = G24 |
| <input type="checkbox"/> | 14 | Pressure monitoring | With measuring port Without pressure monitoring | | = M = O |
| <input type="checkbox"/> | 19 | Filter rating | 06 µm 10 µm | | = 06 = 10 |
| <input type="checkbox"/> | 20 | Clogging indicator | Without clogging indicator Visual clogging indicator Electric clogging indicator | | = A = O = E |
| <input type="checkbox"/> | 26 | Seal | Seal material Seal material | FKM NBR | = V = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

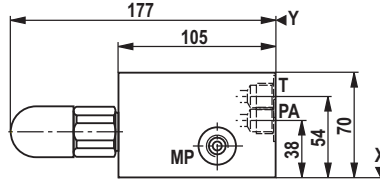
Pressure relief module, type "SDB"

Symbol



Unit dimensions

Dimension Z = 85 mm



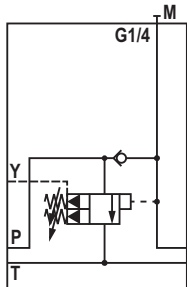
| Material no. | Device designation | Type designation |
|--------------|------------------------|--|
| | Pressure relief module | IH15EB-1X/SDB- <input type="checkbox"/> 1 <input type="checkbox"/> 2 / <input type="checkbox"/> 14 <input type="checkbox"/> 26 |
| R901065894 | | IH15EB-1X/SDB-A100/M/V |
| R901065267 | | IH15EB-1X/SDB-A100/O/V |
| R901065895 | | IH15EB-1X/SDB-H100/M/V |
| R901065269 | | IH15EB-1X/SDB-H100/O/V |
| R901065896 | | IH15EB-1X/SDB-S100/M/V |
| R904101875 | | IH15EB-1X/SDB-S100/O/V |

| | | | |
|---|---|--|--|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | = S = H = A |
| <input type="checkbox"/> 2 | Pressure rating of the pressure relief valve | Setting pressure up to max. 25 bar Setting pressure up to max. 50 bar Setting pressure up to max. 100 bar Setting pressure up to max. 200 bar Setting pressure up to max. 315 bar Setting pressure up to max. 400 bar | = 25 = 50 = 100 = 200 = 315 = 400 |
| Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | | | |
| | | Setting pressure up to max. 50 bar Setting pressure up to max. 100 bar Setting pressure up to max. 140 bar Setting pressure up to max. 210 bar Setting pressure up to max. 330 bar | = 50E = 100E = 140E = 210E = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../.E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 88 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 26 | Seal | Seal material FKM Seal material NBR | = V = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

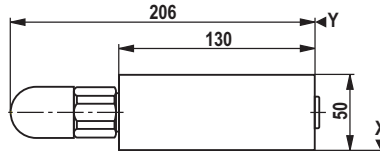
Pressure cut-off module, type "SDA"

Symbol



Unit dimensions

Dimension Z = 95 mm



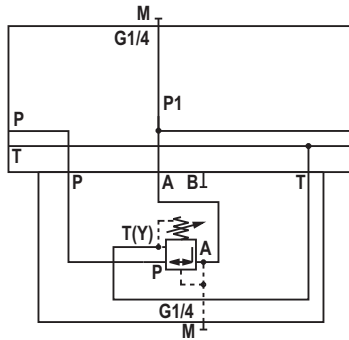
| Material no. | Device designation | Type designation |
|--------------|-------------------------|--|
| | Pressure cut-off module | IH15EB-2X/SDA- <input type="checkbox"/> ²³ / <input type="checkbox"/> ²⁴ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901152738 | | IH15EB-2X/SDA-2/K/M/V |

| | | | |
|--|---|--|---|
| <input type="checkbox"/> ¹⁴ | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ²³ | Adjustment type | Hexagon with protective cap | = 2 |
| <input type="checkbox"/> ²⁴ | Pressure rating of the pressure cut-off valve | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 50 bar = C 100 bar = F 200 bar = K 350 bar = R |
| <input type="checkbox"/> ²⁶ | Seal | Seal material Seal material | FKM = V NBR = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

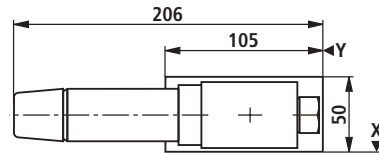
Pressure reducing module, type "WDR"

Symbol



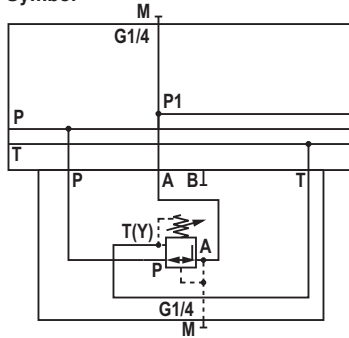
Unit dimensions

Dimension Z = 120 mm



Pressure reducing module with P1 channel, type "WDRP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--------------------------|--|
| | Pressure reducing module | IH15MB-1X/WDR- <input type="checkbox"/> ¹⁶ / <input type="checkbox"/> ¹⁷ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901066169 | | IH15MB-1X/WDR-1/210/M/V |
| R901066168 | | IH15MB-1X/WDR-1/210/O/V |
| R904101852 | | IH15MB-1X/WDR-2/75/M/V |
| R904102085 | | IH15MB-1X/WDR-2/75/O/V |
| R904101559 | | IH15MB-1X/WDR-2/150/M/V |
| R904101853 | | IH15MB-1X/WDR-2/210/M/V |
| R904101854 | | IH15MB-1X/WDR-2/315/M/V |
| R901066167 | | IH15MB-1X/WDR-3/210/M/V |
| R901066166 | | IH15MB-1X/WDR-3/210/O/V |
| R901066165 | | IH15MB-1X/WDR-7/210/M/V |
| R901066164 | | IH15MB-1X/WDR-7/210/O/V |

Directional seat valve module, type "W", "S"

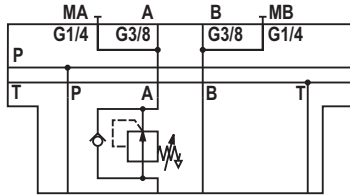
| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Pressure reducing module with P1 channel | IH15MB-1X/WDRP1- <input type="checkbox"/> ¹⁶ / <input type="checkbox"/> ¹⁷ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101755 | | IH15MB-1X/WDRP1-1/150/M/V |
| R901067481 | | IH15MB-1X/WDRP1-1/150/O/V |
| R904101636 | | IH15MB-1X/WDRP1-2/75/M/V |
| R901067480 | | IH15MB-1X/WDRP1-2/75/O/V |
| R904101855 | | IH15MB-1X/WDRP1-2/150/M/V |
| R901067478 | | IH15MB-1X/WDRP1-2/150/O/V |
| R901067482 | | IH15MB-1X/WDRP1-3/210/M/V |
| R901067483 | | IH15MB-1X/WDRP1-3/210/O/V |
| R901067485 | | IH15MB-1X/WDRP1-7/210/M/V |
| R901067486 | | IH15MB-1X/WDRP1-7/210/O/V |

| | | | |
|--|--|---------|--------------------------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port Without pressure monitoring | | = M = O |
| <input type="checkbox"/> ¹⁶ Adjustment element at the pressure reducing valve | Rotary knob Setscrew with hexagon and protective cap Lockable rotary knob with scale Rotary knob with scale | | = 1 = 2 = 3 = 7 |
| <input type="checkbox"/> ¹⁷ Secondary pressure | Max. secondary pressure | 25 bar | = 25 |
| | Max. secondary pressure | 75 bar | = 75 |
| | Max. secondary pressure | 150 bar | = 150 |
| | Max. secondary pressure | 210 bar | = 210 |
| | Max. secondary pressure | 315 bar | = 315 |
| <input type="checkbox"/> ²⁶ Seal | Seal material | FKM | = V |
| | Seal material | NBR | = M |

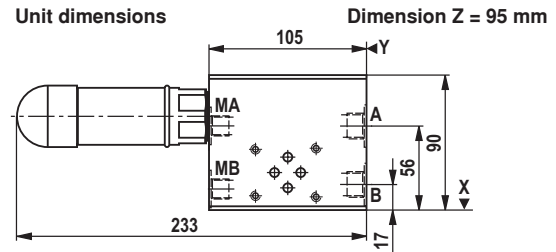
Directional seat valve module, type "W", "S" (dimensions in mm)

Sandwich module with pressure reducing valve in channel A, type "WZDR-A"

Symbol

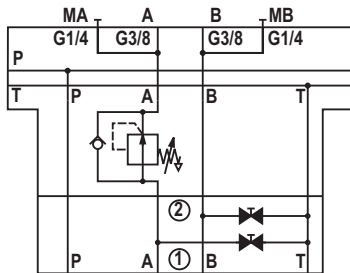


Unit dimensions

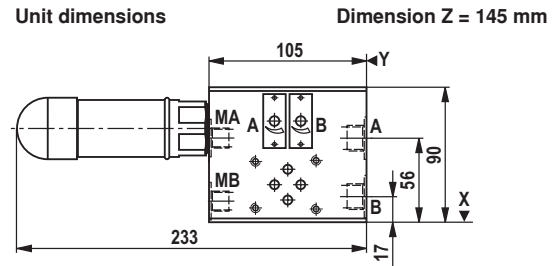


Sandwich module with pressure reducing valve in channel A and drain cock, type "WZDR-A/A"

Symbol

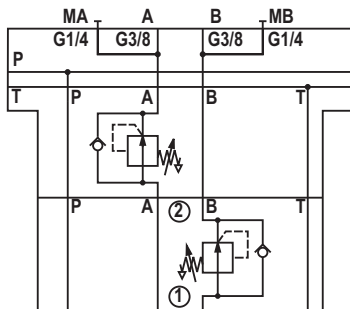


Unit dimensions

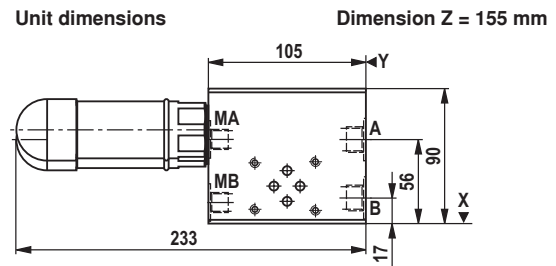


Sandwich module with pressure reducing valve in channel AB, type "WZDR-AB"

Symbol

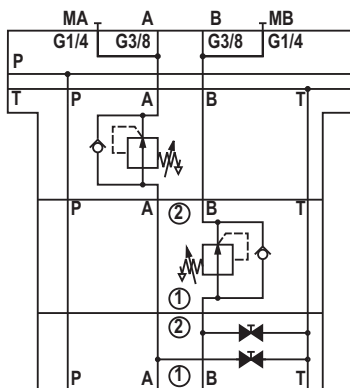


Unit dimensions

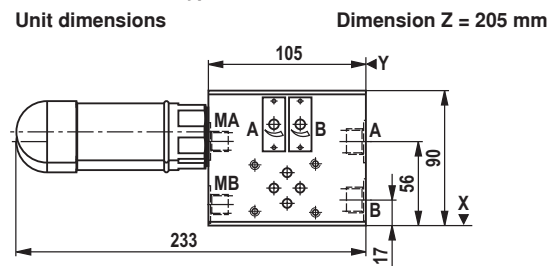


Sandwich module with pressure reducing valve in channel AB and drain cock, type "WZDR-AB/A"

Symbol



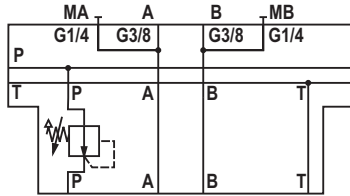
Unit dimensions



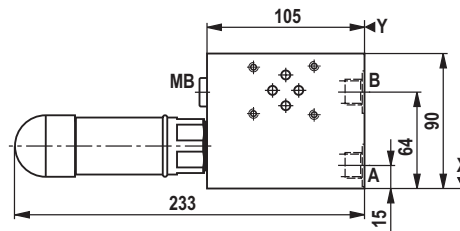
Directional seat valve module, type "W", "S" (dimensions in mm)

Sandwich module with pressure reducing valve in channel P, type "WZDR-P"

Symbol



Unit dimensions



Dimension Z = 95 mm

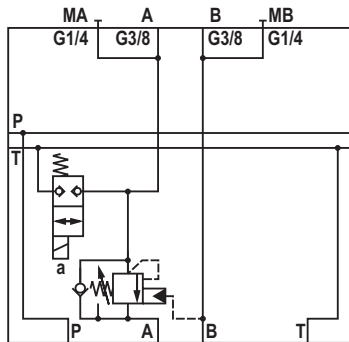
| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Sandwich module with pressure reducing valve | IH15EB-1X/WZDR- 29 / 32 33 / 34 / 14 / 26 |
| R904102218 | | IH15EB-1X/WZDR-AB/2/100/M/V |
| R904102219 | | IH15EB-1X/WZDR-AB/2/100D/M/V |
| R901040102 | | IH15EB-1X/WZDR-AB/2/210/M/V |
| R901063736 | | IH15EB-1X/WZDR-AB/2/210D/M/V |
| R904101639 | | IH15EB-1X/WZDR-A/2/100/M/V |
| R904102089 | | IH15EB-1X/WZDR-A/2/100D/M/V |
| R901024724 | | IH15EB-1X/WZDR-A/2/210D/M/V |
| R904101807 | | IH15EB-1X/WZDR-A/2/315/M/V |
| R901110142 | | IH15EB-1X/WZDR-P/2/210/M/V |
| R901110143 | | IH15EB-1X/WZDR-P/2/210D/M/V |

| | | | |
|-----------------------------|---|---|---|
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 26 | Seal | Seal material Seal material | FKM = V NBR = M |
| <input type="checkbox"/> 29 | Cartridge valve | In channel A In channel A and B In channel P | = A = AB = P |
| <input type="checkbox"/> 32 | Stop valve | Without stop valve With stop valve | = no code = A |
| <input type="checkbox"/> 33 | Adjustment element at the pressure reducing valve | Setscrew with hexagon and protective cap Rotary knob with scale, lockable | = 2 = 3 |
| <input type="checkbox"/> 34 | Secondary pressure | Max. secondary pressure Max. secondary pressure Max. secondary pressure Max. secondary pressure with pressure switch Max. secondary pressure with pressure switch Max. secondary pressure with pressure switch | 100 bar = 100 210 bar = 210 315 bar = 315 100 bar = 100D 210 bar = 210D 315 bar = 315D |

Directional seat valve module, type "W", "S" (dimensions in mm)

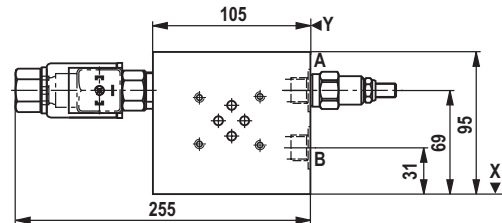
Sandwich module with lowering brake valve in channel A, type "WZSB-A"

Symbol



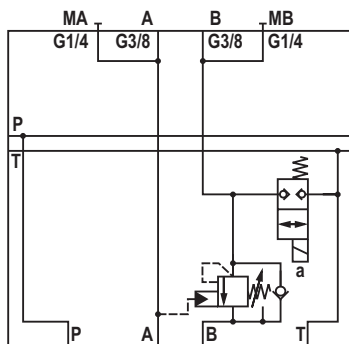
Unit dimensions

Dimension Z = 110 mm



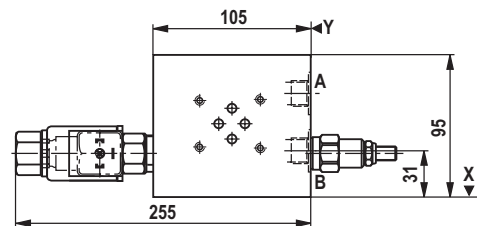
Sandwich module with lowering brake valve in channel B, type "WZSB-B"

Symbol



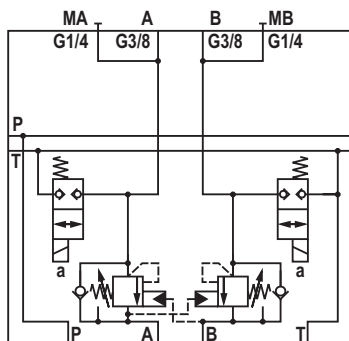
Unit dimensions

Dimension Z = 110 mm



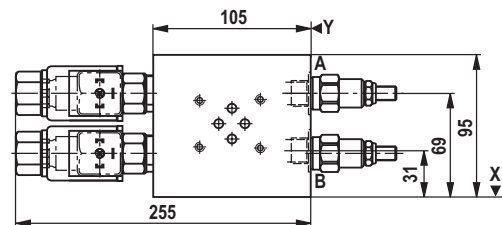
Sandwich module with lowering brake valve in channel A and B, type "WZSB-AB"

Symbol



Unit dimensions

Dimension Z = 110 mm



Directional seat valve module, type: "W", "S"

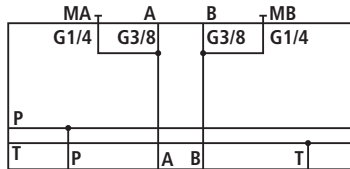
| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Sandwich module with lowering brake valve | IH15EB-1X/WZSB- <input type="checkbox"/> ²⁹ / <input type="checkbox"/> ¹⁴ <input type="checkbox"/> ⁴ <input type="checkbox"/> ⁸ / <input type="checkbox"/> ²⁶ |
| R901160333 | | IH15EB-1X/WZSB-AB/MNG24/V |

| | | | |
|--|-------------------------------------|--|--------------------|
| <input type="checkbox"/> ⁴ | Designation of the 2/2 seat valve | Normally closed Normally open | = N = P |
| <input type="checkbox"/> ⁸ | Solenoid voltage of the seat valves | Volt | 24 V DC = G24 |
| <input type="checkbox"/> ¹⁴ | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ²⁶ | Seal | Seal material Seal material | FKM = V NBR = M |
| <input type="checkbox"/> ²⁹ | Cartridge valve | In channel A In channel B In channel A and B | = A = B = AB |

Directional seat valve module, type "W", "S" (dimensions in mm)

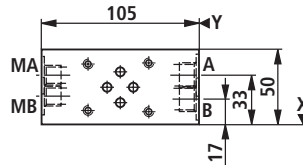
Sandwich module, type "WZ"

Symbol

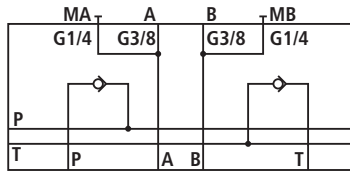


IH15MB-1X/WZ-...

