

KCX Tubed insulation washer

Insulation washer with integral cap suitable for attachment of insulation layers to wooden and sheet metal substrates.



Product information

Features and benefits

- Recommended for the attachment of ETICS to wooden substrates using UC screws, or to sheet metal using WB screws (allows setting without pre-drilling, thus saving a stage of installation)
- Special design of integral fastener cap allows reduction of thermal bridges to 0,001W/K.
- Design with long tube allows to use short length of the screw for best cost effective solution to fix large insulation thickness.
- Consistent and reliable holding force
- Quick, simple and clean installation.
- Can be used in combination with additional KWL plate - 90, 110 or 140mm diameter.

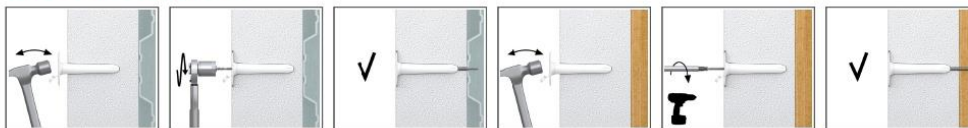
Applications

- External Thermal Insulation Composite Systems (ETICS)

Base materials

- Approved for use in:**
- Metal Sheet & Profiles
 - Wood
 - Timber
 - Chipboard
 - Concrete

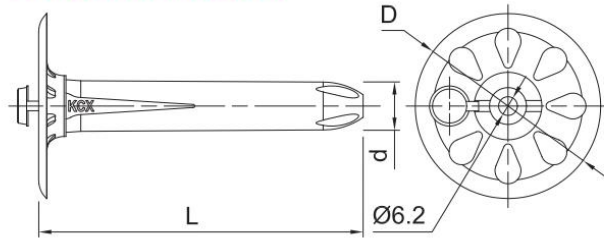
Installation guide



1. Lightly insert KCX washer into surface of insulation material.
2. Drive the required screw through the washer and insulation material into the substrate, until fixing depth is reached.
3. In wooden substrates the washer is recommended for use with the UC chipboard screw.
4. In sheet metal the washer is recommended for use with either the WB or WX self-drilling screw.

FACADE INSULATION FIXINGS **KOELNER**

Product information



Size	Product Code	Screw	Screw		Fixture	Diameter	Length
			Diameter	Length	Max. thickness		
			d	L	t _{fix}	D	L
			[mm]			[mm]	
KCX with screw to wood							
Ø5	KCX-055	UC-5050	5	50	70	60	55
		UC-5060	5	60	80	60	55
		UC-5070	5	70	90	60	55
		UC-5080	5	80	100	60	55
		UC-5090	5	90	110	60	55
Ø6	KCX-105	UC-6050	6	50	120	60	105
		UC-6060	6	60	130	60	105
		UC-6070	6	70	140	60	105
		UC-6080	6	80	150	60	105
		UC-6090	6	90	160	60	105
	KCX-165	UC-6100	6	100	170	60	105
		UC-6050	6	50	180	60	165
		UC-6060	6	60	190	60	165
		UC-6070	6	70	200	60	165
		UC-6080	6	80	210	60	165
		UC-6090	6	90	220	60	165
		UC-6100	6	100	230	60	165
		UC-6110	6	110	240	60	165
		UC-6120	6	120	250	60	165
		UC-6140	6	140	270	60	165
		UC-6160	6	160	290	60	165
KCX with selfdrilling screw to metal sheet							
Ø4.8	KCX-055	WX-48050	4.8	50	70	60	55
		WX-48060	4.8	60	80	60	55
		WX-48070	4.8	70	90	60	55
		WX-48080	4.8	80	100	60	55
		WX-48100	4.8	100	110	60	55
	KCX-105	WX-48050	4.8	50	120	60	105
		WX-48060	4.8	60	130	60	105
		WX-48070	4.8	70	140	60	105
		WX-48080	4.8	80	150	60	105
		WX-48100	4.8	100	170	60	105
	KCX-165	WX-48050	4.8	50	180	60	165
		WX-48060	4.8	60	190	60	165
		WX-48070	4.8	70	200	60	165
		WX-48080	4.8	80	210	60	165
		WX-48100	4.8	100	230	60	165
		WX-48120	4.8	120	250	60	165
		WX-48140	4.8	140	270	60	165
		WX-48160	4.8	160	290	60	165
		WX-48180	4.8	180	310	60	165
		WX-48200	4.8	200	330	60	165

