

**DIETZEL**  
**UNIVOLT**

Cable Management Systems



# Safety

## first! HFT<sup>®</sup> Cable Management



# Enduring safety

Prevention pays off in the long run.

Proper planning begins with making provisions for the protection of human lives and valuable assets.

With halogen-free cable management systems from Dietzel Univolt you are always on the safer side.

## Your advantages:

- 1 minimum smoke release in case of fire
- 2 absolutely halogen-free
- 3 flame retardant
- 4 chemically resistant
- 5 temperature resistant
- 6 maintenance free
- 7 easy to install
- 8 insulating



HFT® - the novelties in brief



PVC



LSF0H

## LSF0H versus PVC

LSF0H refers to an internationally recognised description of product properties that comply with increased safety requirements. Concerning conduit systems for electrical installations this means specific precaution against fires and consequential damages. Effectively this leads to higher safety for human lives, better protection of valuable assets and safeguarding the continuity of operations.

# UNIVOLT HFT® LSFOH Series

## Safety in case of fires

Safety in case of fires is also a matter of proper planning. When exposed to fire, plastic materials like PVC release corrosive gases which are not only extremely toxic for human lives, but also attack building stock. Univolt's HFT® branded installation systems are the result of almost 30 years of permanent development. Their improved properties regarding safety and durability comply with the most advanced requirements in modern constructions. HFT® conduit systems are indispensable as a complement to halogen-free cables. Distinctive to conventional plastics they are suitable for a wide range of applications due to their thermal, mechanical and chemical characteristics.

The LSF0H series is the most recent advancement of UNIVOLT's HFT® range and complies with the following relevant safety aspects, as approved by the relevant standards:

- **LS (= low smoke):** minimal generation of smoke, no release of corrosive gases
- **F (= flame retardant):** impedes the propagation of fires, applicable for temperatures from -25°C to +105°C or beyond
- **OH (= zero halogen):** contains absolutely no halogens

## Comparison to steel

Our LSF0H conduits offer the same **mechanical resistance** against compression and impact forces like steel systems. Additionally, they have several advantages compared to metal cable management systems

100m of protective conduit (Ø 20mm), with same mechanical properties (compression resistance 1250 N).



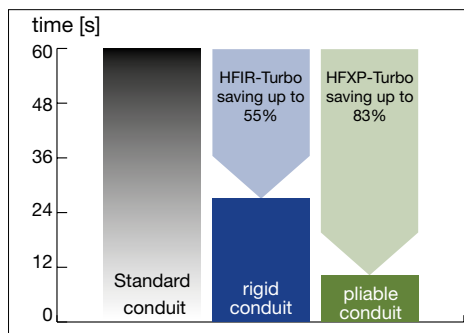
per 100m of protective conduit

- ① weight saving
- ② rust proof and maintenance free for life-time
- ③ easy to install
- ④ selfinsulating
- ⑤ flame retardant
- ⑥ UV stabilised
- ⑦ chemically resistant
- ⑧ seawater-proof
- ⑨ low smoke release
- ⑩ temperature resistant

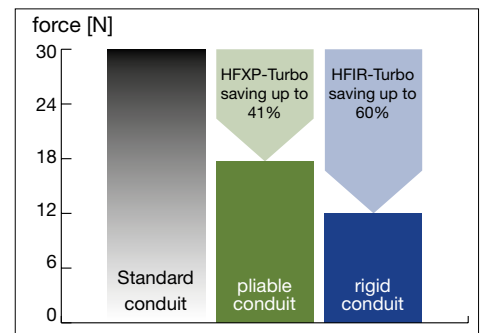
## UNIVOLT Turbo Technology

The Turbo design is a patented feature of installation conduits and has become most favoured by installers. Now it is also available for UNIVOLT's LSF0H series and helps users to save time, effort and money. Compared with conventional conduits the Turbo products lead to lower frictional forces, hence shorter installation times for cabling work.

### Less time



### Less effort



Less friction thanks to the Turbo effect:








## The Turbo Effect

The Turbo effect is an innovative and patented conduit design developed by Dietzel Univolt that simplifies and enhances installation work. Inserting cables becomes faster and less strenuous without compromising the characteristics of standard conduits. The sectional corrugation reduces the friction between cable and conduit and helps installers to save time and cost - an explicit customer benefit.



# Pliable HFT® Conduits Light Gauge (320 N)

**HFX Turbo**, halogen-free pliable conduit light gauge, corrugated, with sectional corrugation; light grey (RAL 7035) or white (RAL 9010), in coils of 50m resp. 25m






Material       
 PP-Blend LSF0H EN 2333 > 320 N - -15°C/+105°C

**In accordance with:** IEC/EN 61386-22 (replaces IEC 60614-2-3, BS 6099), IEC 60423, EN 50642, LSF0H



art	dn	di	ps [m]	pl [m]	ref	
					light grey	white
HFX Turbo 16	16,0	10,5	50	2700	<b>102 295</b>	<b>102 309</b>
HFX Turbo 20	20,0	13,7	50	2700	<b>102 296</b>	<b>102 310</b>
HFX Turbo 25	25,0	17,9	50	1600	<b>102 297</b>	<b>102 311</b>
HFX Turbo 32	32,0	24,3	25	675	<b>102 298</b>	<b>102 312</b>
HFX Turbo 40	40,0	30,0	25	500	<b>102 299</b>	<b>102 313</b>
HFX Turbo 50	50,0	38,5	25	300	<b>102 300</b>	<b>102 314</b>

**HFX Turbo**, halogen-free pliable conduit light gauge, corrugated, with sectional corrugation; black (RAL 9005), in coils of 100m, resp. 50m or 25m

Material       
 PP-Blend LSF0H EN 2333 > 320 N ✓ -15°C/+105°C






**In accordance with:** IEC/EN 61386-22 (replaces IEC 60614-2-3, BS 6099), IEC 60423, EN 50642, LSF0H



art	dn	di	ps [m]	pl [m]	ref
HFX Turbo 16	16,0	10,5	100	3200	<b>102 302</b>
HFX Turbo 20	20,0	13,7	100	4000	<b>102 303</b>
HFX Turbo 25	25,0	17,9	50	1600	<b>102 304</b>
HFX Turbo 32	32,0	24,3	50	1000	<b>102 305</b>
HFX Turbo 40	40,0	30,0	25	500	<b>102 306</b>
HFX Turbo 50	50,0	38,5	25	300	<b>102 307</b>