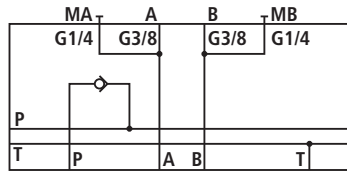
Unit dimensions



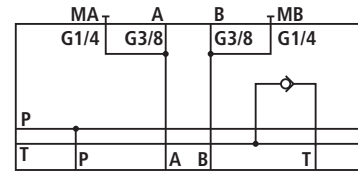
Dimension Z = 70 mm
without check valve
Dimension Z = 85 mm
with check valve



IH15MB-1X/WZ-PT/...



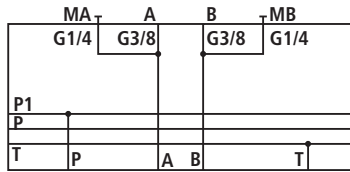
IH15MB-1X/WZ-P/...



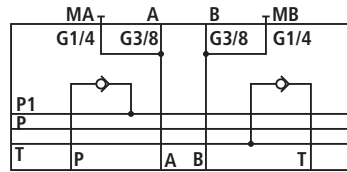
IH15MB-1X/WZ-T/...

Sandwich module with P1 channel, type "WZP1"

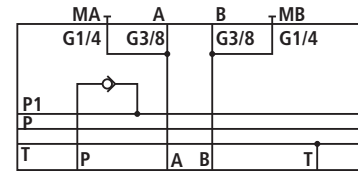
Symbol



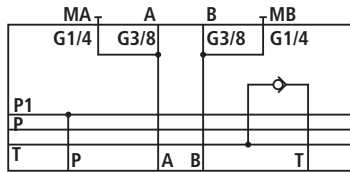
IH15MB-1X/WZP1-...



IH15MB-1X/WZP1-PT/...



IH15MB-1X/WZP1-P/...



IH15MB-1X/WZP1-T/...

| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Sandwich module | IH15MB-1X/WZ- <input type="checkbox"/> ²¹ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101345 | | IH15MB-1X/WZ-M/V |
| R904101410 | | IH15MB-1X/WZ-O/V |
| R901067488 | | IH15MB-1X/WZ-PT/M/V |
| R901067489 | | IH15MB-1X/WZ-PT/O/V |
| R901067490 | | IH15MB-1X/WZ-P/M/V |
| R901067491 | | IH15MB-1X/WZ-P/O/V |
| R901065897 | | IH15MB-1X/WZ-T/M/V |
| R904101455 | | IH15MB-1X/WZ-T/O/V |

Directional seat valve module, type "W", "S"

| Material no. | Device designation | Type designation |
|--------------|------------------------------------|--|
| | Sandwich module with P1 channel | IH15MB-1X/WZP1- <input type="checkbox"/> ²¹ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101830 | | IH15MB-1X/WZP1-M/V |
| R904101598 | | IH15MB-1X/WZP1-O/V |
| R901067493 | | IH15MB-1X/WZP1-PT/M/V |
| R901067495 | | IH15MB-1X/WZP1-PT/O/V |
| R901067497 | | IH15MB-1X/WZP1-P/M/V |
| R904101756 | | IH15MB-1X/WZP1-P/O/V |
| R901067498 | | IH15MB-1X/WZP1-T/M/V |
| R901067499 | | IH15MB-1X/WZP1-T/O/V |

| | | |
|--|---|---------------------------------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ²¹ Check valve | Without check valve In channel P In channel T In channel P and T | = no code = P = T = PT |
| <input type="checkbox"/> ²⁶ Seal | Seal material Seal material | FKM NBR = V = M |

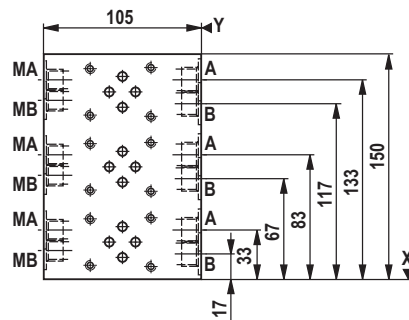
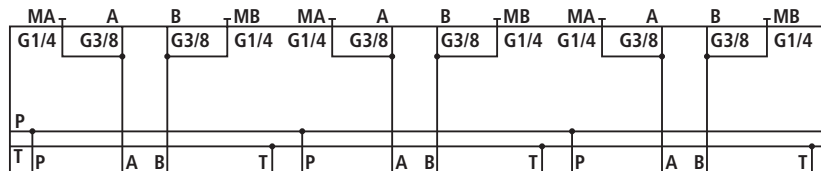
Directional seat valve module, type "W", "S" (dimensions in mm)

Sandwich module with 3 valve stations, type "WZ3"

Symbol

Unit dimensions

Dimension Z = 70 mm

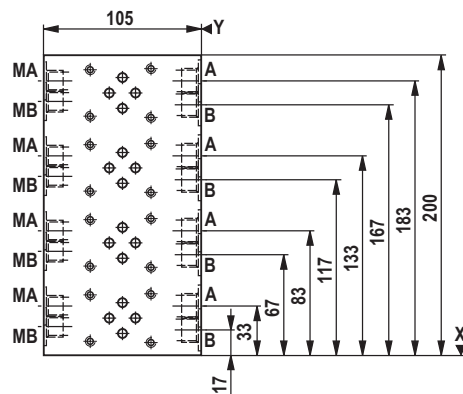
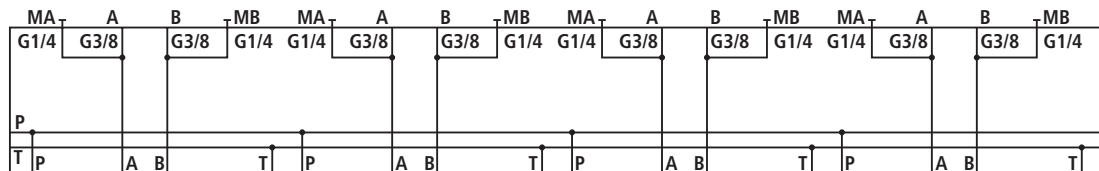


Sandwich module with 4 valve stations, type "WZ4"

Symbol

Unit dimensions

Dimension Z = 70 mm



Directional seat valve module, type "W", "S"

| Material no. | Device designation | Type designation |
|--------------|-----------------------------------|--|
| | Sandwich module, 3 valve stations | IH15MB-1X/WZ3- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901096707 | | IH15EB-1X/WZ3-M/V |
| R901096708 | | IH15EB-1X/WZ3-O/V |

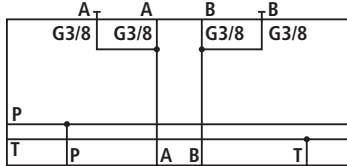
| Material no. | Device designation | Type designation |
|--------------|-----------------------------------|--|
| | Sandwich module, 4 valve stations | IH15MB-1X/WZ4- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901090430 | | IH15EB-1X/WZ4-M/V |
| R901096706 | | IH15EB-1X/WZ4-O/V |

| | | |
|--|--|------------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ²⁶ Seal | Seal material Seal material | = V = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

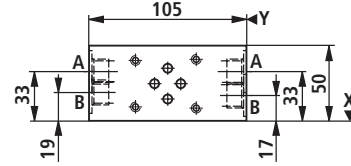
Sandwich module in special design -008
(outlets A and B 2x G3/8 each), type "WZ-....-008"

Symbol



Unit dimensions

Dimension Z = 70 mm

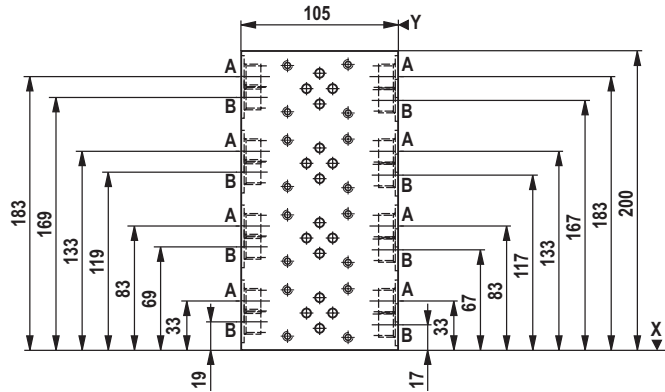
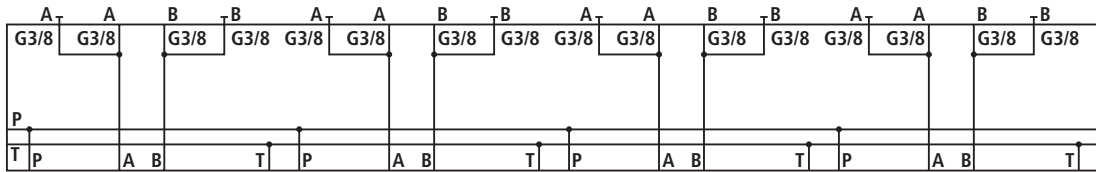


Sandwich module with 4 valve stations in special design -008
(outlets A and B 2x G3/8 each), type "WZ4-....-008"

Symbol

Unit dimensions

Dimension Z = 70 mm



Directional seat valve module, type "W", "S"

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Sandwich module in special design -008, 1 valve station | IH15MB-1X/WZ- ¹⁴ □ / ²⁶ □ -008 |
| R901128760 | | IH15MB-1X/WZ-M/V-008 |
| R901125893 | | IH15MB-1X/WZ-O/V-008 |

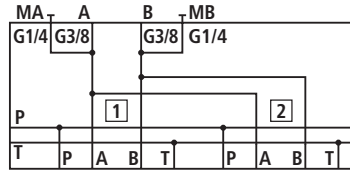
| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module in special design -008, 4 valve stations | IH15MB-1X/WZ4- ¹⁴ □ / ²⁶ □ -008 |
| R901128761 | | IH15MB-1X/WZ4-M/V-008 |
| R901125863 | | IH15MB-1X/WZ4-O/V-008 |

| | | | | |
|--------------------|---------------------|-----------------------------|-----|-----|
| ¹⁴ □ | Pressure monitoring | With measuring port | | = M |
| | | Without pressure monitoring | | = O |
| ²⁶ □ | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

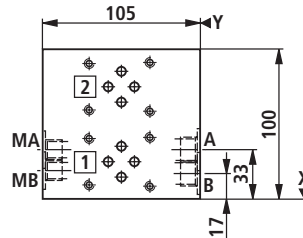
Directional seat valve module, type "W", "S" (dimensions in mm)

Sandwich module 2 - AA - BB, type "WZ2AABB"

Symbol



Unit dimensions



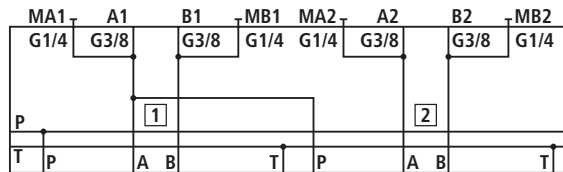
Dimension Z = 70 mm

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Sandwich module, 2 valve stations, AA-BB channel connected | IH15MB-1X/WZ2AABB- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101364 | | IH15MB-1X/WZ2AABB-M/V |
| R904101411 | | IH15MB-1X/WZ2AABB-O/V |

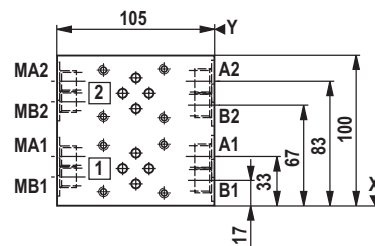
| | | |
|--|-----------------------------|---------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port | = M |
| | Without pressure monitoring | = O |
| <input type="checkbox"/> ²⁶ Seal | Seal material | FKM = V |
| | Seal material | NBR = M |

Sandwich module 2 - AP, type "WZ2AP"

Symbol



Unit dimensions



Dimension Z = 70 mm

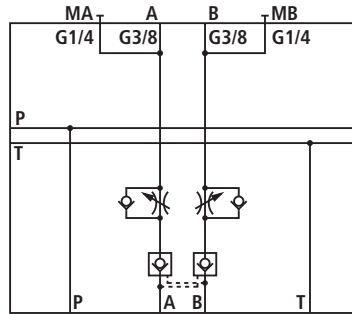
| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Sandwich module, 2 valve stations, A-P channel connected | IH15MB-1X/WZ2AP- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901094521 | | IH15MB-1X/WZ2AP-M/V |
| R901094520 | | IH15MB-1X/WZ2AP-O/V |

| | | |
|--|-----------------------------|---------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port | = M |
| | Without pressure monitoring | = O |
| <input type="checkbox"/> ²⁶ Seal | Seal material | FKM = V |
| | Seal material | NBR = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

Sandwich module with cartridge valves, type "WZE"

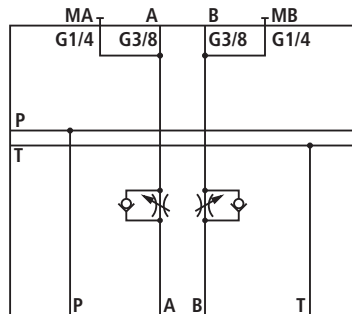
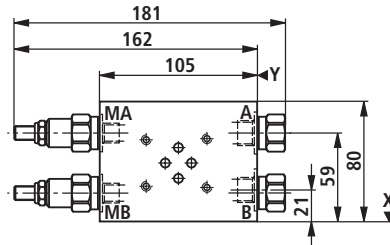
Symbol



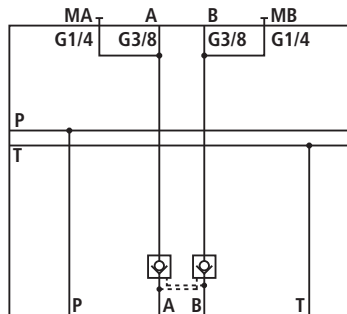
IH15EB-1X/WZE-FSR/AB...

Unit dimensions

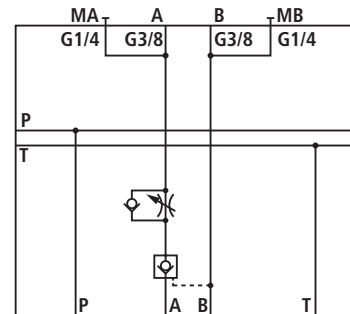
Dimension Z = 110 mm



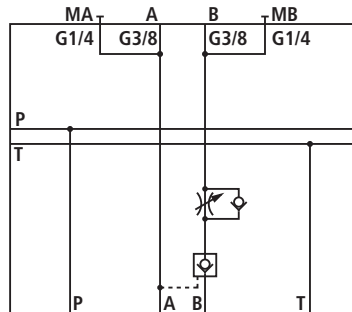
IH15EB-1X/WZE-FS/AB...



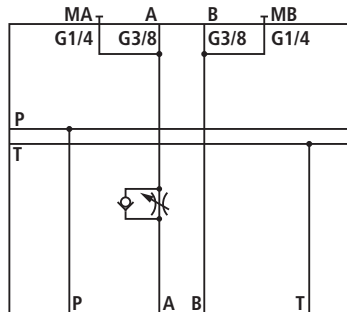
IH15EB-1X/WZE-R/AB...



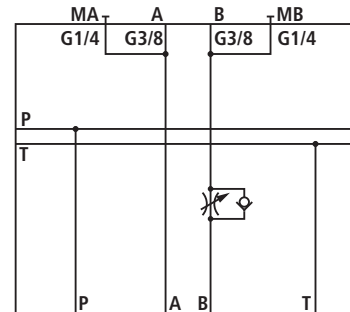
IH15EB-1X/WZE-FSR/A...



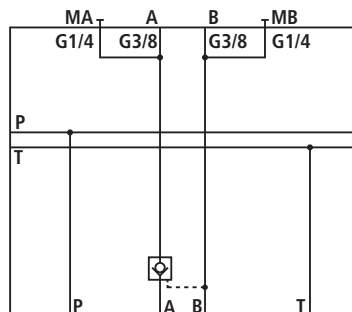
IH15EB-1X/WZE-FSR/B...



