

Breakaway couplings

Product range



Secure your fluid lines

Breakaway couplings are safety components used to prevent one of the most serious safety hazards in the process of loading fluid media: the unwanted and disproportionate tensile load on the load line. It happens, for example, when tanker trucks or rail tank wagons move off too soon or by ships drifting. Such tensile loads can mechanically damage or even destroy both the connection points and the load line itself. It can even lead to uncontrolled leakage of the media being loaded, posing a corresponding hazard to humans and the environment.

Multiple advantages for your installations

- Operators and environment are protected from leakage of hazardous substances.
- Media loss is limited to the minimum.
- Loading lines are protected.
- Customized solutions from DN 25 to DN 150 to meet a large scope of applications.
- Direction of flow is irrelevant in regards to the flow rate.
- Applicable for many fluids (liquids and gases).
- Robust design withstanding even harsh conditions.
- No uncontrolled spill.

Stäubli safety breakaway couplings are typically equipped with two functions to avoid above mentioned risks:

- A defined separating mechanism, which separates the line between the mobile unit and the loading system below the permissible load.
- Valves for both sectioning points to prevent the fluid from leaking.

Application areas:

- Loading processes by means of hose lines.
- Hose and pipe loading arms.
- Loading stations.
- Filling processes.
- Mobile tanking systems.

Two types of separation mechanism

■ Via breaking pins ("force-limiting release")

- Hose is transferring the force that initiates the release.
- Release through 3 breaking pins with defined release force.



■ Via steel cable ("distance-limiting release")

- Steel cable transfers the force that initiates the release.
- One side of the coupling is typically attached to a fixed point.



Summary

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Safety breakaway couplings...

Industrial

ABS



- Breaking pins
- Disc valve closure

The **universal** couplings for a broad range of applications.

ABH



- Breaking pins
- Cone valve closure

The **universal** couplings for a broad range of applications that require **high flow** rates and low pressure loss.

ACS



- Control cable
- Disc valve closure

The basic technology for all lines of **low tensile strength** and for pressures and/or nominal widths at which breaking pin technology reaches its limits.

ACH



- Control cable
- Cone valve closure

The high-performance coupling with **high flow** rates and low pressure loss for all lines of **low tensile strength** and for pressures and/or nominal widths at which breaking pin technology reaches its limits.

Separation mechanism via breaking pins

Separation mechanism via steel cable

... at a glance

Marine

MBS



- Breaking pins
- Disc valve closure

The **universal** couplings for applications that require a **radial stress-resistant** breakaway coupling.

MBH



- Breaking pins
- Cone valve closure

The high-performance couplings with **high flow** rates and low pressure loss for applications that require a **radial stress-resistant** breakaway coupling.

Separation mechanism via breaking pins

ABS series

The standard safety breakaway coupling

The ABS series breakaway couplings separate the line at a defined tensile load. Typically one side of the coupling is attached to a rig and fixed point, the other to a hose line. The ABS series is your economic solution for a wide range of applications.

Your advantages

- Universally deployable breakaway coupling.
- Compact design.
- Releases when force is applied axial or up to 90° (any direction) to the plane of the coupling.



Technical data

	ABS20-DN25	ABS40-DN50	ABS50-DN65	ABS60-DN80	ABS75-DN100
Hose nominal diameter	DN 25	DN 50	DN 65	DN 80	DN 100
Equivalent flow diameter (mm)	20	40	50	60	75
Maximum allowable pressure PS (bar)	up to 25				
Minimum and maximum allowable temperature TS (°C)*	- 40 to 150 (Aluminum: - 40 to 60)				
Shut-off	double				

* Seal type may further limit the temperature range.

Sealing

- Nitrile (NBR)
- Ethylene-Propylene (EPDM)
- Fluorocarbon (FKM)
- Perfluoroelastomer (FFKM)

Connection

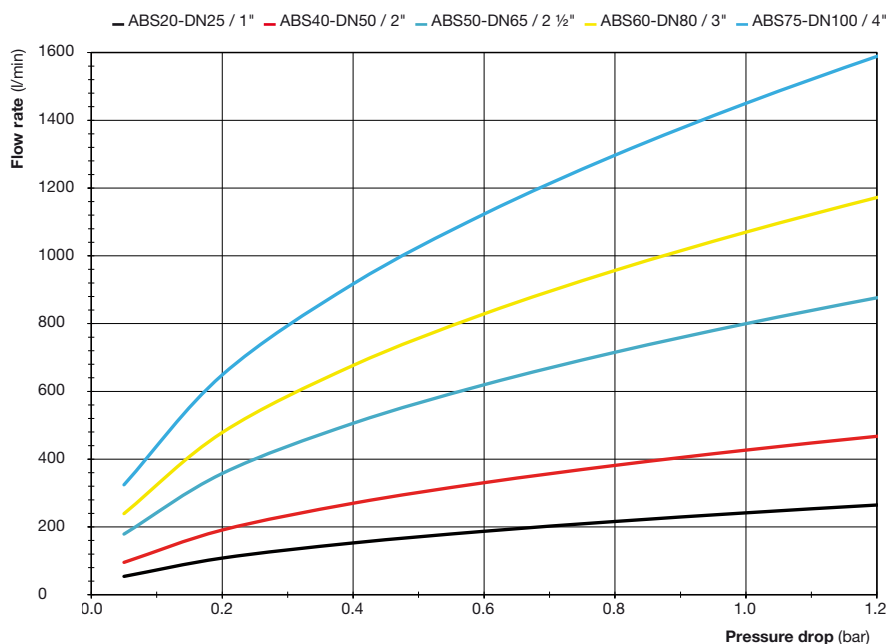
- Thread: BSP or NPT
- Fixed flange: EN 1092-1, ASME B16.5, TTMA (aluminum ABS60-DN80 and ABS75-DN100 only)

Other connections upon request (also via adapters screwed and glued in BSP or NPT thread)

Construction

- Predominantly stainless steel
- Aluminum (ABS40-DN50, ABS60-DN80 and ABS75-DN100 with BSP or NPT only)
- Stainless steel with E-CTFE coating and Hastelloy® inner parts upon request
- Hastelloy® upon request

Hydraulic flow rate / pressure drop charts



Test conditions:
Fluid: water 20 °C

How to build your ABS part number

ABS40-DN50 . 108 . 108 / IC8 / JE / 10

1 2 3 4 5 6

To build your part number, choose the following elements. All of these are mandatory elements.

