

Properties/Features Reliable Sprinkler Bulb initiation Pneumatic valve initiation Easy to install (just one screw) Works stand-alone 24/7 also w/o power Vibration resistant Can be electrically activated Needs optional parts for remote triggering Redundant functionality (external/automatic) Via nerosul permoters Redundant functionality (external/automatic) Via nerosul permoters Vibration resistant Clean agent NOVEC** Non-conductive agent Non-conductive agent No added damage to the equipment from extinguishing process Very simple to retrofit (just one screw) in existing cabinets Very simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Another than to opia a cabinet components when installed Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Another than to opia a cabinet components when installed Another than the top of a cabinet, no need to be dose to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Monitoring of activation with no optional parts (opening contact) Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TiV certified (ENASS45/ARGE) MPA tested CE mark Yes serified detection element	System comparison Device Integrated Fire Protection solution R. Eichhorn - May 2020 *	AMFE Product Series	Flex Tube Systems for Cabinets
Reliable Sprinkler Bulb initiation Pneumatic valve initiation X X X Anades subted de servy 350me Works stand-alone 24/7 also w/o power Vibration resistant Can be electrically activated Needs optional parts for remote triggering Redundant functionality (external/automatic) Clean agent NOVEC** Nor-scidule from the extinguishing Nor-toxic agent Nor-toxic agent No added damage to the equipment from extinguishing process Pressurized initiation tube all the time Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Yers simple to replace cabinet components when installed Yers simple to replace cabinet components when installed Most simple to replace cabinet components when installed Monitoring of activation with no optional parts (opening contact) Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Anonitoring required after 5.10 years Annual inspection years activated by low-power signal with no optional parts External optional components for remote activation required Robust metal product / no accidental fractur by tools or cabinet parts Factory Sealed Annual inspection years accidental fractur by tools or cabinet parts Annual inspection years accidental fractur by tools or cabinet parts Fire choice of any initiation temperature Annual inspection years accidental fractur by tools or cabinet parts Annual inspection years accidental fractur by tools or cabinet parts Annual inspection years accidental fractur by tools or cabinet parts Fire Control (discharge required Annual inspection years accidental fractur by tools or cabinet parts Annual inspection years accidental fractur by tools or cabinet parts Annual inspection years accidental fractur by tools or cabinet parts Annual fracture by tools accidentaly			
Easy to install (just one screw) Works stand-alone 24/7 also w/o power Vibration resistant Can be electrically activated Needs optional parts for remote triggering Redundant functionality (external/automatic) Clean agent NOVEC!* No residues from the extinguishing Non-toxic agent Non-conductive agent Non-conductive agent Non-conductive agent No added damage to the equipment from extinguishing process Pressurized initiation tube all the time Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Monitoring of activation with no optional parts (opening contact) Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Reduction of the process of the property of the process of the product of the process of the product of the process of the product of the product of the process o			
Easy to install (just one screw) Works stand-alone 24/7 also w/o power Vibration resistant Can be electrically activated Needs optional parts for remote triggering Redundant functionality (external/automatic) Clean agent NOVEC** Voorout.coult CO, Noresidues from the extinguishing Non-toxic agent No added damage to the equipment from extinguishing process Pressurized initiation tube all the time Pressurized initiation tube all the time Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to ret		<u> </u>	<u> </u>
Works stand-alone 24/7 also w/o power Vibration resistant ✓ disclarate the remains had visual alone 24/7 also w/o power Vibration resistant ✓ disclarate the remains had visual alone remains had visual remains had v	Pneumatic valve initiation	X	4
Vibration resistant Can be electrically activated Needs optional parts for remote triggering Redundant functionality (external/automatic) Clean agent NOVECT** No residues from the extinguishing Non-toxic agent Non-conductive agent No added damage to the equipment from extinguishing process Pressurized initiation tube all the time Pressurized initiation tube all the time X Very simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Monitoring of activation with no optional parts (opening contact) A considering required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45S45/ARGE) MPA tested CE mark Very make discharge required after 5 A conservational memorate in the conservation of the conservation	Easy to install (just one screw)	1	Requires cable clip every 15omm
Vibration resistant Can be electrically activated Needs optional parts for remote triggering Redundant functionality (external/automatic) Clean agent NOVECT** No residues from the extinguishing Non-toxic agent Non-conductive agent No added damage to the equipment from extinguishing process Pressurized initiation tube all the time Pressurized initiation tube all the time X Very simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Monitoring of activation with no optional parts (opening contact) A considering required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45S45/ARGE) MPA tested CE mark Very make discharge required after 5 A conservational memorate in the conservation of the conservation	Works stand-alone 24/7 also w/o power	1	<u> </u>