## Light Gauge (320 N), Super Fast

**HFX X**, super-fast halogen-free pliable conduit light gauge, corrugated, with additional glide core; black (RAL 9005), in coils of 100m

Material       
 PP LSF0H EN 23332 > 320 N - -15°C/+105°C

**In accordance with:** IEC/EN 61386-22, EN 60754, EN 61034, LSF0H



art	dn	di	ps [m]	pl [m]	ref
HFX X 20	20,0	14,0	100	4000	<b>106 057</b>
HFX X 25	25,0	18,0	100	2800	<b>106 058</b>

## Medium Gauge (750 N)






**HFXP Turbo Eco**, halogen-free pliable, self recovering conduit medium gauge, corrugated, with sectional corrugation; black (similar to RAL 9005), in coils of 100m, resp. 50m or 25m

Material					
PP-Blend	LSF0H	EN 3343	> 750 N	-	-25°C/+105°C
In accordance with: IEC/EN 61386-22 (replaces IEC 60614-2-3, BS 6099), IEC 60423, EN 50642, LSF0H					

art	dn	di	ps [m]	pl [m]	ref
HFXP Turbo Eco 16	16,0	10,0	100	3200	<b>105 750</b>
HFXP Turbo Eco 32	32,0	23,5	25	675	<b>105 751</b>
HFXP Turbo Eco 40	40,0	30,0	25	500	<b>105 752</b>
HFXP Turbo Eco 50	50,0	38,0	25	300	<b>105 753</b>



**HFXP Turbo Pro**, halogen-free pliable conduit medium gauge, corrugated, with sectional corrugation; black (RAL 9005), in coils of 50m resp. 25m

Material					
PP-Blend	LSF0H	EN 3343	> 750 N	✓	-25°C/+105°C
<b>In accordance with:</b> IEC/EN 61386-22 (replaces IEC 60614-2-3, BS 6099), IEC 60423, EN 50642, LSF0H					

art	dn	di	ps [m]	pl [m]	ref
HFXP Turbo Pro 16	16,0	10,0	50	2700	<b>087 169</b>
HFXP Turbo Pro 20	20,0	13,5	50	2700	<b>087 170</b>
HFXP Turbo Pro 25	25,0	17,5	50	1600	<b>087 171</b>
HFXP Turbo Pro 32	32,0	23,5	25	675	<b>087 172</b>
HFXP Turbo Pro 40	40,0	30,0	25	500	<b>087 173</b>
HFXP Turbo Pro 50	50,0	38,5	25	300	<b>087 174</b>



## Medium Gauge (750 N), Super Fast

**HFXP Xtreme**, halogen-free pliable, self recovering conduit medium gauge, corrugated, with additional sliding layer; black (RAL 9005), in coils of 100m

Material					
PP-Blend	LSF0H	EN 3343	> 750 N	✓	-25°C/+105°C
<b>In accordance with:</b> IEC/EN 61386; LSF0H-compliant acc. to EN 60754 and EN 61034					

art	dn	di	ps [m]	pl [m]	ref
HFXP X 20	20,0	13,0	100	4000	<b>104 830</b>
HFXP X 25	25,0	17,0	100	2800	<b>104 831</b>



# HFXP Xtreme Pro, halogen-free pliable conduit medium gauge, corrugated, with sectional corrugation and additional sliding layer; black (RAL 9005), in coils of 100m

Material     

PP-Blend LSF0H EN 3343 > 750 N ✓ -25°C/+105°C

**In accordance with:** IEC/EN 61386; LSF0H-compliant acc. to EN 60754 and EN 61034



art	dn	di	ps [m]	pl [m]	ref
HFXP X Pro 20	20,0	13,0	50	2700	<b>104 836</b>
HFXP X Pro 20	20,0	13,0	100	4000	<b>104 838</b>
HFXP X Pro 25	25,0	17,0	50	1600	<b>104 837</b>
HFXP X Pro 25	25,0	17,0	100	2800	<b>104 839</b>

## Medium Gauge (750 N), High Temperature

### HFXP HT, halogen-free and high temperature resistant pliable conduit medium gauge, corrugated; black (RAL 9005), in coils of 50m resp. 25m

Material     

PC-Blend halogen-free EN 3355 > 750 N ✓ -45°C/+150°C






**In accordance with:** IEC/EN 61386-22 (replaces IEC 60614-2-3, BS 6099), IEC 60423



art	dn	di	ps [m]	pl [m]	ref
HFXP HT 12	13,0	9,0	50	4500	<b>016 574</b>
HFXP HT 16	16,0	9,9	50	2700	<b>011 301</b>
HFXP HT 20	20,0	13,0	50	2700	<b>011 302</b>
HFXP HT 25	25,0	17,0	50	1600	<b>011 303</b>
HFXP HT 32	32,0	23,5	25	675	<b>011 304</b>
HFXP HT 40	40,0	30,0	25	500	<b>013 254</b>
HFXP HT 50	50,0	38,5	25	300	<b>013 255</b>
HFXP HT 63	63,0	50,0	25	175	<b>019 897</b>

## Light Gauge (320 N), Highly Flexible

### HFXS, halogen-free and highly flexible protective conduit light gauge, corrugated, halogen-free; black (RAL 9005, UV stabilised) or grey (RAL 7001), in coils of 50m resp. 25m

Material     

PA LSF0H EN 2243 > 320 N ✓\* -25°C/+105°C

**In accordance with:** IEC/EN 61386-22 (replaces IEC 60614-2-5, BS 6099), IEC 60423, EN 50642, LSF0H



art	dn	di	ps [m]	pl [m]	ref	
					grey	black *
HFXS 12	13,0	8,9	50	4500	<b>015 902</b>	<b>023 654</b>
HFXS 16	16,0	10,7	50	2700	<b>012 903</b>	<b>023 655</b>
HFXS 20	20,0	13,5	50	2700	<b>012 904</b>	<b>023 656</b>
HFXS 25	25,0	17,7	50	1600	<b>012 905</b>	<b>023 657</b>
HFXS 32	32,0	24,3	25	675	<b>012 906</b>	<b>023 658</b>
HFXS 40	40,0	30,2	25	500	<b>012 907</b>	<b>023 659</b>
HFXS 50	50,0	39,0	25	300	<b>012 908</b>	<b>023 660</b>
HFXS 63	63,0	50,5	25	175	<b>025 054</b>	<b>023 661</b>

**Application:** For applications requiring high flexibility and oil resistance such as machine construction, automotive industry, robotics etc.