1 Model

to be chosen page 9

2 Connection type on fixed side

to be chosen page 9

3 Connection type on hose side

to be chosen page 9

4 Material series (predominantly)

Code

- Stainless steel 316 IC6*
- Stainless steel 316 Ti IC8
- Aluminum EN AW 5083 L4*

* depending on nominal width

5 Type of seal

Code

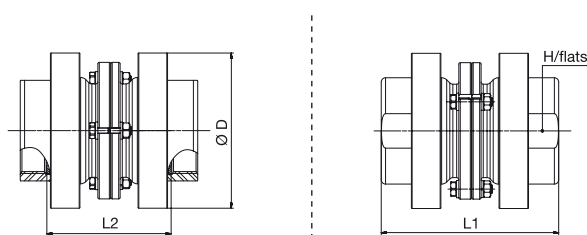
- Nitrile (NBR) JN
- Ethylene-Propylene (EPDM) JE
- Fluorocarbon (FPM) JV
- Perfluoroelastomer (FFKM) 6375 JK1

6 Release force

Model	Release forces in kN**	
ABS20-DN25	3.2	7
ABS40-DN50	10	15
ABS50-DN65	15	20
ABS60-DN80	20	27.5
ABS75-DN100	30	44
results in:	PN16	PN25

** Other release forces upon request.

Part numbers



Female thread

Model	Description	Connection	Dimensions (mm)				Weight* (kg)	Part numbers**
			ØD	L1	L2	H/flats		
ABS20-DN25	Female thread	BSP 1"	77	112.5	90	41	1.1	ABS20-DN25.105.105
		NPT 1"	77	140.5	120.2	41	1.3	ABS20-DN25.205.205
	Flanges	EN 1092-1 (PN40 Form B) DN25	115	104.5	-	-	3.2	ABS20-DN25.A54.A54
		ASME B16.5 (150 psi) 1"	108	104.5	-	-	2.4	ABS20-DN25.B15.B15
		ASME B16.5 (300 psi) 1"	124	104.5	-	-	3.4	ABS20-DN25.B25.B25
ABS40-DN50	Female thread	BSP 2"	108	123.5	86.5	70	2.4	ABS40-DN50.108.108
		NPT 2"	108	143.5	121.4	70	2.9	ABS40-DN50.208.208
	Flanges	EN 1092-1 (PN40 Form B) DN50***	165	103.5	-	-	6.9	ABS40-DN50.A57.A57
		ASME B16.5 (150 psi) 2"	152.4	103.5	-	-	6.0	ABS40-DN50.B18.B18
		ASME B16.5 (300 psi) 2"	165.1	103.5	-	-	7.3	ABS40-DN50.B28.B28
ABS50-DN65	Female thread	BSP 2 1/2"	133	147.5	106.5	85	5.4	ABS50-DN65.109.109
		NPT 2 1/2"	-	-	-	-	-	ABS50-DN65.209.209
	Flanges	EN 1092-1 (PN16 Form B) DN65	185	123.5	-	-	8.3	ABS50-DN65.A38.A38
ABS60-DN80	Female thread	BSP 3"	148	174.5	131.5	100	5.7	ABS60-DN80.10A.10A
		NPT 3"	148	202.5	163.6	100	6.7	ABS60-DN80.20A.20A
	Flanges	EN 1092-1 (PN16 Form B) DN80	200	149.5	-	-	12.0	ABS60-DN80.A39.A39
		EN 1092-1 (PN40 Form B) DN80	200	149.5	-	-	13.0	ABS60-DN80.A59.A59
		ASME B16.5 (150 psi) 3"	190.5	149.5	-	-	12.1	ABS60-DN80.B1A.B1A
		ASME B16.5 (300 psi) 3"	209.6	149.5	-	-	15.1	ABS60-DN80.B2A.B2A
		TTMA 3" DN 100	142.9	149.5	-	-	-	ABS60-DN80.C03.C03
ABS75-DN100	Female thread	BSP 4"	169	209	166	125	10.1	ABS75-DN100.10C.10C
		NPT 4"	169	236.5	193.6	125	11.4	ABS75-DN100.20C.20C
	Flanges	EN 1092-1 (PN16 Form B) DN100	220	188	-	-	15.8	ABS75-DN100.A3A.A3A
		ASME B16.5 (150 psi) 4"	228.6	188.5	-	-	18.5	ABS75-DN100.B1C.B1C
		ASME B16.5 (300 psi) 4"	254	188	-	-	26.0	ABS75-DN100.B2C.B2C
		TTMA 4" DN 125	168	177.5	-	-	-	ABS75-DN100.C04.C04

* The weight applies to stainless steel only with an approximate tolerance of +/-5%

** Add the code of options at the end of the part-number: see page 8

*** Compatible to EN 1092-1 (PN 16 Form B) DN50

ABH series

The safety breakaway coupling with a high flow rate

The ABH series breakaway coupling is a consistent further development of the Stäubli breakaway coupling programme. Along with the same safe triggering as seen in the ABS series, this series minimises the pressure loss within the coupling or allows an approx. 4 times higher flow rate at a constant pressure loss. This saves energy and time during the loading process.

Your advantages

- Highest flow rates.
- Significant reduction of the pressure loss.
- Releases when force is applied axial or up to 90° (any direction) to the plane of the coupling.



Technical data

	ABH40-DN50	ABH65-DN80	ABH80-DN100	ABH110-DN150
Hose nominal diameter	DN 50	DN 80	DN 100	DN 150
Equivalent flow diameter (mm)	40	65	80	110
Maximum allowable pressure PS (bar)	up to 25			
Minimum and maximum allowable temperature TS (°C)*	- 40 to 150 (Aluminum: - 40 to 60)			
Shut-off	double 			

* Seal type may further limit the temperature range.

Sealing

- Nitrile (NBR)
- Ethylene-Propylene (EPDM)
- Fluorocarbon (FKM)
- Perfluoroelastomer (FFKM)

