

Summary of Legislative Incentives for Fire Sprinklers in New Buildings†

Construction Alternatives are in red

	Major airports sprinklered?	Places of assembly	Shopping Centres	Industry	Warehouses	Hotels	Care Homes	Hospitals	Teaching Establishments	Residential Accommodation	Offices	Car Parks
Austria	No		>1,800m <sup>2</sup> across 3 or more storeys; >3,000m <sup>2</sup>	>5,000m <sup>2</sup> or add fire resistance	Depends on height and stored goods but generally require sprinklers >1800m <sup>2</sup>	>32m  >22m reduced fire resistance		>32m  >22m reduced fire resistance		>32m high  >22m reduced fire resistance	>32m high  >22m reduced fire resistance	>1,600m <sup>2</sup> with natural ventilation instead of fire detection or to reduce air changes by 75% with mechanical ventilation; >4800m <sup>2</sup>
Belgium	Yes	>3,500m <sup>2</sup> >2,500m <sup>2</sup> if Floor >10m	>2,000m <sup>2</sup>	>25,000m <sup>2</sup> and < 350 MJ/m <sup>2</sup> >10,000m <sup>2</sup> and > 350 MJ/m <sup>2</sup> >5,000m <sup>2</sup> and > 900 MJ/m <sup>2</sup>	>5,000m <sup>2</sup>	>3,500m <sup>2</sup> >2,500m <sup>2</sup> if >10m		>3,500m <sup>2</sup> >2,500m <sup>2</sup> & >10m				Automatic enclosed with LPG vehicles
Czech Republic	No	Exhibition halls with compartment > 5,000m <sup>2</sup>	>1,000m <sup>2</sup>	>20m <sup>3</sup> of flammable liquids	Postal stores >800m <sup>2</sup> >50m <sup>3</sup> of flammable liquids	>30m				>8 storeys; >4 storeys & >50 apartments semi-combustible structure & >5 storeys & >30 apartments combustible structure & >3 storeys & >20 apartments		Automatic underground;  From 2nd underground floor if >50 vehicles;  Capacity >200 vehicles & below assembly buildings
Denmark	Yes	>2,000m <sup>2</sup>  >1,000 m <sup>2</sup> without smoke extraction	>2,000m <sup>2</sup>  >1,000 m <sup>2</sup> without smoke extraction	>2,000m <sup>2</sup> and >200MJ/m <sup>2</sup>  >5,000m <sup>2</sup> other fire load	>2,000m <sup>2</sup> and >200MJ/m <sup>2</sup>  >5,000m <sup>2</sup> other fire load		>1,000m <sup>2</sup> sleeping area multi-floor	>1,000m <sup>2</sup> sleeping area multi-floor			Alternative to fire alarm if compartment >2,000m <sup>2</sup>	>2,000m <sup>2</sup> except residential
Finland	Yes	Unlimited compartment or halve fire rating and 25% smoke exhaust	Unlimited compartment or halve fire rating and 25% smoke exhaust	Unlimited compartment or halve fire rating and 25% smoke exhaust	>2000m <sup>2</sup> in structure without passive fire resistance	Unlimited comp't / 50% rating + 25% smoke exhaust.	Usually required in new and existing care homes following risk assessment			Timber-framed apartment buildings 3-8 storeys	Unlimited comp'mnt or 50% fire rating + 25% smoke exhaust. Timber-framed 3-8 storeys	Underground >3,000 m <sup>2</sup>
France	No		>3,000m <sup>2</sup> or with restaurant or >10,000kg paint  Can increase storage of dangerous goods from 1,000m <sup>3</sup> to 2,000m <sup>3</sup>		>3000m <sup>2</sup> and less than 12000m <sup>2</sup> >12000m <sup>2</sup> with risk assessment and approval from Prefect	>200m  or >480 MJ/m <sup>2</sup>					>200m  or >480 MJ/m <sup>2</sup>	>5 underground storeys and only from 6th level  Optional to detection if 3-5 underground storeys and only from 3rd level