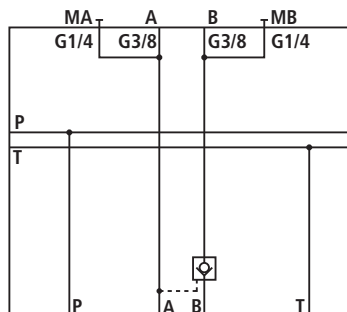
IH15EB-1X/WZE-FS/A...



IH15EB-1X/WZE-FS/B...



IH15EB-1X/WZE-R/A...

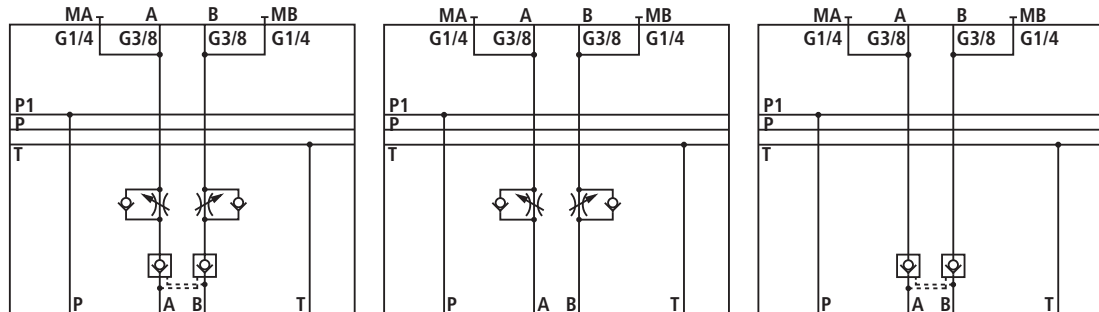


IH15EB-1X/WZE-R/B...

Directional seat valve module, type "W", "S" (dimensions in mm)

Sandwich module with cartridge valves, type "WZEP1"

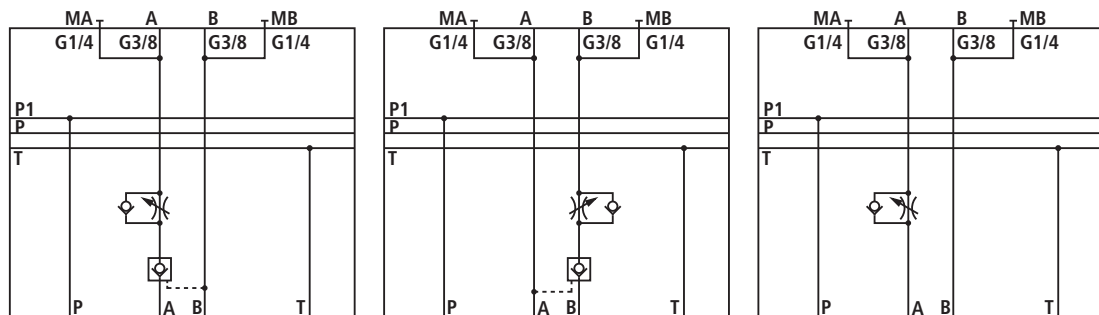
Symbol



IH15EB-1X/WZEP1-FSR/AB...

IH15EB-1X/WZEP1-FS/AB...

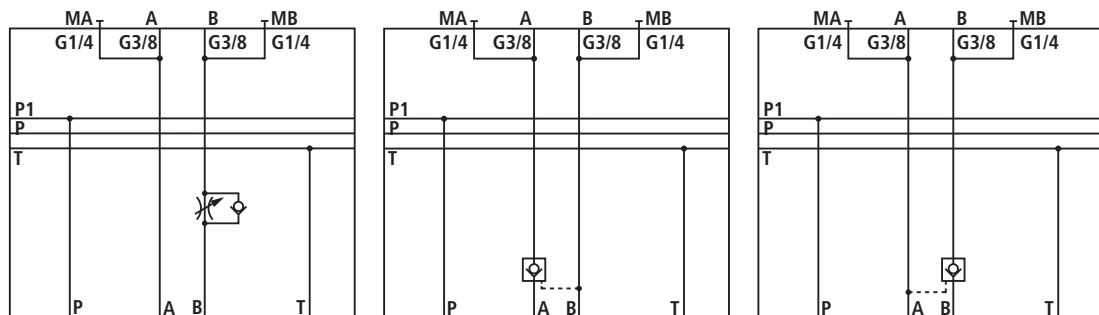
IH15EB-1X/WZEP1-R/AB...



IH15EB-1X/WZEP1-FSR/A...

IH15EB-1X/WZEP1-FSR/B...

IH15EB-1X/WZEP1-FS/A...



IH15EB-1X/WZEP1-FS/B...

IH15EB-1X/WZEP1-R/A...

IH15EB-1X/WZEP1-R/B...

| Material no. | Device designation | Type designation |
|--------------|---------------------------------------|--|
| | Sandwich module with cartridge valves | IH15EB-1X/WZE- <input type="text" value="28"/> / <input type="text" value="29"/> / <input type="text" value="14"/> / <input type="text" value="26"/> |
| R904101344 | | IH15EB-1X/WZE-FSR/AB/M/V |
| R901067578 | | IH15EB-1X/WZE-FSR/AB/O/V |
| R901067579 | | IH15EB-1X/WZE-FS/AB/M/V |
| R901067580 | | IH15EB-1X/WZE-FS/AB/O/V |
| R901067581 | | IH15EB-1X/WZE-R/AB/M/V |
| R901067582 | | IH15EB-1X/WZE-R/AB/O/V |

Directional seat valve module, type "W", "S"

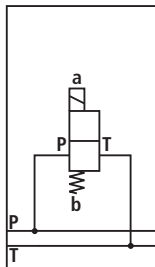
| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Sandwich module with cartridge valves and P1 channel | IH15EB-1X/WZEP1- <input type="checkbox"/> ²⁸ / <input type="checkbox"/> ²⁹ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901067583 | | IH15EB-1X/WZEP1-FSR/AB/M/V |
| R901067584 | | IH15EB-1X/WZEP1-FSR/AB/O/V |
| R901067585 | | IH15EB-1X/WZEP1-FS/AB/M/V |
| R901067586 | | IH15EB-1X/WZEP1-FS/AB/O/V |
| R901067587 | | IH15EB-1X/WZEP1-R/AB/M/V |
| R901067675 | | IH15EB-1X/WZEP1-R/AB/O/V |

| | | |
|--|---|--------------------------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ²⁶ Seal | Seal material Seal material | FKM NBR = V = M |
| <input type="checkbox"/> ²⁸ Cartridge valve | Adjustable throttle check valve Pilot operated check valve Adjustable throttle check valve and pilot operated check valve | = FS = R = FSR |
| <input type="checkbox"/> ²⁹ Cartridge valve | In channel A In channel B In channel A and B | = A = B = AB |

Directional seat valve module, type "W", "S" (dimensions in mm)

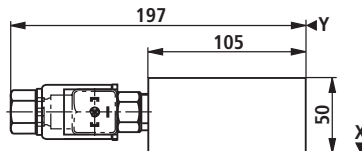
Circulation module, type "SU"

Symbol



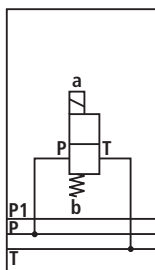
Unit dimensions

Dimension Z = 70 mm



Circulation module with P1 channel, type "SUP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Circulation module | IH15EB-1X/SU- <input type="text"/> ⁴ <input type="text"/> ⁸ / <input type="text"/> ²⁶ |
| R904101894 | | IH15EB-1X/SU-NG24/V |
| R904101895 | | IH15EB-1X/SU-PG24/V |

| Material no. | Device designation | Type designation |
|--------------|------------------------------------|--|
| | Circulation module with P1 channel | IH15EB-1X/SUP1- <input type="text"/> ⁴ <input type="text"/> ⁸ / <input type="text"/> ²⁶ |
| R904101896 | | IH15EB-1X/SUP1-NG24/V |
| R904101897 | | IH15EB-1X/SUP1-PG24/V |

| | | | | |
|------------------------------------|-------------------------------------|-----------------|---------|-------|
| <input type="text"/> ⁴ | Designation of the 2/2 seat valve | Normally closed | | = N |
| | | Normally open | | = P |
| <input type="text"/> ⁸ | Solenoid voltage of the seat valves | Volt | 24 V DC | = G24 |
| <input type="text"/> ²⁶ | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

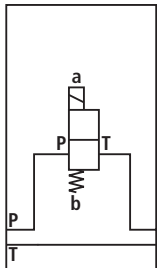
Directional seat valve module, type "W", "S" (dimensions in mm)

Module P, type "SP"

Symbol

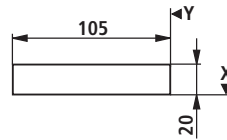


IH15EB-1X/SP -V
-M

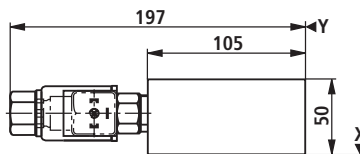


IH15EB-1X/SP -N
-P ...

Unit dimensions



Dimension Z = 70 mm

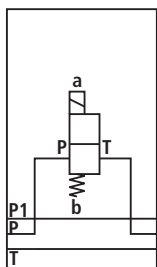


Module P with P1 channel, type "SPP1"

Symbol

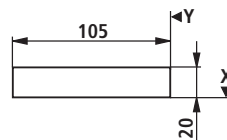


IH15EB-1X/SPP1 -V
-M

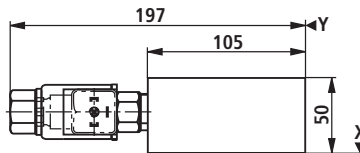


IH15EB-1X/SPP1 -N
-P ...

Unit dimensions



Dimension Z = 70 mm



Directional seat valve module, type "W", "S"

| Material no. | Device designation | Type designation |
|--------------|--------------------|---|
| | Control module P | IH15EB-1X/SP- <input type="text" value="26"/> |
| R904101760 | | IH15EB-1X/SP/V |

| Material no. | Device designation | Type designation |
|--------------|--------------------|---|
| | Control module P | IH15EB-1X/SP- <input type="text" value="4"/> <input type="text" value="8"/> / <input type="text" value="26"/> |
| R904101795 | | IH15EB-1X/SP-NG24/V |
| R904101898 | | IH15EB-1X/SP-PG24/V |

| Material no. | Device designation | Type designation |
|--------------|----------------------------------|---|
| | Control module P with P1 channel | IH15EB-1X/SPP1- <input type="text" value="26"/> |
| R901070019 | | IH15EB-1X/SPP1/V |

| Material no. | Device designation | Type designation |
|--------------|----------------------------------|---|
| | Control module P with P1 channel | IH15EB-1X/SPP1- <input type="text" value="4"/> <input type="text" value="8"/> / <input type="text" value="26"/> |
| R904101899 | | IH15EB-1X/SPP1-NG24/V |
| R904101900 | | IH15EB-1X/SPP1-PG24/V |

| | | | |
|---------------------------------|-------------------------------------|----------------------------------|--------------------------|
| <input type="text" value="4"/> | Designation of the 2/2 seat valve | Normally closed Normally open | = N = P |
| <input type="text" value="8"/> | Solenoid voltage of the seat valves | Volt | 24 V DC = G24 |
| <input type="text" value="26"/> | Seal | Seal material Seal material | FKM NBR = V = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

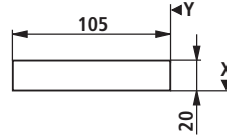
Module T, type "ST"

Symbol



IH15EB-1X/ST ^{-V}
_{-M}

Unit dimensions



Dimension Z = 70 mm

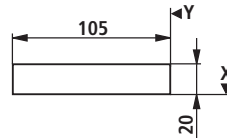
Module T with P1 channel, type "STP1"

Symbol



IH15EB-1X/STP1 ^{-V}
_{-M}

Unit dimensions



Dimension Z = 70 mm

| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Control module T | IH15EB-1X/ST- ²⁶ <input type="text"/> |
| R901300263 | | IH15EB-1X/ST/V |

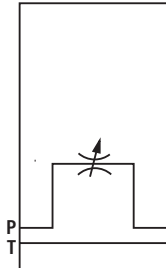
| Material no. | Device designation | Type designation |
|--------------|----------------------------------|--|
| | Control module T with P1 channel | IH15EB-1X/STP1- ²⁶ <input type="text"/> |
| R901300262 | | IH15EB-1X/STP1/V |

| | | | | |
|------------------------------------|------|---------------|-----|-----|
| ²⁶ <input type="text"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

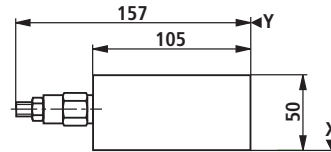
Module PDV, type "SPDV"

Symbol



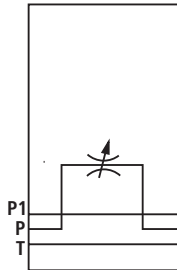
Unit dimensions

Dimension Z = 70 mm



Module PDV with P1 channel, type "SPDVP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--------------------------------------|--|
| | Control module P with throttle valve | IH15MB-1X/SPDV - <input type="text" value="26"/> |
| R901215052 | | IH15MB-1X/SPDV -V |

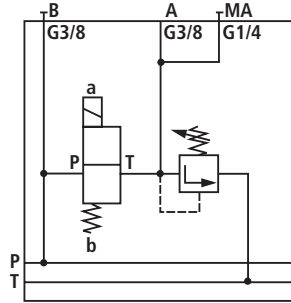
| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Control module P with throttle valve and P1 channel | IH15MB-1X/SPDVP1 - <input type="text" value="26"/> |
| R901300246 | | IH15MB-1X/SPDVP1 - V |

| | | | | |
|---------------------------------|------|---------------|-----|-----|
| <input type="text" value="26"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

Directional seat valve module, type "S" (dimensions in mm)

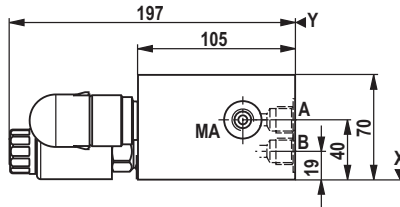
Module P - B - A - T with pressure relief valve,
type "SPBAT2DB"

Symbol



Unit dimensions

Dimension Z = 85 mm



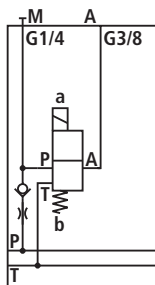
| Material no. | Device designation | Type designation |
|--------------|--------------------|---|
| | Module SPBAT2DB | IH15EB-1X/SPBAT2DB- <input type="checkbox"/> 1 <input type="checkbox"/> 2 / <input type="checkbox"/> 14 <input type="checkbox"/> 4 <input type="checkbox"/> 8 <input type="checkbox"/> 26 |
| R901168798 | | IH15EB-1X/SPBAT2DB-S315/OPG24/V |

| | | | |
|---|---|--|---|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with internal hexagon Rotary knob | = S = H |
| <input type="checkbox"/> 2 | Pressure rating of the pressure relief valve | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 25 bar = 25 50 bar = 50 100 bar = 100 200 bar = 200 350 bar = 350 500 bar = 500 |
| Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | | | |
| | | | Setting pressure up to max. = 50E Setting pressure up to max. = 100E Setting pressure up to max. = 140E Setting pressure up to max. = 210E Setting pressure up to max. = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD 6../..E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 88 |
| <input type="checkbox"/> 4 | Designation of the 2/2 seat valve | Normally closed Normally open | = N = P |
| <input type="checkbox"/> 8 | Solenoid voltage of the seat valves | Volt | 24 V DC = G24 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 26 | Seal | Seal material | FKM = V |

Directional seat valve module, type "W", "S" (dimensions in mm)

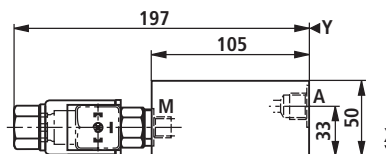
Module P - A, type "SPA3"

Symbol



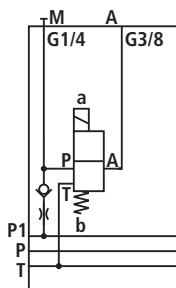
Unit dimensions

Dimension Z = 70 mm



Module P - A with P1 channel, type "SPA3P1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|----------------------|--|
| | Control module P - A | IH15EB-1X/SPA3- 5 14 8 27 26 □ / □ □ / □ / □ |
| R901019899 | | IH15EB-1X/SPA3-C/MG24/V |
| R904101901 | | IH15EB-1X/SPA3-C/OG24/V |
| R901070054 | | IH15EB-1X/SPA3-U/MG24/V |
| R904101902 | | IH15EB-1X/SPA3-U/OG24/V |

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Control module P - A with P1 channel | IH15EB-1X/SPA3P1- 5 14 8 27 26 □ / □ □ / □ / □ |
| R901070056 | | IH15EB-1X/SPA3P1-C/MG24/V |
| R901070058 | | IH15EB-1X/SPA3P1-C/OG24/V |
| R901070059 | | IH15EB-1X/SPA3P1-U/MG24/V |
| R901070060 | | IH15EB-1X/SPA3P1-U/OG24/V |

