

Funke BI-Adapter®

System for connecting pipes
with a non-circular outer geometry





Also available as an oil-resistant version



The Funke BI-Adapter®



Background

Civil engineers need to connect pipes with the same diameter, but which are made of different materials, on a daily basis. As installing a manhole structure is a time-consuming and cost-intensive solution, alternatives are often used. However, depending on available materials, these are often a rather improvised result that turns out to be ineffective for long-term use. The Funke VPC® Pipe Coupling provides the perfect answer to this problem. It allows engineers to connect pipes that have the same nominal and circular outer diameter with one another, even if these pipes are made of different materials. But what can be done if the pipes have a circular geometry on the inside but different geometries on the outside?

Funke Kunststoffe GmbH now also offers a solution for this specific scenario. The new Funke BI-Adapter® allows you to securely connect pipes that are only circular on the inside – such as pipes with a base or pipes with top reinforcement, for example – and it also allows you to connect ovoid pipes with circular pipes.

Advantages of the Funke BI-Adapter®

- Suitable for all conventional pipe materials
- Easy assembly
- Flexible use in combination with VPC® Pipe Coupling
- Designed to connect pipes that have non-circular outer geometries

Connecting a PVC-U CONNEX pipe to a concrete pipe with a base using a Funke BI-Adapter®





one for all

The product

The Funke BI-Adapter® consists of an inner sleeve, an expansion wedge made of 1.4404 stainless steel and an EPDM sealing collar. The EPDM-covered inner sleeve is inserted into the pipe. The user then widens it by driving in the wedge, which press fits it onto the inner wall of the pipe. Several sealing ribs arranged in a ring shape ensure that a tight joint is formed. The VPC® Pipe Coupling included in the delivery is then mounted and fastened on the other end of the BI-Adapter. This makes it possible to connect a pipe with a circular outer geometry. The outer diameter of the pipe requiring connection must be in the clamping range of the used VPC® Pipe Coupling. The Funke BI-Adapter® is available for pipes with nominal diameters from DN 150 to DN 1000. The 150 – 600 version has General Building Authority approval (abZ) from the German Institute of Structural Engineering (DIBt) with the approval number Z-42.5-546. The BI adapter 100, 125, 150 and 200 are available as rigid versions for small nominal widths.

Iro gives the BI-Adapter top marks Passed the test

Iro GmbH Oldenburg has inspected the Funke BI-Adapter® DN 300 in accordance with DIN 19523, a standard released in August 2008. It tested the component's resistance to mechanical loads that arise when the component is cleaned with high-pressure water jets. The material test showed that the product is resistant to high-pressure water jetting and cleaning.

Adapter put to the test

The test simulated loads that the component is exposed to when it is cleaned using high-pressure water jets. The test involves blasting a high-pressure water jet onto the test sample at a defined angle and from a set distance and moving this in parallel over the inner surface of the tested component.

The inspector monitors the water pressure, water flow and diffusion angle of the water jet, ensuring that the hydraulic load remains within the defined range for the duration of the test. A special, wear-resistant ceramic insert focuses the water jet and ensures that the opening diameter of the jet and the load exerted on the sample do not change over the course of the test.

Positive results

Following the high-pressure water jet test, the inner surface of the test sample was checked for damages. The results were positive: The BI-Adapter withstood the hydraulic loads exerted by the high-pressure water jets, and the test also confirmed that the seal was still functioning properly.



Internal view of installed BI-Adapter



Replacing sections with HS® pipes

Versions for



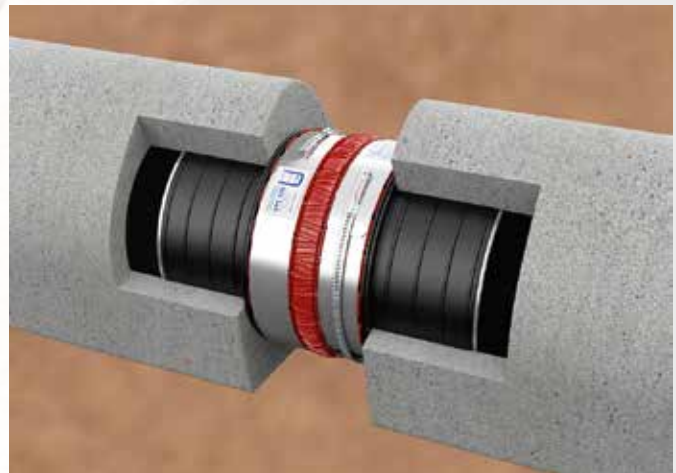
Funke BI-Adapter® with Funke Repair Pipe
Offset-free connection of 2 concrete pipes with one plastic pipe



The Funke BI-Adapter® allows you to make repairs, for instance, when a concrete pipe has collapsed or has been damaged by a soil displacement hammer. The damaged sections of the pipe can be replaced with an HS® Short Pipe or a Repair Pipe. In this case, a further two BI-Adapters are required.



Funke BI-Adapter® Internal/Internal
Connecting old concrete pipe to new concrete pipe



The Funke BI-Adapter® Internal/Internal DN 250 – 600 offers a simple solution for cases where an existing concrete line needs to be connected with a concrete line that does not have the correct dimensions. The BI-Adapter Internal/Internal allows you to securely connect the two pipe runs with each other, even if the tip end of the new pipe does not fit into the sleeve of the existing pipe.