Germany	Yes	>3,600m <sup>2</sup> * total with rooms >400m <sup>2</sup> or >22m high or below ground	>3000m <sup>2</sup> or underground floors >500m <sup>2</sup>  60 minutes less fire resistance for walls and ceilings; no need for smoke extraction; can increase travel distance by 35m	Increase compartment area 3-10 times depending on fire resistance and number of storeys  1,800m <sup>2</sup> to 10,000m <sup>2</sup> ; single storey  3,000m <sup>2</sup> to 10,000m <sup>2</sup> ; single storey with 30' fire resistance	>1,200m <sup>2</sup> Storage > 7.5m high fire load >15kWh/m <sup>2</sup> & >400m <sup>2</sup> fire load >45kWh/m <sup>2</sup> & <400m <sup>2</sup>	>3,600m <sup>2</sup> * total with rooms >400m <sup>2</sup>  or >22m high		>22m high or >32m high with balconies to prevent external fire spread and rooms <400m <sup>2</sup>	>22m high or >32m high with balconies to prevent external fire spread and rooms <400m <sup>2</sup>	>22m high or >32m high with balconies to prevent external fire spread and rooms <400m <sup>2</sup>	Floors 4m below ground Car parks under other use buildings	
Greece		>50 people and >23m	>1,000m <sup>2</sup> per storey Total area >2,500m <sup>2</sup> basement >250m <sup>2</sup>	>2,000 MJ/m <sup>2</sup> or >1,000 MJ/m <sup>2</sup> and >2,000m <sup>2</sup>	>2,000 MJ/m <sup>2</sup> or >1,000 MJ/m <sup>2</sup> and >2,000m <sup>2</sup>	>28m	>100 beds >12m	>100 beds >12m	Basements >250m <sup>2</sup> Boiler rooms	>28m	>20m and people	>400 >300m <sup>2</sup> or multi-storey
Hungary		Cinemas> 13.65m or >1,000 people	>8,000m <sup>2</sup> >13.65m height		>3,000m2 and >6m high and >1,500 MJ/m <sup>2</sup>	>13.65m	>3 storeys	If beds >13.65m	>30m	>13.65m	>30m	Multi-floor underground; >13.65m height closed; >20 cars per compartment
Ireland	No		Single storey >4000m <sup>2</sup> All shopping centres		Single storey 14,000m <sup>2</sup> normal and >1,000m <sup>2</sup> high hazard	>30m and phased evacuation					>30m and phased evacuation	
Italy	No	>16,000 m <sup>2</sup>  Longer travel distances and narrower escape routes	>16,000 m <sup>2</sup>  Longer travel distances and narrower escape routes	>32,000 m <sup>2</sup>  Longer travel distances and narrower escape routes	>16,000 m <sup>2</sup>  Longer travel distances and narrower escape routes	>1,000 beds >8,000 m <sup>2</sup> Longer travel distance, narrower escape route	>8,000 m <sup>2</sup>  Longer travel distance, narrower escape route	>8,000 m <sup>2</sup>  Longer travel, narrower escape route	Basements with fire loading >30 kg/m <sup>2</sup>		Archives >200m <sup>2</sup> or >60kg/m <sup>2</sup> fire load	Multi-floor underground Above ground: '-4 floors closed '-5 floors open  Automatic car parks
Lithuania	Yes	>5000 people	>1,500m <sup>2</sup>	>2,000m <sup>2</sup> if combustible goods stored	>2,000m <sup>2</sup> or > 5.5m storage height	>26.5m	≥ 42 m or >5000 people	≥ 42 m or >5000 people	≥ 42 m or >5000 people	> 75m	≥ 42 m	Underground & >25cars  Above ground >7m  Automatic car parks
			>3,000m <sup>2</sup> or	>225MJ/m <sup>2</sup>								