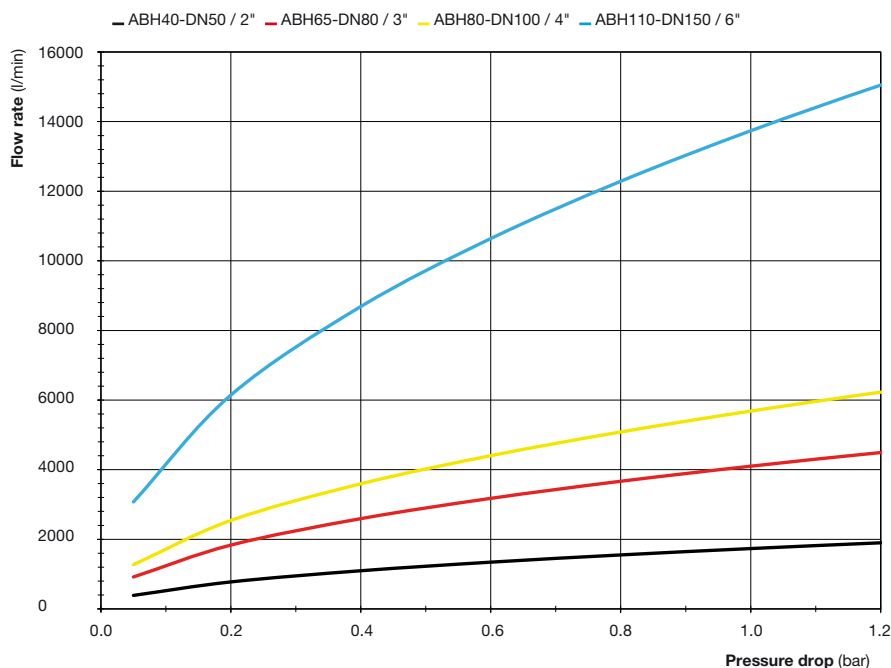
Connection

- Thread: BSP, NPT
 - Fixed flange: EN 1092-1, ASME B16.5
- Other connections upon request (also via adapters screwed and glued in BSP or NPT thread)

Construction

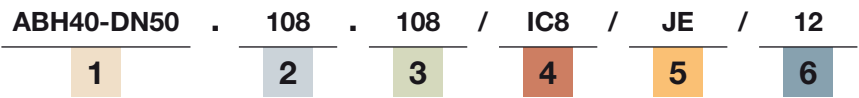
- Predominantly stainless steel
- Aluminum (ABH40-DN50, ABH65-DN80 and ABH80-DN100 with BSP only)
- Stainless steel with E-CTFE coating and Hastelloy® inner parts upon request
- Hastelloy® upon request

Hydraulic flow rate / pressure drop charts



Test conditions:
Fluid: water 20 °C

How to build your ABH part number



To build your part number, choose the following elements. All of these are mandatory elements.

- 1

Model
to be chosen page 13
- 2

Connection type on fixed side
to be chosen page 13
- 3

Connection type on hose side
to be chosen page 13
- 4

Material series (predominantly) **Code**
- Stainless steel 316 Ti **IC8**
- Aluminum EN AW 5083 **L4***
* depending on nominal width

- 5

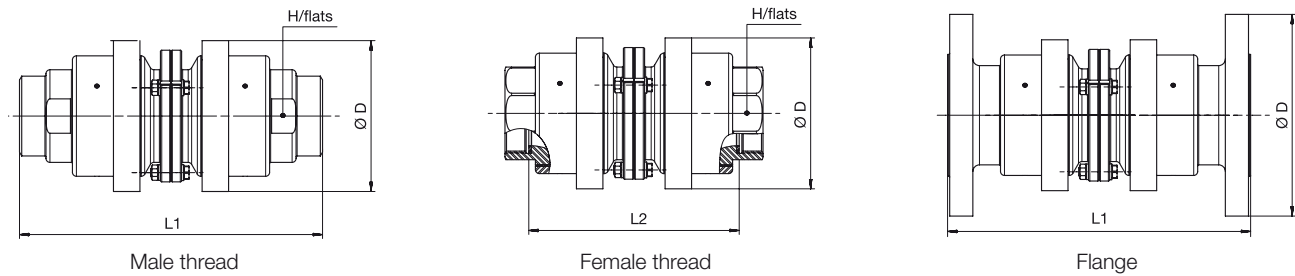
Type of seal **Code**
- Nitrile (NBR) **JN**
- Ethylene-Propylene (EPDM) **JE**
- Fluorocarbon (FPM) **JV**
- Perfluoroelastomer (FFKM) 6375.....**JK1**
- 6

Release force

Model	Release forces in kN**	
ABH40-DN50	12	15
ABH65-DN80	22	30
ABH80-DN100	30	44
ABH110-DN150	60	92
results in:	PN16	PN25

** Other release forces upon request.

Part numbers



Model	Description	Connection	Dimensions (mm)				Weight* (kg)	Part numbers**
			ØD	L1	L2	H/flats		
ABH40-DN50	Female thread	BSP 2"	114	195	159	70	5.2	ABH40-DN50.108.108
		NPT 2"	114	201	178.9	70	5.3	ABH40-DN50.208.208
	Male thread	BSP 2"	114	235	-	70	5.4	ABH40-DN50.158.158
		NPT 2"	114	244	221.9	70	5.5	ABH40-DN50.258.258
	Flanges	EN 1092-1 (PN40 Form B) DN50***	165	229	-	-	10.1	ABH40-DN50.A57.A57
		ASME B16.5 (150 psi) 2"	152.4	229	-	-	9.3	ABH40-DN50.B18.B18
		ASME B16.5 (300 psi) 2"	165.1	229	-	-	10.7	ABH40-DN50.B28.B28
ABH65-DN80	Female thread	BSP 3"	153.6	270	228	100	13.4	ABH65-DN80.10A.10A
		NPT 3"	153.6	288	249	100	14.1	ABH65-DN80.20A.20A
	Male thread	BSP 3"	153.6	318	-	100	13.6	ABH65-DN80.15A.15A
		NPT 3"	153.6	345	306.1	100	13.9	ABH65-DN80.25A.25A
	Flanges	EN 1092-1 (PN16 Form B) DN80	200	316	-	-	19.6	ABH65-DN80.A39.A39
		EN 1092-1 (PN40 Form B) DN80	200	324	-	-	21.1	ABH65-DN80.A59.A59
		ASME B16.5 (150 psi) 3"	190.5	316	-	-	21.5	ABH65-DN80.B1A.B1A
		ASME B16.5 (300 psi) 3"	209.6	316	-	-	24.6	ABH65-DN80.B2A.B2A
ABH80-DN100	Female thread	BSP 4"	185.6	336	294	125	23.7	ABH80-DN100.10C.10C
		NPT 4"	185.6	358	315.1	125	24.8	ABH80-DN100.20C.20C
	Male thread	BSP 4"	185.6	386	-	125	24.3	ABH80-DN100.15C.15C
		NPT 4"	185.6	417	374.1	125	24.9	ABH80-DN100.25C.25C
	Flanges	EN 1092-1 (PN16 Form B) DN100	220	392	-	-	31.3	ABH80-DN100.A3A.A3A
		EN 1092-1 (PN40 Form B) DN100	235	400	-	-	34.4	ABH80-DN100.A5A.A5A
		ASME B16.5 (150 psi) 4"	228.6	380	-	-	34.7	ABH80-DN100.B1C.B1C
		ASME B16.5 (300 psi) 4"	254	390	-	-	42.4	ABH80-DN100.B2C.B2C
ABH110-DN150	Flanges	EN 1092-1 (PN40 Form B) DN150	285	432	-	-	56.2	ABH110-DN150.A5C.A5C
		ASME B16.5 (150 psi) 6"	279.4	432	-	-	58.8	ABH110-DN150.B1E.B1E
		ASME B16.5 (300 psi) 6"	317.5	440	-	-	75.2	ABH110-DN150.B2E.B2E