# Rigid HFT® Conduits

## Light Gauge (320 N)



**HFIRM Turbo**, halogen-free rigid conduit light gauge, with moulded-on coupler and sectional corrugation; light grey (RAL 7035), in 3m standard length

Material       
 PP-Blend LSF0H EN 2243 > 320 N - -25°C/+105°C  
**In accordance with:** IEC/EN 61386-21 (replaces IEC 60614-2-2, BS 6099), IEC 60423, EN 50642, LSF0H

art	dn	di	ps [m]	pl [m]	ref
HFIRM Turbo 16	16,0	12,9	111	6216	<b>087 215</b>
HFIRM Turbo 20	20,0	16,2	111	3996	<b>087 216</b>
HFIRM Turbo 25	25,0	21,0	57	2280	<b>087 217</b>
HFIRM Turbo 32	32,0	28,0	57	1368	<b>087 218</b>
HFIRM Turbo 40	40,0	35,0	21	966	<b>102 952</b>
HFIRM Turbo 50	50,0	45,0	21	630	<b>102 953</b>



**HFIR Turbo**, halogen-free rigid conduit light gauge, plain ends, with sectional corrugation (dim 16-32); white (RAL 9010), in 3m standard length

Material       
 PP-Blend LSF0H EN 2243 > 320 N - -25°C/+105°C  
**In accordance with:** IEC/EN 61386-21 (replaces IEC 60614-2-2, BS 6099), IEC 60423, EN 50642, LSF0H

art	dn	di	ps [m]	pl [m]	ref
HFIR Turbo 16	16,0	12,9	111	6120	<b>087 178</b>
HFIR Turbo 20	20,0	16,2	111	4080	<b>087 179</b>
HFIR Turbo 25	25,0	21,0	57	2400	<b>087 180</b>
HFIR Turbo 32	32,0	28,0	57	1350	<b>087 181</b>
HFIR Turbo 40	40,0	35,0	21	1020	<b>103 797</b>
HFIR Turbo 50	50,0	45,0	21	630	<b>103 798</b>



## Medium Gauge (750 N)

**HFPRM Turbo**, halogen-free rigid conduit medium gauge, with moulded-on coupler and sectional corrugation; light grey (RAL 7035) or black (RAL 9005, UV-stabilised), in 3m standard length






Material       
 PP-Blend LSF0H EN 3343 > 750 N  $\Delta^*$  -25°C/+105°C  
**In accordance with:** IEC/EN 61386-21 (replaces IEC 60614-2-2, BS 6099), IEC 60423, EN 50642, LSF0H



art	dn	di	ps [m]	pl [m]	ref	
					light grey	black *
HFPRM Turbo 16	16,0	11,0	111	6216	<b>087 223</b>	<b>087 219</b>
HFPRM Turbo 20	20,0	15,0	111	3996	<b>087 224</b>	<b>087 220</b>
HFPRM Turbo 25	25,0	20,0	57	2280	<b>087 225</b>	<b>087 221</b>
HFPRM Turbo 32	32,0	26,7	57	1368	<b>087 226</b>	<b>087 222</b>
HFPRM Turbo 40	40,0	34,0	21	966	<b>098 784</b>	<b>098 781</b>
HFPRM Turbo 50	50,0	43,5	21	630	<b>098 785</b>	<b>098 782</b>
HFPRM Turbo 63	63,0	55,5	21	378	<b>098 786</b>	<b>098 783</b>

## Heavy Gauge (1250 N)

**HFBS Turbo**, halogen-free rigid conduit heavy gauge, plain ends; black (RAL 9005), in 3m standard length

Material       
 PP-Blend LSF0H EN 4424 > 1250 N ✓ -25°C/+120°C  
**In accordance with:** IEC/EN 61386-21 (replaces IEC 60614-2-2, BS 6099), IEC 60423, EN 50642, LSF0H



art	dn	di	ps [m]	pl [m]	ref
HFBS Turbo 16	16,0	10,2	111	6216	<b>099 870</b>
HFBS Turbo 20	20,0	14,4	111	3996	<b>099 871</b>
HFBS Turbo 25	25,0	18,5	57	2280	<b>099 872</b>
HFBS Turbo 32	32,0	25,4	57	1368	<b>099 873</b>
HFBS Turbo 40	40,0	33,0	21	966	<b>099 874</b>
HFBS Turbo 50	50,0	43,1	21	630	<b>099 875</b>



## Accessories

**HFCL**, clip, halogen-free, interlinkable; light grey (RAL 7035), black (RAL 9005) or white (RAL 9010), for mounting with plug DSD or screws with Ø 4mm

Material    
 PC-Blend halogen-free -25°C/+105°C

art	dn	ps	pl	ref		
				light grey	black	white
HFCL 16	16,0	100	3200	<b>041 428</b>	<b>009 634</b>	<b>038 596</b>
HFCL 20	20,0	100	2400	<b>041 016</b>	<b>009 635</b>	<b>037 041</b>
HFCL 25	25,0	100	1600	<b>041 429</b>	<b>009 636</b>	<b>038 597</b>
HFCL 32	32,0	100	1600	<b>041 430</b>	<b>009 637</b>	<b>038 598</b>
HFCL 40	40,0	50	800	<b>041 431</b>	<b>009 638</b>	<b>038 599</b>
HFCL 50	50,0	50	600	<b>041 432</b>	<b>009 639</b>	<b>038 600</b>
HFCL 63	63,0	25	300	<b>041 433</b>	<b>021 168</b>	-



**HFCLB**, bracket; light grey (RAL 7035) or black (RAL 9005), for HFCL clips

Material    
 PC-Blend halogen-free -25°C/+105°C

art	dn	ps	pl	ref	
				light grey	black
HFCLB 40	40,0	250	8000	<b>080 803</b>	<b>023 080</b>
HFCLB 50	50,0	200	6400	<b>080 804</b>	<b>023 081</b>
HFCLB 63	63,0	150	4800	<b>102 989</b>	<b>023 082</b>






**DSD**, plug, halogen-free; light grey (RAL 7035), for quick and efficient mounting of HFCL clips, required fixing hole size Ø 6mm (gas concrete Ø 5.5mm)

Material    
 PA halogen-free -25°C/+90°C

art	ln	ps	pl	ref
DSD 35	35mm	500	16000	<b>082 226</b>



**KM Turbo**, grip type coupler, chlorine-free or halogen-free, for pliable conduits; light grey (RAL 7035), grey (RAL 7001), black (RAL 9005) or orange (RAL 2004), waterproof and tight conduit connector for use in concrete, IP 67