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Size	Product Code	Screw	Screw		Fixture	Diameter	Length
			Diameter	Length	Max. thickness		
			d	L	t _{fix}	D	L
			[mm]			[mm]	
Ø4.8	KCX-165	WX-48240	4.8	240	370	60	165
		WX-48300	4.8	300	430	60	165
KCX with screw to metal sheet							
Ø4.8	KCX-055	WO-48060	4.8	60	80	60	55
		WO-48080	4.8	80	100	60	55
		WO-48100	4.8	100	110	60	55
	KCX-105	WO-48060	4.8	60	130	60	105
		WO-48080	4.8	80	150	60	105
		WO-48100	4.8	100	170	60	105
	KCX-165	WO-48060	4.8	60	190	60	165
		WO-48080	4.8	80	210	60	165
		WO-48100	4.8	100	230	60	165
		WO-48120	4.8	120	250	60	165
		WO-48140	4.8	140	270	60	165
		WO-48160	4.8	160	290	60	165
		WO-48180	4.8	180	310	60	165
		WO-48200	4.8	200	330	60	165
		WO-48240	4.8	240	370	60	165
		WO-48300	4.8	300	430	60	165
KCX with screw to concrete							
Ø6.1	KCX-055	R-WBT-61075	6.1	75	90	60	55
		R-WBT-61100	6.1	100	110	60	55
	KCX-105	R-WBT-61075	6.1	75	140	60	105
		R-WBT-61100	6.1	100	160	60	105
		R-WBT-61120	6.1	120	180	60	105
	KCX-165	R-WBT-61075	6.1	75	200	60	165
		R-WBT-61100	6.1	100	230	60	165
		R-WBT-61120	6.1	120	250	60	165
		R-WBT-61140	6.1	140	270	60	165
		R-WBT-61160	6.1	160	290	60	165
		R-WBT-61180	6.1	180	310	60	165
		R-WBT-61200	6.1	200	330	60	165
		R-WBT-61220	6.1	220	430	60	165
		R-WBT-61240	6.1	240	450	60	165
		R-WBT-61260	6.1	260	470	60	165
		R-WBT-61300	6.1	300	510	60	165

Installation data

Substrate		[mm]	Timber		Steel	Timber	Concrete
Hole diameter in substrate	d _h	[mm]	-	-	-	-	5
Min. installation depth	h _{inst}	[mm]	20	24	0.5	30	30
Min. hole depth in substrate	h _g	[mm]	-	-	-	-	35
Min. substrate thickness	h _{min}	[mm]	20	24	0.5	30	80
Min. spacing	s _{min}	[mm]	100	100	120	120	120
Min. edge distance	c _{min}	[mm]	100	100	30	30	50
Fixing diameter	d	[mm]	5	6	4.8	6.1	6.1

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Basic performance data

Performance data for single anchor without influence of edge distance and spacing

Substrate	[mm]	Timber			OSB	Steel				Timber	Concrete
		20	24	19	18	0.5	0.63	0.75	0.88	30	30
Effective embedment depth h_{ef}		20	24	19	18	0.5	0.63	0.75	0.88	30	30
CHARACTERISTIC LOAD N_{Rk}											
KCX + UC 5	[kN]	1.29	-	-	-	-	-	-	-	-	-
KCX + UC 6	[kN]	-	1.29	-	-	-	-	-	-	-	-
KCX + WD 4.8	[kN]	-	-	1.29	1.29	0.66	0.86	1.29	-	-	-
KCX + WX 4.8	[kN]	-	-	-	-	-	-	1.29	1.29	-	-
KCX + WBT 6.1	[kN]	-	-	-	-	-	-	-	-	1.29	1.29
DESIGN LOAD N_{Ed}											
KCX + UC 5	[kN]	0.65	-	-	-	-	-	-	-	-	-
KCX + UC 6	[kN]	-	0.65	-	-	-	-	-	-	-	-
KCX + WD 4.8	[kN]	-	-	0.65	0.65	0.50	0.65	0.65	-	-	-
KCX + WX 4.8	[kN]	-	-	-	-	-	-	0.65	0.65	-	-
KCX + WBT 6.1	[kN]	-	-	-	-	-	-	-	-	0.65	0.65

