



BLACKTECplus

THE PE PIPE WITH THE PLUS



- Bänninger Group of Companies
- Worldwide
- Made in Germany



BLACKTECplus

BLACKTECplus is the innovative result of many years of research and reduces the expansion of PE pipes.



Application example



BLACKTECplus – Key benefits:

- Reduced pipe expansion provides quick installation, resulting in cost savings at the construction phase
- Material cost savings, due to reduction of the expansion bends, welds/joints and fixed points

BLACKTECplus – Additional safety benefits:

- Reduced axial expansion provides force reduction at the fixed points and the overall structure
- Reduction of expansion joints minimised the wear & tear and risk of potential damage of the overall system
- Significant reduction of welded/fused joints within the pipeline system

PRODUCT PROPERTIES

- More than half reduction of the linear expansion compare to solid PE pipes
- Lower weight compared to metal pipes
- Impact resistant at very low temperatures
- 40°C to +60°C for PE
- UV-resistant, suitable for outdoor installation
- Excellent chemical resistance
- Pressure range up to 16 bar
- Patented
- Tested by IMA-Dresden

Dimensions and tolerances according to DIN 8074/8075, DIN EN 12201-2 as well as ISO 4427-2

Joining technology according to DVS:

- Butt welding
- Electrofusion socket-welding
- Flange connection

Certified by DIN CERTCO and monitored by IMA-Dresden.

APPLICATION FIELDS

- Cooling water, refrigeration plants
- Water treatment
- Energy, geothermal (thermal water), local/district heating
- Applications with fluctuations in indoor and ambient temperature



Explanation of the pictograms >

SCAN ME!



CERTIFICATION

The BLACKTECplus pressure pipe made of polyethylene (PE) with short-fiber-reinforced PE interlayer is DINplus certified. Available in dimensions d63 to d250.



THE PE PIPE WITH THE PLUS

CALCULATION OF SAVINGS

Example: industrial production building

Laying PE solid wall pipe d250, SDR11 vs. BLACKTECplus d250, SDR11 > approx. 315 meters

MATERIALS COSTS:

1 Expansion bend

Extra cost pipe d250, 15 m
4 x Plain bearing d250
4 x 90° elbow d250

approx. 1750,- €

1 Fixed point

Fixed point clamp Zn d250

approx. 320,- €

1 Slide clamp

approx. 75,- €

LABOUR COSTS:

1 Expansion bend

8 x Butt welding

approx. 720,- €

By reducing expansion bends in the pipeline, the overall hydraulic resistance is improved full stopped. This means improved efficiency of the pumps, therefore smaller pump can be used.

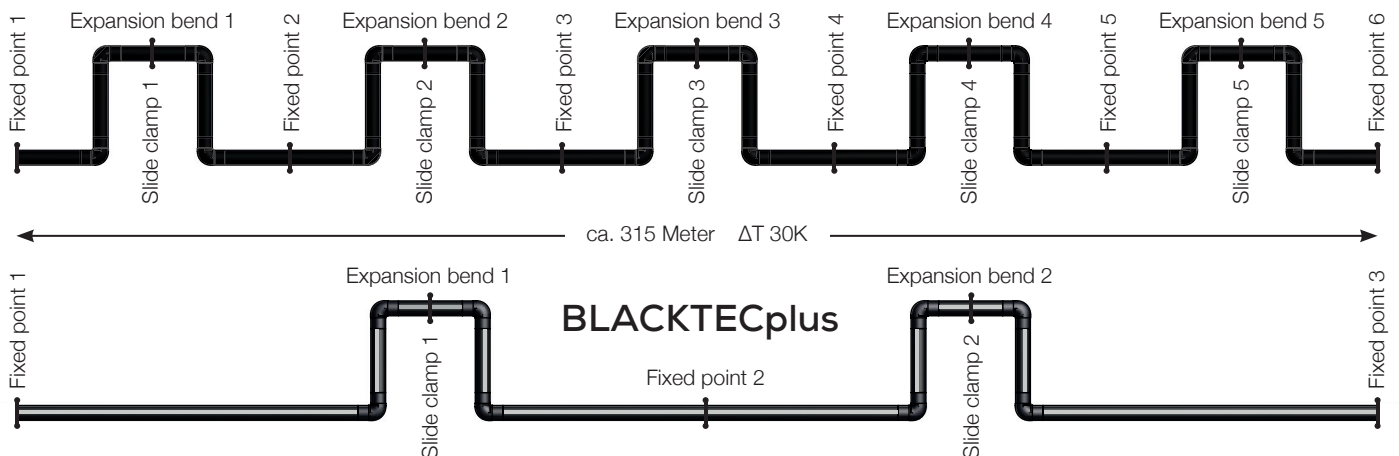
TOTAL SAVINGS:

AS OF 2023

6 Expansion bends	approx. 10.500,- €
6 Fixed points	approx. 1.920,- €
4 Slide clamps	approx. 300,- €
Labour costs	approx. 4.320,- €
Total =	approx. 16.320,- €

Video on linear expansion >

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LINEAR EXPANSION IN COMPARISON

Pipe length Meter	Temperature difference ΔT in K									
	10 K		20 K		30 K		40 K		50 K	
	BLACKTECplus	PE Solid wall	BLACKTECplus	PE Solid wall	BLACKTECplus	PE Solid wall	BLACKTECplus	PE Solid wall	BLACKTECplus	PE Solid wall
1	0,9	2	1,8	4	2,7	6	3,6	8	4,5	10
5	4,5	10	9	20	13,5	30	18	40	22,5	50
10	9	20	18	40	27	60	36	80	45	100
20	18	40	36	80	54	120	72	160	90	200
30	27	60	54	120	81	180	108	240	135	300
40	36	80	72	160	108	240	144	320	180	400
50	45	100	90	200	135	300	180	400	225	500
60	54	120	108	240	162	360	216	480	270	600
70	63	140	126	280	189	420	252	560	315	700
80	72	160	144	320	216	480	288	640	360	800
90	81	180	162	360	243	540	324	720	405	900
100	90	200	180	400	270	600	360	800	450	1000
150	135	300	270	600	405	900	540	1200	675	1500
200	180	400	360	800	540	1200	720	1600	900	2000
250	225	500	450	1000	675	1500	900	2000	1125	2500
300	270	600	540	1200	810	1800	1080	2400	1350	3000

Linear expansion ΔL in mm





■ RELIABLE PARTNER WORLDWIDE...



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