Material			
PE	halogen-free* chlorine-free	IP 67	-25°C/+90°C



art	dn	ps	pl	ref			
				light grey	grey	black	orange*
KM Turbo 16	16,0	100	1200	<b>085 725</b>	<b>085 724</b>	<b>085 726</b>	<b>085 723</b>
KM Turbo 20	20,0	100	800	<b>083 837</b>	<b>083 838</b>	<b>084 051</b>	<b>080 642</b>
KM Turbo 25	25,0	50	600	<b>083 839</b>	<b>083 840</b>	<b>084 052</b>	<b>080 643</b>
KM Turbo 32	32,0	25	300	<b>085 924</b>	<b>085 923</b>	<b>085 926</b>	<b>085 925</b>
KM Turbo 40	40,0	25	200	<b>102 331</b>	<b>102 342</b>	<b>102 335</b>	<b>102 338</b>
KM Turbo 50	50,0	15	120	<b>102 332</b>	<b>102 343</b>	<b>102 336</b>	<b>102 339</b>
KM Turbo 63	63,0	8	64	<b>102 333</b>	<b>102 344</b>	<b>102 337</b>	<b>102 340</b>

**HFSM**, slip type coupler; light grey (RAL 7035), black (RAL 9005) or white (RAL 9010), for the connection of rigid or pliable conduits

Material		
PC-Blend	halogen-free	-25°C/+90°C



art	dn	ps	pl	ref		
				light grey	black	white
HFSM 16	16,0	100	1200	<b>041 421</b>	<b>020 556</b>	<b>038 571</b>
HFSM 20	20,0	100	800	<b>041 017</b>	<b>020 557</b>	<b>037 036</b>
HFSM 25	25,0	50	600	<b>041 422</b>	<b>020 558</b>	<b>038 572</b>
HFSM 32	32,0	25	300	<b>041 423</b>	<b>020 559</b>	<b>038 573</b>
HFSM 40	40,0	25	200	<b>041 424</b>	<b>020 652</b>	<b>038 574</b>
HFSM 50	50,0	15	120	<b>041 425</b>	<b>020 653</b>	<b>038 575</b>
HFSM 63	63,0	8	64	<b>041 426</b>	<b>020 654</b>	<b>041 420</b>

**HFSB**, normal bend, slip type; light grey (RAL 7035), black (RAL 9005) or white (RAL 9010), for the connection of rigid conduits in an angle of 90°

Material		
PC-Blend	halogen-free	-25°C/+90°C



art	dn	ps	pl	ref		
				light grey	black	white
HFSB 16	16,0	50	600	<b>065 492</b>	<b>020 825</b>	<b>038 576</b>
HFSB 20	20,0	25	300	<b>065 493</b>	<b>020 826</b>	<b>038 577</b>
HFSB 25	25,0	20	160	<b>065 494</b>	<b>020 827</b>	<b>038 578</b>
HFSB 32	32,0	50	-	<b>065 495</b>	<b>020 828</b>	<b>038 579</b>
HFSB 40	40,0	35	-	<b>065 496</b>	<b>020 829</b>	<b>038 580</b>
HFSB 50	50,0	20	-	<b>065 497</b>	<b>020 830</b>	<b>038 581</b>
HFSB 63	63,0	8	-	<b>065 498</b>	<b>027 261</b>	-

**HFS**, saddle, with two fixing holes; light grey (RAL 7035), black (RAL 9005) or white (RAL 9010), for mounting with screws Ø 4mm

Material    
 PC-Blend halogen-free -25°C/+90°C

art	dn	ps	pl	ref		
				light grey	black	white
HFS 16	16,0	100	3200	<b>080 811</b>	<b>020 832</b>	<b>041 831</b>
HFS 20	20,0	50	1600	<b>080 812</b>	<b>020 833</b>	<b>041 832</b>
HFS 25	25,0	100	1600	<b>080 813</b>	<b>020 834</b>	<b>041 833</b>
HFS 32	32,0	100	800	<b>080 814</b>	<b>020 835</b>	<b>041 834</b>
HFS 40	40,0	50	400	<b>080 815</b>	<b>020 836</b>	<b>041 835</b>
HFS 50	50,0	50	400	<b>080 816</b>	<b>020 837</b>	<b>041 836</b>
HFS 63	63,0	25	200	<b>080 817</b>	<b>020 838</b>	-



**HFSBS**, spacer bar saddle; black (RAL 9005) or white (RAL 9010)

Material    
 PC-Blend halogen-free -25°C/+90°C

art	dn	ps	pl	ref	
				black	white
HFSBS 16	16,0	100	2400	<b>009 628</b>	<b>041 852</b>
HFSBS 20	20,0	50	1200	<b>009 629</b>	<b>037 033</b>
HFSBS 25	25,0	50	1200	<b>009 630</b>	<b>041 621</b>
HFSBS 32	32,0	50	600	<b>009 631</b>	<b>041 853</b>
HFSBS 40	40,0	25	300	<b>009 632</b>	<b>041 854</b>
HFSBS 50	50,0	25	200	<b>009 633</b>	<b>041 855</b>



**HFIB**, inspection bend; black (RAL 9005), for rigid conduits

Material    
 PC-Blend halogen-free -25°C/+90°C

**Ordering Note:** light grey or white version available on request

art	dn	ps	pl	ref
HFIB 20	20,0	50	400	<b>009 643</b>
HFIB 25	25,0	20	240	<b>009 644</b>



**HFIE**, inspection elbow; black (RAL 9005), for rigid conduits

Material    
 PC-Blend halogen-free -25°C/+90°C

**Ordering Note:** light grey or white version available on request

art	dn	ps	pl	ref
HFIE 20	20,0	50	400	<b>026 968</b>
HFIE 25	25,0	20	240	<b>026 969</b>
HFIE 32	32,0	25	200	<b>104 457</b>



## HFIT, inspection tee; light grey (RAL 7035) or black (RAL 9005), for rigid conduits

Material    
 PC-Blend halogen-free -25°C/+90°C.