* The weight applies to stainless steel only with an approximate tolerance of +/-5%

** Add the code of options at the end of the part-number: see page 12

*** Compatible to EN 1092-1 (PN 16 Form B) DN50

ACS series

The standard safety breakaway coupling with control cable

Breaking pins require the breakaway forces to be transferred by the hose. This may lead to difficulties at higher nominal widths, varying pressures and/or fragile hoses. With ACS breakaway couplings the force for release will be transferred via a cable but not the hose line. They have a lower threshold why even low forces are sufficient to release the ACS.

Your advantages

- Compact design.
- Releases when force is applied axial or up to 90° (any direction) to the plane of the coupling.



Technical data

	ACS20-DN25	ACS40-DN50	ACS60-DN80	ACS75-DN100	ACS110-DN150
Hose nominal diameter	DN 25	DN 50	DN 80	DN 100	DN 150
Equivalent flow diameter (mm)	20	40	60	75	110
Maximum allowable pressure PS (bar)	up to 25				
Minimum and maximum allowable temperature TS (°C)*	- 40 to 150				
Shut-off double					

* Seal type may further limit the temperature range.

Sealing

- Nitrile (NBR)
- Ethylene-Propylene (EPDM)
- Fluorocarbon (FKM)
- Perfluoroelastomer (FFKM)

Connection

- Thread: BSP, NPT (except ACS110-DN150)
- Fixed flange: EN 1092-1, ASME B16.5 (ACS110-DN150 only)

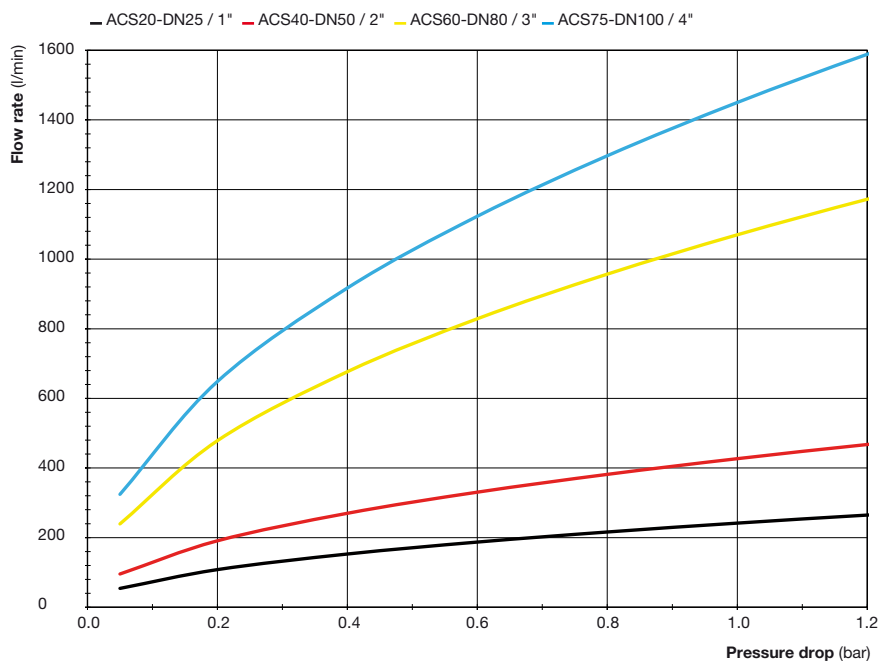
Other connections upon request (also via adapters screwed and glued in BSP or NPT thread)

Construction

- Predominantly stainless steel
- Stainless steel with E-CTFE coating and Hastelloy® inner parts upon request
- Hastelloy® upon request (not ACS110-DN150)

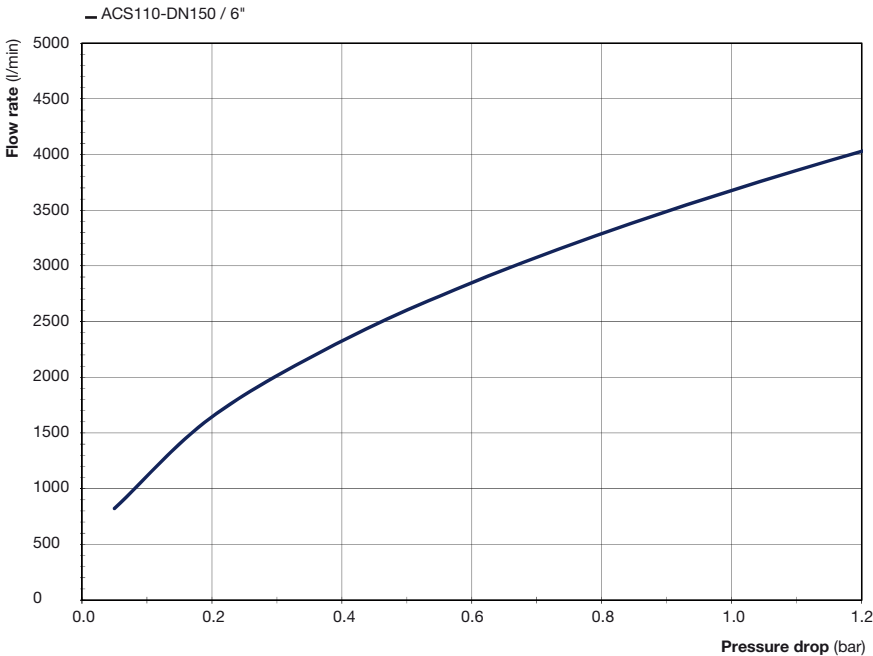
Hydraulic flow rate / pressure drop charts

Test conditions: Water (20 °C)



Hydraulic flow rate / pressure drop charts

Test conditions: Water (20 °C)



How to build your ACS part number

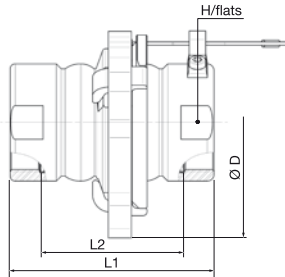
ACS40-DN50 . 108 . 108 / IC8 / JE

1 2 3 4 5

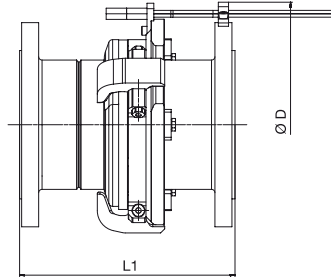
To build your part number, choose the following elements. All of these are mandatory elements.

