



Mining trailing & reeling cables

Type SHD / SHD-CGC

Type SHD & SHD-CGC Shielded Underground Mining Cable

2 kV & 5 kV 3-core shielded trailing cables: SHD-CGC (center GC) & SHD Flat 3C

ICEA S-75-381 / NEMA WC 58

2 kV & 5 kV Shielded

P-7K-184-MSHA

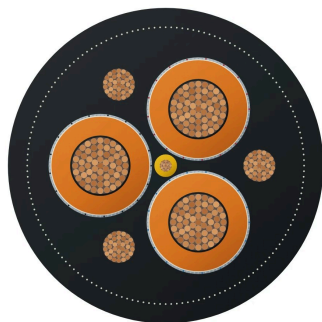


Application

Extra-heavy-duty shielded underground mining trailing cables to ICEA S-75-381 / NEMA WC 58: Type SHD-CGC (2 kV & 5 kV) with 3 grounds and a 16 AWG yellow PP center ground-check pilot for longwall shearers, plus Type SHD Flat 3C (2 kV) for continuous miners.

Typical uses: Underground coal longwall shearers, Continuous miners & roadheaders, Armoured face conveyors (AFC), Stage loaders & mobile crushers, Underground loaders & shuttle cars, High-capacity mine dewatering

Construction



Cross-section, not to scale

1	Phase conductors (3)	2/0 AWG to 350 kcmil (4 AWG-350 kcmil series)
2	Strand shield	
3	Primary insulation	ICEA S-75-381 Part 3
4	Insulation shield	
5	Center ground-check (SHD-CGC)	30 CFR § 75.804(a)
6	Grounding conductors	5 to 1 AWG (SHD-CGC) · 3 AWG (SHD Flat 2/0)
7	Integral fill & separator tape	
8	Outer jacket	P-7K-184-MSHA / P-184-MSHA · PA DEP

Technical data

Typical values

Rated voltage	2,000 V (Type SHD Flat 3C & Type SHD-CGC 3C) · 5,000 V (Type SHD-CGC Round 3C)	Ampacity range (90 °C)	243 to 435 A for 2/0 AWG–350 kcmil (95 to 487 A across full 6 AWG–500 kcmil range at 90 °C conductor, 40 °C ambient)
Phase core shielding	Semi-conducting strand shield + tinned copper/textile composite braid over each phase insulation	Grounding conductors	SHD-CGC: 3 symmetrical interstitial grounds · SHD Flat: 2 grounds between phase cores
Ground-check pilot (CGC)	30 CFR § 75.804: ≥ 16 AWG center ground-check conductor insulated with polypropylene permitted on longwall/shearer cables	Max. continuous conductor temp.	+90 °C continuous conductor temperature
Emergency overload / short-circuit	+130 °C emergency overload · +250 °C short-circuit	Min. operating temperature	–40 °C (extra-heavy-duty thermoset CPE / neoprene)
Min. bending radius	8 × OD for shielded round SHD-CGC cables; 6 × minor height H in the flat bending plane for Type SHD Flat 3C	Core fill & torsion control	Integral rubber fill and reinforcing binder for anti-torsion longwall handling
Outer jacket & wall thickness	Reinforced mold-cured extra-heavy-duty black thermoset CPE (205–265 mil wall) or polychloroprene/neoprene	Mine flame acceptance	MSHA 30 CFR Part 7 Subpart K flame test (P-184-MSHA / P-7K-184-MSHA); Pennsylvania DEP flame-resistant acceptance
Underground face environment	Resists coal-face rock fall, Bretby cable-handler flexing, abrasion, oil, emulsion fluids, moisture and ozone	Standards	ICEA S-75-381 / NEMA WC 58

