

Maximum allowed size of embroidery & transfer on Fristads high-visibility garments

EN ISO 20471 is a standard for high-visibility garments. High-visibility clothing has fluorescent areas and reflective material conforming to certification requirements according to three different classes. Class 3 is the highest safety class. Garments that are certified according to class 3 can be combined with any other garment, as long as these do not cover the high-visibility garment's fluorescent or reflective areas.

On garments personalised with company logos, it is important to ensure that the logo does not obscure too great a proportion of the fluorescent area. This table will help you determine how large your logo can be. The total fluorescent area must be at least 0.8 m² to conform with class 3.

Minimum area in m² to obtain approval according to EN ISO 20471

MATERIAL	CLASS 3	CLASS 2	CLASS 1
Fluorescent	0.8	0.5	0.14
Reflective	0.2	0.13	0.1



EN ISO 20471

EN ISO 20471 is a standard for high-visibility garments.

ART. NO	SIZE	EN ISO 20471 HI-VIS CLASS	REFLECTIVE AREA/M ²	FLUO-RESCENT AREA/M ²	HI-VIS CO-CERTIFICATION	MAX AREA CM ² FOR TRANSFER AND EMBROIDERY
100001	XS	2	0.23	0.7	U6	2000 cm ²
100001	≥S	3	0.25	0.82	U6	200 cm ²
100002	≥C44	2	0.13	0.64	T4	1400 cm ²
100003	≥C44	2	0.13	0.81	T6	3100 cm ²
100004	≥S	3	0.3	0.84	-	400 cm ²
100134	XS-S	2	0.16	0.75	U6	2500 cm ²
100134	>M	3	0.2	0.82	U6	200 cm ²
100279	>C44	1	0.1	0.17	T1	300 cm ²
100382	XS/S	1	0.1	0.44	W1	3000 cm ²
100382	>M	2	0.14	0.51	W1	100 cm ²
100416	>S/M	3	0.25	0.83	U6	300 cm ²
100496	>XS	3	0.2	0.82	U6	200 cm ²
100972	XS-M	2	0.2	0.58	U4	800 cm ²
100972	>L	3	0.23	0.8	U4	*
100973	XS-M	2	0.2	0.63	U5	1300 cm ²
100973	>XL	3	0.24	0.8	U5	*
100974	>C44	2	0.13	0.65	T4	1500 cm ²
100975	>C44	2	0.13	0.65	T4	1500 cm ²
100976	>C44	2	0.14	0.53	S2	300 cm ²