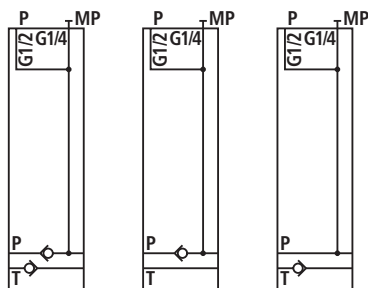
Directional seat valve module, type "W", "S"

| | | | |
|--|-----------------------------|----------|-----------|
| <input type="checkbox"/> 5 Designation of the 3/2 seat valve | | | = U |
| | | | = C |
| <input type="checkbox"/> 8 Solenoid voltage of the seat valves | Volt | 24 V DC | = G24 |
| <input type="checkbox"/> 14 Pressure monitoring | With measuring port | | = M |
| | Without pressure monitoring | | = O |
| <input type="checkbox"/> 26 Seal | Seal material | FKM | = V |
| | Seal material | NBR | = M |
| <input type="checkbox"/> 27 Throttle | Without throttle | | = no code |
| | Throttle diameter | Ø 1.0 mm | = B10 |
| | Throttle diameter | Ø 2.5 mm | = B25 |

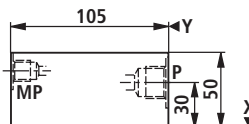
Directional seat valve module, type "W", "S" (dimensions in mm)

Module with check valve, type "SR"

Symbol



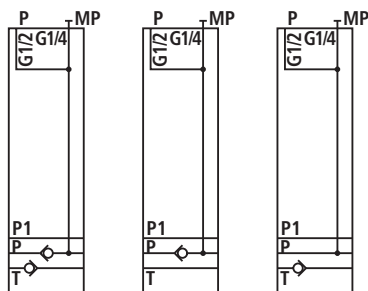
Unit dimensions



Dimension Z = 70 mm

Module with check valve and P1 channel, type "SRP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|---------------------------------|---|
| | Control module with check valve | IH15EB-1X/SR - <input type="text"/> ²¹ / <input type="text"/> ¹⁴ / <input type="text"/> ²⁶ |
| R901070301 | | IH15EB-1X/SR-PT/M/V |
| R904101888 | | IH15EB-1X/SR-PT/O/V |
| R901065236 | | IH15EB-1X/SR-P/M/V |
| R904101558 | | IH15EB-1X/SR-P/O/V |
| R901070303 | | IH15EB-1X/SR-T/M/V |
| R904101596 | | IH15EB-1X/SR-T/O/V |

| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Control module with check valve and P1 channel | IH15EB-1X/SRP1- <input type="text"/> ²¹ / <input type="text"/> ¹⁴ / <input type="text"/> ²⁶ |
| R901070304 | | IH15EB-1X/SRP1-PT/M/V |
| R904101892 | | IH15EB-1X/SRP1-PT/O/V |
| R901070305 | | IH15EB-1X/SRP1-P/M/V |
| R904101889 | | IH15EB-1X/SRP1-P/O/V |
| R901070306 | | IH15EB-1X/SRP1-T/M/V |
| R904101890 | | IH15EB-1X/SRP1-T/O/V |

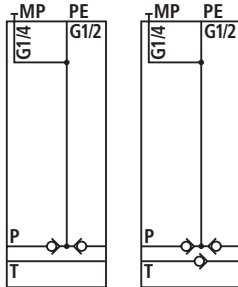
Directional seat valve module, type "W", "S"

| | | | | |
|--------------------------------|---------------------|---|------------|---------------------------------|
| 14 <input type="checkbox"/> | Pressure monitoring | With measuring port Without pressure monitoring | | = M = O |
| 21 <input type="checkbox"/> | Check valve | Without check valve In channel P In channel T In channel P and T | | = no code = P = T = PT |
| 26 <input type="checkbox"/> | Seal | Seal material Seal material | FKM NBR | = V = M |

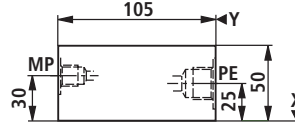
Directional seat valve module, type "W", "S" (dimensions in mm)

Module with check valve, type "SR2"

Symbol



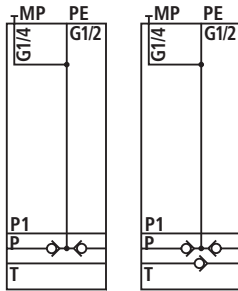
Unit dimensions



Dimension Z = 70 mm

Module with check valve and P1 channel, type "SR2P1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|---------------------------------|--|
| | Control module with check valve | IH15EB-1X/SR2 - <input type="checkbox"/> ²¹ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901140077 | | IH15EB-1X/SR2-P/O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Control module with check valve and P1 channel | IH15EB-1X/SR2P1- <input type="checkbox"/> ²¹ / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901300658 | | IH15EB-1X/SR2P1-P/O/V |

| | | |
|--|---|---------------------------------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ²¹ Check valve | Without check valve In channel P In channel T In channel P and T | = no code = P = T = PT |
| <input type="checkbox"/> ²⁶ Seal | Seal material Seal material | FKM NBR = V = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

Project planning information

When designing the control with accumulator you have to make sure that the accumulator is protected against inadmissible overpressure by means of a type examination-tested pressure relief valve. The type-examination tested pressure relief valve must not accept any control tasks. The set pressure of the type-examination tested pressure relief valve must be less than or equal to the maximum admissible operating pressure of the accumulator.

In order to achieve the best utilization of the accumulator volume possible as well as long service life, compliance with the following nitrogen filling pressure value is recommended:

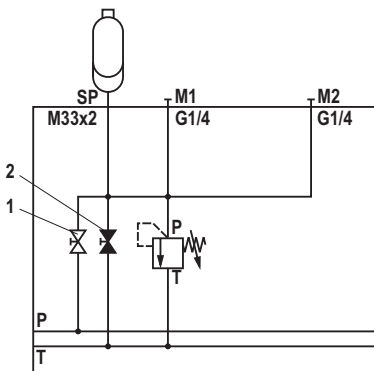
$$p_o = 0.9 \times p_{(\text{minimum operating pressure})}$$

Mounting information

The accumulators is to be fastened so that in case of operational vibrations, safe hold is guaranteed. No holding forces may be applied via the oil and gas connection.

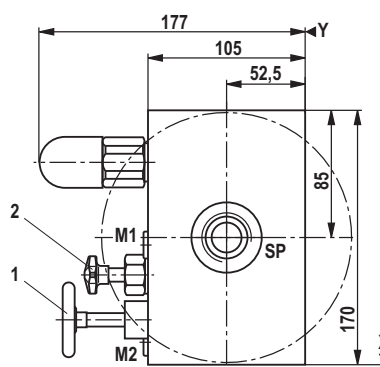
Sandwich module with accumulator shut-off module, type "ZSSB"

Symbol



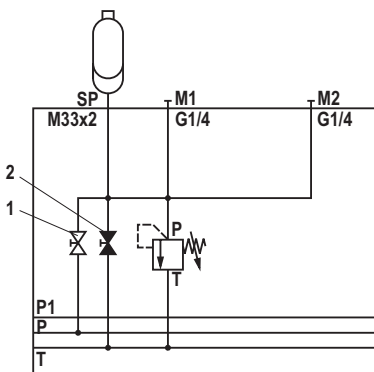
Unit dimensions

Dimension Z = max. 295 mm



Sandwich module with accumulator shut-off module and P1 channel, type "ZSSBP1"

Symbol



- Operating information:
- 1 System stop valve must be open in the operating condition
 - 2 Manual unloading must be closed in the operating condition

Directional seat valve module, type "W", "S"

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Sandwich module with accumulator shut-off module | IH15EB-1X/ZSSB- <input type="checkbox"/> ¹ <input type="checkbox"/> ³ / <input type="checkbox"/> ³¹ / <input type="checkbox"/> ¹⁴ <input type="checkbox"/> ⁸ / <input type="checkbox"/> ¹⁸ / <input type="checkbox"/> ²⁶ |
| R904101904 | | IH15EB-1X/ZSSB-S140E/EMG24/1,40/V |
| R904101903 | | IH15EB-1X/ZSSB-S140E/M/M/1,40/V |
| R904102293 | | IH15EB-1X/ZSSB-S140E/M/M/2,00/V |

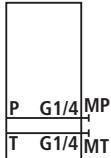
| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Sandwich module with accumulator shut-off module and P1 channel | IH15EB-1X/ZSSBP1- <input type="checkbox"/> ¹ <input type="checkbox"/> ³ / <input type="checkbox"/> ³¹ / <input type="checkbox"/> ¹⁴ <input type="checkbox"/> ⁸ / <input type="checkbox"/> ¹⁸ / <input type="checkbox"/> ²⁶ |
| R904101906 | | IH15EB-1X/ZSSBP1-S140E/EMG24/1,40/V |
| R904101905 | | IH15EB-1X/ZSSBP1-S140E/M/M/1,40/V |

| | | | |
|---|---|--|---|
| <input type="checkbox"/> ¹ | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | = S = H = A |
| <input type="checkbox"/> ³ | Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | Setting pressure up to max. 50 bar Setting pressure up to max. 100 bar Setting pressure up to max. 140 bar Setting pressure up to max. 210 bar Setting pressure up to max. 330 bar | = 50E = 100E = 140E = 210E = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../..E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 89 |
| <input type="checkbox"/> ⁸ | Solenoid voltage of the seat valves | Volt | 24 V DC = G24 |
| <input type="checkbox"/> ¹⁴ | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ¹⁸ | Diaphragm-type accumulator | Nominal volume in l | Max. pressure in bar |
| | | 0.35 | 210 = 0.35 |
| | | 0.50 | 210 = 0.50 |
| | | 0.70 | 210 = 0.70 |
| | | 0.70 | 350 = 0.70 |
| | | 1.40 | 140 = 1.40 |
| | | 1.40 | 350 = 1.40 |
| | | 2.00 | 350 = 2.00 |
| | | 2.80 | 350 = 2.80 |
| | | 3.50 | 350 = 3.50 |
| | Bladder-type accumulator | 0.50 | 400 = 0.50 |
| | | 4.00 | 330 = 4.00 |
| <input type="checkbox"/> ²⁶ | Seal | Seal material Seal material | FKM = V NBR = M |
| <input type="checkbox"/> ³¹ | Unloading | Manual Manual and electromagnetic | = M = E |

Directional seat valve module, type "W", "S" (dimensions in mm)

End module, type "WSE"

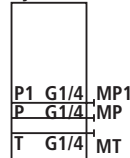
Symbol



IH15MB-1X/WSE...

End module with P1 channel, type "WSEP1"

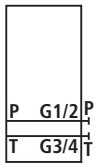
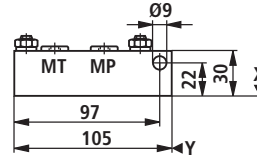
Symbol



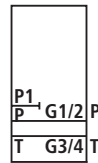
IH15MB-1X/WSEP1...

Unit dimensions

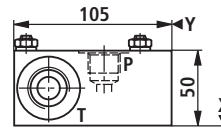
Dimension Z = 70 mm



IH15MB-1X/WSE-PT...



IH15MB-1X/WSEP1-PT...



| Material no. | Device designation | Type designation |
|--------------|--------------------|---|
| | End module | IH15MB-1X/WSE- <input type="checkbox"/> ²² / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101349 | | IH15MB-1X/WSE-M/V |
| R904101555 | | IH15MB-1X/WSE-O/V |
| R904101793 | | IH15MB-1X/WSE-PT/M/V |
| R904101857 | | IH15MB-1X/WSE-PT/O/V |

| Material no. | Device designation | Type designation |
|--------------|----------------------------|---|
| | End module with P1 channel | IH15MB-1X/WSEP1- <input type="checkbox"/> ²² / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101599 | | IH15MB-1X/WSEP1-M/V |
| R901067146 | | IH15MB-1X/WSEP1-O/V |
| R901070307 | | IH15MB-1X/WSEP1-PT/M/V |
| R901070308 | | IH15MB-1X/WSEP1-PT/O/V |

| | | |
|--|--|--------------------|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> ²² Ports | Without ports P and T | = no code = PT |
| <input type="checkbox"/> ²⁶ Seal | Seal material | FKM = V NBR = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

Project planning information

When designing the control with accumulator you have to make sure that the accumulator is protected against inadmissible overpressure by means of a type examination-tested pressure relief valve. The type-examination tested pressure relief valve must not accept any control tasks. The set pressure of the type-examination tested pressure relief valve must be less than or equal to the maximum admissible operating pressure of the accumulator.

In order to achieve the best utilization of the accumulator volume possible as well as long service life, compliance with the following nitrogen filling pressure value is recommended:

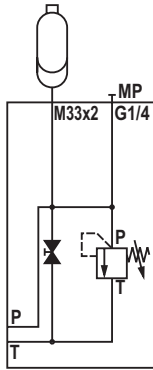
$$p_o = 0.9 \times p_{(\text{minimum operating pressure})}$$

Mounting information

The accumulators is to be fastened so that in case of operational vibrations, safe hold is guaranteed. No holding forces may be applied via the oil and gas connection.

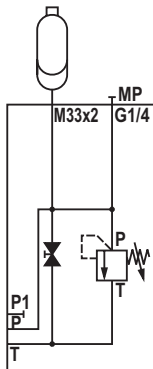
End module with pressure relief valve, accumulator and stop valve, type "SEDBSA"

Symbol



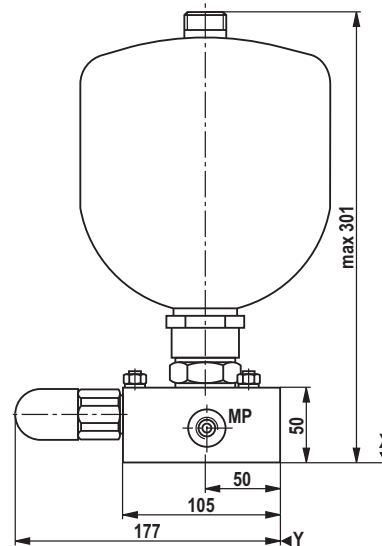
End module with pressure relief valve, accumulator, stop valve and P1 channel, type "SEDBSAP1"

Symbol



Unit dimensions

Dimension Z = max 120 mm



Directional seat valve module, type "W", "S"

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | End module with pressure relief valve, accumulator and stop valve | IH15EB-1X/SEDBSA- 1 3 14 18 26 <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> |
| R904102091 | | IH15EB-1X/SEDBSA-S100/M/0,70/V |
| R904101415 | | IH15EB-1X/SEDBSA-S100/M/1,40/V |

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | End module with pressure relief valve, accumulator, stop valve and P1 channel | IH15EB-1X/SEDBSAP1- 1 3 14 18 26 <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> |
| R904101886 | | IH15EB-1X/SEDBSAP1-S100/M/1,40/V |

| | | | |
|--|---|--|---|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | = S = H = A |
| <input type="checkbox"/> 3 | Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | Setting pressure up to max. 50 bar Setting pressure up to max. 100 bar Setting pressure up to max. 140 bar Setting pressure up to max. 210 bar Setting pressure up to max. 330 bar | = 50E = 100E = 140E = 210E = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../.E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 89 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 18 | Diaphragm-type accumulator | Nominal volume in l | Max. pressure in bar |
| | | 0.35 | 210 = 0.35 |
| | | 0.50 | 210 = 0.50 |
| | | 0.70 | 210 = 0.70 |
| | | 0.70 | 350 = 0.70 |
| | | 1.40 | 140 = 1.40 |
| | | 1.40 | 350 = 1.40 |
| | | 2.00 | 350 = 2.00 |
| | | 2.80 | 350 = 2.80 |
| | | 3.50 | 350 = 3.50 |
| | Bladder-type accumulator | 0.50 | 400 = 0.50 |
| | | 4.00 | 330 = 4.00 |
| <input type="checkbox"/> 26 | Seal | Seal material | FKM = V NBR = M |

Directional seat valve module, type "W", "S" (dimensions in mm)

Project planning information

When designing the control with accumulator you have to make sure that the accumulator is protected against inadmissible overpressure by means of a type examination-tested pressure relief valve. The type-examination tested pressure relief valve must not accept any control tasks. The set pressure of the type-examination tested pressure relief valve must be less than or equal to the maximum admissible operating pressure of the accumulator.

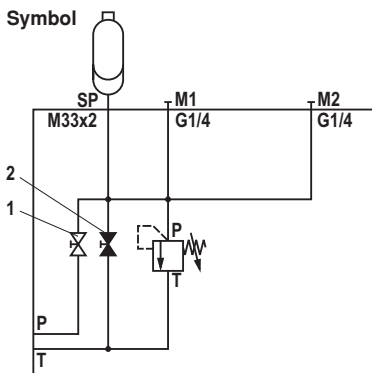
In order to achieve the best utilization of the accumulator volume possible as well as long service life, compliance with the following nitrogen filling pressure value is recommended:

$$p_o = 0.9 \times p_{(\text{minimum operating pressure})}$$

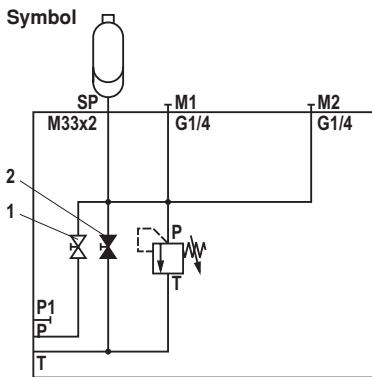
Mounting information

The accumulators is to be fastened so that in case of operational vibrations, safe hold is guaranteed. No holding forces may be applied via the oil and gas connection.