BI-Adapter Pipe Connection Set Transition for inserting a concrete pipe connection

The BI-Adapter Pipe Connection Set DN 300 to 600 was developed for subsequent installation of a concrete pipe/pipe connection (with base or circular) in an existing pipeline. The set includes two VPC® Pipe Couplings – each consisting of two spring baskets and two fixed foldable VPC® sealing collars –, four BI-Adapters as well as a side cutter, a tap-in block, a special lubricant including brush and the Installation Instructions. A tangential tensioner and a torque wrench are also required for professional installation. These tools are alternatively available with the VPC® Assembly Toolbox. Before inserting the fitting piece, the pipe support must be brought up to height and compacted in accordance with DIN EN 1610. In the same way as a pipe, a chamber can also be retrofitted into an existing concrete pipeline with a base, whereby the chamber is to be regarded as a fitting in this case.



special cases

Funke BI-Adapter® Ovoid/Circular Transition from ovoid to a circular pipe

Using the new Funke BI-Adapter® Ovoid (DN 200/300 – 400/600) also offers advantages for the transition between an ovoid and a circular pipe. Until now, it was only possible to set up such a connection using a more complex manhole structure. However, the new part from Funke offers an alternative, inexpensive and easy method of connecting an ovoid pipe to a circular pipe.



Transition ovoid/circular from 500/750 Transition from ovoid to a circular pipe



A special solution is available for transitions from an ovoid profile with a nominal diameter of 500/700 or higher to circular pipes. It is supplied including the adhesive that is also used for the complete assembly set.



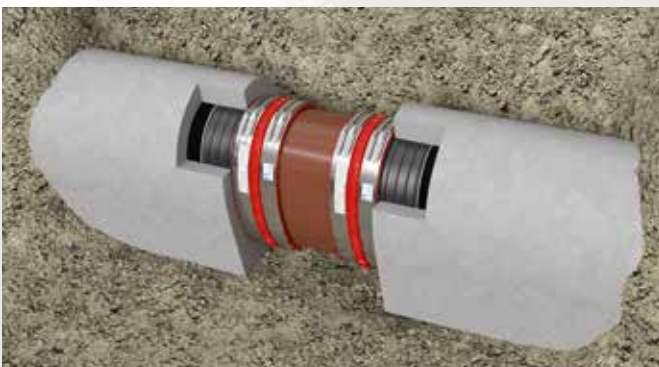
Funke BI-Adapter® Ovoid/Ovoid Transition from ovoid to ovoid with short pipe



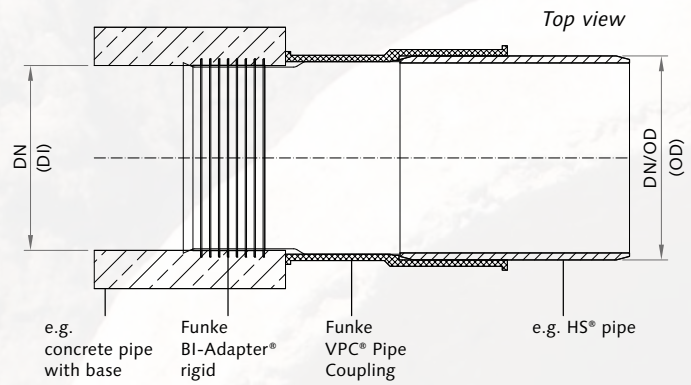
Funke has produced an ovoid plastic pipe for repairs to ovoid supports in the nominal diameter range from DN 200/300 to DN 600/900. A gap can be filled with two VPC® Pipe Couplings and two BI-Adapters Ovoid.

Funke BI-Adapter® Ovoid/Ovoid Transition from ovoid to ovoid

In addition, two BI-Adapters Ovoid and a VPC® Pipe Coupling can be used to extend an existing pipeline comprised of ovoid profiles with nominal width range from DN 200/300 to DN 600/900 with new pipes with the same profile.

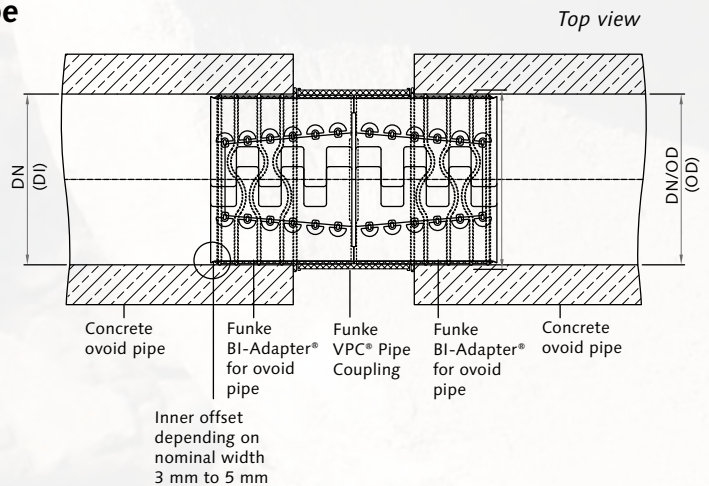
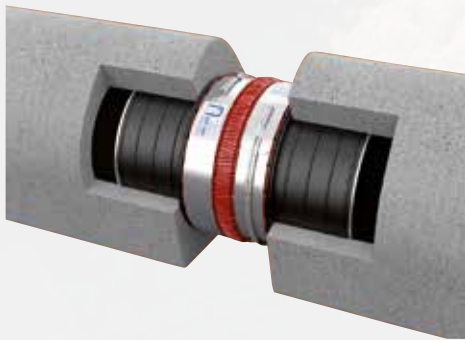