100977	C44-C50	1	0.14	0.39	S1	2500 cm ²
100977	>C52	2	0.16	0.52	S1	200 cm ²
100978	>C44	1	0.1	0.14	T1	*
100979	>C44	1	0.1	0.14	T1	*
100984	>XS	2	0.14	0.7	T4	2000 cm ²
100994	>XS	2	0.15	0.63	T4	1300 cm ²
101006	>XS	3	0.22	0.9	U6	1000 cm ²
101010	>XS	2	0.13	0.68	W2	1800 cm ²
101018	>C44	2	0.13	0.7	T4	2000 cm ²
101019	>C44	2	0.14	0.76	T5	2600 cm ²
110141	>XS	2	0.13	0.54	W1	400 cm ²
110151	>XS	3	0.2	0.83	U6	300 cm ²
111189	C34-C40	1	0.12	0.63	T4	4900 cm ²
111189	>C42	2	0.13	0.72	T4	2200 cm ²
111190	>C34	1	0.1	0.21	T2	700 cm ²
111191	C34-C40	1	0.12	0.63	T4	4900 cm ²
111191	>C42	2	0.13	0.72	T4	2200 cm ²
111192	>C34	1	0.1	0.21	T2	700 cm ²
111332	XS-M	2	0.21	0.65	U5	1500 cm ²
111332	>L	3	0.25	0.84	U5	400 cm ²
111333	XS-M	2	0.2	0.65	U5	1500 cm ²
111333	>L	3	0.25	0.84	U5	400 cm ²
111376	>XXS	2	0.13	0.58	T3	800 cm ²
114026	>C44	1	0.1	0.14	T1	*
114040	XXS	2	0.2	0.72	U6	2200 cm ²
114040	>XS	3	0.25	0.81	U6	100 cm ²
114041	XXS	2	0.2	0.71	U6	2100 cm ²
114041	>XS	3	0.21	0.8	U6	*
114042		2	0.14	0.81	T6	3100 cm ²
114087	XXS	2	0.19	0.91	U6	4100 cm ²
114087	>XS	3	0.2	0.95	U6	1500 cm ²
114097	C44-C50	1	0.14	0.41	S1	2700 cm ²
114097	>C52	2	0.17	0.51	S1	100 cm ²
114099	>C44	1	0.1	0.17	T1	300 cm ²
114100	XS	2	0.2	0.73	U6	2300 cm ²
114100	>S	3	0.21	0.81	U6	100 cm ²
116158	>XS	1	0.1	0.26	T2	1200 cm ²
117060	>C44	2	0.13	0.68	T4	1800 cm ²
119621	XS	2	0.19	0.73	U6	2300 cm ²
119621	>M	3	0.2	0.87	U6	700 cm ²
119621	S	2	0.2	0.8	U6	3000 cm ²
119623	XS	2	0.16	0.62	U5	1200 cm ²
119623	S	2	0.17	0.67	U5	1700 cm ²
119623	>L	3	0.2	0.8	U5	*
119624	>S	3	0.23	0.83	U6	300 cm ²
119625	XS-S	2	0.17	0.7	U6	2000 cm ²
119625	>M	3	0.23	0.86	U6	600 cm ²
119626	XS	2	0.19	0.79	U6	2900 cm ²
119626	>S	3	0.2	0.86	U6	600 cm ²
119627	XS	3	0.3	0.85	U6	500 cm ²
119627	>S	3	0.32	1.02	U6	2200 cm ²
119628	XS	3	0.2	0.83	U6	300 cm ²