Accumulator shut-off module, type "SSB"

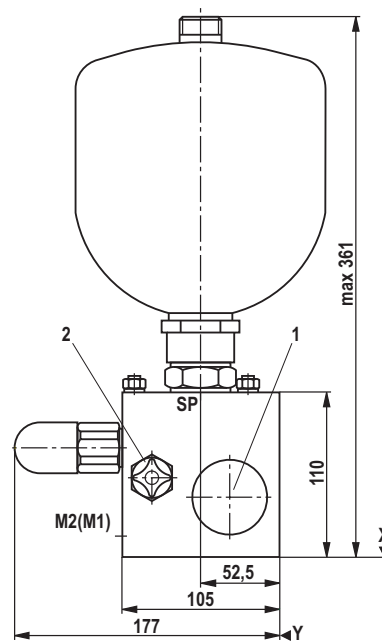


Accumulator shut-off module with P1 channel, type "SSBP1"



Unit dimensions

Dimension Z = 172 mm



- Operating information:
- 1 System stop valve must be open in the operating condition
 - 2 Manual unloading must be closed in the operating condition

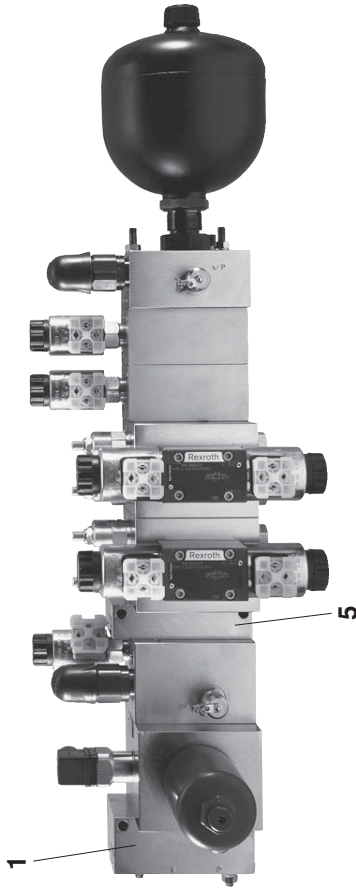
| Material no. | Device designation | Type designation |
|--------------|-----------------------------|--|
| | Accumulator shut-off module | IH15EB-1X/SSB- <input type="text"/> <input type="text"/> / <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> |
| R904101840 | | IH15EB-1X/SSB-S140E/E/MG24/1,40/V |
| R901044115 | | IH15EB-1X/SSB-S140E/E/OG24/1,40/V |
| R904101848 | | IH15EB-1X/SSB-S140E/M/M/1,40/V |
| R901066444 | | IH15EB-1X/SSB-S140E/M/O/1,40/V |
| R901039971 | | IH15EB-1X/SSB-S330E/M/M/0,50/V |
| R901070594 | | IH15EB-1X/SSB-S330E/M/O/0,50/V |

Directional seat valve module, type "W", "S"

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Accumulator shut-off module with P1 channel | IH15EB-1X/SSBP1- 1 3 31 14 8 18 26 □ □ / □ □ / □ □ / □ □ |
| R904101846 | | IH15EB-1X/SSBP1-S140E/E/MG24/1,40/V |
| R901070596 | | IH15EB-1X/SSBP1-S140E/E/OG24/1,40/V |
| R904101845 | | IH15EB-1X/SSBP1-S140E/M/M/1,40/V |
| R901070597 | | IH15EB-1X/SSBP1-S140E/M/O/1,40/V |

| | | | |
|--|---|---|--|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | = S = H = A |
| <input type="checkbox"/> 3 | Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. | 50 bar = 50E 100 bar = 100E 140 bar = 140E 210 bar = 210E 330 bar = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../.E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 89 |
| <input type="checkbox"/> 8 | Solenoid voltage of the seat valves | Volt | 24 V DC = G24 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 18 | Diaphragm-type accumulator | Nominal volume in l | Max. pressure in bar |
| | | 0.35 | 210 = 0.35 |
| | | 0.50 | 210 = 0.50 |
| | | 0.70 | 210 = 0.70 |
| | | 0.70 | 350 = 0.70 |
| | | 1.40 | 140 = 1.40 |
| | | 1.40 | 350 = 1.40 |
| | | 2.00 | 350 = 2.00 |
| | | 2.80 | 350 = 2.80 |
| | | 3.50 | 350 = 3.50 |
| | Bladder-type accumulator | 0.50 | 400 = 0.50 |
| | | 4.00 | 330 = 4.00 |
| <input type="checkbox"/> 26 | Seal | Seal material Seal material | FKM = V NBR = M |
| <input type="checkbox"/> 31 | Unloading | Manual Manual and electromagnetic | = M = E |

Module for external attachment: Attachment with application examples



- 1 Connection module type A or connection module with through bore type AD (see page 65 and 66)
- 5 Sandwich module type ZG and ZGPT (see page 70 and 71) The sandwich module with mounting thread can be combined with the connection module item 1 type AD and with the end module item 3 type E. It can, however, not be combined with the connection module type A and ADB. The length dimensions are calculated by adding dimension "X" of the directional valve modules (see page 14 to 62)

Project planning information

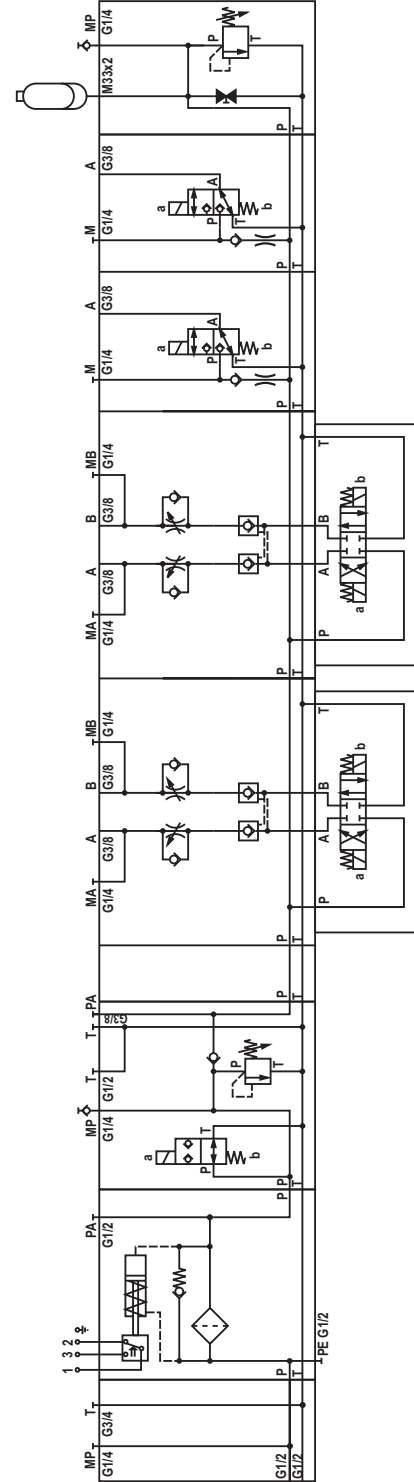
When designing the control with accumulator you have to make sure that the accumulator is protected against inadmissible overpressure by means of a type examination-tested pressure relief valve. The type-examination tested pressure relief valve must not accept any control tasks. The set pressure of the type-examination tested pressure relief valve must be less than or equal to the maximum admissible operating pressure of the accumulator.

In order to achieve the best utilization of the accumulator volume possible as well as long service life, compliance with the following nitrogen filling pressure value is recommended:

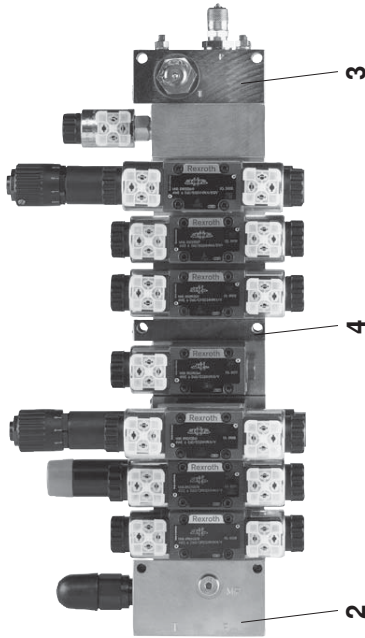
$$P_0 = 0.9 \times P_1 \text{ (minimum operating pressure)}$$

Mounting information

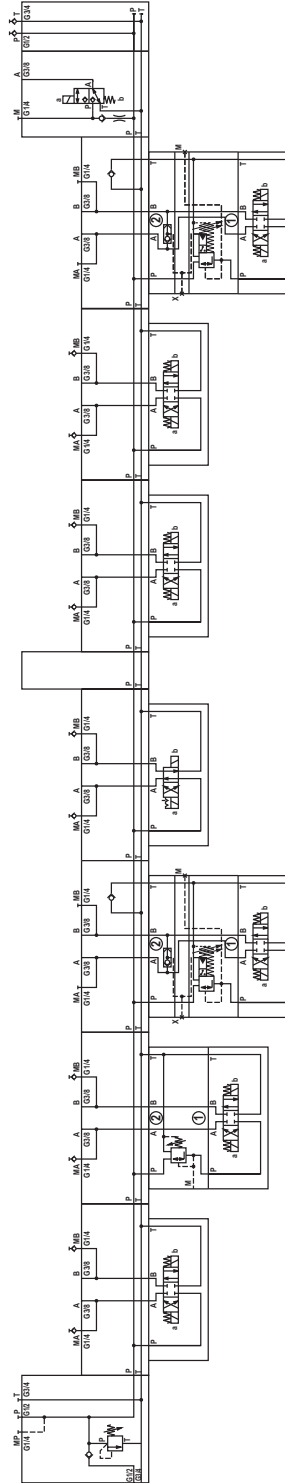
The accumulators is to be fastened so that in case of operational vibrations, safe hold is guaranteed. No holding forces may be applied via the oil and gas connection.



Module for external attachment: Attachment with application examples



- 2 Connection module with pressure relief valve type ADB (see page 67)
 - 3 End module type E (see page 72)
 - 4 Sandwich module type Z or ZPT (see page 68 and 69)
The sandwich module can also be combined with the connection module item 1 type A or item 2 type ADB and with the end module item 3.
- The length dimensions are calculated by adding dimension "X" of the directional valve modules (see page 14 to 62)



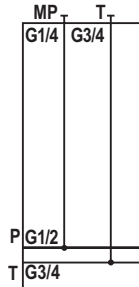
RE 51156/05.13 | IH15B

Hydraulics | Bosch Rexroth AG 65/96

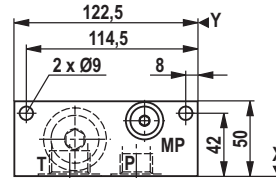
Module for external attachment (dimensions in mm)

Connection module, type "A"

Symbol



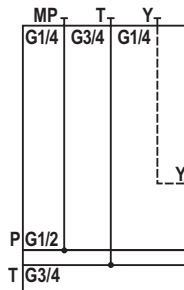
Unit dimensions



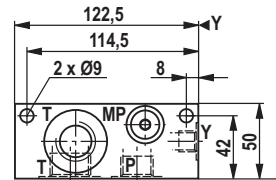
Dimension Z = 70 mm

Connection module with Y channel, type "AY"

Symbol



Unit dimensions



Dimension Z = 70 mm

| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Connection module | IH15MB-1X/A- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101350 | | IH15MB-1X/A-M/V |
| R904101514 | | IH15MB-1X/A-O/V |

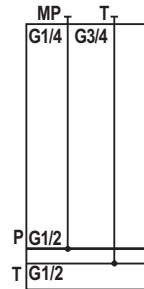
| Material no. | Device designation | Type designation |
|--------------|----------------------------------|---|
| | Connection module with Y channel | IH15MB-1X/AY- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901066327 | | IH15MB-1X/AY-M/V |
| R904101841 | | IH15MB-1X/AY-O/V |

| | | | |
|--|---------------------|-----------------------------|---------|
| <input type="checkbox"/> ¹⁴ | Pressure monitoring | With measuring port | = M |
| | | Without pressure monitoring | = O |
| <input type="checkbox"/> ²⁶ | Seal | Seal material | FKM = V |
| | | Seal material | NBR = M |

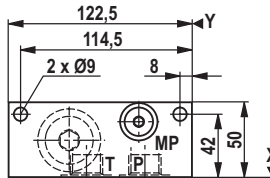
Module for external attachment (dimensions in mm)

Connection module with through hole,
type "AD"

Symbol



Unit dimensions



Dimension Z = 70 mm

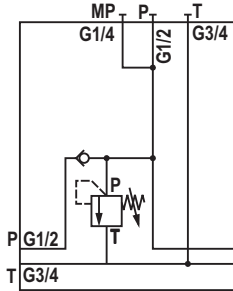
| Material no. | Device designation | Type designation |
|--------------|--------------------------------------|---|
| | Connection module with through holes | IH15MB-1X/AD- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101797 | | IH15MB-1X/AD-M/V |
| R901066320 | | IH15MB-1X/AD-O/V |

| | | | |
|--|-----------------------------|-----|-----|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port | | = M |
| | Without pressure monitoring | | = O |
| <input type="checkbox"/> ²⁶ Seal | Seal material | FKM | = V |
| | Seal material | NBR | = M |

Module for external attachment (dimensions in mm)

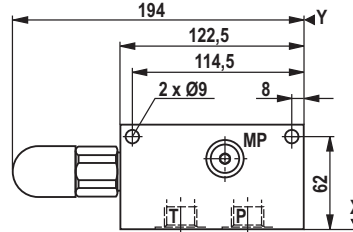
Connection module with pressure relief valve,
type "ADB"

Symbol



Unit dimensions

Dimension Z = 85 mm



| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Connection module with pressure relief valve | IH15EB-1X/ADB- <input type="checkbox"/> 1 <input type="checkbox"/> 2 / <input type="checkbox"/> 14 <input type="checkbox"/> 26 |
| R901069495 | | IH15EB-1X/ADB-A200/M/V |
| R901069497 | | IH15EB-1X/ADB-A200/O/V |
| R901069494 | | IH15EB-1X/ADB-H200/M/V |
| R901069496 | | IH15EB-1X/ADB-H200/O/V |
| R901069238 | | IH15EB-1X/ADB-S200/M/V |
| R901069240 | | IH15EB-1X/ADB-S200/O/V |

| | | |
|---|---|--|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap = S Rotary knob = H Lockable rotary knob = A |
| <input type="checkbox"/> 2 | Pressure rating of the pressure relief valve | Setting pressure up to max. 25 bar = 25 Setting pressure up to max. 50 bar = 50 Setting pressure up to max. 100 bar = 100 Setting pressure up to max. 200 bar = 200 Setting pressure up to max. 315 bar = 315 Setting pressure up to max. 400 bar = 400 |
| Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | | |
| | | Setting pressure up to max. 50 bar = 50E Setting pressure up to max. 100 bar = 100E Setting pressure up to max. 140 bar = 140E Setting pressure up to max. 210 bar = 210E Setting pressure up to max. 330 bar = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../..E Type testing according to Pressure Equipment Directive 97/23/EC | | See page 88 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port = M Without pressure monitoring = O |
| <input type="checkbox"/> 26 | Seal | Seal material FKM = V Seal material NBR = M |

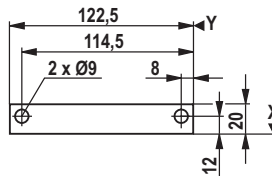
Module for external attachment (dimensions in mm)

Sandwich module, type "Z"

Symbol



Unit dimensions



Dimension Z = 70 mm

Sandwich module with P1 channel, type "ZP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--------------------|---|
| | Sandwich module | IH15MB-1X/Z- ²⁶ <input type="text"/> |
| R904101642 | | IH15MB-1X/Z-V |

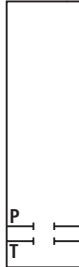
| Material no. | Device designation | Type designation |
|--------------|---------------------------------|--|
| | Sandwich module with P1 channel | IH15MB-1X/ZP1-V ²⁶ <input type="text"/> |
| R904101834 | | IH15MB-1X/ZP1-V |

| | | | | |
|------------------------------------|------|---------------|-----|-----|
| ²⁶ <input type="text"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

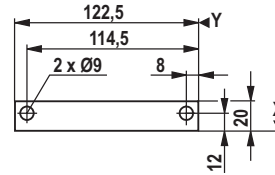
Module for external attachment (dimensions in mm)

Sandwich module with PT interruption, type "ZPT"