Funke BI-Adapter® rigid DN 100 – 200



Designation	Item number	Existing pipe Inner diameter (ID) from – to mm	Connection pipe Outer diameter (OD) from – to mm
BI-Adapter 100 rigid	BIA100S	99.5 – 101.5	102 – 133
BI-Adapter 125 rigid	BIA125S	124.5 – 126.5	102 – 133
BI-Adapter 150 rigid Version A concrete to plastic	BIA150SA	149.5 – 151.5	123 – 161
BI-Adapter 150 rigid Version B concrete to vitrified clay	BIA150SB	149.5 – 151.5	160 – 192
BI-Adapter 200 rigid Version A concrete to plastic	BIA200SA	199.5 – 201.5	183 – 226
BI-Adapter 200 rigid Version B concrete to vitrified clay	BIA200SB	199.5 – 201.5	218 – 261

Funke BI-Adapter® Internal/Internal Transition from concrete pipe to concrete pipe



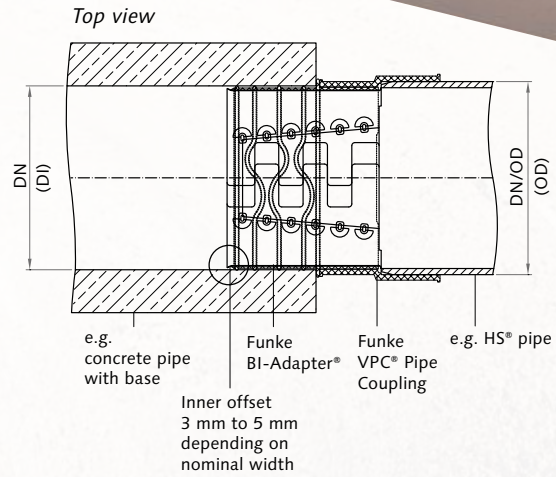
DN	Item number	Existing pipe Inner diameter (ID) from – to mm	VPC® Pipe Coupling Clamping range from – to mm
250	BIAII250	245 – 255	218 – 261
300	BIAII300	295 – 305	270 – 320
400	BIAII400	395 – 405	360 – 430
500	BIAII500	495 – 505	450 – 520
600	BIAII600	595 – 605	555 – 625



The tangential tensioner is required for professional installation from VPC 275 upwards.

Funke BI-Adapter®

DN 150 – 1200



BI-Adapter	Item number	Existing pipe Inner diameter (ID) from – to mm	Connection pipe Outer diameter (OD) from – to mm	VPC® in the scope of delivery included
DN 150	BIA150	145 – 155	123 – 161	VPC125
DN 190	BIA190200	185 – 195	183 – 226	VPC200K
DN 200	BIA200	195 – 205	183 – 226	VPC200K
DN 225	BIA225220	220 – 230	218 – 261	VPC220
DN 240	BIA240275	235 – 245	218 – 261	VPC275
DN 250	BIA250220	245 – 255	218 – 261	VPC220
	BIA250290		240 – 290	VPC290
DN 285	BIA285325	280 – 290	270 – 320	VPC325
DN 300	BIA300270	295 – 305	270 – 320	VPC270
	BIA300360		295 – 360	VPC360
	BIA300382		315 – 382	VPC382*
DN 350	BIA350382	345 – 355	315 – 382	VPC382
	BIA350400		330 – 400	VPC400
	BIA350415		345 – 415	VPC415
DN 380	BIA380430	375 – 385	360 – 430	VPC430
	BIA400430		360 – 430	VPC430
DN 400	BIA400465	395 – 405	395 – 465	VPC465
	BIA400500		430 – 500	VPC500*
DN 450	BIA450485	445 – 455	415 – 485	VPC485
	BIA450500		430 – 500	VPC500
DN 475	BIA475535	470 – 480	465 – 535	VPC535
DN 500	BIA500520	495 – 505	450 – 520	VPC520
	BIA500565		495 – 565	VPC565
	BIA500590		520 – 590	VPC590*
DN 600	BIA600640	595 – 605	570 – 640	VPC640
	BIA600660		590 – 660	VPC660
	BIA600690		620 – 690	VPC690*
DN 700	BIA700730	695 – 705	660 – 730	VPC730
DN 800	BIA800835	795 – 805	765 – 835	VPC835
	BIA800890		820 – 890	VPC890*
DN 900	BIA900940	895 – 905	870 – 940	VPC940
DN 1000	BIA10001030	995 – 1005	980 – 1030	VPC1030
	BIA10001070		1020 – 1070	VPC1070
DN 1200	BIA12001240	1195 – 1205	1190 – 1240	VPC1240**