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Luxemburg			>3 storeys and >1,000m <sup>2</sup> Single storey no need for 90' structural fire resistance No need for 60' separation between units in centre			>60m high Closed car parks with >20 cars Double compartment'nt to 1,600m <sup>2</sup>	If living areas open onto corridors			>60m high Youth accommodation >3 storeys with rubbish stored in building	>60m high Archives >600m <sup>2</sup> Double compartment: 1,600m <sup>2</sup> one storey 3,200m <sup>2</sup> multi-storey	Closed or underground with >50 cars Increase travel distance 30m to 40m if >20 cars
Netherlands	Yes		Firework sales or storage >1000m <sup>2</sup> fire compartment	>1000m <sup>2</sup> fire compartment >10,000 kg dangerous goods	Firework storage >1000m <sup>2</sup> fire compartment >10,000 kg dangerous goods	>70m high				>70m high Reduce fire resistance from 30 to 60 minutes or increase travel distance and compartment size or fit fewer hydrants		If >1,000m <sup>2</sup>
Norway	Yes	>1800m <sup>2</sup> one floor	>1,200m <sup>2</sup> multi-floor	>800m <sup>2</sup> unless unusually low fire load	>800m <sup>2</sup> unless unusually low fire load	All new hotels	All new care homes	All new hospitals		All new dwellings with more than two storeys	Compartment >1800m <sup>2</sup>	>1800m <sup>2</sup> one floor
Poland		>600 people or sports stadia >3000 people	>10,000m <sup>2</sup> one floor >2,500m <sup>2</sup> multi-floor			>55m high				>55m high	>55m high	Underground & >100 cars
Portugal	No	>28m high >1,000 people >15,000m <sup>2</sup>	>28m high >1,000 people >2 storeys			>9m high >100 people >50 sleeping guests					>28m high >1,000 people	>9m, >3,200m <sup>2</sup> >1 underground storey
Slovak Republic		Exhibition halls with compartment > 5,000m2	>2,000m <sup>2</sup> one floor >1,000m <sup>2</sup> multi-floor		Yes, depending on many factors	>300 guests	>800 patients	>800 patients		>500 residents		
Spain	Yes	Increase travel distance 25%	Compartment >1500m <sup>2</sup> and fire load >500 MJ/m <sup>2</sup> Compartment >2500m <sup>2</sup> Increase travel distance 25%	>3500m <sup>2</sup> & fire load >850 MJ/m <sup>2</sup> Max. compartment sizes further reduced if the fire load is higher or the building adjoins other buildings Double compartments and reduce structural fire resistance	>2000m <sup>2</sup> & fire load >850 MJ/m <sup>2</sup> Maximum compartment sizes further reduced if the fire load is higher or the building adjoins other buildings	Required if top floor >28m Increase travel distance 25%	Required if top floor >28m Increase travel distance 25%	Increase travel distance 25%	Increase travel distance 25%	Top floor >80m	Top floor >80m Increase travel distance 25%	In automatic car parks
Sweden	Yes	Performance-based code	Performance-based code	<800 MJ/m <sup>2</sup> and >5,000m <sup>2</sup>	>800 MJ/m <sup>2</sup> and >2,500m <sup>2</sup>	Performance-based but many hotels sprinklered	All new care homes	All new hospitals	Performance-based code	>16 storey buildings and others for performance	>16 storey buildings and others for performance	Performance-based code
Switzerland		Reduction of 30' in compartment fire resistance	Required in department stores and shopping centres >2,400m <sup>2</sup>	Reduction of 30' in compartment fire resistance	Reduction of 30' in compartment fire resistance	Reduction of 30' in compartment fire resistance	Reduction of 30' in compartment fire resistance	Reduction of 30' in compartment fire resistance	Reduction of 30' in compartment fire resistance		Atria >11m, or >3 storeys, or forming compartment >3,600m <sup>2</sup>	Underground comp'nt: >4,800m <sup>2</sup> single level >2,400m <sup>2</sup> multi-level Above ground: >4,800m <sup>2</sup> closed >9,600m <sup>2</sup> per level open Automatic car parks with >50 cars
Turkey		Museums, entertainment, eating and drinking places >4,000m <sup>2</sup> ; other assembly places >6,000m <sup>2</sup>	Multi-storey with area >2,000m <sup>2</sup> (new); multi-storey with area >3,000m <sup>2</sup> (existing)	>15,000m <sup>2</sup> , or with easily ignitable and flammable materials >6,000m <sup>2</sup>	>5,000m <sup>2</sup> , or with easily ignitable and flammable materials >1,000m <sup>2</sup>	>21.50m (new); or multi-storey with 100 bedrooms (new) or 200 beds (new and existing)	If higher than 30.50m or >1,500m <sup>2</sup>	If higher than 30.50m or >1,500m <sup>2</sup>	If higher than 30.50m	If higher than 51.50m	If new offices higher than 30.50m and in existing offices higher than 51.50m	Enclosed car parks >600m <sup>2</sup> (new) or >1,000m2 (existing); or if >10 cars brought in by elevator
United Kingdom	No	If top floor >30m with phased evacuation Multi-storey compartment doubled to 4,000m <sup>2</sup> Structural fire resistance reduced 30' if height <5m or 18m< height <30m. Scotland entertainment compartment >2,000m <sup>2</sup>	In England and Wales for compartments >2000m <sup>2</sup> Sprinkler store room or separate from retail area. Structural fire resistance reduced 30' if height <5m or 18m< height <30m. Required in all Scottish shopping centres	Double max. area per level in multi-floor building to 14,000m <sup>2</sup> if <18m high 4,000m <sup>2</sup> if >18m high. Instead of fire resistance for gallery >10m wide. Structural fire resistance reduced 30' if height <30m.	>20,000m <sup>2</sup> or >18m height Double max. volume per level in multi-floor building to 40,000m <sup>3</sup> (<18m ht.) 8,000m <sup>3</sup> (>18m ht.) Structural fire resistance reduced 30' if height <30m.	If top floor >30m with phased evacuation	Scotland, Wales all care homes England if >1 bed in a room; instead of door closers.	England must consider sprinklers	Schools: all of Wales; all of Scotland; very common after risk analysis in England	Wales all housing Scotland in buildings above 18m high England in: -buildings above 30m -3 storey house with open plan ground floor -four-storey house without 2nd staircase	If top floor >30m with phased evacuation Reduce structural fire resistance by 30' (5m<height<30m)	

† Turkey has some requirements in existing buildings

\* Not places of worship, educational establishments, museums