Symbol



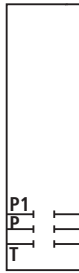
Unit dimensions



Dimension Z = 70 mm

Sandwich module with PTP1 interruption, type "ZPTP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--------------------------------------|---|
| | Sandwich module with PT interruption | IH15MB-1X/ZPT- ²⁶ <input type="text"/> |
| R901072044 | | IH15MB-1X/ZPT-V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with PTP1 interruption | IH15MB-1X/ZPTP1- ²⁶ <input type="text"/> |
| R901072043 | | IH15MB-1X/ZPTP1-V |

| | | | | |
|------------------------------------|------|---------------|-----|-----|
| ²⁶ <input type="text"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

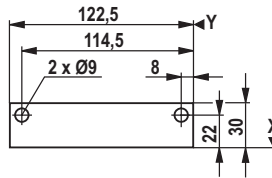
Module for external attachment (dimensions in mm)

Sandwich module with mounting thread for threaded bolt, type "ZG"

Symbol



Unit dimensions



Dimension Z = 70 mm

Sandwich module with mounting thread for threaded bolt and P1 channel, type "ZGP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Sandwich module with mounting thread for threaded bolt | IH15MB-1X/ZG- ²⁶ <input type="text"/> |
| R904101503 | | IH15MB-1X/ZG-V |

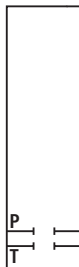
| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Sandwich module with mounting thread for threaded bolt and P1 channel | IH15MB-1X/ZGP1- ²⁶ <input type="text"/> |
| R904101831 | | IH15MB-1X/ZGP1-V |

| | | | | |
|------------------------------------|------|---------------|-----|-----|
| ²⁶ <input type="text"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

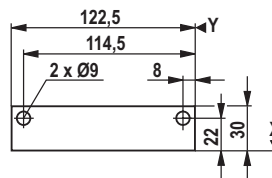
Module for external attachment (dimensions in mm)

Sandwich module with mounting thread for threaded bolt with PT interruption, type "ZGPT"

Symbol



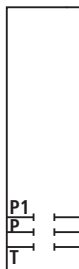
Unit dimensions



Dimension Z = 70 mm

Sandwich module with mounting thread for threaded bolt with PTP1 interruption, type "ZGPTP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Sandwich module with PT interruption and mounting thread for threaded bolt | IH15MB-1X/ZGPT- ²⁶ <input type="text"/> |
| R904101761 | | IH15MB-1X/ZGPT-V |

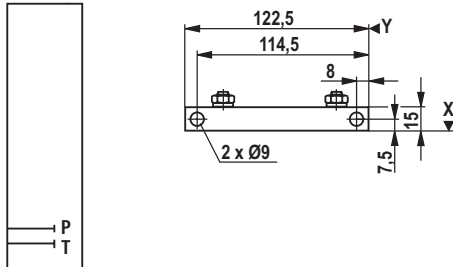
| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Sandwich module with PTP1 interruption and mounting thread for threaded bolt | IH15MB-1X/ZGPTP1- ²⁶ <input type="text"/> |
| R904101832 | | IH15MB-1X/ZGPTP1-V |

| | | | |
|---|---------------|-----|-----|
| ²⁶ <input type="text"/> Seal | Seal material | FKM | = V |
| | Seal material | NBR | = M |

Module for external attachment (dimensions in mm)

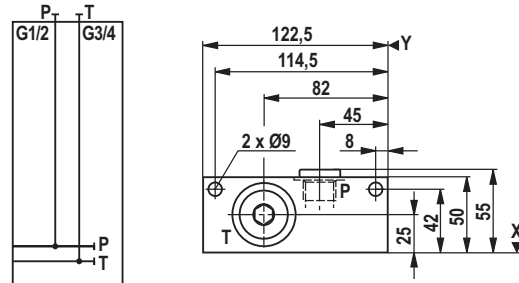
End module, type "E"

Symbol Unit dimensions Dimension Z = 70 mm



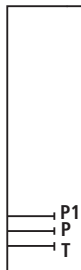
with port P and T

Symbol Unit dimensions Dimension Z = 70 mm



End module with P1 channel, type "EP1"

Symbol



Symbol



| Material no. | Device designation | Type designation |
|--------------|--------------------|---|
| | End module | IH15MB-1X/E- <input type="checkbox"/> ²² / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101351 | | IH15MB-1X/E-PT/M/V |
| R904101516 | | IH15MB-1X/E-PT/O/V |
| R901136829 | | IH15MB-1X/E-V |

| Material no. | Device designation | Type designation |
|--------------|----------------------------|---|
| | End module with P1 channel | IH15MB-1X/EP1- <input type="checkbox"/> ²² / <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101847 | | IH15MB-1X/EP1-PT/M/V |
| R904101849 | | IH15MB-1X/EP1-PT/O/V |
| R901137570 | | IH15MB-1X/EP1-V |

| | | | |
|--|---------------------|-----------------------------|-------------------|
| <input type="checkbox"/> ¹⁴ | Pressure monitoring | With measuring port | = M ¹⁾ |
| | | Without pressure monitoring | = O ¹⁾ |
| <input type="checkbox"/> ²² | Ports | Without ports | = no code |
| | | With port P and T | = PT |
| <input type="checkbox"/> ²⁶ | Seal | Seal material | = V |
| | | Seal material | = M |

¹⁾ Indication is only necessary if the module is equipped with port P and T.

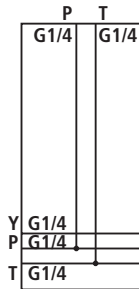
RE 51156/05.13 | IH15B

Hydraulics | Bosch Rexroth AG 73/96

Reducing module, type "R" (dimensions in mm)

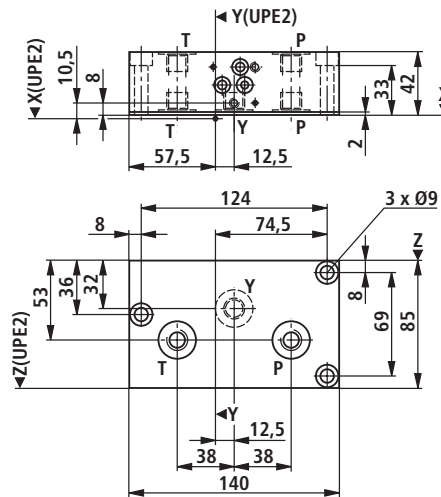
Tank connection module with reduction from IH15B to IH15A, type "RBAIH15A"

Symbol



Unit dimensions

Dimension Z = 85 mm



| Material no. | Device designation | Type designation |
|--------------|---|-----------------------------------|
| | Tank connection module with reduction from IH15B to IH15A | IH15MB-1X/RBAIH15A- ²⁶ |
| R904101835 | | IH15MB-1X/RBAIH15A-V |

| | | | | |
|---------------|------|---------------|-----|-----|
| ²⁶ | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

Reducing module, type "R" (dimensions in mm)

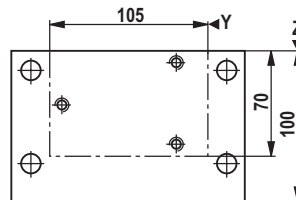
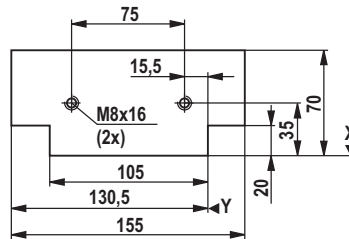
Reducing module IH15B to IH20B (left),
type "RIH20BL"

Symbol



Unit dimensions

Dimension Z = 100 mm



| Material no. | Device designation | Type designation |
|--------------|---------------------------------------|--|
| | Reducing module IH15B to IH20B (left) | IH15MB-1X/RIH20BL- <input type="text"/> ²⁷ / <input type="text"/> ²⁶ |
| R904101839 | | IH15MB-1X/RIH20BL-V |

| | | | |
|---|-------------------|----------|-----------|
| <input type="text"/> ²⁶ Seal | Seal material | FKM | = V |
| | Seal material | NBR | = M |
| <input type="text"/> ²⁷ Throttle | Without throttle | | = no code |
| | Throttle diameter | Ø 1.0 mm | = B10 |
| | Throttle diameter | Ø 2.5 mm | = B25 |

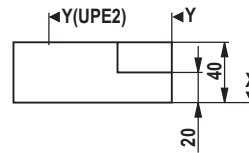
Reducing module, type "R" (dimensions in mm)

Reducing module IH15B to IH15A (right),
type "RIH15AR"

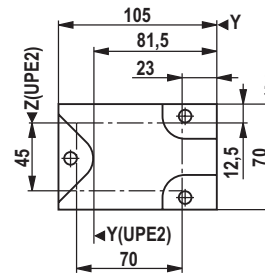
Symbol



Unit dimensions



Dimension Z = 70 mm



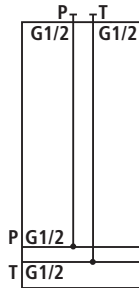
| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Reducing module IH15B to IH15A (right) | IH15MB-1X/RIH15AR- <input type="text" value="27"/> / <input type="text" value="26"/> |
| R904101836 | | IH15MB-1X/RIH15AR-V |

| | | | | |
|---------------------------------|----------|-------------------|----------|-----------|
| <input type="text" value="26"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |
| <input type="text" value="27"/> | Throttle | Without throttle | | = no code |
| | | Throttle diameter | Ø 1.0 mm | = B10 |
| | | Throttle diameter | Ø 2.5 mm | = B25 |

Module with threaded connection for pipeline installation (dimensions in mm)

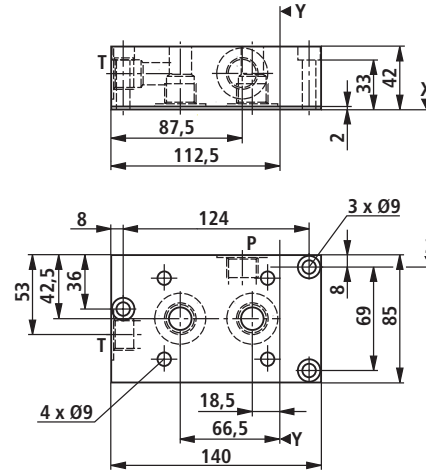
Tank connection module for sandwich module with threaded connection, type "BAZG"

Symbol



Unit dimensions

Dimension Z = 85 mm



| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Tank connection module for sandwich module for pipeline installation | IH15MB-1X/BAZG- ²⁶ <input type="checkbox"/> |
| R901112004 | | IH15MB-1X/BAZG-V |

| | | | | |
|--|------|---------------|-----|-----|
| ²⁶ <input type="checkbox"/> | Seal | Seal material | FKM | = V |
| | | Seal material | NBR | = M |

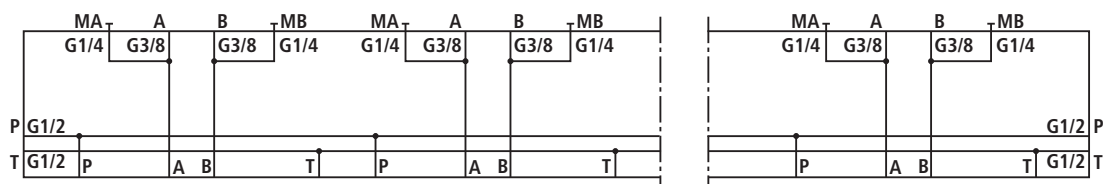
Module with threaded connection for pipeline installation (dimensions in mm)

Sandwich module with threaded connection, type "WZG..."

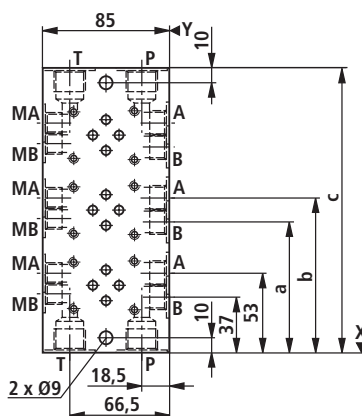
Symbol

Unit dimensions

Dimension Z = 70 mm



| Number of valve stations | Dimension a | Dimension b | Dimension c |
|--------------------------|-------------|-------------|-------------|
| 2-fold | 87 | 103 | 140 |
| 3-fold | 137 | 153 | 190 |
| 4-fold | 187 | 203 | 240 |
| 5-fold | 237 | 253 | 290 |
| 6-fold | 287 | 303 | 340 |
| 7-fold | 337 | 353 | 390 |
| 8-fold | 387 | 403 | 440 |
| 9-fold | 437 | 453 | 490 |
| 10-fold | 487 | 503 | 540 |



| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 2 valve stations | IH15MB-1X/WZG2- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901300657 | | IH15MB-1X/WZG2-M/V |
| R901135266 | | IH15MB-1X/WZG2-O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 3 valve stations | IH15MB-1X/WZG3- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901300653 | | IH15MB-1X/WZG3-M/V |
| R901300656 | | IH15MB-1X/WZG3-O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 4 valve stations | IH15MB-1X/WZG4- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901300650 | | IH15MB-1X/WZG4-M/V |
| R901300652 | | IH15MB-1X/WZG4-O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 5 valve stations | IH15MB-1X/WZG5- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901300649 | | IH15MB-1X/WZG5-M/V |
| R901300648 | | IH15MB-1X/WZG5-O/V |

Module with threaded connection for pipeline installation (dimensions in mm)

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 6 valve stations | IH15MB-1X/WZG6- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901301740 | | IH15MB-1X/WZG6-M/V |
| R901301741 | | IH15MB-1X/WZG6-O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 7 valve stations | IH15MB-1X/WZG7- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901301738 | | IH15MB-1X/WZG7-M/V |
| R901301739 | | IH15MB-1X/WZG7-O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 8 valve stations | IH15MB-1X/WZG8- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901301736 | | IH15MB-1X/WZG8-M/V |
| R901301737 | | IH15MB-1X/WZG8-O/V |

| Material no. | Device designation | Type designation |
|--------------|--|---|
| | Sandwich module with threaded connection, 9 valve stations | IH15MB-1X/WZG9- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901301734 | | IH15MB-1X/WZG9-M/V |
| R901301735 | | IH15MB-1X/WZG9-O/V |

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Sandwich module with threaded connection, 10 valve stations | IH15MB-1X/WZG10- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R901301732 | | IH15MB-1X/WZG10-M/V |
| R901301733 | | IH15MB-1X/WZG10-O/V |

| | | | |
|--|-----------------------------|-----|-----|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port | | = M |
| | Without pressure monitoring | | = O |
| <input type="checkbox"/> ²⁶ Seal | Seal material | FKM | = V |
| | Seal material | NBR | = M |

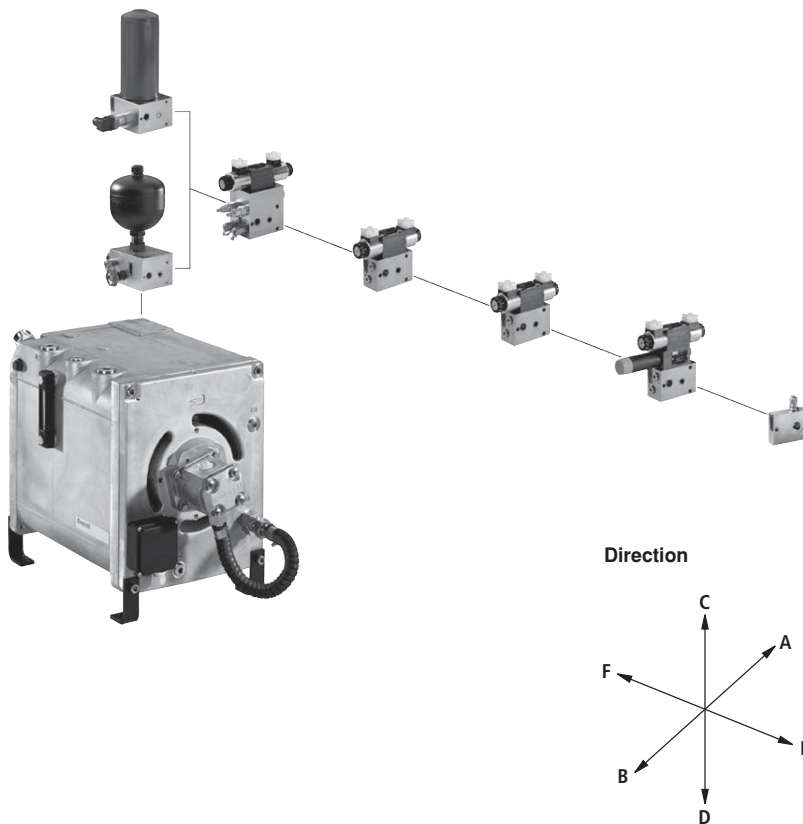
Module for drive module UPE5, type "UPE5": Description, general

The control modules for the UPE5 drive module serves the realization of complete hydraulic controls. They can be fitted and mounted individually.

The filter or accumulator shut-off module establishes the connection of the hydraulic control to the K2 connection of the drive module (see 51145).

Using the connection modules, the IH15B control modules can be attached to the filter or accumulator shut-off module.

Module for drive module UPE5, type "UPE5": Attachment



Project planning information

The total length of the IH15B control should not be longer than the UPE5 drive module.

Maximum recommended total length $l = 500$ mm.

Please consult us if the total length of the required control should be longer.