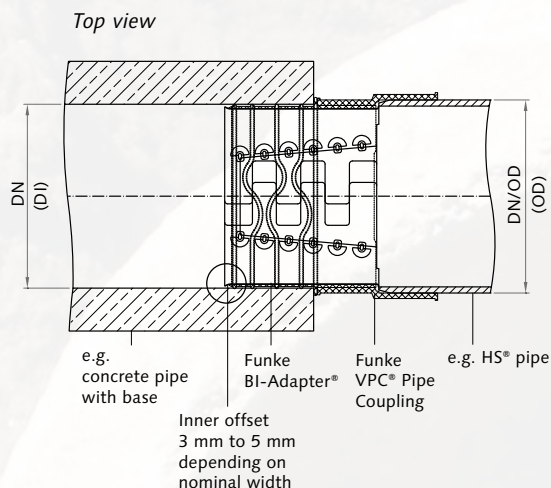
Funke BI-Adapter®
for lined pipes

* Including bush

** Installation by Funke Application Technology – please request this separately.

The tangential tensioner is required for professional installation from VPC 275 upwards.

Funke BI-Adapter® oil-resistant DN 150 – 1000



BI-Adapter	Item number	Existing pipe Inner diameter (ID) from – to mm	Connection pipe Outer diameter (OD) from – to mm	VPC® in the scope of delivery included
DN 150	BIA150OEL	145 – 155	123 – 161	VPC125OEL
DN 200	BIA200OEL	195 – 205	183 – 226	VPC200KOEL
DN 225	BIA225220OEL	220 – 230	218 – 261	VPC220OEL
DN 250	BIA250220OEL	245 – 255	218 – 261	VPC220OEL
	BIA250290OEL		240 – 290	VPC290OEL
DN 300	BIA300270OEL	295 – 305	270 – 320	VPC270OEL
	BIA300360OEL		295 – 360	VPC360OEL
	BIA300382OEL		315 – 382	VPC382OEL*
DN 350	BIA350382OEL	345 – 355	315 – 382	VPC382OEL
	BIA350400OEL		330 – 400	VPC400OEL
	BIA350415OEL		345 – 415	VPC415OEL
DN 400	BIA400430OEL	395 – 405	360 – 430	VPC430OEL
	BIA400465OEL		395 – 465	VPC465OEL
	BIA400500OEL		430 – 500	VPC500OEL*
DN 450	BIA450485OEL	445 – 455	415 – 485	VPC485OEL
	BIA450500OEL		430 – 500	VPC500OEL
DN 500	BIA500520OEL	495 – 505	450 – 520	VPC520OEL
	BIA500565OEL		495 – 565	VPC565OEL
	BIA500590OEL		520 – 590	VPC590OEL*
DN 600	BIA600640OEL	595 – 605	570 – 640	VPC640OEL
	BIA600660OEL		590 – 660	VPC660OEL
	BIA600690OEL		620 – 690	VPC690OEL*
DN 700	BIA700730OEL	695 – 705	660 – 730	VPC730OEL
DN 800	BIA800835OEL	795 – 805	765 – 835	VPC835OEL
DN 900	BIA900940OEL	895 – 905	870 – 940	VPC940OEL
DN 1000	BIA10001030OEL	995 – 1005	980 – 1030	VPC1030OEL
	BIA10001070OEL		1020 – 1070	VPC1070OEL



*Including bush

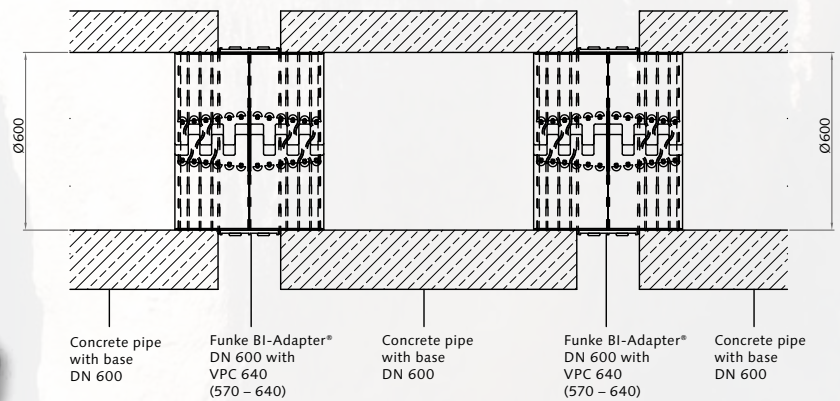
Sealing sleeve NBR, oil and petrol resistant to DIN EN 681-1 WH

The tangential tensioner is required for professional installation from VPC 275 upwards.



BI-Adapter Pipe Connection Set

Transition for inserting a concrete fitting piece pipe connection



Before inserting the adapter pipe connection, the pipe support must be brought up to height and compacted in accordance with DIN EN 1610.