Product commercial data

Size	Product Code	Length [mm]	Screw Length [mm]	Quantity [pcs]			Weight [kg]			Bar Codes
				Box	Outer	Pallet	Box	Outer	Pallet	
	KCX-055	55		400	400	22400	3.9	3.9	246.3	5906675078984
	KCX-105	105		250	250	12000	3.6	3.6	203.8	5906675078991
	KCX-165	165		150	150	8400	3.0	3.0	197.4	5906675079004
Ø2.5	UC-2508		8	1000	24000		0.37	8.9		5906675312125
	UC-2510		10	1000	24000	768000	0.32	7.7	275.8	5906675312224
	UC-2513		13	1000	24000	768000	0.32	7.7	275.8	5906675313233
	UC-2516		16	1000	24000	768000	0.42	10.1	352.6	5906675312422
Ø3	UC-3012		12	1000	32000	768000	0.46	14.6	379.4	5906675310220
	UC-3016		16	1000	32000	768000	0.59	19.0	485.4	5906675310428
	UC-3020		20	1000	32000	768000	0.67	21.5	546.9	5906675310527
	UC-3025		25	1000	32000	768000	0.81	26.0	653.6	5906675310626
	UC-3030		30	1000	24000	576000	0.93	22.3	564.0	5906675310725
	UC-3035		35	1000	16000	384000	1.08	17.3	445.1	5906675310824
Ø3.5	UC-3040		40	1000	16000	384000	1.28	20.4	520.0	5906675310923
	UC-3512		12	1000	32000	768000	0.59	18.9	483.1	5906675311128
	UC-3516		16	1000	32000	768000	0.73	23.3	588.3	5906675311227
	UC-3520		20	1000	32000	768000	0.86	27.7	693.6	5906675311425
	UC-3525		25	1000	24000	576000	1.12	26.9	675.1	5906675311524
	UC-3530		30	1000	16000	384000	1.27	20.2	515.8	5906675311623
	UC-3535		35	1000	16000	384000	1.45	23.2	587.6	5906675311722
	UC-3540		40	1000	12000	288000	1.64	19.6	501.2	5906675311821
Ø4	UC-3545		45	500	8000	192000	0.94	15.0	389.8	5906675311920
	UC-3550		50	500	6000	144000	1.04	12.5	330.7	5906675312026
	UC-4016		16	1000	16000	384000	0.96	15.3	397.5	5906675313221
	UC-4020		20	1000	24000	576000	1.17	28.0	701.0	5906675313429
	UC-4025		25	1000	16000	384000	1.42	22.7	575.3	5906675313528
	UC-4030		30	500	8000	192000	0.83	13.2	347.2	5906675313627
	UC-4035		35	500	12000	288000	0.93	22.4	567.4	5906675313726
	UC-4040		40	500	8000	192000	1.06	17.0	438.6	5906675313825

