

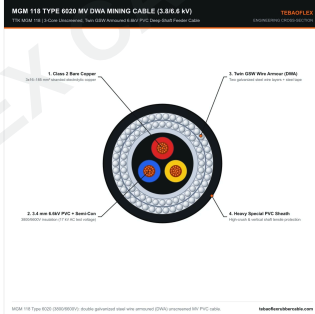
MGM 118 Type 6020 Double-Armoured Medium-Voltage Shaft Cable (3800/6600V)

MGM 118 Type 6020 is a 3800/6600 V double galvanized steel wire armoured (DWA) power cable built to Turkish TTK MGM 118, combining Class 2 copper conductors, 3.4 mm MV PVC insulation with semiconductive stress grading, and twin steel wire armour layers for vertical shafts and high-hazard underground roadways.

1. CABLE CONSTRUCTION

1. Conductor	Electrolytic circular stranded bare copper wire per IEC 60228 Class 2 (4.90 mm to 17.00 mm nominal conductor diameter across 16–185 mm²).
2. MV Insulation & Semi-Con Layer	3.4 mm nominal medium-voltage PVC insulation compound paired with semiconductive stress-grading layer for void-free 3.8/6.6 kV dielectric performance.
3. Inner Bedding	Extruded PVC inner sheath (1.4 mm to 2.6 mm radial wall; 30.0 mm to 56.9 mm bedding diameter) cushioning the core assembly under twin armour clamping forces.
4. Double GSW Armour (DWA)	Two concentric layers of heavy galvanized steel round wires (2x1.6 mm on 3x16; 2x2.0 mm on 3x25–70; 2x2.5 mm on 3x95–185 mm²) with optional galvanized steel separator/binder tape.
5. Outer Sheath	Special flame-retardant mining-grade PVC outer jacket (2.1 mm to 2.9 mm radial thickness) formulated against shaft water, oil mist, and flame propagation.

Cross-Section Anatomy



MGM 118 Type 6020 Cross-Section: Three Class 2 bare copper conductors, 3.4 mm MV PVC insulation + semiconductive stress layer, PVC inner bedding, double-layer GSW wire armour (DWA) with optional binder tape, and special PVC jacket.

2. ELECTRICAL, MECHANICAL & STANDARD DATA

Reference Standard	Turkish Hard Coal Enterprises TTK MGM 118 & IEC 60228 Class 2
Rated Voltage (Uo/U)	3800 / 6600 V (3.8/6.6 kV AC Medium-Voltage Shaft Feeders)
Routine Dielectric Test	17,000 V (17 kV) AC
Cross-Section Range	3 x 16, 25, 35, 50, 70, 95, 120, 150, and 185 mm²
MV Insulation Thickness	3.4 mm nominal across all cross-sections
Continuous Current (25°C)	86 A (3x16 mm²) up to 370 A (3x185 mm²) at 25°C ambient
Minimum Bending Radius	10 x maximum overall cable diameter (427 mm to 763 mm)
Armour DC Resistance (20°C)	1.53 Ω/km (3x16 mm²) down to 0.132 Ω/km (3x185 mm²)

3. DIMENSIONAL, ARMOUR & ELECTRICAL SPECIFICATIONS

MGM 118 Type 6020 (3800/6600V) — Double GSW Armoured (DWA) Vertical Shaft Feeder Schedule														
Cable Size	Cond. Dia. (mm)	MV PVC Wall (mm)	Inner Sheath (mm)	Inner Dia. (mm)	DWA Wire Dia. (mm)	Outer Sheath (mm)	Min. OD (mm)	Max. OD (mm)	Min. Bend (mm)	Current 25°C (A)	Cond. R (Ω/km)	Armour R (Ω/km)	Cu Wt. (kg/km)	Cable Wt. (kg/km)
3x16	4.90	3.4	1.4	30.0	2 x 1.6	2.1	38.7	42.7	427	86	1.15	1.53	461	4450
3x25	6.10	3.4	1.8	34.0	2 x 2.0	2.2	43.9	47.9	479	110	0.727	0.969	720	5850
3x35	7.10	3.4	1.8	36.5	2 x 2.0	2.3	46.2	50.2	502	135	0.524	0.699	1008	6500
3x50	8.40	3.4	1.8	37.9	2 x 2.0	2.4	49.2	53.2	532	160	0.387	0.516	1440	7400
3x70	10.00	3.4	1.8	40.7	2 x 2.0	2.5	52.9	56.9	569	200	0.268	0.357	2086	8550
3x95	11.80	3.4	2.2	44.7	2 x 2.5	2.6	59.7	63.7	637	245	0.193	0.257	2836	11250
3x120	13.30	3.4	2.2	48.6	2 x 2.5	2.7	63.2	67.2	672	285	0.153	0.204	3706	12550
3x150	15.20	3.4	2.2	52.7	2 x 2.5	2.8	67.4	71.4	714	325	0.124	0.165	4820	14200
3x185	17.00	3.4	2.6	56.9	2 x 2.5	2.9	72.3	76.3	763	370	0.0991	0.132	6078	16300

Vertical Shaft Cleating Note: Use cable weights above (4, 450 kg/km to 16, 300 kg/km) to calculate shaft cleat spacing and surface suspension-head tensile anchoring loads.