Needs optional parts for remote triggering X No optional parts required X		✓	if ALL cable clips are properly fixed
Needs optional parts for remote triggering X No optional parts (external/automatic) No optional parts required X No optional parts required X No optional parts required X No optional parts (external/automatic) No residues from the extinguishing X Co.	Can be electrically activated	J	1
Redundant functionality (external/automatic) Clean agent NOVEC** No residues from the extinguishing Non-toxic agent Non-conductive agent Non-conducti		×	
Clean agent NOVEC™ No residues from the extinguishing Non-toxic agent Non-conductive agent No added damage to the equipment from extinguishing process Pressurized initiation tube all the time Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark		No optional parts required	<u> </u>
No residues from the extinguishing Non-toxic agent Non-conductive agent No added damage to the equipment from extinguishing process You added damage to the equipment from extinguishing process Pressurized initiation tube all the time Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required TÜV certified (EN45545/ARGE) MPA tested CE mark Va database voice declaracy declar	Reduited it functionality (external automatic)		^
Non-toxic agent Non-conductive agent Non-c	Clean agent NOVEC™	✓_	✓ Optional, usually CO₂
Non-conductive agent No added damage to the equipment from extinguishing process Pressurized initiation tube all the time Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45S45/ARGE) MPA tested CE mark	No residues from the extinguishing	1	1
No added damage to the equipment from extinguishing process Co., et and C. dicharge may destroplated Pressurized initiation tube all the time	Non-toxic agent	1	X co₂
Pressurized initiation tube all the time Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts TÜV certified (EN45545/ARGE) MPA tested CE mark	Non-conductive agent	✓	√
Factory Sealed - only opens the agent cylinder in case of fire Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Requires monthly visual inspection Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	No added damage to the equipment from extinguishing process	1	
Most simple to retrofit (just one screw) in existing cabinets Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	Pressurized initiation tube all the time	×	1
Very simple to replace cabinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	Factory Sealed - only opens the agent cylinder in case of fire	1	×
Very simple to replace capinet components when installed Installation at the top of a cabinet, no need to be close to "hot-spots" Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	Most simple to retrofit (just one screw) in existing cabinets	1	×
Can be directly connected to power disconnect to shut off electricity Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	Very simple to replace cabinet components when installed	4	
Free choice of any initiation temperature (from 57°C 181°C) Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	Installation at the top of a cabinet, no need to be close to "hot-spots"	4	✓
Monitoring of activation with no optional parts (opening contact) Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	Can be directly connected to power disconnect to shut off electricity	1	×
Can be remotely activated by low-power signal with no optional parts External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark X nedds optional components to be added for remote activation X deaded for remote act	Free choice of any initiation temperature (from 57°C 181°C)	4	
External optional components for remote activation required Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required X Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark	Monitoring of activation with no optional parts (opening contact)	✓	×
Hydrostatic testing required after 510 years Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required **X **Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel **X **TÜV certified (EN45545/ARGE) MPA tested CE mark **X **X **X **X **X **X **X *	Can be remotely activated by low-power signal with no optional parts	1	nedds optional components to be added for remote activation
Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required ** Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel ** TÜV certified (EN45545/ARGE) MPA tested CE mark ** ** ** ** ** ** ** ** **	External optional components for remote activation required	×	1
Annual inspection/weighting for maintenance Requires monthly visual inspection Periodic discharge required X Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark X X A CE mark	Hydrostatic testing required after 510 years	×	1
Requires monthly visual inspection Periodic discharge required Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark		√	×
Robust metal product / no accidental fractur by tools or cabinet parts Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark X X CE mark	Requires monthly visual inspection	X	√
Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark X X V	Periodic discharge required	×	1
Easy to install by non-certified personnel TÜV certified (EN45545/ARGE) MPA tested CE mark X X V	Robust metal product / no accidental fractur by tools or cabinet parts	1	×
MPA tested		✓	×
MPA tested	TÜV certified (EN45545/ARGE)		×
CE mark		<u> </u>	×
	VDS certified detection element		X

^{*)} The comparision reflects research conducted in May 2020 executed by JOB Germany. It may not include all available systems in the market or cosinder recent technical change.