1	Standard part number	
	to be chosen	page 17
2	Connection type on fixed side	
	to be chosen	page 17
3	Connection type on hose side	
	to be chosen	page 17
4	Material series (predominantly)	Code
	- Stainless steel 316 Ti	IC8
5	Type of seal	Code
	- Nitrile (NBR)	JN
	- Ethylene-Propylene (EPDM)	JE
	- Fluorocarbon (FPM)	JV
	- Perfluoroelastomer (FFKM) 6375.....	JK1

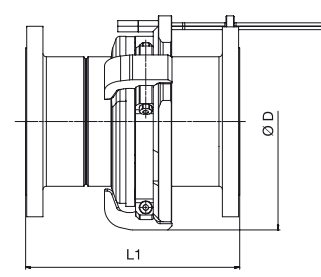
Part numbers



Female thread



Flange EN 1092-1 (PN16 Form B)
and ASME B16.5 (150psi)



Flange EN 1092-1 (PN 40 Form B)

Model	Description	Connection	Dimensions (mm)				Weight* (kg)	Part numbers**
			ØD	L1	L2	H/flats		
ACS20-DN25	Female thread	BSP 1"	100	112.5	91.5	41	1.2	ACS20-DN25.105.105
		NPT 1"	100	140.5	105.8	41	1.3	ACS20-DN25.205.205
ACS40-DN50	Female thread	BSP 2"	140	123.5	86.5	67	2.5	ACS40-DN50.108.108
		NPT 2"	140	143.5	105.1	67	2.8	ACS40-DN50.208.208
ACS60-DN80	Female thread	BSP 3"	210	174.5	131.5	100	7.5	ACS60-DN80.10A.10A
		NPT 3"	210	202.5	141.5	100	8.5	ACS60-DN80.20A.20A
ACS75-DN100	Female thread	BSP 4"	275	208.5	165.5	125	13.8	ACS75-DN100.10C.10C
		NPT 4"	275	242.5	176.5	125	15.0	ACS75-DN100.20C.20C
ACS110-DN150	Flanges	EN 1092-1 (PN16 Form B) DN150	314	307	-	-	51.6	ACS110-DN150.A3C.A3C
		EN 1092-1 (PN40 Form B) DN150	339	315	-	-	60.3	ACS110-DN150.A5C.A5C
		ASME B16.5 (150 psi) 6"	314	314	-	-	53.3	ACS110-DN150.B1E.B1E

* The weight applies to stainless steel only with an approximate tolerance of +/-5%

** Add the code of options at the end of the part-number: see page 16

ACH series

The control cable safety breakaway coupling with a high flow rate

ACH series is the flow-optimized variant of the ACS with the same benefits but for faster transfer of your fluid in order to save time and money. The ACH breakaway couplings provide an approx. 4 times higher flow rate with no increase of the pressure loss or an approx. 4 times lower pressure loss at a constant flow.

Your advantages

- Highest flow rates.
- Significant reduction of the pressure loss.
- Releases when force is applied axial or up to 90° (any direction) to the plane of the coupling.



Technical data

	ACH40-DN50	ACH65-DN80	ACH80-DN100	ACH110-DN150
Hose nominal diameter	DN 50	DN 80	DN 100	DN 150
Equivalent flow diameter (mm)	40	65	80	110
Maximum allowable pressure PS (bar)	up to 25			
Minimum and maximum allowable temperature TS (°C)*	- 40 to 150			
Shut-off	double			

* Seal type may further limit the temperature range.

Sealing

- Nitrile (NBR)
- Ethylene-Propylene (EPDM)
- Fluorocarbon (FKM)
- Perfluoroelastomer (FFKM)

Connection

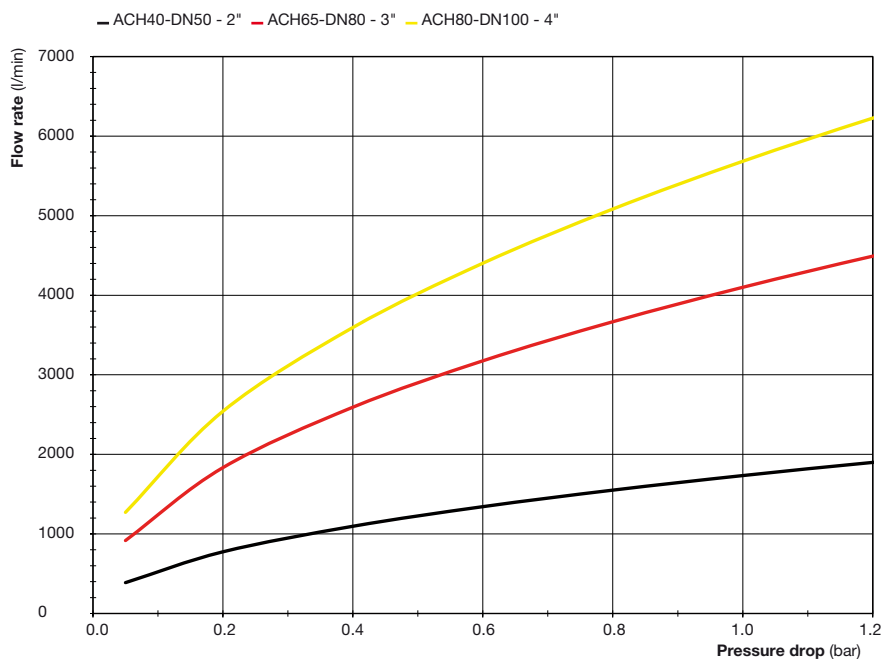
- Thread: BSP, NPT (except ACS110-DN150)
 - Fixed flange: EN 1092-1, ASME B16.5
- Other connections upon request (also via adapters screwed and glued in BSP or NPT thread)