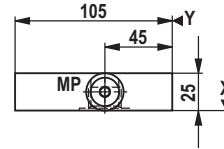
Module for drive module UPE5, type "UPE5" (dimensions in mm)

Connection module, type "UPE5A"

Symbol



Unit dimensions

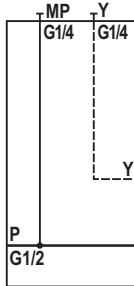


Dimension Z = 70 mm

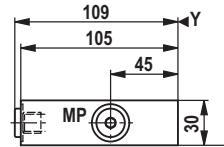
| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Connection module | IH15MB-1X/UPE5A- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101342 | | IH15MB-1X/UPE5A-M/V |
| R901070572 | | IH15MB-1X/UPE5A-O/V |

Connection module with Y channel, type "UPE5AY"

Symbol



Unit dimensions



Dimension Z = 70 mm



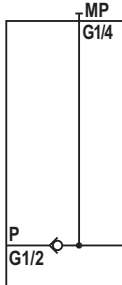
| Material no. | Device designation | Type designation |
|--------------|----------------------------------|---|
| | Connection module with Y channel | IH15MB-1X/UPE5AY- <input type="checkbox"/> ¹⁴ / <input type="checkbox"/> ²⁶ |
| R904101850 | | IH15MB-1X/UPE5AY-M/V |
| R901070573 | | IH15MB-1X/UPE5AY-O/V |

| | | | |
|--|-----------------------------|-----|-----|
| <input type="checkbox"/> ¹⁴ Pressure monitoring | With measuring port | | = M |
| | Without pressure monitoring | | = O |
| <input type="checkbox"/> ²⁶ Seal | Seal material | FKM | = V |
| | Seal material | NBR | = M |

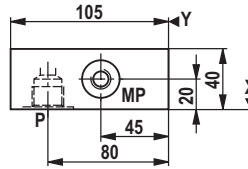
Module for drive module UPE5, type "UPE5" (dimensions in mm)

Connection module with check valve, type "UPE5AR"

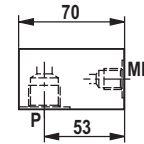
Symbol



Unit dimensions



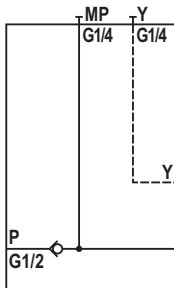
Dimension Z = 70 mm



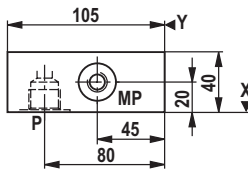
| Material no. | Device designation | Type designation |
|--------------|------------------------------------|---|
| | Connection module with check valve | IH15MB-1X/UPE5AR- <input type="checkbox"/> 14 / <input type="checkbox"/> 26 |
| R901184480 | | IH15MB-1X/UPE5AR-M/V |
| R901189885 | | IH15MB-1X/UPE5AR-O/V |

Connection module with Y channel and check valve, type "UPE5AYR"

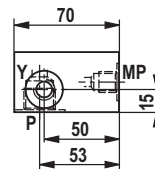
Symbol



Unit dimensions



Dimension Z = 70 mm



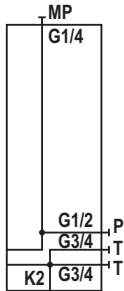
| Material no. | Device designation | Type designation |
|--------------|--|--|
| | Connection module with Y channel and check valve | IH15MB-1X/UPE5AYR- <input type="checkbox"/> 14 / <input type="checkbox"/> 26 |
| R901184481 | | IH15MB-1X/UPE5AYR-M/V |
| R901189886 | | IH15MB-1X/UPE5AYR-O/V |

| | | | |
|-----------------------------|---------------------|-----------------------------|---------|
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port | = M |
| | | Without pressure monitoring | = O |
| <input type="checkbox"/> 26 | Seal | Seal material | FKM = V |
| | | Seal material | NBR = M |

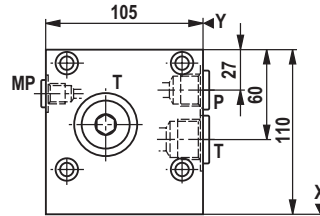
Module for drive module UPE5, type "UPE5" (dimensions in mm)

Tank connection module, type "UPE5BA"

Symbol



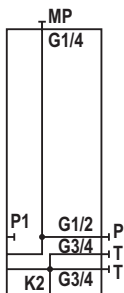
Unit dimensions



Dimension Z = 70 mm

Tank connection module with P1 channel, type "UPE5BAP1"

Symbol



| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Tank connection module, type "UPE5BAP1" | IH15MB-1X/UPE5BA-PT/ <input type="text" value="14"/> / <input type="text" value="26"/> |
| R901125941 | | IH15MB-1X/UPE5BA-PT/M/V |
| R901124952 | | IH15MB-1X/UPE5BA-PT/O/V |

| Material no. | Device designation | Type designation |
|--------------|---|--|
| | Tank connection module with P1 channel, type "UPE5BAP1" | IH15MB-1X/UPE5BAP1-PT/ <input type="text" value="14"/> / <input type="text" value="26"/> |
| R901128499 | | IH15MB-1X/UPE5BAP1-PT/M/V |
| R901128498 | | IH15MB-1X/UPE5BAP1-PT/O/V |

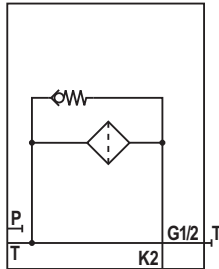
| | | | |
|---------------------------------|---------------------|-----------------------------|---------|
| <input type="text" value="14"/> | Pressure monitoring | With measuring port | = M |
| | | Without pressure monitoring | = O |
| <input type="text" value="26"/> | Seal | Seal material | FKM = V |
| | | Seal material | NBR = M |

Module for drive module UPE5, type "UPE5" (dimensions in mm)

Filter module, type "UPE5F30", "UPE5F60"

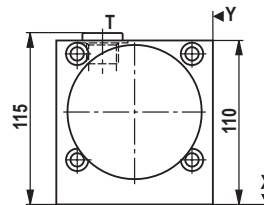
($p_{max} = 7 \text{ bar}$)

Symbol

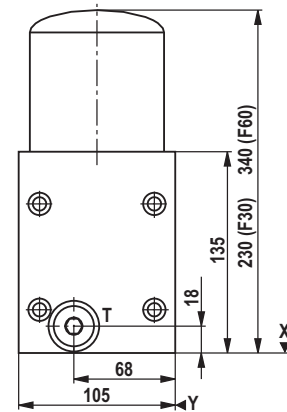


Unit dimensions

Dimension Z = 165 mm UPE5F30 position
Dimension Z = 275 mm UPE5F60 position
Dimension Z = 70 mm position "F"



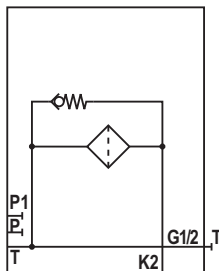
Position of the filter
Version "C"



Position of the filter
Version "F"

Filter module with P1 channel, type "UPE5F30P1", "UPE5F60P1" ($p_{max} = 7 \text{ bar}$)

Symbol



Installation information:

Wind the filter cartridge as tight as possible on the block.
Then, wind the filter cartridge by further 1/3 of a rotation.

| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Filter module | IH15EB-1X/UPE5F30- <input type="text" value="30"/> <input type="text" value="19"/> / <input type="text" value="20"/> / <input type="text" value="26"/> |
| R901070574 | | IH15EB-1X/UPE5F30-C/10/A/V |
| R904101860 | | IH15EB-1X/UPE5F30-C/10/E/V |
| R901070575 | | IH15EB-1X/UPE5F30-C/10/O/V |

| Material no. | Device designation | Type designation |
|--------------|--------------------|--|
| | Filter module | IH15EB-1X/UPE5F60- <input type="text" value="30"/> <input type="text" value="19"/> / <input type="text" value="20"/> / <input type="text" value="26"/> |
| R901070576 | | IH15EB-1X/UPE5F60-C/10/A/V |
| R904101346 | | IH15EB-1X/UPE5F60-C/10/E/V |
| R901070577 | | IH15EB-1X/UPE5F60-C/10/O/V |

Module for drive module UPE5, type "UPE5"

| Material no. | Device designation | Type designation |
|--------------|----------------------------------|--|
| | Filter module with P1 channel | IH15EB-1X/UPE5F30P1- <input type="checkbox"/> ³⁰ <input type="checkbox"/> ¹⁹ / <input type="checkbox"/> ²⁰ / <input type="checkbox"/> ²⁶ |
| R901070579 | | IH15EB-1X/UPE5F30P1-C/10/A/V |
| R904101863 | | IH15EB-1X/UPE5F30P1-C/10/E/V |
| R901070580 | | IH15EB-1X/UPE5F30P1-C/10/O/V |

| Material no. | Device designation | Type designation |
|--------------|----------------------------------|--|
| | Filter module with P1 channel | IH15EB-1X/UPE5F60P1- <input type="checkbox"/> ³⁰ <input type="checkbox"/> ¹⁹ / <input type="checkbox"/> ²⁰ / <input type="checkbox"/> ²⁶ |
| R901070581 | | IH15EB-1X/UPE5F60P1-C/10/A/V |
| R904101862 | | IH15EB-1X/UPE5F60P1-C/10/E/V |
| R901070582 | | IH15EB-1X/UPE5F60P1-C/10/O/V |

| | | | |
|--|------------------------|--|--------------------------|
| <input type="checkbox"/> ¹⁹ | Filter rating | 06 µm 10 µm | = 06 = 10 |
| <input type="checkbox"/> ²⁰ | Clogging indicator | Without clogging indicator Visual clogging indicator Electric clogging indicator | = A = O = E |
| <input type="checkbox"/> ²⁶ | Seal | Seal material Seal material | FKM NBR = V = M |
| <input type="checkbox"/> ³⁰ | Position of the filter | Direction C Direction F | = C = F |

Module for drive module UPE5, type "UPE5" (dimensions in mm)

Project planning information

When designing the control with accumulator you have to make sure that the accumulator is protected against inadmissible overpressure by means of a type examination-tested pressure relief valve. The type-examination tested pressure relief valve must not accept any control tasks. The set pressure of the type-examination tested pressure relief valve must be less than or equal to the maximum admissible operating pressure of the accumulator.

In order to achieve the best utilization of the accumulator volume possible as well as long service life, compliance with the following nitrogen filling pressure value is recommended:

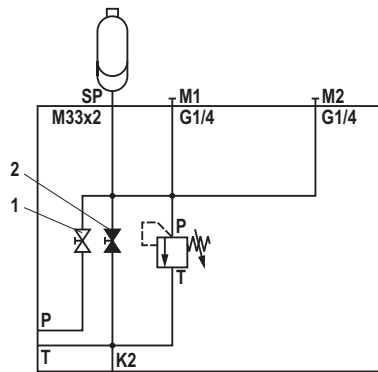
$$p_o = 0.9 \times p_{(\text{minimum operating pressure})}$$

Mounting information

The accumulators is to be fastened so that in case of operational vibrations, safe hold is guaranteed. No holding forces may be applied via the oil and gas connection.

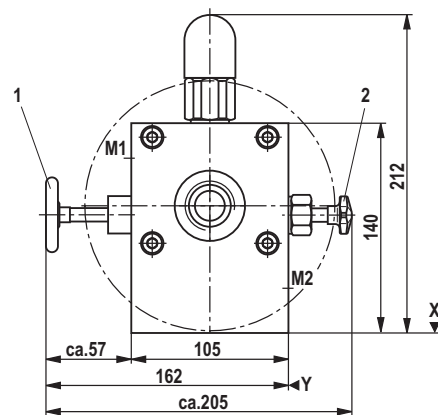
Accumulator shut-off module, type "UPE5SSB"

Symbol



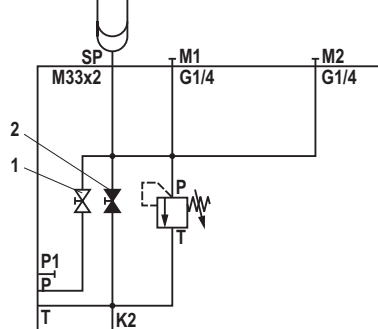
Unit dimensions

Dimension Z = max 336 mm



Accumulator shut-off module with P1 channel, type "UPE5SSBP1"

Symbol



- Operating information:
- 1 System stop valve must be open in the operating condition
 - 2 Manual unloading must be closed in the operating condition

| Material no. | Device designation | Type designation |
|--------------|-----------------------------|--|
| | Accumulator shut-off module | IH15EB-1X/UPE5SSB- 1 2 31 14 8 18 26 □ □ / □ □ / □ □ / □ □ |
| R904101864 | | IH15EB-1X/UPE5SSB-S140E/E/MG24/1,40/V |
| R901070583 | | IH15EB-1X/UPE5SSB-S140E/E/OG24/1,40/V |
| R904101791 | | IH15EB-1X/UPE5SSB-S140E/M/M/1,40/V |
| R901070584 | | IH15EB-1X/UPE5SSB-S140E/M/O/1,40/V |

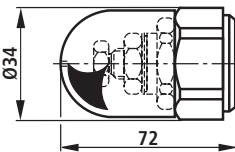
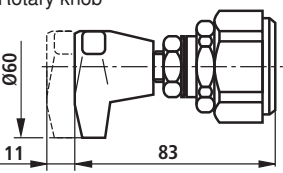
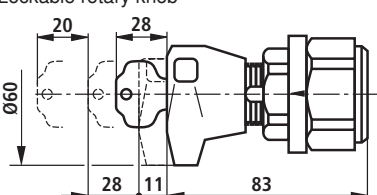
Module for drive module UPE5, type "UPE5"

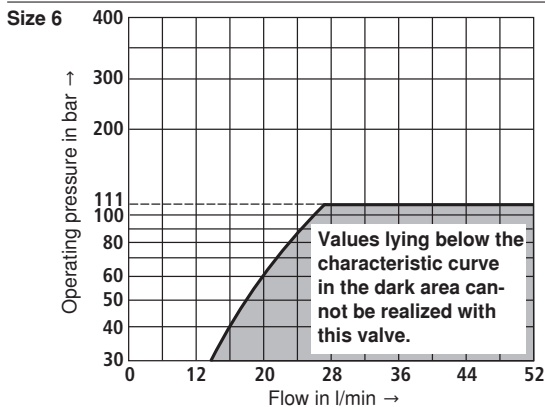
| Material no. | Device designation | Type designation |
|--------------|---|---|
| | Accumulator shut-off module with P1 channel | IH15EB-1X/UPE5SSBP1- 1 3 31 14 8 18 26 <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> / <input type="checkbox"/> |
| R904101866 | | IH15EB-1X/UPE5SSBP1-S140E/E/MG24/1,40/V |
| R901070586 | | IH15EB-1X/UPE5SSBP1-S140E/E/OG24/1,40/V |
| R904101865 | | IH15EB-1X/UPE5SSBP1-S140E/M/M/1,40/V |
| R901070587 | | IH15EB-1X/UPE5SSBP1-S140E/M/O/1,40/V |

| | | | |
|---|---|--|---|
| <input type="checkbox"/> 1 | Adjustment element at the pressure relief valve | Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob | = S = H = A |
| <input type="checkbox"/> 3 | Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request! | Setting pressure up to max. 50 bar Setting pressure up to max. 100 bar Setting pressure up to max. 140 bar Setting pressure up to max. 210 bar Setting pressure up to max. 330 bar | = 50E = 100E = 140E = 210E = 330E |
| Characteristic curve for type-examination tested pressure relief valves type: DBD../..E Type testing according to Pressure Equipment Directive 97/23/EC | | | See page 89 |
| <input type="checkbox"/> 8 | Solenoid voltage of the seat valves | Volt | 24 V DC = G24 |
| <input type="checkbox"/> 14 | Pressure monitoring | With measuring port Without pressure monitoring | = M = O |
| <input type="checkbox"/> 18 | Diaphragm-type accumulator | Nominal volume in l | Max. pressure in bar |
| | | 0.35 | 210 = 0.35 |
| | | 0.50 | 210 = 0.50 |
| | | 0.70 | 210 = 0.70 |
| | | 0.70 | 350 = 0.70 |
| | | 1.40 | 140 = 1.40 |
| | | 1.40 | 350 = 1.40 |
| | | 2.00 | 350 = 2.00 |
| | | 2.80 | 350 = 2.80 |
| | | 3.50 | 350 = 3.50 |
| | Bladder-type accumulator | 0.50 | 400 = 0.50 |
| | | 4.00 | 330 = 4.00 |
| <input type="checkbox"/> 26 | Seal | Seal material Seal material | FKM = V NBR = M |
| <input type="checkbox"/> 31 | Unloading | Manual Manual and electromagnetic | = M = E |