**Ordering Note:** light grey or white version available on request



art	dn	ps	pl	ref	
				light grey	black
HFIT 20	20,0	50	400	<b>082 561</b>	<b>009 640</b>
HFIT 25	25,0	20	240	<b>082 562</b>	<b>009 641</b>
HFIT 32	32,0	10	80	-	<b>104 456</b>

## HFAFT/MBS, adaptor with female thread and male bush; black (RAL 9005) or white (RAL 9010), for the connection of rigid or pliable conduits with distribution and enclosure boxes

Material    
 PC-Blend halogen-free -25°C/+90°C

**Ordering Note:** available in light grey colour on request



art	dn	ps	pl	ref	
				black	white
HFAFT/MBS 16	16,0	100	2400	<b>009 673</b>	<b>064 493</b>
HFAFT/MBS 20	20,0	100	1200	<b>009 674</b>	<b>037 043</b>
HFAFT/MBS 25	25,0	50	600	<b>009 675</b>	<b>041 465</b>
HFAFT/MBS 32	32,0	20	480	<b>009 676</b>	<b>064 271</b>
HFAFT/MBS 40	40,0	25	300	<b>009 677</b>	-
HFAFT/MBS 50	50,0	10	120	<b>009 678</b>	-

## HFAMT/LR, adaptor with male thread and lock ring; black (RAL 9005), for the connection of pliable conduits with distribution and enclosure boxes

Material    
 PC-Blend halogen-free -25°C/+90°C

**Ordering Note:** available in light grey or white colour on request



art	dn	ps	pl	ref
HFAMT/LR 20	20,0	100	1200	<b>009 680</b>
HFAMT/LR 25	25,0	50	600	<b>009 681</b>

## HFAMT/LN, adaptor with male thread and lock nut; black (RAL 9005), for the connection of rigid or pliable conduits with distribution and enclosure boxes

Material    
 PC-Blend halogen-free -25°C/+90°C

**Ordering Note:** available in light grey or white colour on request



art	dn	ps	pl	ref
HFAMT/LN 20	20,0	100	1200	<b>020 843</b>
HFAMT/LN 25	25,0	50	600	<b>020 844</b>

## FPE, end cap, halogen-free; light grey (RAL 7035) or black (RAL 9005), for the protection of cables at conduit edges

Material   
 PE halogen-free

art	dn	ps	ref	
			black	light grey
FPE 16	16,0	100	-	<b>061 664</b>
FPE 20	20,0	100	<b>035 425</b>	<b>064 849</b>
FPE 25	25,0	50	<b>035 426</b>	<b>064 850</b>
FPE 32	32,0	25	<b>035 427</b>	<b>064 851</b>
FPE 40	40,0	25	<b>035 428</b>	<b>064 852</b>
FPE 50	50,0	20	<b>035 429</b>	<b>064 853</b>
FPE 63	63,0	20	<b>035 430</b>	<b>064 854</b>



## SGL, straight gland, halogen-free; black (RAL 9005, UV stabilised) or grey (RAL 7001), patented plug-in system for quick-fit assembly, tight connection, with metric thread, acc. to IEC/EN 60423

Material     
 PA halogen-free IP 54 -25°C/+105°C

**Ordering Note:** available with Pg or NPT thread on request

art	dn	ps	pl	ref	
				black	grey
SGL 1212	13,0	100	3200	<b>027 797</b>	<b>016 440</b>
SGL 1616	16,0	100	2400	<b>027 798</b>	<b>012 699</b>
SGL 2020	20,0	50	1200	<b>027 799</b>	<b>012 700</b>
SGL 2525	25,0	50	600	<b>027 800</b>	<b>012 701</b>
SGL 3232	32,0	30	360	<b>027 801</b>	<b>012 702</b>
SGL 4040	40,0	20	240	<b>027 802</b>	<b>015 509</b>
SGL 5050	50,0	16	128	<b>027 803</b>	<b>015 508</b>
SGL 6363	63,0	8	64	<b>027 804</b>	<b>043 075</b>



Material     
 PA halogen-free IP 65 -25°C/+105°C

**Ordering Note:** available with Pg or NPT thread on request

art	dn	ps	pl	ref	
				black	grey
SGL 1212 S	13,0	100	3200	<b>043 067</b>	<b>023 615</b>
SGL 1616 S	16,0	100	2400	<b>043 068</b>	<b>012 707</b>
SGL 2020 S	20,0	50	1200	<b>043 069</b>	<b>012 708</b>
SGL 2525 S	25,0	50	600	<b>043 070</b>	<b>012 709</b>
SGL 3232 S	32,0	30	360	<b>043 071</b>	<b>012 710</b>
SGL 4040 S	40,0	20	240	<b>043 073</b>	<b>015 914</b>
SGL 5050 S	50,0	16	128	<b>043 074</b>	<b>015 915</b>
SGL 6363 S	63,0	8	64	<b>043 077</b>	<b>043 076</b>





# SLN, lock nut; black (RAL 9005, UV stabilised) or grey (RAL 7001), with metric thread acc. to IEC/EN 60423

Material  
 PA  halogen-free  -25°C/+105°C



art	dn	ps	pl	ref	
				black	grey
SLN 12	12,0	100	-	<b>061 137</b>	<b>081 534</b>
SLN 16	16,0	200	8000	<b>026 257</b>	<b>014 206</b>
SLN 20	20,0	200	6400	<b>026 256</b>	<b>013 277</b>
SLN 25	25,0	100	4000	<b>026 255</b>	<b>013 278</b>
SLN 32	32,0	100	2400	<b>026 254</b>	<b>013 279</b>
SLN 40	40,0	30	1200	<b>026 053</b>	<b>015 916</b>
SLN 50	50,0	25	1000	<b>026 054</b>	<b>017 307</b>
SLN 63	63,0	20	480	<b>027 590</b>	<b>027 589</b>

# PKG H, enclosure box, surface type, halogen-free; light grey (RAL 7035), black (RAL 9005, UV stabilised) or white (RAL 9010), suitable for damp locations, jetting water tight, IP 65

In accordance with: IEC/EN 60670

Material  halogen-free  IP 65   -25°C/+105°C



without knock-out conduit entries

art	dim	ps	pl	ref		
				light grey	black	white
PKG H 100 OP	105x105x64mm	5	50	<b>023 760</b>	<b>000 528</b>	<b>037 325</b>
PKG H 200 OP	200x150x85mm	2	12	<b>023 761</b>	<b>010 685</b>	<b>037 326</b>
PKG H 300 OP	300x200x125mm	1	4	<b>023 762</b>	<b>013 019</b>	<b>065 716</b>