Sizes

15 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Type · size	Phase strands	Grounds (3) AWG (strands)	Center GC pilot	Insulation mils	Insulation mm	Jacket mils	Nominal OD in	Nominal OD mm	Weight ≈ lb/kft	Mass ≈ kg/km	Ampacity A (90 °C)
Type SHD-CGC · 2,000 V (3 Shielded Phase + 3 Grounds + 16 AWG Center GC) 9 sizes											
☐ SHD-CGC 2 kV · 3 × 4 AWG	259	3 × 8 AWG (133)	16 AWG (PP)	70	1.78	185	1.62	41.1	1,850	2,753	122
☐ SHD-CGC 2 kV · 3 × 2 AWG	259	3 × 7 AWG (133)	16 AWG (PP)	70	1.78	195	1.78	45.2	2,360	3,512	159
☐ SHD-CGC 2 kV · 3 × 1 AWG	259	3 × 6 AWG (133)	16 AWG (PP)	80	2.03	200	1.91	48.5	2,790	4,152	184
☐ SHD-CGC 2 kV · 3 × 1/0 AWG	266	3 × 5 AWG (133)	16 AWG (PP)	80	2.03	205	2.00	50.8	3,120	4,643	211
☐ SHD-CGC 2 kV · 3 × 2/0 AWG	323	3 × 5 AWG (133)	16 AWG (PP)	80	2.03	205	2.09	53.1	3,400	5,059	243
☐ SHD-CGC 2 kV · 3 × 3/0 AWG	418	3 × 4 AWG (259)	16 AWG (PP)	80	2.03	205	2.21	56.1	3,934	5,855	279
☐ SHD-CGC 2 kV · 3 × 4/0 AWG	532	3 × 3 AWG (259)	16 AWG (PP)	80	2.03	220	2.36	59.9	4,860	7,231	321
☐ SHD-CGC 2 kV · 3 × 250 kcmil	627	3 × 2 AWG (259)	16 AWG (PP)	95	2.41	235	2.58	65.5	5,780	8,602	355
☐ SHD-CGC 2 kV · 3 × 350 kcmil	888	3 × 1 AWG (259)	16 AWG (PP)	95	2.41	250	2.81	71.4	7,400	11,012	435
Type SHD-CGC · 5,000 V (3 Shielded Phase + 3 Grounds + 16 AWG Center GC) 6 sizes											
☐ SHD-CGC 5 kV · 3 × 1/0 AWG	266	3 × 5 AWG (133)	16 AWG (PP)	110	2.79	220	2.11	53.6	3,390	5,045	211
☐ SHD-CGC 5 kV · 3 × 2/0 AWG	323	3 × 5 AWG (133)	16 AWG (PP)	110	2.79	220	2.20	55.9	3,716	5,529	243
☐ SHD-CGC 5 kV · 3 × 3/0 AWG	418	3 × 4 AWG (259)	16 AWG (PP)	110	2.79	235	2.36	59.9	4,130	6,146	279
☐ SHD-CGC 5 kV · 3 × 4/0 AWG	532	3 × 3 AWG (259)	16 AWG (PP)	110	2.79	235	2.50	63.5	5,190	7,723	321
☐ SHD-CGC 5 kV · 3 × 250 kcmil	627	3 × 2 AWG (259)	16 AWG (PP)	120	3.05	250	2.72	69.1	6,120	9,108	355
☐ SHD-CGC 5 kV · 3 × 350 kcmil	888	3 × 1 AWG (259)	16 AWG (PP)	120	3.05	265	2.95	74.9	7,571	11,265	435

– 2/0 AWG, 3/0 AWG, 4/0 AWG and 350 kcmil rows are directly from TEBAOFLEX datasheets (datasheet_5c01fa2975.pdf and datasheet_27b50accde.pdf).

– Each SHD-CGC cable contains three shielded phase conductors, three symmetrical interstitial grounding conductors, and one central 16 AWG yellow polypropylene-insulated ground-check conductor.

Type SHD Flat 3C · 2 kV (No GC)

7 sizes

Type · size	Strands (power / ground)	Insulation in	Insulation mm	H × W in	H × W mm	Weight ≈ lb/kft	Mass ≈ kg/km	Ampacity A (90°C)
Type SHD Flat · 3 × 4 AWG + 2×8 G	259 / 133	0.070	1.78	0.940 × 2.250	23.9 × 57.2	1,750	2,604	122
Type SHD Flat · 3 × 2 AWG + 2×6 G	259 / 133	0.070	1.78	1.030 × 2.520	26.2 × 64.0	2,280	3,393	159
Type SHD Flat · 3 × 1 AWG + 2×5 G	259 / 133	0.080	2.03	1.120 × 2.750	28.4 × 69.9	2,760	4,107	184
Type SHD Flat · 3 × 1/0 AWG + 2×4 G	266 / 259	0.080	2.03	1.160 × 2.860	29.5 × 72.6	3,180	4,732	211
Type SHD Flat · 3 × 2/0 AWG + 2×3 G	329 (7×47) / 204 (6×34)	0.080	2.03	1.205 × 2.970	30.6 × 75.4	3,600	5,357	243
Type SHD Flat · 3 × 3/0 AWG + 2×2 G	418 / 259	0.080	2.03	1.300 × 3.210	33.0 × 81.5	4,190	6,235	279
Type SHD Flat · 3 × 4/0 AWG + 2×1 G	532 / 259	0.080	2.03	1.410 × 3.500	35.8 × 88.9	4,950	7,366	321

- Flat 3C dimensional tolerances per datasheet_8726099609.pdf: ±0.050 in (±1.27 mm) minor H dimension and ±0.080 in (±2.03 mm) major W dimension.
- Type SHD Flat 3C includes two grounding conductors between the three shielded phase cores and omits the ground-check pilot.

Standards and approvals

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

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Email

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Web

tebaoflex.com/cables/shd-shd-cgc-shielded-underground-mining-trailing-cable



Typical values for this cable type, based on ICEA S-75-381 / NEMA WC 58. Values for your order are confirmed in the quotation. Subject to change without notice.
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