Type key

Information on the type key

| | | | | | | | | | | | | | | | | | | | | |
|---|---|-----------------------------|--------|-----------------------------|---------|-----------------------------|---------|-----------------------------|---------|-----------------------------|---------|---|---------|---|--------|--------|--------|-------|-------|-------|
| <p>1</p> <p>Adjustment element at the pressure relief valve</p> | <p>Setscrew with hexagon and protective cap</p>  | <p>= S</p> | | | | | | | | | | | | | | | | | | |
| | <p>Rotary knob</p>  | <p>= H</p> | | | | | | | | | | | | | | | | | | |
| | <p>Lockable rotary knob</p>  | <p>= A</p> | | | | | | | | | | | | | | | | | | |
| <p>2</p> <p>Pressure rating of the pressure relief valve</p> | <table border="1"> <tr><td>Setting pressure up to max.</td><td>25 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>50 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>100 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>200 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>315 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>400 bar</td></tr> </table> | Setting pressure up to max. | 25 bar | Setting pressure up to max. | 50 bar | Setting pressure up to max. | 100 bar | Setting pressure up to max. | 200 bar | Setting pressure up to max. | 315 bar | Setting pressure up to max. | 400 bar | <table border="1"> <tr><td>= 25</td></tr> <tr><td>= 50</td></tr> <tr><td>= 100</td></tr> <tr><td>= 200</td></tr> <tr><td>= 315</td></tr> <tr><td>= 400</td></tr> </table> | = 25 | = 50 | = 100 | = 200 | = 315 | = 400 |
| Setting pressure up to max. | 25 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 50 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 100 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 200 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 315 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 400 bar | | | | | | | | | | | | | | | | | | | |
| = 25 | | | | | | | | | | | | | | | | | | | | |
| = 50 | | | | | | | | | | | | | | | | | | | | |
| = 100 | | | | | | | | | | | | | | | | | | | | |
| = 200 | | | | | | | | | | | | | | | | | | | | |
| = 315 | | | | | | | | | | | | | | | | | | | | |
| = 400 | | | | | | | | | | | | | | | | | | | | |
| <p>Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive) More pressure ratings on request!</p> | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>Setting pressure up to max.</td><td>50 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>100 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>140 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>210 bar</td></tr> <tr><td>Setting pressure up to max.</td><td>330 bar</td></tr> </table> | Setting pressure up to max. | 50 bar | Setting pressure up to max. | 100 bar | Setting pressure up to max. | 140 bar | Setting pressure up to max. | 210 bar | Setting pressure up to max. | 330 bar | <table border="1"> <tr><td>= 50E</td></tr> <tr><td>= 100E</td></tr> <tr><td>= 140E</td></tr> <tr><td>= 210E</td></tr> <tr><td>= 330E</td></tr> </table> | = 50E | = 100E | = 140E | = 210E | = 330E | | | |
| Setting pressure up to max. | 50 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 100 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 140 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 210 bar | | | | | | | | | | | | | | | | | | | |
| Setting pressure up to max. | 330 bar | | | | | | | | | | | | | | | | | | | |
| = 50E | | | | | | | | | | | | | | | | | | | | |
| = 100E | | | | | | | | | | | | | | | | | | | | |
| = 140E | | | | | | | | | | | | | | | | | | | | |
| = 210E | | | | | | | | | | | | | | | | | | | | |
| = 330E | | | | | | | | | | | | | | | | | | | | |
| <p>Characteristic curve for type-examination tested pressure relief valves type: DBD../..E Type testing according to Pressure Equipment Directive 97/23/EC</p> | | | | | | | | | | | | | | | | | | | | |



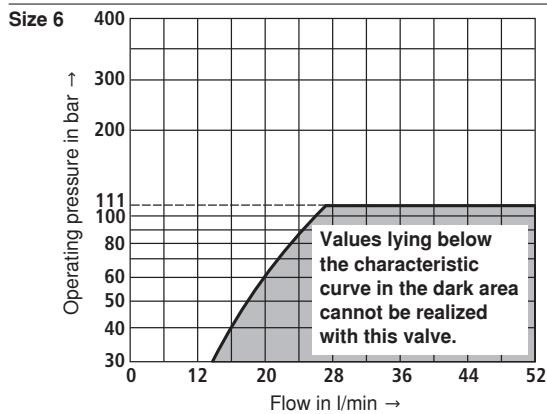
Type key

Information on the type key

³
 Pressure rating of the type-examination tested pressure relief valve, according to Directive 97/23/EC (Pressure Equipment Directive)
More pressure ratings on request!

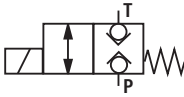
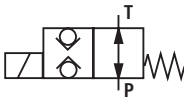
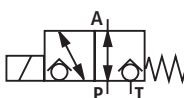
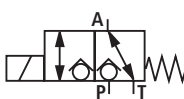
| | | |
|-----------------------------|---------|--------|
| Setting pressure up to max. | 50 bar | = 50E |
| Setting pressure up to max. | 100 bar | = 100E |
| Setting pressure up to max. | 140 bar | = 140E |
| Setting pressure up to max. | 210 bar | = 210E |
| Setting pressure up to max. | 330 bar | = 330E |

Characteristic curve for type-examination tested pressure relief valves type: DBD../..E
Type testing according to Pressure Equipment Directive 97/23/EC



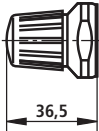
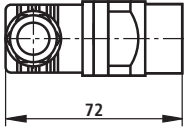
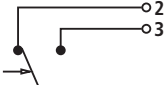
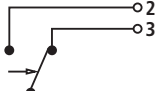
Type key

Information on the type key

| | | | | |
|------|---|--|--|--------|
| 4 | Designation of the 2/2 seat valve |  | = N | |
| | | |  | = P |
| 5 | Designation of the 3/2 seat valve |  | = U | |
| | |  | = C | |
| 8 | Solenoid voltage of the seat valves | Volt | 24 V DC = G24 | |
| 14 | Pressure monitoring | With measuring port | = M | |
| | | Without pressure monitoring | = O | |
| 15 | Max. pressure range of the pressure gauge | Without pressure monitoring | = no code | |
| | | Display range 60 bar | = 60 | |
| | | Display range 100 bar | = 100 | |
| | | Display range 250 bar | = 250 | |
| | | Display range 400 bar | = 400 | |
| 16 | Adjustment element at the pressure reducing valve | Rotary knob | = 1 | |
| | | Setscrew with hexagon and protective cap | = 2 | |
| | | Lockable rotary knob with scale | = 3 | |
| | | Rotary knob with scale | = 7 | |
| 17 | Secondary pressure | Max. secondary pressure | 25 bar = 25 | |
| | | Max. secondary pressure | 75 bar = 75 | |
| | | Max. secondary pressure | 150 bar = 150 | |
| | | Max. secondary pressure | 210 bar = 210 | |
| | | Max. secondary pressure | 315 bar = 315 | |
| 18 | Diaphragm-type accumulator | Nominal volume in l | Max. pressure in bar | |
| | | 0.35 | 210 | = 0.35 |
| | | 0.50 | 210 | = 0.50 |
| | | 0.70 | 210 | = 0.70 |
| | | 0.70 | 350 | = 0.70 |
| | | 1.40 | 140 | = 1.40 |
| | | 1.40 | 350 | = 1.40 |
| | | 2.00 | 350 | = 2.00 |
| | | 2.80 | 350 | = 2.80 |
| | | 3.50 | 350 | = 3.50 |
| | | Bladder-type accumulator | 0.50 | 400 |
| 4.00 | 330 | | = 4.00 | |

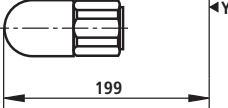
Type key

Information on the type key

| | | |
|--|---|---------------------------------|
| ¹⁹ <input type="checkbox"/> Filter rating | 06 µm 10 µm | = 06 = 10 |
| ²⁰ <input type="checkbox"/> Clogging indicator | Without clogging indicator | = A |
| | Visual clogging indicator  | = O |
| | Electric clogging indicator  | = E |
| Technical data of the electric clogging indicator | | |
| Maximum voltage | V | 42 |
| Switching power | VA | 100 |
| Protection class with protective cap | IP 65 | |
| Contacts | Normally closed contact | |
| Terminal assignment | | |
|  |  | |
| Filter element clean | Filter element contaminated | |
| ²¹ <input type="checkbox"/> Check valve | Without check valve In channel P In channel T In channel P and T | = no code = P = T = PT |
| ²² <input type="checkbox"/> Ports | Without ports P and T | = no code = PT |

Type key

Information on the type key

| | | | |
|--|---|--|---|
| <p>23 <input type="checkbox"/> Adjustment type</p> | <p>Hexagon with protective cap</p>  | | <p>= 2</p> |
| <p>24 <input type="checkbox"/> Pressure rating of the pressure cut-off valve</p> | <p>Setting pressure up to max. Setting pressure up to max. Setting pressure up to max. Setting pressure up to max.</p> | <p>50 bar 100 bar 200 bar 350 bar</p> | <p>= C = F = K = R</p> |
| <p>26 <input type="checkbox"/> Seal</p> | <p>Seal material Seal material</p> | <p>FKM NBR</p> | <p>= V = M</p> |
| <p>27 <input type="checkbox"/> Throttle</p> | <p>Without throttle Throttle diameter Throttle diameter</p> | <p>Ø 1.0 mm Ø 2.5 mm</p> | <p>= no code = B10 = B25</p> |
| <p>28 <input type="checkbox"/> Cartridge valve</p> | <p>Adjustable throttle check valve Pilot operated check valve Adjustable throttle check valve and pilot operated check valve</p> | | <p>= FS = R = FSR</p> |
| <p>29 <input type="checkbox"/> Cartridge valve</p> | <p>In channel A In channel B In channel A and B</p> | | <p>= A = B = AB</p> |
| <p>30 <input type="checkbox"/> Position of the filter</p> | <p>Direction C Direction F</p> | | <p>= C = F</p> |
| <p>31 <input type="checkbox"/> Unloading</p> | <p>Manual Manual and electromagnetic</p> | | <p>= M = E</p> |
| <p>32 <input type="checkbox"/> Stop valve</p> | <p>Without stop valve With stop valve</p> | | <p>= no code = A</p> |
| <p>33 <input type="checkbox"/> Adjustment element at the pressure reducing valve</p> | <p>Setscrew with hexagon and protective cap Rotary knob with scale, lockable</p> | | <p>= 2 = 3</p> |
| <p>34 <input type="checkbox"/> Secondary pressure</p> | <p>Max. secondary pressure Max. secondary pressure Max. secondary pressure Max. secondary pressure with pressure switch Max. secondary pressure with pressure switch Max. secondary pressure with pressure switch</p> | <p>100 bar 210 bar 315 bar 100 bar 210 bar 315 bar</p> | <p>= 100 = 210 = 315 = 100D = 210D = 315D</p> |

Type keys for module with vertical stacking

Type: ABCOC / ABBOC

AB | COC | IH15B | MUSTER | SCHUTZGITTER | 06 | AA | 07

Power units / blocks

Customer-oriented controls = COC

Branch-oriented controls = BOC

Device type

IH15B

Name of customer or branch of trade

e.g.
Company Example or presses

Serial number

e.g.
07 = Number 7

Variant code

Shows different device fittings

Valve size

Functional designation

(according to customer designation or branch designation)

e.g.

Camping

Hatch small

Revolver

Protective grid

Type key for complete control system

Type: IH15BB

IH | 15 | B | B | 006 | 1X/07 | 024 | AA/W220 | N9 | K4 | M | 01

Industrial hydraulics

Module series

15

Assembly

From module series

Size

Size B = B
 q_v up to 30 l/min

Size of the largest valve

Size 6 = 006

Component series 10 to 19

10 to 19 unchanged installation and connection dimensions = 1X

Number of modules

e.g.
7 modules = 07

Type of connection

01 = Pipe thread according to ISO 228 part 1

Seal material

M = NBR seals
V = FKM seals

Electrical type of connection

Attachment devices

Version

Manual override

Attachment devices

Valve voltage

e.g.
G24 = 24 V direct voltage
W220 = 220 V alternating voltage

Variant code

Shows different device fittings

Serial number

e.g.
024 = Number 24

Example:

IH15BB006-1X/07024AA/W220N9K4M01

Assembly IH15B of size B up to 30 l/min with valves of size 6, 7 modules, serial number 24, variant AA, 220 V alternating voltage, N9 manual override, K4 type of connection, seal material Perbunan, type of connection with pipe thread according to ISO 228 part 1

Accessories

Filter element

| Material no. | Module | Denomination | Size | Material | Filter rating |
|--------------|---------------|------------------------|------|----------|---------------|
| R928037999 | F30 / UPE5F30 | 80.30/22 H6XL-S00-5-M | 30 | NBR | 06 µm |
| R928039389 | F30 / UPE5F30 | 80.30/22 H6XL-S00-5-V | 30 | FKM | 06 µm |
| R928037978 | F30 / UPE5F30 | 80.30/22 H10XL-S00-5-M | 30 | NBR | 10 µm |
| R928039388 | F30 / UPE5F30 | 80.30/22 H10XL-S00-5-V | 30 | FKM | 10 µm |
| R928038331 | F60 / UPE5F60 | 84.60 H10XL-S00-5-M | 60 | NBR | 10 µm |
| R928038332 | F60 / UPE5F60 | 84.60 H10XL-S00-5-V | 60 | FKM | 10 µm |
| R928037988 | F60 / UPE5F60 | 84.60 H6XL-S00-5-M | 60 | NBR | 06 µm |
| R928037989 | F60 / UPE5F60 | 84.60 H6XL-S00-5-V | 60 | FKM | 06 µm |
| R928006053 | DF30 / DFS30 | 2.0004 H10XL-A00-0-M | 30 | NBR | 10 µm |
| R928006080 | DF30 / DFS30 | 2.0004 H10XL-A00-0-V | 30 | FKM | 10 µm |
| R928006655 | DF40 / DFS40 | 2.0040 H6XL-B00-0-M | 40 | NBR | 06 µm |
| R928006682 | DF40 / DFS40 | 2.0040 H6XL-B00-0-V | 40 | FKM | 06 µm |
| R928006656 | DF40 / DFS40 | 2.0040 H10XL-B00-0-M | 40 | NBR | 10 µm |
| R928006683 | DF40 / DFS40 | 2.0040 H10XL-B00-0-V | 40 | FKM | 10 µm |
| R928006124 | DF50 / DFS50 | 2.0005 H6XL-C00-0-M | 50 | NBR | 06 µm |
| R928006151 | DF50 / DFS50 | 2.0005 H6XL-C00-0-V | 50 | FKM | 06 µm |
| R928006125 | DF50 / DFS50 | 2.0005 H10XL-C00-0-M | 50 | NBR | 10 µm |
| R928006152 | DF50 / DFS50 | 2.0005 H10XL-C00-0-V | 50 | FKM | 10 µm |

Assembly tool for filter cartridge

- Strap wrench Material no.: R904001048

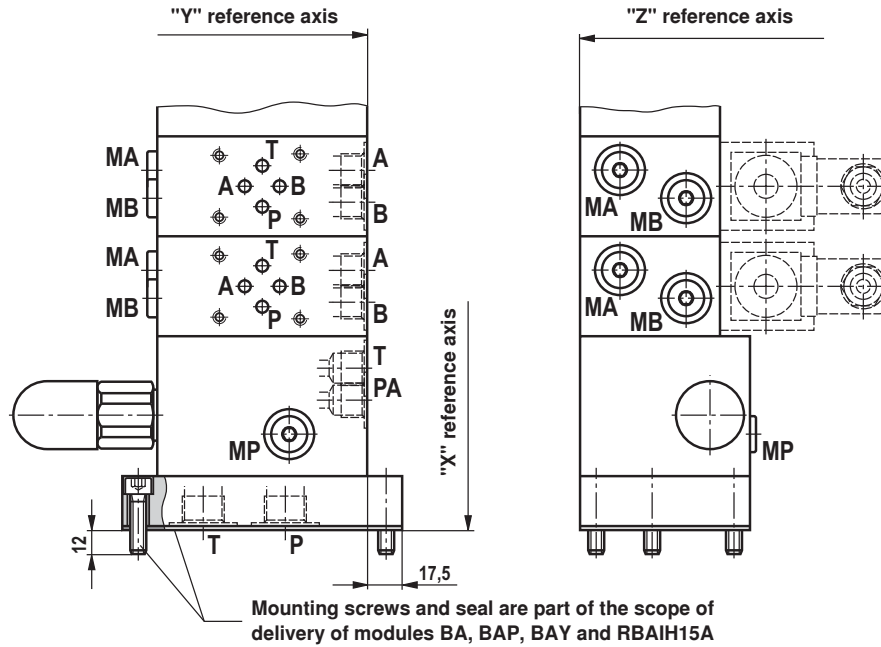
Installation information for F30, F60, UPE5F30 and UPE5F60:

- Wind the filter cartridge as tight as possible on the block. Then, wind the filter cartridge further by further 1/3 of a rotation.

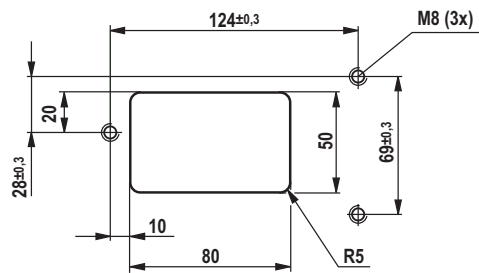
Installation information for DF30, DF40, DF50, DFS30, DFS40 and DFS50:

- Wind the filter cartridge as tight as possible on the block. Then, wind it back by 1/8 to 1/4 of a rotation.

Dimensions: Unit dimensions (dimensions in mm)



Dimensions: Tank break-through (dimensions in mm)



Notes

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