Construction

- Predominantly stainless steel

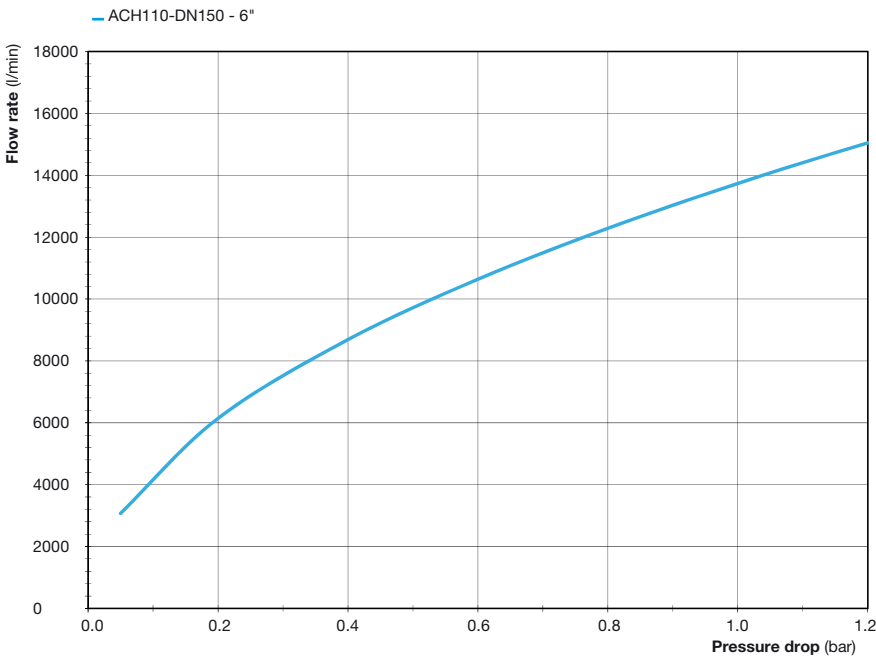
Hydraulic flow rate / pressure drop charts

Test conditions: Water (20 °C)



Hydraulic flow rate / pressure drop charts

Test conditions: Water (20 °C)



How to build your ACH part number

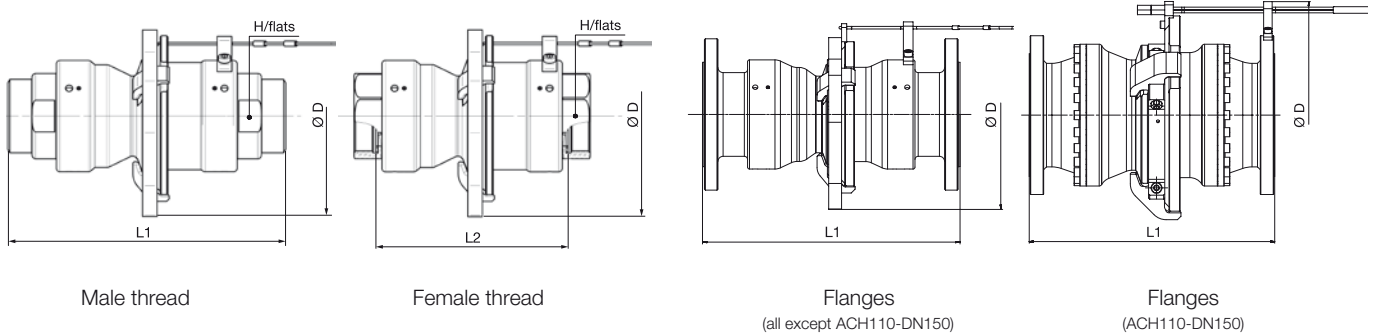
ACH40-DN50 . 108 . 108 / IC8 / JE

1 2 3 4 5

To build your part number, choose the following elements. All of these are mandatory elements.

1 Model to be chosen page 21	5 Type of seal - Nitrile (NBR) JN - Ethylene-Propylene (EPDM) JE - Fluorocarbon (FPM) JV - Perfluoroelastomer (FFKM) 6375 JK1
2 Connection type on fixed side to be chosen page 21	
3 Connection type on hose side to be chosen page 21	
4 Material series (predominantly) IC8 - Stainless steel 316 Ti IC8	

Part numbers



Model	Description	Connection	Dimensions (mm)				Weight* (kg)	Part numbers**
			ØD	L1	L2	H/flats		
ACH40-DN50	Female thread	BSP 2"	165	195	159	70	5.6	ACH40-DN50.108.108
		NPT 2"	165	201	179	70	5.8	ACH40-DN50.208.208
	Male thread	BSP 2"	165	235	-	70	5.9	ACH40-DN50.158.158
		NPT 2"	165	244	205.6	70	6.0	ACH40-DN50.258.258
	Flanges	EN 1092-1 (PN40 Form B) DN50***	188.5	229	-	-	10.7	ACH40-DN50.A57.A57
		ASME B16.5 (150 psi) 2"	188.5	229	-	-	9.8	ACH40-DN50.B18.B18
		ASME B16.5 (300 psi) 2"	188.5	229	-	-	11.2	ACH40-DN50.B28.B28
ACH65-DN80	Female thread	BSP 3"	220	270	228	100	15.9	ACH65-DN80.10A.10A
		NPT 3"	220	288	249	100	16.4	ACH65-DN80.20A.20A
	Male thread	BSP 3"	220	318	-	100	16.1	ACH65-DN80.15A.15A
		NPT 3"	220	332	270	100	16.4	ACH65-DN80.25A.25A
	Flanges	EN 1092-1 (PN16 Form B) DN80	240	316	-	-	22.3	ACH65-DN80.A39.A39
		EN 1092-1 (PN40 Form B) DN80	240	324	-	-	23.8	ACH65-DN80.A59.A59
		ASME B16.5 (150 psi) 3"	240	316	-	-	24.1	ACH65-DN80.B1A.B1A
		ASME B16.5 (300 psi) 3"	240	316	-	-	27.2	ACH65-DN80.B2A.B2A
ACH80-DN100	Female thread	BSP 4"	295	336	294	125	25.9	ACH80-DN100.10C.10C
		NPT 4"	295	378	315	125	26.9	ACH80-DN100.20C.20C
	Male thread	BSP 4"	295	386	-	125	26.5	ACH80-DN100.15C.15C
		NPT 4"	295	417	351	125	27.1	ACH80-DN100.25C.25C
	Flanges	EN 1092-1 (PN16 Form B) DN100	295	392	-	-	33.5	ACH80-DN100.A3A.A3A
		EN 1092-1 (PN40 Form B) DN100	295	400	-	-	36.8	ACH80-DN100.A5A.A5A
		ASME B16.5 (150 psi) 4"	295	380	-	-	36.4	ACH80-DN100.B1C.B1C
		ASME B16.5 (300 psi) 4"	295	390	-	-	44.2	ACH80-DN100.B2C.B2C
ACH110-DN150	Flanges	EN 1092-1 (PN16 Form B) DN150	400	432	-	-	78.9	ACH110-DN150.A3C.A3C
		EN 1092-1 (PN40 Form B) DN150	400	440	-	-	86.4	ACH110-DN150.A5C.A5C
		ASME B16.5 (150 psi) 6"	400	432	-	-	82.4	ACH110-DN150.B1E.B1E
		ASME B16.5 (300 psi) 6"	400	440	-	-	98.4	ACH110-DN150.B2E.B2E

* The weight applies with an approximate tolerance of +/-5%

** Add the code of options at the end of the part-number: see page 20

*** Compatible to EN 1092-1 (PN 16 Form B) DN50

MBS series

The standard safety breakaway coupling for marine applications

The MBS series has been specially developed for applications between two hose lines typically found in maritime environment. The innovative design is characterised by its high resistance to lateral forces that can affect the coupling, causing it to release unintentionally.

