FEICHUN SPECIAL CABLES · FC®

TECHNICAL SUBMITTAL | Issued for Approval (IFA) | Items PC-01 – PC-14

0.6/1 kV · Spreader & Festoon

Spreader Reel & Festoon Power Cables for Container Cranes FC-CFX™ SPR-V & FC-FLX™ RND-X — Technical Data & Compliance Submittal

Prepared for submission by the Singapore contractor to the Engineer and the End Owner. Equivalent offers to CORDAFLEX (SMK)-V, SPD(RE)-FHNCT, SPREADERFLEX REEL XPRT and RONDOFLEX (FC) XPRT.

Doc No. FC-TDS-PWR-2026-S3P8 Rev. A (IFA) Date 14 Oct 2026 Origin China

HS 8544.49

01 Submittal Cover & Approval

PROJECT	END OWNER
MAIN CONTRACTOR / SUBMITTED BY	ENGINEER / CONSULTANT
SUBMITTAL NO.	EQUIPMENT Container crane spreader reels & trolley festoon systems
MANUFACTURER Anhui FeiChun Special Cable Co., Ltd., Hefei, China	MANUFACTURER DOCUMENT FC-TDS-PWR-2026-S3P8 · Rev. A
ITEMS COVERED PC-01 – PC-14 (14 items · 44 drums · 5,631 m)	COMPANION DOCUMENT FC-TDS-FOF-2026-S3F7 (fibre optic items FO-01 – FO-05)

Revision history

Rev.	Date	Description	Prepared	Checked	Approved
0	14 Oct 2026	Issued for tender (RFQ response)	Z. Yang	FC Tech. Dept.	–
A	14 Oct 2026	**Issued for approval** – added item data sheets, ratings, material data, ITP, deviation register, installation guidance	Z. Yang	FC Tech. Dept.	FC QA

Review & approval

MAIN CONTRACTOR	ENGINEER / CONSULTANT	END OWNER
☐ Code A — Approved	☐ Code A — Approved	☐ Code A — Approved
☐ Code B — Approved with comments	☐ Code B — Approved with comments	☐ Code B — Approved with comments
☐ Code C — Revise & resubmit	☐ Code C — Revise & resubmit	☐ Code C — Revise & resubmit
☐ Code D — Rejected	☐ Code D — Rejected	☐ Code D — Rejected
Name / signature:	Name / signature:	Name / signature:
Date:	Date:	Date:

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02 Scope & Item Cross-Reference

This submittal covers the fourteen spreader and festoon power/control cables of the RFQ. Each offer carries the buyer's Item Ref. on the data sheet, drum label and sheath marking. All offers meet or exceed the RFQ parameters, with one clarification recorded in the Deviation Register (Section 09).

No.	Item Ref.	Specified / Reference Type	FeiChun Offer	Drum length	Drums	Total
1	**PC-01**	Spreader reel cable 0.6/1 kV 44C × 2.5 mm² · CORDAFLEX (SMK)-V / SPD(RE)-FHNCT / WS-RLIN-V / SPREADERFLEX REEL XPRT or equivalent	**FC-CFX™ SPR-V (N)SHTÖU 44G2.5**	93 m	9	837 m
2	**PC-02**	Spreader vertical reel cable 0.6/1 kV 44 × 2.5 mm² · SPD(RE)-FHNCT / CORDAFLEX (SMK)-V or equivalent	**FC-CFX™ SPR-V (N)SHTÖU 44G2.5**	100 m	23	2,300 m
3	**PC-03**	Festoon cable 0.6/1 kV 24C × 2.5 mm² · RONDOFLEX XPRT, SAP 20003577 · 5DG6674 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 24G2.5**	182 m	1	182 m
4	**PC-04**	Festoon cable 0.6/1 kV 24C × 2.5 mm² · RONDOFLEX XPRT, SAP 20003577 · 5DG6674 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 24G2.5**	212 m	1	212 m
5	**PC-05**	Festoon cable 0.6/1 kV 30C × 2.5 mm² · RONDOFLEX XPRT, SAP 20003578 · 5DG6675 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 30G2.5**	208 m	1	208 m
6	**PC-06**	Festoon cable 0.6/1 kV 4C × 4 mm² · RONDOFLEX XPRT, SAP 20003550 · 5DG6642 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 4G4**	212 m	1	212 m
7	**PC-07**	Festoon cable 0.6/1 kV 4C × 10 mm², screened · RONDOFLEX FC XPRT, SAP 20003585 · 5DG6684 or equivalent	**FC-FLX™ RND-XC (N)GRDGCGÖU-J 4G10**	208 m	1	208 m
8	**PC-08**	Festoon cable 0.6/1 kV 4C × 16 mm² · RONDOFLEX XPRT, SAP 20003553 · 5DG6645 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 4G16**	212 m	1	212 m
9	**PC-09**	Festoon cable 0.6/1 kV 3C × 16 + 3C × 2.5 mm², screened · RONDOFLEX FC XPRT, SAP 20003586 · 5DG6685 or equivalent	**FC-FLX™ RND-XC (N)GRDGCGÖU-J 3x16+3G2.5/3**	208 m	1	208 m
10	**PC-10**	Festoon cable 0.6/1 kV 4C × 25 mm² · RONDOFLEX XPRT, SAP 20003554 · 5DG6646 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 4G25**	212 m	1	212 m
11	**PC-11**	Festoon cable 0.6/1 kV 5C × 25 mm² · RONDOFLEX XPRT, SAP 20003563 · 5DG6656 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 5G25**	208 m	1	208 m
12	**PC-12**	Festoon cable 0.6/1 kV 1C × 35 mm² · RONDOFLEX XPRT, SAP 20003533 · 5DG6611 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 1x35**	212 m	1	212 m
13	**PC-13**	Festoon cable 0.6/1 kV 5C × 35 mm² · RONDOFLEX XPRT, SAP 20003564 · 5DG6657 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU-J 5G35**	208 m	1	208 m
14	**PC-14**	Festoon cable 0.6/1 kV 6 pairs × (2C × 1 mm²), control · RONDOFLEX XPRT, SAP 20003594 · 5DG6694 or equivalent	**FC-FLX™ RND-X (N)GRDGÖU 6x2x1**	212 m	1	212 m
				Total supply	**44 drums**	**5,631 m**