Nominal diameter DN	Item number	Existing pipe Inner diameter (ID) from – to mm	VPC® Pipe Coupling Clamping range from – to mm
300	BIAPS300	295 – 305	270 – 320
400	BIAPS400	395 – 405	360 – 430
500	BIAPS500	495 – 505	450 – 520
600	BIAPS600	595 – 605	570 – 640

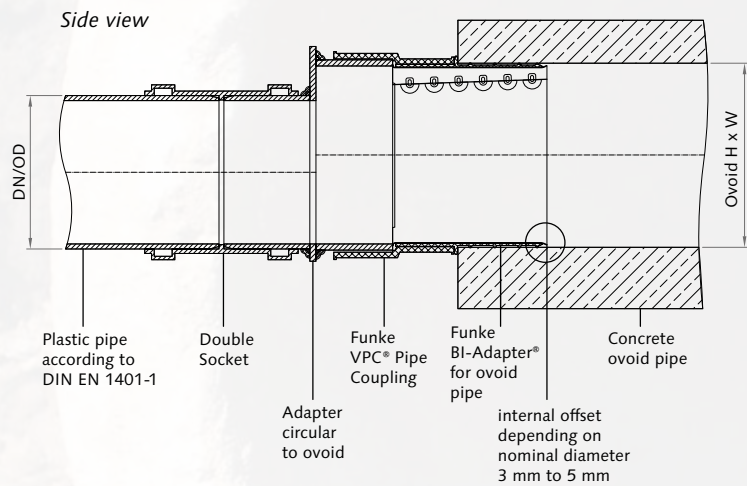


Only suitable for connecting concrete and reinforced concrete pipes.

To create an offset-free connection between two concrete pipes and a plastic pipe, please use the Funke Repair Pipe and two BI-Adapters.



Funke BI-Adapter® Ovoid/Circular Transition from ovoid to a circular pipe



Nominal diameter DN/OD	VPC® Coupling	Item number
Ovoid 200/300 to DN/OD 315	VPC275	EIK200300315
Ovoid 250/375 to DN/OD 315	VPC360	EIK250375315
Ovoid 300/450 to DN/OD 400	VPC430	EIK300450400
Ovoid 350/525 to DN/OD 500	VPC455	EIK350525500
Ovoid 400/600 to DN/OD 500	VPC535	EIK400600500

From VPC 275 upwards, the tangential tensioner is required for professional installation.

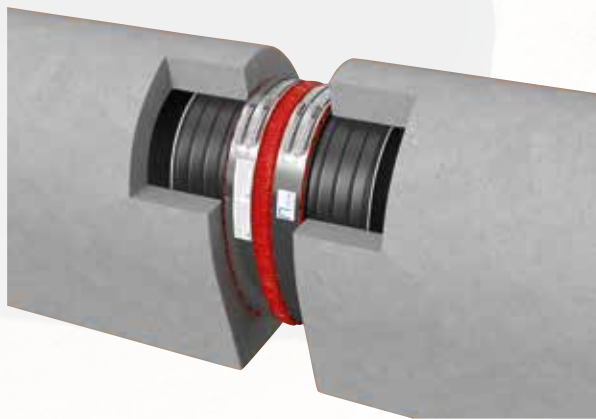
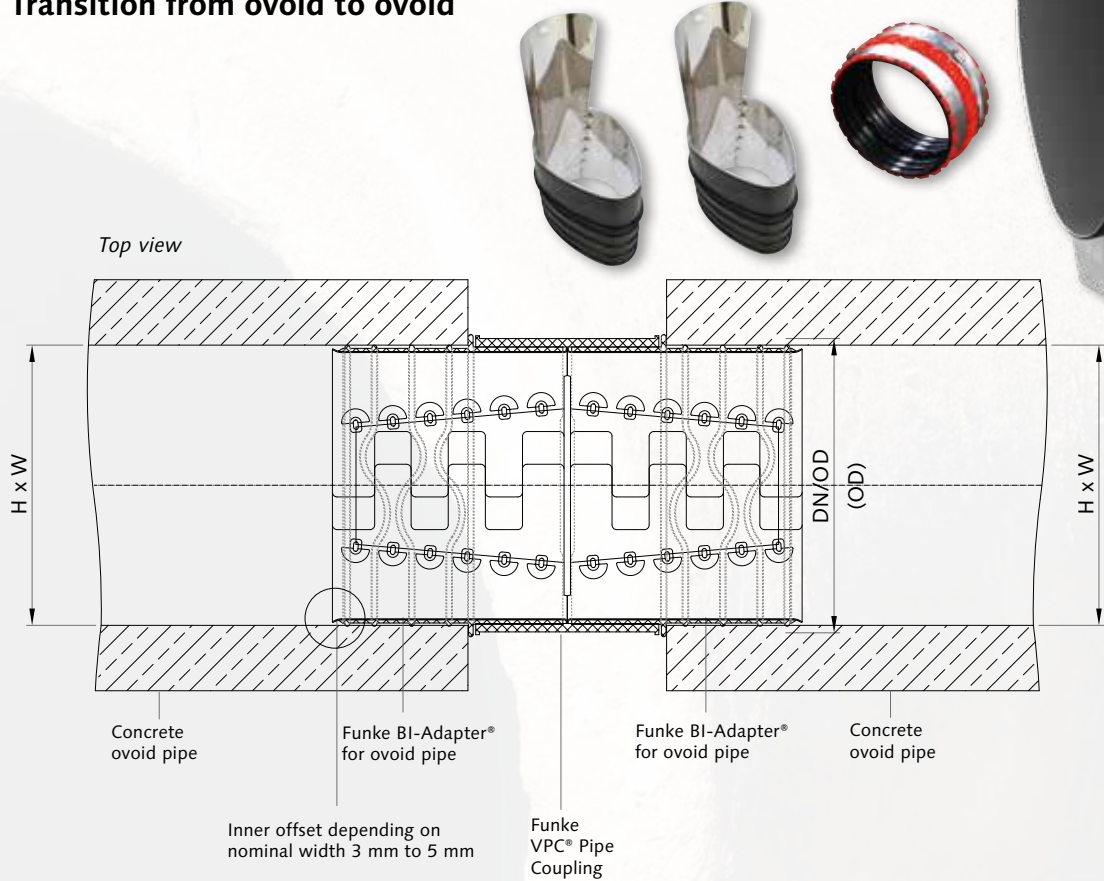
Transition ovoid/circular from 500/750 Transition from ovoid to a circular pipe