**J**, junction box for surface mounting, halogen-free; light grey (RAL 7035), other colours available on request

Material     
 PP halogen-free IP 65\*/66 -15°C/+90°C

In accordance with: IEC/EN 60670-1, EN60670-22, EN60695-2-10, EN60754-1

art	inlets	dim	ps	pl	ref
J80B AP	7	85x85x55mm	5	120	<b>105 641</b>
J100B AP	7	100x100x55mm	6	90	<b>105 643</b>
J160B AP	10	155x100x70mm	1	56	<b>105 851</b>
J200B AP	10	200x155x85mm	1	20	<b>105 852</b>

\*) J80B



**HFCB**, circular junction box, halogen-free; black (RAL 9005, UV stabilised), with 2 mounting lugs, standard mounting screw spacing 50.8mm (2") for conduit diameters 16mm to 25mm resp. 65mm for conduit diameter 32mm, with brass inserts M 4, without lid

Material     
 PC-Blend halogen-free IP 3X -25°C/+90°C

**Ordering Note:** other colours available on request

terminal box

art	dim	ps	pl	ref
HFCB 20/1	Ø 65mm, 32mm	25	200	<b>009 646</b>
HFCB 25/1	Ø 65mm, 32mm	25	200	<b>009 647</b>
HFCB 32/1	Ø 80mm, 40mm	10	80	<b>009 648</b>



through box

art	dim	ps	pl	ref
HFCB 20/2	Ø 65mm, 32mm	25	200	<b>009 650</b>
HFCB 25/2	Ø 65mm, 32mm	25	200	<b>009 651</b>
HFCB 32/2	Ø 80mm, 40mm	10	80	<b>009 652</b>



angle box

art	dim	ps	pl	ref
HFCB 20/A	Ø 65mm, 32mm	25	200	<b>009 654</b>
HFCB 25/A	Ø 65mm, 32mm	25	200	<b>009 655</b>
HFCB 32/A	Ø 80mm, 40mm	10	80	<b>009 656</b>



tee box

art	dim	ps	pl	ref
HFCB 20/3	Ø 65mm, 32mm	25	200	<b>009 658</b>
HFCB 25/3	Ø 65mm, 32mm	20	160	<b>009 659</b>
HFCB 32/3	Ø 80mm, 40mm	10	80	<b>009 660</b>



intersection box



art	dim	ps	pl	ref
HFCB 20/4	Ø 65mm, 32mm	20	160	009 662
HFCB 25/4	Ø 65mm, 32mm	10	120	009 663
HFCB 32/4	Ø 80mm, 40mm	8	64	009 664

circular junction box



art	dim	ps	pl	ref
HFCB 20/2 U	Ø 65mm, 32mm	20	160	097 986
HFCB 25/2 U	Ø 65mm, 32mm	20	160	097 988

circular junction box



art	dim	ps	pl	ref
HFCB 20/2 Y	Ø 65mm, 32mm	20	160	097 987
HFCB 25/2 Y	Ø 65mm, 32mm	20	160	097 989

circular junction box



art	dim	ps	pl	ref
HFCB 20/2 H	Ø 65mm, 32mm	20	160	097 991
HFCB 25/2 H	Ø 65mm, 32mm	20	160	097 992

## HFCBL, circular box lid, halogen-free; black (RAL 9005), for screw fixing

Material



PC-Blend

halogen-free



IP 3X



-25°C/+90°C

**Ordering Note:** other colours available on request



art	dim	ps	pl	ref
HFCBL 16-25	Ø 65mm	100	2400	009 665
HFCBL 32	Ø 80mm	100	1200	009 666

## DSL, plug, halogen-free; light grey (RAL 7035), for fixing cables with zipties.

Material    
 PP halogen-free -25°C/+90°C

art	ln	ps	pl	ref
DSL 35 HG	35mm	100	12000	104 550



## KH, cable holder; light grey (RAL 7035), halogen-free, for the aligned installation of sheathed cables

Material    
 PS halogen-free -25°C/+90°C

art	dim	ps	pl	ref
KH-1 HG	100 x 10 x 3 mm	50	1000	103 496
KH-2 HG	200 x 10 x 3 mm	50	500	103 497



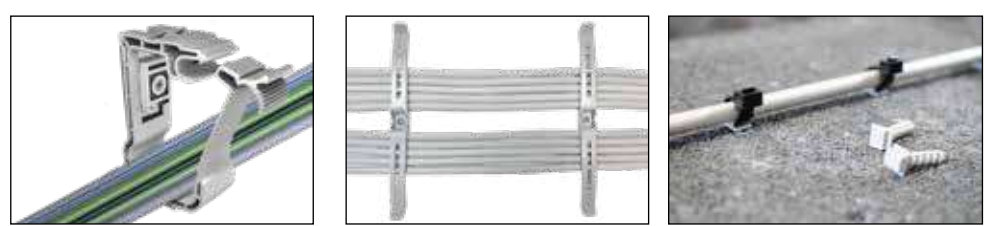
## KSH, multi cable brackets; light grey (RAL 7035), halogen-free, for the fixing and holding of surface cables in walls and ceilings

Material    
 PP halogen-free -25°C/+90°C

art	dim	ps	pl	ref
KSH 15 GR/EX	100 x 10 x 3 mm	25	250	103 962
KSH 30 GR/EX	200 x 10 x 3 mm	15	150	103 963



### Application:

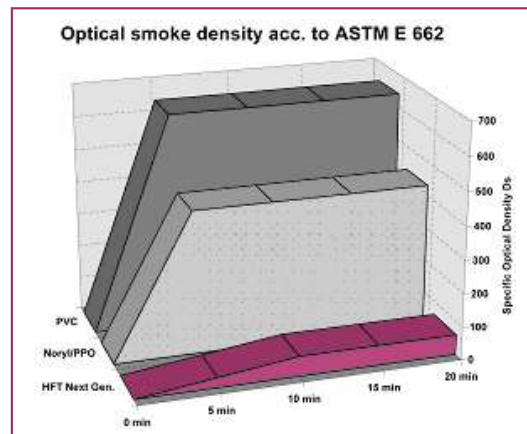


# HFT® Conduits Next Generation

One of the most important arguments for the use of HFT conduits is their characteristic in emergency situations. Exposed to fire these special materials release 90 % less smoke compared to PVC and 80 % less compared to conventional halogen-free materials. By this safety is increased in two ways:

- **People's Safety:** in case of fires the orientation will not be affected by intense smoke release, this eases the evacuation of buildings considerably. Additionally, physical health is not threatened by toxic gases which reduces the risk of suffocation.
- **Asset Protection:** the gases released do not form chemical compounds with other substances.