ART. NO	SIZE	EN ISO 20471 HI-VIS CLASS	REFLECTIVE AREA/M ²	FLUO-RESCENT AREA/M ²	HI-VIS CO-CERTIFICATION	MAX AREA CM ² FOR TRANSFER AND EMBROIDERY
119628	>S	3	0.21	0.92	U6	1200 cm ²
119629	>XS	3	0.2	0.85	U6	500 cm ²
119630	>XS	3	0.23	0.83	U6	300 cm ²
120986	>XS	2	0.13	0.63	T4	1300 cm ²
120987	XS	2	0.2	0.76	U6	2600 cm ²
120987	>S	3	0.22	0.82	U6	200 cm ²
120988	>XS	3	0.2	0.8	U6	*
122191	>C44	1	0.1	0.14	T1	*
124176	>XS	3	0.21	1	U6	2000 cm ²
124177	XS	2	0.13	0.53	W1	300 cm ²
124177	>S	2	0.13	0.58	W1	800 cm ²
124376	>S	3	0.29	0.81	-	100 cm ²
125023	XS	2	0.14	0.52	U4	200 cm ²
125023	>S	2	0.15	0.57	U4	700 cm ²
125024	XS-L	2	0.17	0.66	U6	1600 cm ²
125024	>XL	3	0.21	0.9	U6	1000 cm ²
125612	>C44	2	0.13	0.56	T4	600 cm ²
125613	>C34	2	0.13	0.53	T3	300 cm ²
125614	>C44	1	0.11	0.18	T1	400 cm ²
125615	>C44	1	0.11	0.18	T1	400 cm ²
126534	XS-M	2	0.18	0.67	U6	1700 cm ²
126534	>L	3	0.22	0.88	U6	800 cm ²
126535	XS-M	2	0.15	0.61	U5	1100 cm ²
126535	>L	3	0.21	0.89	U5	900 cm ²
126536	≥C44	1	0.11	0.14	T1	*
126547	XS	2	0.18	0.73	U6	2300 cm ²
126547	S	2	0.19	0.8	U6	3000 cm ²
126547	M	3	0.2	0.86	U6	600 cm ²
126547	>L	3	0.21	0.92	U6	1200 cm ²
127418	>XS	3	0.2	0.85	U6	500 cm ²
127662	>XS	2	0.13	0.58	T3	800 cm ²
127663	XS-S	2	0.18	0.73	U6	2300 cm ²
127663	>M	3	0.2	0.86	U6	600 cm ²
127666	XS-S	2	0.21	0.73	U6	2300 cm ²
127666	>M	3	0.21	0.86	U6	600 cm ²
127731	>C44	1	0.11	0.21	T2	700 cm ²
127732	>C44	1	0.11	0.22	T2	800 cm ²
127734	>C44	2	0.13	0.5	T3	*
127735	>C34	1	0.11	0.23	T2	900 cm ²
127736	>C34	1	0.11	0.23	T2	900 cm ²
127737	>C34	2	0.13	0.52	T3	200 cm ²
129509	>XS	1	0.15	0.29	U2	1500 cm ²
129511	>XS	1	0.1	0.28	U2	1400 cm ²
129513	>XS	1	0.14	0.26	U2	1200 cm ²
129514	XS	2	0.19	0.52	U4	200 cm ²
129514	S	2	0.2	0.57	U4	700 cm ²
129514	>M	2	0.21	0.6	U4	1000 cm ²
129515	XS	2	0.18	0.55	U4	500 cm ²
129515	S	2	0.19	0.59	U4	900 cm ²
129515	>M	2	0.2	0.61	U4	1100 cm ²
129516	>C44	1	0.11	0.23	T2	900 cm ²
129542	>XS	1	0.11	0.2	T1	600 cm ²
129543	>XS	1	0.11	0.2	T1	600 cm ²
129738	≥C34	1	0.1	0.39	S1	2500 cm ²
130164	≥C44	2	0.13	0.5	T3	*
131110	S	2	0.2	0.76	U6	2600 cm ²
131110	≥M	3	0.2	0.83	U6	300 cm ²
131153	>C44	1	0.1	0.27	S1	1300 cm ²
131154	XS	1	0.11	0.39	S1	2500 cm ²
131154	M	1	0.15	0.47	S1	3300 cm ²
131154	>L	2	0.15	0.51	S1	100 cm ²
131155	>XS	2	0.14	0.55	W1	500 cm ²
131156	>XS/S	2	0.13	0.53	W1	300 cm ²
131157	≥C34	1	0.11	0.19	T1	500 cm ²
131221	XS-L	2	0.19	0.55	U4	500 cm ²
131221	>L	3	0.25	0.8	U4	*
131222	>XS	3	0.2	0.85	U6	500 cm ²
132849	≥C44	1	0.1	0.177	T1	370 cm ²