Your advantages

- High stability when lateral forces act on the coupling.
- Controlled separation through breaking pins.
- Secure separation when subjected to an axial tensile load.
- Suitable for reeling with hose on drums.
- Releases only when force is applied axial to the coupling.



Technical data

	MBS20-DN25	MBS35-DN50	MBS60-DN80	MBS75-DN100
Hose nominal diameter	DN 25	DN 50	DN 80	DN 100
Equivalent flow diameter (mm)	20	35	60	75
Maximum allowable pressure PS (bar)	up to 25			
Minimum and maximum allowable temperature TS (°C)*	- 40 to 150			
Shut-off double				

* Seal type may further limit the temperature range.

Sealing

- Nitrile (NBR)
- Ethylene-Propylene (EPDM)
- Fluorocarbon (FKM)
- Perfluoroelastomer (FFKM)

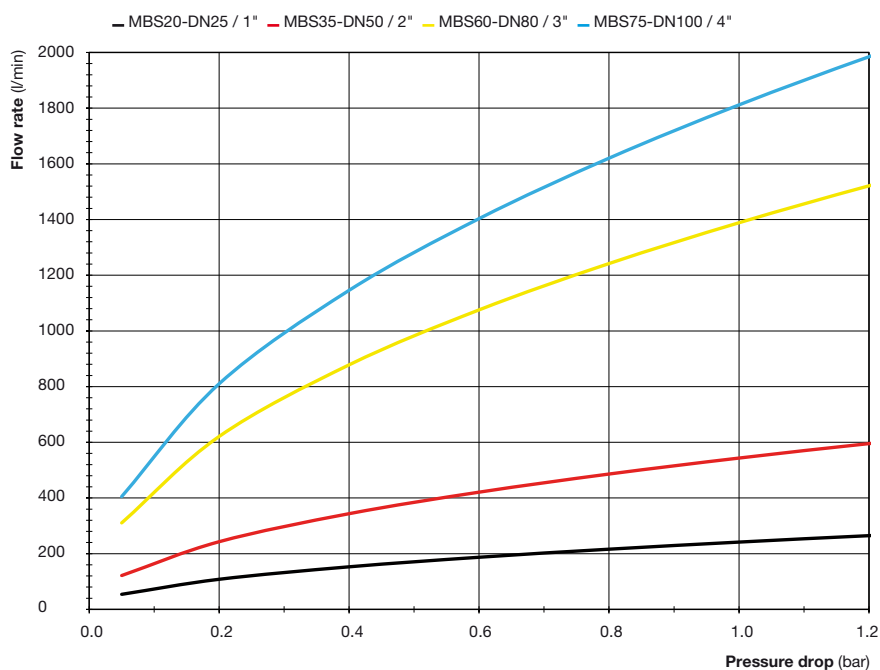
Connection

- Thread: BSP, NPT
 - Fixed flange: EN 1092-1, ASME B16.5
- Other connections upon request (also via adapters screwed and glued in BSP or NPT thread)

Construction

- Predominantly stainless steel

Hydraulic flow rate / pressure drop charts



Test conditions:
Fluid: water 20 °C

How to build your MBS part number

MBS35-DN50	.	108	.	108	/	IC8	/	JE	/	10
1		2		3		4		5		6

To build your part number, choose the following elements. All of these are mandatory elements.

1 Model

to be chosen page 24

2 Connection type on side 1

(can be different from side 2)

to be chosen page 24

3 Connection type on side 2

(can be different from side 1)

to be chosen page 24

4 Material series (predominantly)

Code

- Stainless steel 316 Ti IC8

5 Type of seal

Code

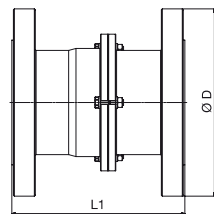
- Nitrile (NBR) JN
- Ethylene-Propylene (EPDM) JE
- Fluorocarbon (FPM) JV
- Perfluoroelastomer (FFKM) 6375 JK1

6 Release force

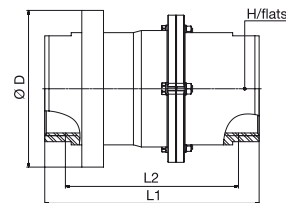
Model	Release forces in kN*	
MBS20-DN25	3.2	7
MBS35-DN50	10	15
MBS60-DN80	20	30
MBS75-DN100	30	44
results in:	PN16	PN25

* Other release forces upon request.

Part numbers



Flange



Female thread

Model	Description	Connection	Dimensions (mm)				Weight* (kg)	Part numbers**
			ØD	L1	L2	H/flats		
MBS20-DN25	Female thread	BSP 1"	77	112.5	92.5	41	1.2	MBS20-DN25.105.105
		NPT 1"	77	140.5	120.2	41	1.4	MBS20-DN25.205.205
	Flanges	EN 1092-1 (PN40 Form B) DN25	115	-	140.5	-	3.4	MBS20-DN25.A54.A54
MBS35-DN50	Female thread	BSP 2"	108	123.5	86.5	70	3	MBS35-DN50.108.108
		NPT 2"	108	143.5	121.4	70	3.3	MBS35-DN50.208.208
	Flanges	EN 1092-1 (PN16 Form B) DN50***	165	-	150.5	-	7.6	MBS35-DN50.A37.A37
MBS60-DN80	Female thread	BSP 3"	148	174.5	131.5	100	6.5	MBS60-DN80.10A.10A
		NPT 3"	148	202.5	163.6	100	7.3	MBS60-DN80.20A.20A
	Flanges	ASME B16.5 (150 psi) 3"	190.5	-	176	-	13.5	MBS60-DN80.B1A.B1A
MBS75-DN100	Female thread	BSP 4"	200	202.5	162.5	125	13	MBS75-DN100.10C.10C
		NPT 4"	200	241.5	198.6	125	14.2	MBS75-DN100.20C.20C
	Flanges	ASME B16.5 (150 psi) 4"	228.6	-	259	-	24	MBS75-DN100.B1C.B1C

* The weight applies with an approximate tolerance of +/-5%

** Add the code of options above at the end of the part-number

*** Compatible to EN 1092-1 (PN 40 Form B) DN50

MBH series

The marine safety breakaway coupling with a high flow rate

The MBH series provides the same benefits as the MBS but allows an approx. 4 times higher flow rate.