Sensitive technologies, like IT systems, will not be damaged which guarantees that business operations can continue, especially in cases of smaller fires. Both results in much lower consequential costs related to business interruptions and repairs.



Lowest smoke density in plastic installation materials, flame retardant and insulating!

## Details about HFT®

HFT® is a registered trademark and refers to installation systems with improved properties compared to conventional cable management. The halogen-free materials used for the production do not contain toxic or corrosive substances thus meeting the increased safety requirements of modern applications. Sourcing and processing the most appropriate and advanced raw materials are a key competence of our technical team.

## Further benefits of UNIVOLT's LSF0H conduits

The new LSF0H series offers considerable improvements in addition to the existing advantages of our conduits:

- absolute resistance against oils, fats, acids, lyes, etc.
- especially suitable for installations in concrete
- bendable in cold condition
- smoke density reduced up to 90% compared to PVC
- UV-stabilised
- easy to install
- better than steel

## Cable protection with HFT Univolt products

is not only a vital contribution to the safety of human lives, it also minimises conduction losses, ensures the smooth operation of sensitive technologies, prevents additional costs for repairs and complies with current international standards.

## Projects: HFT® installation systems worldwide

### Areas of application

HFT® systems are ideally suited for installations with an emphasis on the protection of human lives and valuable assets:

- high technology industrial plants, water treatment plants
- power plants, oil refineries and oil rigs, laboratories
- railway and underground systems, tunnels, parking houses
- elevators and emergency plants, transmitting stations
- hospitals, schools, hotels, shopping centres
- sports stadiums, conference and event centres
- museums, theatres, libraries, cultural monuments
- computing and telecommunication centres
- airports, railway stations
- automotives, ships, aircrafts, trains
- air sampling systems
- robotic systems and sensitive machinery





Hospital Godstrup, Denmark



Omantel Headquarter, Oman



Four Seasons, Baku



Belgrade on Water, Serbia



Airports



Sports arenas



High-tech facilities



Railway stations



Oil rigs



Event centres

# Classification Codes according to EN/IEC 61386: Conduit Systems

Codification Number	Digit of the Classification Code						
	1	2	3	4	5	6	
	Compression resistance	Impact resistance	Minimum temperature resistance	Maximum temperature resistance	Resistance to bending	Electrical properties	
0	none declared	none declared	none declared	none declared		none declared	
1	125N	0,5J	+5°C	+60°C			
	very light	very light			rigid	conductive	
2	320 N	1J	-5°C	+90°C			
	light	light			pliable	insulating	
3	750 N	2J	-15°C	+105°C			
	medium	medium			pliable, self recovering	conductive and insulating	
4	1250 N	6J	-25°C	+120°C			
	heavy	heavy			flexible		
5	4000 N	20,4J	-45°C	+150°C			
	very heavy	very heavy					
6				+250°C			
7				+400°C			

Example: HFXP EN 3343

The four digit code refers to the classification which can be found under each individual article in this catalogue. (see also explanation on the right).

Digit of the Classification Code							
7	8	9	10	11	12	13	
Resistance to ingress of solid objects	Protection against ingress of water	Corrosion resistance	Tensile strength	Resistance to flame propagation	Suspended load capacity	Fire effects	
	non-protected		non declared		none declared	under consideration	
			100 N		20 N, 48h		
	dripping water	low inside and outside	very light	non-flame propagating	very light		
			250 N		30 N, 48h		
	dripping water tilted 15°	medium inside and outside	light	flame propagating	light		
>2,5 mm			500 N		150 N, 48h		
	spraying water	medium inside, high outside	medium		medium		
>1,0 mm			1000 N		450 N, 48h		
	splashing water	high inside and outside	heavy		heavy		
			2500 N		850 N, 48h		
dust protected	water jetting		very heavy		very heavy		
dust tight	powerful water jetting						
	temporary immersion effects						