* Logo placement only possible on contrast colour area, not on fluorescent area.

Maximum allowed size of embroidery and transfer

Fluorescent and reflective areas on Fristads flame-protected high-visibility garments.

Minimum area in m² to obtain approval according to EN ISO 20471

MATERIAL	CLASS 3	CLASS 2	CLASS 1
Fluorescent	0.8	0.5	0.14
Reflective	0.2	0.13	0.1

ART. NO	SIZE	EN ISO 20471 HI-VIS CLASS	REFLEC-TIVE AREA/M ²	FLUO-RESCENT AREA/M ²	HI-VIS CO-CERTI-FICATION	MAX AREA CM ² FOR TRANSFER	MAX AREA CM ² FOR EMBROIDERY
101038	≥XS	3	0.2	0.99	U6	10 cm ²	Not possible
101056	≥XS	2	0.13	1.17	T6	10 cm ²	Not possible
109417*	≥C44	1	0.1	0.14	T1	435 cm ² *	40 cm ² *
109419	≥C44	2	0.13	0.7	T4	435 cm ²	40 cm ²
109420	≥C44	2	0.13	0.69	T4	435 cm ²	40 cm ²
109423	≥XS	3	0.2	0.81	U6	100 cm ²	40 cm ²
109424	≥XS	2	0.14	0.65	T4	435 cm ²	40 cm ²
109428	XS	2	0.19	0.69	U6	435 cm ²	40 cm ²
109428	S	2	0.21	0.75	U6	435 cm ²	40 cm ²
109428	≥M	3	0.22	0.85	U6	435 cm ²	40 cm ²
110642	≥XS	2	0.13	0.53	W1	300 cm ²	40 cm ²
111619*	≥C44	1	0.1	0.14	T1	435 cm ² *	40 cm ² *
119922	XS	2	0.18	0.77	U6	435 cm ²	40 cm ²
119922	≥S	3	0.2	0.86	U6	435 cm ²	40 cm ²
119923	XS	2	0.19	0.78	U6	435 cm ²	40 cm ²
119923	≥S	3	0.2	0.85	U6	435 cm ²	40 cm ²
120929	XS-S	1	0.18	0.43	U3	435 cm ²	40 cm ²
120929	≥M	2	0.2	0.55	U3	435 cm ²	40 cm ²
121355*	≥C44	1	0.1	0.14	T1	435 cm ² *	40 cm ² *
122195	XS-M	2	0.17	0.74	U6	435 cm ²	40 cm ²
122195	≥L	3	0.21	0.84	U6	400 cm ²	40 cm ²
122196	≥C34	2	0.13	0.54	T3	400 cm ²	40 cm ²
122197	≥C34	1	0.1	0.21	T2	435 cm ²	40 cm ²
122233	XS	2	0.17	0.79	U6	435 cm ²	40 cm ²
122233	≥S	3	0.22	0.88	U6	435 cm ²	40 cm ²
124178	≥XS	3	0.2	0.86	U6	435 cm ²	40 cm ²
124295	≥XXS/XS	3	0.22	0.8	U6	Not possible	Not possible
124309	≥XS	1	0.2	0.42	U3	435 cm ²	40 cm ²
125041	XS	2	0.19	0.67	U6	250 cm ²	40 cm ²
125041	S	2	0.2	0.74	U6	250 cm ²	40 cm ²
125041	≥M	3	0.21	0.8	U6	Not possible	Not possible
125617	XS	2	0.21	0.73	U6	448 cm ²	Not possible
125617	S	2	0.22	0.79	U6	448 cm ²	Not possible
125617	≥M	3	0.21	0.86	U6	448 cm ²	Not possible
125618	≥XS	2	0.13	0.58	T3	448 cm ²	Not possible
125893*	≥XS	3	0.28	0.8	-	435 cm ² *	40 cm ² *
125938	XS	2	0.18	0.66	U6	250 cm ²	40 cm ²
125938	S	2	0.2	0.75	U6	250 cm ²	40 cm ²
125938	≥M	3	0.21	0.83	U6	250 cm ²	40 cm ²
125939	≥C44	2	0.13	0.57	T3	250 cm ²	40 cm ²
125940	≥C44	2	0.13	0.54	T3	250 cm ²	40 cm ²
125941	≥C44	1	0.11	0.17	T1	250 cm ²	40 cm ²
125942	≥C44	1	0.11	0.17	T1	250 cm ²	40 cm ²
125943	≥C44	2	0.13	0.54	T3	250 cm ²	40 cm ²
125944	XS-S	2	0.19	0.74	U6	250 cm ²	40 cm ²
125944*	≥M	3	0.2	0.88	U6	250 cm ² *	40 cm ² *
125945	≥XS	2	0.14	0.58	T3	250 cm ²	40 cm ²

Garments that are certified according to class 3 can be combined with any other garment, as long as these do not cover the high-visibility garment's fluorescent or reflective areas.

On garments personalised with company logos, it is important to ensure that the logo does not obscure too great a proportion of the fluorescent area. This table will help you determine how large your logo can be. The total fluorescent area must be at least 0.8 m² to conform with class 3.

Note! Articles marked with * can only have logos placed on contrast colour areas, not on fluorescent areas.



EN ISO 20471
EN ISO 20471 is a standard for high-visibility garments.