Nominal diameter DN/OD	Item number
Ovoid 500/750 to DN/OD 500	EIUK500750500
Ovoid 600/900 to DN/OD 630	EIUK600900630
Ovoid 700/1050 to DN/OD 710	EIUK7001050710
Ovoid 800/1200 to DN/OD 800	EIUK8001200800



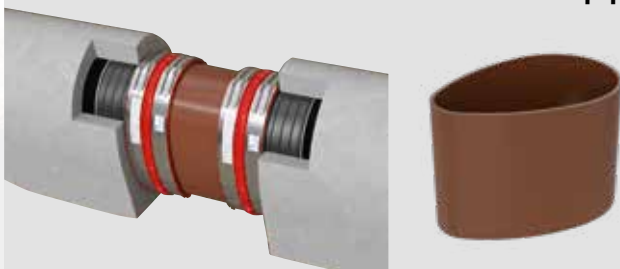
Funke BI-Adapter® Ovoid/Ovoid profile Transition from ovoid to ovoid



Nominal diameter DN/OD	VPC® Coupling	Item number
Ovoid 200/300	VPC275	BIAIIEI200300
Ovoid 250/375	VPC360	BIAIIEI250375
Ovoid 300/450	VPC430	BIAIIEI300450
Ovoid 350/525	VPC455	BIAIIEI350525
Ovoid 400/600	VPC535	BIAIIEI400600
Ovoid 500/750	VPC640	BIAIIEI500750
Ovoid 600/900	VPC780	BIAIIEI600900

Scope of delivery: 2 BI-Adapters, 1 VPC® Pipe Coupling.
The tangential tensioner is required for professional installation from VPC 275 upwards.

Funke BI-Adapter® Ovoid/Ovoid profile Transition from ovoid to ovoid with short pipe



Nominal diameter DN/OD	Length [mm]	required VPC®	Item number
Ovoid 200/300	500	VPC275	EIROHR050200300
Ovoid 250/375	500	VPC360	EIROHR050250375
Ovoid 300/450	500	VPC430	EIROHR050300450
Ovoid 350/525	500	VPC455	EIROHR050350525
Ovoid 400/600	500	VPC535	EIROHR050400600
Ovoid 500/750	1000	VPC640	EIROHR100500750
Ovoid 600/900	1000	VPC780	EIROHR100600900

When using a short pipe, a second VPC® Pipe Coupling is required in addition to the BI-Adapter Ovoid/Ovoid set (not included in the scope of delivery).



Funke BI-Adapter® 100 – 1200

Designation	Item number	Inner diameter Existing pipe from – to mm (BI-Adapter)	Outer diameter Connection pipe from – to mm (VPC® Pipe Coupling)	PVC-U	PP	PE	
				DIN EN 1401	DIN EN 1852	DIN EN 12666	
Transitions of nominal width DN 100 with BIA 100 (rigid)				110	110	110	
BI-Adapter 100S with VPC100	BIA100S	99.5 – 101.5 mm	102 – 133 mm	x	x	x	
Transitions of nominal width DN 125 with BIA 125 (rigid)				125	125	125	
BI-Adapter 125S with VPC100	BIA125S	124.5 – 126.5 mm	102 – 133 mm	x	x	x	
Transitions of nominal width DN 150 with BIA 150 (rigid)				160	160	160	
BI-Adapter 150SA with VPC125	BIA150SA	149.5 – 151.5 mm	123 – 161 mm	x	x	x	
Transitions of nominal width DN 150 with BIA 150 (rigid)				160	160	160	
BI-Adapter 150SB with VPC150	BIA150SB	149.5 – 151.5 mm	160 – 192 mm	x	x	x	
Transitions of nominal width DN 200 with BIA 200 (rigid)				200	200	225	
BI-Adapter 200SA with VPC200K	BIA200SA	199.5 – 201.5 mm	183 – 226 mm	x	x	x	
Transitions of nominal width DN 200 with BIA 200 (rigid)				200	200	225	
BI-Adapter 200SB with VPC220	BIA200SB	199.5 – 201.5 mm	218 – 261 mm	–	–	–	
Transitions of nominal width DN 150 with BIA 150				160	160	160	
BI-Adapter 150 with VPC125	BIA150	145 – 155 mm	123 – 161 mm	x	x	x	
Transitions of nominal width DN 200 with BIA 200				200	200	225	
BI-Adapter 200 with VPC200K	BIA200	195 – 205 mm	183 – 226 mm	x	x	x	
Transitions of nominal width DN 225 with BIA 225				250	250	225/250	
BI-Adapter 225 with VPC220	BIA225220	220 – 230 mm	218 – 261 mm	x	x	x	
Transitions of nominal width DN 250 with BIA 250				250	250	280	
BI-Adapter 250 with VPC220	BIA250220	245 – 255 mm	218 – 261 mm	x	x	–	
BI-Adapter 250 with VPC290	BIA250290		240 – 290 mm	x	x	x	
Transitions of nominal width DN 300 with BIA 300				315	315	355	
BI-Adapter 300 with VPC270	BIA300270	295 – 305 mm	270 – 324 mm	x	x	–	
BI-Adapter 300 with VPC360	BIA300360		295 – 360 mm	x	x	x	
BI-Adapter 300 with VPC382 with bush	BIA300382		315 – 382 mm	x	x	x	
Transitions of nominal width DN 350 with BIA 350				318	315	355	
BI-Adapter 350 with VPC382	BIA350382	345 – 355 mm	315 – 382 mm	x	x	x	
BI-Adapter 350 with VPC400	BIA350400		330 – 400 mm	400	400	x	
BI-Adapter 350 with VPC415	BIA350415		345 – 415 mm	400	400	x	