FACADE INSULATION FIXINGS **KOELNER**

Product commercial data

Size	Product Code	Length [mm]	Screw	Quantity [pcs]			Weight [kg]			Bar Codes
			Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
04	UC-4045		45	500	8000	192000	1.18	18.8	482.0	5906675313924
	UC-4050		50	500	6000	144000	1.31	15.8	408.4	5906675314020
	UC-4060		60	500	6000	144000	1.50	18.0	462.6	5906675314129
	UC-4070		70	250	4000	96000	0.91	14.5	377.9	5906675314228
04.5	UC-4520		20	500	9000	216000	0.82	14.8	385.6	5906675315126
	UC-4525		25	500	9000	216000	0.99	17.8	457.3	5906675315225
	UC-4530		30	500	12000	288000	1.04	24.9	627.9	5906675315324
	UC-4535		35	500	8000	192000	1.25	19.9	508.1	5906675315423
	UC-4540		40	500	8000	192000	1.48	23.6	596.8	5906675315522
	UC-4545		45	250	6000	144000	0.75	18.1	464.3	5906675315621
	UC-4550		50	250	4000	96000	0.87	14.0	365.6	5906675315720
	UC-4560		60	250	4000	96000	1.00	16.0	413.6	5906675315829
	UC-4570		70	250	3000	72000	1.20	14.4	375.6	5906675315928
05	UC-5020		20	500	16000	384000	1.02	32.6	813.4	5906675316123
	UC-5025		25	500	12000	288000	1.11	26.7	669.9	5906675316222
	UC-5030		30	500	8000	192000	1.33	21.3	542.3	5906675316321
	UC-5035		35	500	8000	192000	1.52	24.3	612.1	5906675316420
	UC-5040		40	250	4000	96000	0.84	13.5	353.7	5906675316529
	UC-5045		45	250	6000	144000	0.97	23.4	590.4	5906675316628
	UC-5050		50	200	3200	76800	0.89	14.2	369.8	5906675316727
	UC-5060		60	200	2400	57600	1.03	12.3	325.2	5906675316826
	UC-5070		70	200	2400	57600	1.17	14.1	367.2	5906675316925
	UC-5080		80	100	1600	38400	0.67	10.7	286.5	5906675317024
	UC-5090		90	100	2400	57600	0.71	17.0	437.8	5906675317123
	UC-5100		100	100	1600	38400	0.84	13.5	353.7	5906675317229
06	UC-6030		30	200	6400	153600	0.82	26.4	662.8	5906675318127
	UC-6040		40	200	4800	115200	1.06	25.5	642.9	5906675318325
	UC-6045		45	200	3600	86400	1.16	20.9	531.1	5906675318424
	UC-6050		50	200	3200	76800	1.28	20.5	522.7	5906675318523
	UC-6060		60	200	2400	57600	1.50	18.0	462.3	5906675318622
	UC-6070		70	100	2400	57600	0.86	20.7	527.1	5906675318721
	UC-6080		80	100	2400	57600	0.98	23.5	594.5	5906675318820
	UC-6090		90	100	1200	28800	1.08	13.0	341.0	5906675318929
	UC-6100		100	100	1200	28800	1.20	14.4	375.6	5906675319025
	UC-6110		110	100	1200	28800	1.31	15.8	408.1	5906675319124
	UC-6120		120	100	1200	28800	1.42	17.1	439.2	5906675319223
	UC-6140		140	100	1200	28800	1.64	19.7	502.0	5906675319421
	UC-6160		160	100	1200	28800	1.87	22.4	567.4	5906675319520
04.8	WO-48060		60	250	4000	96000	1.35	21.6	548.4	5906675222127
	WO-48080		80	250	3000	72000	1.63	19.5	498.0	5906675222226
	WO-48100		100	200	2400	57600	1.86	22.3	564.8	5906675222325
	WO-48120		120	200	3200	76800	2.0	32.0	798.0	5906675222424
	WO-48140		140	200	2400	57600	2.7	31.8	793.2	5906675222523
	WO-48160		160	100	1200	28800	1.50	18.0	461.5	5906675222622
	WO-48180		180	100	100	16800	1.67	1.67	310.7	5906675222721
	WO-48200		200	100	100	16800	2.0	2.0	365.0	5906675222820
	WO-48240		240	100	500	28800	2.2	10.9	65.7	5906675221021
	WO-48300		300	100	500	15000	2.7	13.5	435.0	5906675222929
	WX-48050		50	250	3000	72000	1.20	14.4	375.7	5906675221229
	WX-48060		60	250	3000	72000	1.43	17.2	443.1	5906675221328
	WX-48070		70	250	3000	72000	1.73	20.7	527.0	5906675221427
	WX-48080		80	250	3000	72000	1.85	22.2	562.6	5906675221526
WX-48100		100	200	2400	57600	1.88	22.6	572.3	5906675221625	

FACADE INSULATION FIXINGS **KOELNER**

Product commercial data

Size	Product Code	Length [mm]	Screw	Quantity [pcs]			Weight [kg]			Bar Codes
			Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
Ø4.8	WX-48120		120	200	2400	57600	2.3	27.4	686.5	5906675221724
	WX-48140		140	200	2400	57600	2.7	31.8	793.7	5906675221823
	WX-48160		160	100	1200	28800	2.9	34.8	865.2	5906675221922
	WX-48180		180	100	800	19200	1.75	14.0	366.8	5906675222028
	WX-48200		200	100	800	19200	3.2	25.9	652.1	5906675223124
	WX-48240		240	100	500	16800	2.8	13.8	493.7	5906675490328
	WX-48300		300	100	500	16800	2.8	14.1	502.4	5906675223223
Ø6.1	R-WBT-61050		50	100	3200	76800	0.79	25.2	634.4	5906675101200
	R-WBT-61075		75	100	1600	38400	1.11	17.7	454.3	5906675101231
	R-WBT-61090		90	100	1600	38400	1.34	21.4	543.8	5906675101309
	R-WBT-61100		100	100	1600	38400	1.49	23.9	602.5	5906675101408
	R-WBT-61120		120	100	1200	28800	1.77	21.3	540.9	5906675101439
	R-WBT-61140		140	100	1200	28800	2.0	24.5	618.7	5906675101460
	R-WBT-61160		160	100	1200	28800	2.3	28.1	704.2	5906675101514
	R-WBT-61180		180	100	100	16800	2.7	2.7	477.9	5906675225173
	R-WBT-61200		200	100	100	16800	2.9	2.9	518.5	5906675101927
	R-WBT-61220		220	100	100	16800	3.2	3.2	568.4	5906675102214
	R-WBT-61240		240	100	100	16800	3.5	3.5	620.7	5906675102245
	R-WBT-61260		260	100	100	16800	3.8	3.8	661.7	5906675102269
	R-WBT-61300		300	100	100	7800	4.3	4.3	367.0	5906675102290
WBT-61120-ZN		100	100	1200	28800	1.76	21.2	538.1	5906675116952	