Your advantages

- High stability when lateral forces act on the coupling.
- Highest flow rates.
- Significant reduction of the pressure loss.
- Releases only when force is applied axial to the coupling.



Technical data

	MBH40-DN50	MBH65-DN80	MBH80-DN100	MBH110-DN150
Hose nominal diameter	DN 50	DN 80	DN 100	DN 150
Equivalent flow diameter (mm)	40	65	80	110
Maximum allowable pressure PS (bar)	up to 25			
Minimum and maximum allowable temperature TS (°C)*	- 40 to 150			
Shut-off double				

* Seal type may further limit the temperature range.

Sealing

- Nitrile (NBR)
- Ethylene-Propylene (EPDM)
- Fluorocarbon (FKM)
- Perfluoroelastomer (FFKM)

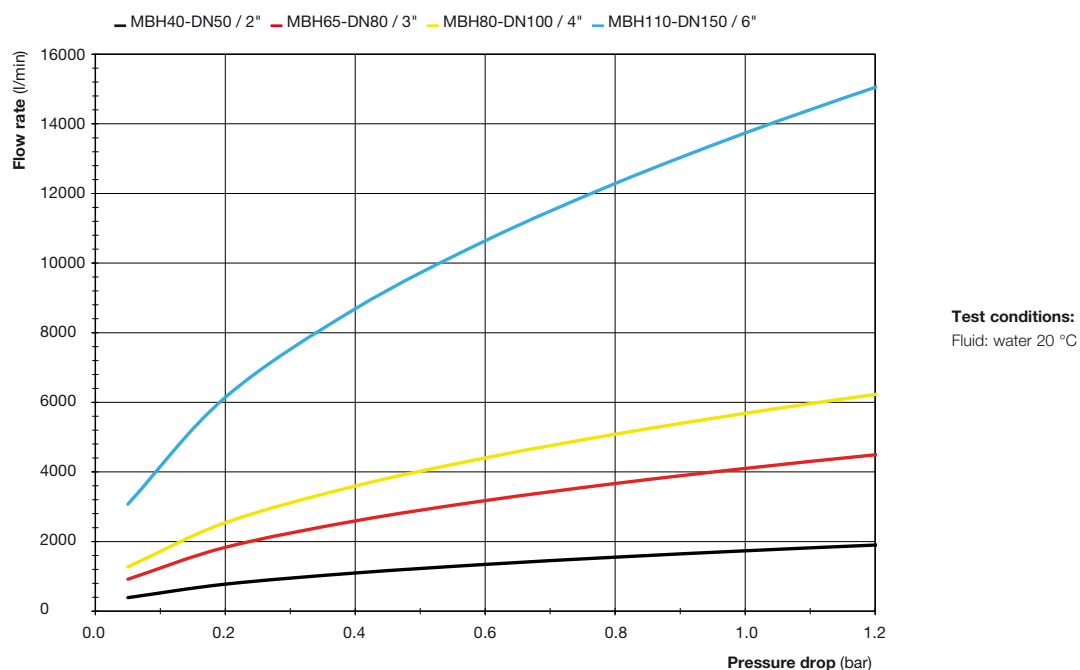
Connection

- Thread: BSP, NPT
- Fixed flange: ASME B16.5, EN1092-1 upon request

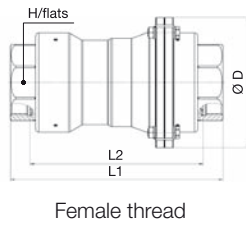
Construction

- Predominantly stainless steel

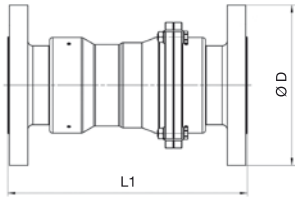
Hydraulic flow rate / pressure drop charts



Part numbers



Female thread



Flange

Model	Description	Connection	Dimensions (mm)				Weight* (kg)	Part numbers**
			ØD	L1	L2	H/flats		
MBH40-DN50	Female thread	BSP 2"	119.5	195	159	70	5.3	MBH40-DN50.108.108
	Flanges	ASME B16.5 (150 psi) 2"	152.4	229	-	-	9.4	MBH40-DN50.B18.B18
MBH65-DN80	Female thread	BSP 3"	166	270	228	100	13.6	MBH65-DN80.10A.10A
		NPT 3"	166	288	249	100	14.2	MBH65-DN80.20A.20A
	Flanges	ASME B16.5 (150 psi) 3"	190.5	316	-	-	21.6	MBH65-DN80.B1A.B1A
		ASME B16.5 (300 psi) 3"	209.6	316	-	-	24.7	MBH65-DN80.B2A.B2A
MBH80-DN100	Female thread	BSP 4"	210	336	294	125	26.3	MBH80-DN100.10C.10C
		NPT 4"	210	358	315.1	125	27.1	MBH80-DN100.20C.20C
	Flanges	ASME B16.5 (150 psi) 4"	228.6	380	-	-	37.2	MBH80-DN100.B1C.B1C
		ASME B16.5 (300 psi) 4"	254	390	-	-	44.9	MBH80-DN100.B2C.B2C
MBH110-DN150	Flanges	ASME B16.5 (150 psi) 6"	279.4	432	-	-	67.4	MBH110-DN150.B1E.B1E

* The weight applies with an approximate tolerance of +/-5%

**Add the code of options below at the end of the part-number

How to build your MBH part number

MBH40-DN50	.	108	.	108	/	IC8	/	JE	/	12
1		2		3		4		5		6

To build your part number, choose the following elements. All of these are mandatory elements.

1

Model

to be chosen page 27

2

Connection type on side 1

(can be different from side 2)

to be chosen page 27

3

Connection type on side 2

(can be different from side 1)

to be chosen page 27

4

Material series

(predominantly)

Code

- Stainless steel 316 Ti IC8

5

Type of seal

Code

- Nitrile (NBR) JN

- Ethylene-Propylene (EPDM) JE

- Fluorocarbon (FPM) JV

- Perfluoroelastomer (FFKM) 6375 JK1

6

Release force

Model	Release forces in kN*	
MBH40-DN50	12	15
MBH65-DN80	22	30
MBH80-DN100	30	44
MBH110-DN150	60	90

* Other release forces upon request.



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