Dimensions in mm, E = eccentric ring. The dimensions comply with the specified standards and guidelines. Maximum tolerances have not been taken into account.

Overview of connection options concrete to:

Connection pipe types with outer diameter in mm

	GRP DIN EN 16556/16865	Ultra Rib 1 u 2 DIN EN 13476	Robukan PP DIN EN 13476	Cast iron (GGG) DIN EN 598	SML	Vitrified clay N DIN EN 295	Vitrified clay H DIN EN 295	FZ KL. B	FZ KL. A	AZ
116	–	–	–	118	110	131	–	118	116	116
x	–	–	–	x	x	x	–	x	x	x
142	–	–	–	144	135	159	–	143	141	141
–	–	–	–	–	–	–	–	–	–	–
167	170	170	174	170	160	186	–	170	168	168
–	–	–	–	–	x	–	–	–	–	–
167	170	170	174	170	160	186	–	170	168	168
x	x	x	x	x	x	x	–	x	x	x
220	225	225	235	222	210	242	254	222	220	220
x	x	x	–	x	x	–	–	x	x	x
220	225	225	235	222	210	242	254	222	220	220
–	–	–	x	–	–	x	x	–	–	–
167	170	170	174	170	160	186	–	170	168	168
–	–	–	–	–	x	–	–	–	–	–
220	225	225	235	222	210	242	254	222	220	220
x	x	x	–	x	x	–	–	x	x	x
220	225	225	235	222	210	271	–	222	220	220
x	x	x	x	x	–	–	–	x	x	x
272	280	280	294	274	274	299	318	284	–	274
–	–	–	–	–	–	–	–	–	–	–
x	x	x	–	x	x	–	–	x	–	x
324	335	335	347	326	326	355	376	328	–	328
–	–	–	–	–	–	–	–	–	–	–
x	x	x	x	x	x	x	–	x	–	x
x	x	x	x	x	x	x	x	x	–	x
324	335	335	347	326	326	417	376	328	–	328
x	x	x	x	x	x	–	x	x	–	x
–	x	x	x	–	–	–	x	–	–	–
–	–	–	x	–	–	–	x	–	–	–

Manufacturer-related tolerances are also possible.

In each case, please note the information regarding internal diameters provided by the pipe manufacturers.



Funke BI-Adapter® 100 – 1200

Designation	Item number	Inner diameter Existing pipe from – to mm (BI-Adapter)	Outer diameter Connection pipe from – to mm (VPC® Pipe Coupling)	PVC-U	PP	PE	
				DIN EN 1401	DIN EN 1852	DIN EN 12666	
Transitions of nominal width DN 400 with BIA 400				400	400	450	
BI-Adapter 400 with VPC430	BIA400430		360 – 430 mm	x	x	–	
BI-Adapter 400 with VPC465	BIA400465	395 – 405 mm	395 – 465 mm	x	x	x	
BI-Adapter 400 with VPC500 with bush	BIA400500		430 – 500 mm	x	x	x	
Transitions of nominal width DN 450 with BIA 450				500	500	450	
BI-Adapter 450 with VPC485	BIA450485		415 – 485 mm	–	–	–	
BI-Adapter 450 with VPC500	BIA450500	445 – 455 mm	430 – 500 mm	x	x	x	
Transitions of nominal width DN 500 with BIA 500				500	500	560	
BI-Adapter 500 with VPC520	BIA500520		450 – 520 mm	x	x	–	
BI-Adapter 500 with VPC565	BIA500565	495 – 505 mm	495 – 565 mm	x	x	x	
BI-Adapter 500 with VPC590 with bush	BIA500590		520 – 590 mm	x	x	x	
Transitions of nominal width DN 600 with BIA 600				630	630	630	
BI-Adapter 600 with VPC640	BIA600640		570 – 640 mm	x	x	x	
BI-Adapter 600 with VPC660	BIA600660	595 – 605 mm	590 – 660 mm	x	x	x	
BI-Adapter 600 with VPC690 with bush	BIA600690		620 – 690 mm	x	x	x	
Transitions of nominal width DN 700 with BIA 700				710	710	710	
BI-Adapter 700 with VPC730	BIA700730	695 – 705 mm	660 – 730 mm	x	x	x	
Transitions of nominal width DN 800 with BIA 800				800	800	800	
BI-Adapter 800 with VPC835	BIA800835		765 – 835 mm	x	x	x	
BI-Adapter 800 with VPC890 with bush	BIA800890	795 – 805 mm	820 – 890 mm	–	–	–	
Transitions of nominal width DN 900 with BIA 900				900	900	900	
BI-Adapter 900 with VPC940	BIA9008940	895 – 905 mm	870 – 940	x	x	x	
Transitions of nominal width DN 1000 with BIA 1000				1000	1000	1000	
BI-Adapter 1000 with VPC1030	BIA10001030		980 – 1030	x	x	x	
BI-Adapter 1000 with VPC1070 with bush	BIA10001070	995 – 1005 mm	1020 – 1070	–	–	–	
Transitions of nominal width DN 1200 with BIA 1200				1200	1200	1200	
BI-Adapter 1200 with VPC1240	BIA12001240	1195 – 1205 mm	1190 – 1240	x	x	x	