ART. NO	SIZE	EN ISO 20471 HI-VIS CLASS	REFLEC-TIVE AREA/M ²	FLUO-RESCENT AREA/M ²	HI-VIS CO-CERTI-FICATION	MAX AREA CM ² FOR TRANSFER	MAX AREA CM ² FOR EMBROIDERY
125947*	≥XS	3	0.21	0.8	U6	250 cm ² *	40 cm ² *
125948	≥S	3	0.3	0.86	-	250 cm ²	40 cm ²
125949	≥S	3	0.28	0.83	-	250 cm ²	40 cm ²
125950	≥C34	2	0.13	0.52	T3	200 cm ²	40 cm ²
125951	≥C34	1	0.1	0.15	T1	100 cm ²	40 cm ²
125952	XS-M	2	0.16	0.63	U5	250 cm ²	40 cm ²
125952*	≥L	3	0.21	0.8	U5	250 cm ² *	40 cm ² *
126510	≥C44	2	0.13	0.57	T3	250 cm ²	40 cm ²
126518	≥C34	1	0.1	0.21	T2	435 cm ²	40 cm ²
127669	XS-S	2	0.15	0.65	U5	435 cm ²	40 cm ²
127669	≥M	3	0.21	0.81	U5	100 cm ²	40 cm ²
129517	≥C44	2	0.13	0.55	T3	435 cm ²	40 cm ²
129518	≥C44	1	0.1	0.15	T1	100 cm ²	40 cm ²
129519	≥C44	1	0.11	0.15	T1	100 cm ²	40 cm ²
129520	≥C44	2	0.13	0.54	T3	435 cm ²	40 cm ²
129521	≥C34	1	0.1	0.15	T1	100 cm ²	40 cm ²
129522	S	2	0.18	0.63	U5	250 cm ²	40 cm ²
129522	M	2	0.19	0.71	U5	250 cm ²	40 cm ²
129522	L	2	0.21	0.79	U5	250 cm ²	40 cm ²
129522	≥XL	3	0.22	0.88	U5	250 cm ²	40 cm ²
129548	XS	2	0.18	0.74	U6	435 cm ²	40 cm ²
129548	S	2	0.19	0.79	U6	435 cm ²	40 cm ²
129548	M	3	0.2	0.86	U6	435 cm ²	40 cm ²
129548	≥L	3	0.22	0.93	U6	435 cm ²	40 cm ²
129742	XS	2	0.17	0.72	U6	448 cm ²	Not possible
129742	S	2	0.18	0.76	U6	448 cm ²	Not possible
129742	≥M	3	0.20	0.82	U6	200 cm ²	Not possible
129869	XS-S	2	0.18	0.75	U6	340 cm ²	40 cm ²
129869	≥M	3	0.21	0.88	U6	340 cm ²	40 cm ²
129870	≥XS	2	0.13	0.58	T3	340 cm ²	40 cm ²
130666	≥XS	1	0.23	0.29	n/a	435 cm ²	40 cm ²
131146	S-L	2	0.17	0.67	U6	340 cm ²	40 cm ²
131146	≥XL	3	0.21	0.83	U6	300 cm ²	40 cm ²
131147	XS-S	2	0.18	0.7	U6	340 cm ²	40 cm ²
131147	≥M	3	0.2	0.84	U6	340 cm ²	40 cm ²
133268	≥XS	1	0.14	0.3	U2	340 cm ²	40 cm ²
133269	≥S	1	0.14	0.31	U2	340 cm ²	40 cm ²

* Logo placement only possible on contrast colour area, not on fluorescent area.

Approved transfers and embroidery

Profiling of flame-retardant Fristads garments must be in accordance with approved transfers and embroidery thread available within Fristads.

Fristads only uses transfers and embroidery that are approved together with our flame-retardant garments.

Maximum allowed size of embroidery and transfer

Fristads flame-protected non high-visibility garments.

Profiling of flame-retardant Fristads garments must be in accordance with approved transfers and embroidery thread available within Fristads. Fristads only uses transfers and embroidery that are approved together with our flame-retardant garments.

Separate table is available for our high visibility garments.

ART.NO	MAX AREA CM² FOR TRANSFER	MAX AREA CM² FOR EMBROIDERY
100328	250 cm²	40 cm²
100329	250 cm²	40 cm²
100330	250 cm²	40 cm²
100333	250 cm²	40 cm²
100334	250 cm²	40 cm²
100336	250 cm²	40 cm²
100338	250 cm²	40 cm²
100342	250 cm²	40 cm²
100343	250 cm²	40 cm²
100581	250 cm²	40 cm²
109425	435 cm²	40 cm²
109430	435 cm²	40 cm²
110736	250 cm²	40 cm²
111842	250 cm²	40 cm²
114095	435 cm²	40 cm²
119911	435 cm²	40 cm²

ART.NO	MAX AREA CM² FOR TRANSFER	MAX AREA CM² FOR EMBROIDERY
119921	435 cm²	40 cm²
121115	435 cm²	40 cm²
121354	435 cm²	40 cm²
122194	435 cm²	40 cm²
122286	435 cm²	40 cm²
122287	435 cm²	40 cm²
125038	435 cm²	40 cm²
125953	250 cm²	40 cm²
125954	250 cm²	40 cm²
129523	250 cm²	40 cm²
129524	435 cm²	40 cm²
131165	10 cm²	40 cm²
131166	10 cm²	40 cm²
131167	10 cm²	40 cm²
131168	10 cm²	40 cm²