## Symbols: product properties



LSFOH  
halogen-free  
chlorine-free



classification



compression  
resistance



UV-stability



temperature

# Chemical Resistance of Plastic Materials

Chemical Substances	°C	Polyvinylchloride	Polyethylene/Polypropylene	Polycarbonate	Polyamide	Polyphenylenether/Polyphenyleneoxide	Chemical Substances	°C	Polyvinylchloride	Polyethylene/Polypropylene	Polycarbonate	Polyamide	Polyphenylenether/Polyphenyleneoxide
		PVC	PE/PP	PC	PA	PPE/PPO			PVC	PE/PP	PC	PA	PPE/PPO
Acetaldehyde, aqueous (40%)	40	!	✓	-	!	!	Glycerine, aqueous	60	✓	✓	!	✓	✓
Acetic acid (<10%)	40	✓	✓	✓	!	!	Hydrochloric acid (weak)	40	✓	✓	!	-	ü
Acetic acid (10% - 85%)	60	✓	✓	-	-	!	Hydrochloric acid (concentated)	60	✓	✓	-	-	!
Acetic acid (85% - 95%)	40	✓	✓	-	-	!	Hydrofluorosilic acid, aqueous (<32.5%)	60	✓	✓	✓	-	!
Acetic acid (>95%)	20	✓	✓	-	-	-	Hydrofluoric acid, aqueous (<40%)	20	✓	ü	-	-	!
Acetone (traces)	20	-	ü	-	ü	-	Hydrogen (100%)	60	✓	✓	✓	✓	✓
Ammonia, aqueous (20%)	40	✓	✓	-	✓	!	Hydrogen peroxide (20%)	20	✓	✓	!	!	-
Ammonia, dry	60	✓	✓	-	ü	!	Hydrogen sulphide, dry or humid	60	✓	✓	!	!	!
Ammonium fluoride (2%)	20	✓	!	!	-	!	Hydrogen sulphide, aqueous	40	✓	✓	!	!	!
Aniline (saturated)	60	!	-	-	!	-	Ketone	-	-	-	-	ü	-
Arsenic acid (<20%)	60	✓	✓	✓	!	-	Lactic acid, aqueous (1%)	40	✓	✓	✓	✓	✓
Beer	60	✓	✓	!	✓	✓	Methyl alcohol, aqueous (all)	40	✓	✓	-	ü	ü
Benzene	20	-	!	-	ü	-	Mineral oil	20	✓	✓	!	✓	!
Bleaching agent (13%)	40	✓	✓	!	!	!	Nitric acid (<30%)	40	✓	✓	-	-	!
Borax, aqueous	60	✓	✓	!	!	✓	Nitric acid (30% - 45%)	45	✓	✓	-	-	-
Bromic acid, aqueous (10)	20	✓	✓	-	-	!	Nitric acid (50% - 60%)	20	✓	!	-	-	-
Butane, gaseous		ü	-	✓	✓	!	Nitric gases, dry or humid (weak)	60	!	!	-	!	!
Carbonic acid, dry	40	✓	✓	✓	✓	!	Oils and Fats (vegetable and organic)	60	✓	✓	-	ü	-
Carbonic acid, dry or humid	40	ü	ü	!	✓	!	Oxalic acid, aqueous (10%)	40	✓	✓	✓	!	!
Carbon tetrachloride	20	-	-	-	ü	-	Oxalic acid, aqueous (concentrated)	60	✓	✓	-	-	!
Carbon disulphide	20	!	!	-	!	-	Oxygen	60	✓	✓	!	✓	✓
Caustic soda (<40%)	40	✓	ü	-	ü	ü	Ozone	20	✓	!	-	!	!
Caustic soda (40% - 60%)	60	ü	ü	-	ü	ü	Permanganate (<6%)	20	✓	✓	!	-	!
Cement, dry	20	ü	ü	ü	ü	ü	Petrol, Normal/Premium	60	✓	!	-	ü	-
Cement, mixed	20	✓	✓	-	ü	ü	Petroleum	20	✓	✓	!	✓	-
Chloric gas, dry or humid	20	!	!	-	-	-	Phenol, aqueous (<90%)	45	!	!	-	-	-
Chloric water	20	!	!	-	-	-	Phosphoric acid, aqueous (<30%)	40	✓	✓	-	-	!
Chlorinated hydrocarbons		-	-	-	ü	-	Phosphoric acid, aqueous (<30%)	60	✓	✓	-	-	!
Chlorosulfuric acid (100%)	20	!	!	-	-	-	Potash lye, aqueous (<40%)	40	ü	ü	-	ü	ü
Chromium acid, aqueous (<50%)	50	✓	✓	-	-	-	Potash lye (40% - 50%)	60	✓	✓	-	ü	ü
Chromium acid (20%)		!	!	✓	-	-	Potassium sodium lye (<40%)	40	✓	✓	-	ü	ü
Chromosulfuric acid (20%)		!	!	-	-	-	Potassium sodium lye (40% - 50%)	60	✓	✓	-	ü	ü
Citric acid (all)	60	✓	✓	✓	✓	!	Propane, liquid		ü	-	✓	✓	!
Cresol, aqueous (<90%)	45	!	!	-	-	!	Salt solution (all)	40	✓	✓	✓	✓	✓
Cupric sulfate (all)	60	✓	✓	✓	!	!	Seawater	40	✓	✓	!	✓	✓
Diesel oil	20	✓	✓	!	ü	-	Sulfur dioxide, aqueous (all)	40	✓	✓	!	!	!
Developer (photographic)	40	✓	✓	!	✓	!	Sulfuric acid, dry or humid (all)	60	✓	✓	!	!	!
Dextrine (18%)	20	✓	✓	!	✓	!	Sulfuric acid, aqueous (<40%)	40	✓	✓	!	-	ü
Ester		-	-	-	ü	ü	Sulfuric acid, aqueous (40% - 80%)	60	ü	ü	-	-	!
Ethyl alcohol, aqueous (<40%)	40	✓	✓	!	✓	✓	Sulfuric acid, aqueous (80% - 90%)	40	✓	✓	-	-	!
Ethyl ether	20	-	!	!	✓	-	Sulfuric acid, aqueous (90% - 96%)	20	✓	✓	-	-	!
Fatty acid	20	✓	!	!	✓	!	Sodium chloride solution (weak)	40	✓	✓	✓	✓	✓
Fixing bath	40	✓	✓	!	✓	!	Tartaric acid (10%)	60	✓	✓	✓	✓	!
Fluorochlorinated Hydrocarbons		✓	!	✓	✓	-	Urine	40	✓	✓	✓	✓	✓
Formaldehyde, aqueous (all)	30	✓	✓	!	✓	-	Water	60	✓	✓	✓	✓	✓
Formic Acid (<30%)	40	✓	✓	!	-	!	Xylene (100%)	20	-	!	-	ü	-
Formic Acid (concentrated)	20	✓	✓	-	-	!	Zinc chloride, aqueous (all)	60	!	✓	!	-	!
							Zinc sulfate, aqueous (weak)	60	✓	✓	!	-	!

## List of Symbols:

- ✓ The parts are resistant against chemical attack under conventional laying conditions
- ! The parts are partially resistant against chemical attack under conventional laying conditions. It is strongly advised to investigate the actual conditions very carefully, resp. to contact UNIVOLT for tests.
- The parts are not resistant against chemical attack.



# Why use HFT®?



## Safety matters:

- ⇒ higher safety for human lives
- ⇒ better protection of valuable assets
- ⇒ safeguarding continuity of operations



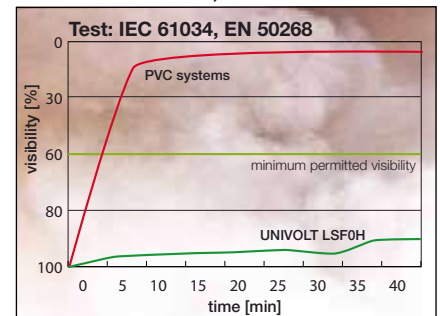
## Comprehensive provision and protection:

**Safety for human lives** deserves the highest priority in fire protection matters. Generating less gases and fumes, LSF0H conduits improve orientation and evacuation in case of fires. Additionally, this minimises the danger of intoxication or suffocation which accounts for most casualties.

**Protection of valuable assets** is crucial for the prosperity of modern business. Using LSF0H systems reduces the risk of negative impacts on building stock, sensitive technologies and information systems caused by toxic and corrosive gases.

**Continuity of operations** is an underestimated cost factor. Even minor fires can lead to shutdowns or significant disturbances, which usually result in subsequential costs beyond quantification. Meanwhile, several industries have recognised the importance of this issue and apply LSF0H criteria for their installations.

### Smoke emission, 3m Cube Test



*Dramatically less smoke formation: UNIVOLT LSF0H conduits top IEC 61034 tests with excellent results.*

If human lives are at risk, there is no second chance.





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