Dimensions in mm, E = eccentric ring. The dimensions comply with the specified standards and guidelines. Maximum tolerances have not been taken into account.

Overview of connection options concrete to:

Connection pipe types with outer diameter in mm

	GRP DIN EN 16556/16865	Ultra Rib 1 u 2 DIN EN 13476	Robukan PP DIN EN 13476	Cast iron (GGG) DIN EN 598	SML	Vitrified clay N DIN EN 295	Vitrified clay H DIN EN 295	FZ KL. B	FZ KL. A	AZ
427	450	459	429	429	486	492	448	442	432	
x	-	-	x	x	-	-	-	-	-	
x	x	x	x	x	-	-	x	x	x	
x	x	x	x	x	x	x	x	x	x	
427	450	461	429	429	524	492	448	442	432	
x	x	x	x	x	-	-	x	x	x	
-	x	x	-	-	-	x	x	x	x	
530	560	570	532	532	581	609	556	552	540	
-	-	-	-	-	-	-	-	-	-	
x	x	-	x	x	-	-	x	x	x	
x	x	x	x	x	x	-	x	x	x	
616		682	635	635	687	725	664	658	646	
x		-	x	x	-	-	-	-	-	
x		-	x	x	-	-	-	x	x	
-		x	x	x	x	-	x	x	x	
718			738		790	832	778	750	750	
x			-		-	-	-	-	-	
820			842		895	932	888	856	856	
x			x		-	-	-	-	-	
-			x		-	-	x	x	x	
924			945		1002		998	961	961	
x			-		-		-	-	-	
1026			1048		1109		1108	1068	1068	
x			-		-		-	-	-	
-			x		-		-	x	x	
1229			1255		1320		1298	1282		
x			-		-		-	-		

Manufacturer-related tolerances are also possible.

In each case, please note the information regarding internal diameters provided by the pipe manufacturers.

Installing the **Funke BI-Adapter**[®] DN 150 – 1000



Scope of delivery: BI-Adapter, VPC[®] Pipe Coupling, tapping block, special lubricant for the Funke BI-Adapter[®], brush and Installation Instructions

Expose the concrete pipe and create sufficient space around the collector (1). Remove all impurities from inside the concrete pipe and thoroughly clean the surface. If the inner surfaces have suffered major damage due to erosions, they need to be repaired with suitable filling material before the BI-Adapter is installed. Check the nominal diameters and make sure that they match the specifications on the BI-Adapter (2).

Then fully cover the inner surface of the concrete pipe with the special lubricant provided using the brush that was included in the delivery (3 + 4). Insert the BI-Adapter into the concrete pipe (5) and adjust it so that the expansion wedge is facing upwards. Make sure that the BI-Adapter is inserted up to the stop in the main pipe (6). Then push the expansion wedge by hand until there is a light preload.

Take the tapping block that is included in the delivery and hammer it (7) to fix the expansion wedge firmly in place. Make sure once again that the BI-Adapter is mounted securely.

This document is a translation of the German brochure. All mentioned approvals and standards pertain to those in Germany. For details on the corresponding approvals and standards in your country, please contact us.

Slide the cardboard template included in the delivery onto the expansion wedge until it reaches the pipe opening (8). This is an important measure to ensure that no flying sparks reach and damage the inner surface of the pipe. The protruding end of the expansion wedge can now be cut off with an angle grinder (9). Then take the VPC[®] Pipe Coupling included in the delivery and a short pipe (must be provided by the customer) and connect these with each other (10). The inner surface of the short pipe should be chamfered at the bottom if the direction of the flow is from the concrete pipe into the plastic pipe.

Take into account the clamping range of the connecting pipe when assembling the component. Connect the short pipe fitted with the VPC[®] Pipe Coupling to the BI-Adapter (11–13). Use the tangential tensioner when installing VPC[®] Pipe Couplings with nominal diameter greater than or equal to 290 mm. The pipes or fittings requiring connection must be coated with a lubricant and installed in accordance with DIN EN 1610. Please follow the in-depth Installation Instructions enclosed with the VPC[®] Pipe Coupling.

Completely installed connection (14–15).