RATED VOLTAGE

0.6/1 kV

AC test 3.5 kV · 5 min

SPREADER REEL

7,000 N

Aramid strength member · 180 m/min

FESTOON TRAVEL

270 m/min

Short-lay EPR/PCP design

CONDUCTOR TEMP.

90 °C

Short circuit 250 °C

03 FC-CFX™ SPR-V (N)SHTÖU 44G2.5 — Items PC-01 & PC-02

TYPE A **FC-CFX™ SPR-V (N)SHTÖU 44G2.5**

PC-01 · PC-02 · ≡ CORDAFLEX (SMK)-V / SPD(RE)-FHNCT

Heavy-duty spreader cable for vertical and monospiral spreader reels on STS and RTG cranes. Forty-four cores are laid in three short-lay layers around a central aramid strength member that carries the hanging load; a polyester anti-torsion braid between the rubber sheaths keeps the cable torsionally stable during fast hoisting. One design covers both items: it meets the tighter PC-02 diameter window (36 – 37.8 mm) and the higher PC-02 tensile requirement (7,000 N), and therefore exceeds PC-01.

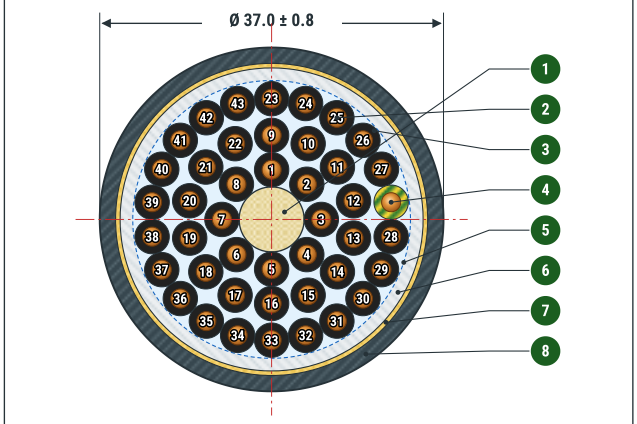


FIG. 1 — FC-CFX™ SPR-V (N)SHTÖU 44G2.5 · ITEMS PC-01 / PC-02

DOC NO. FC-TDS-PWR-2026-S3P8	REV. 0 · SCALE NTS (≈ 7:1)
PROJECTION: 1st ANGLE · SECTION A–A	DIMENSIONS IN mm · FEICHUN CABLES

Pos.	Element	Material / Detail
1	Central strength member	Aramid core, PE-sheathed, Ø 7.0 mm — rated ≥ 7,000 N
2	Conductor	Tinned copper, extra-fine wire class 6 (IEC 60228), 2.5 mm²
3	Insulation	EPR rubber 3GI3, black with white numerals 1 – 43
4	Protective conductor	Green/yellow core, 2.5 mm²
5	Core assembly	3 layers (8 + 14 + 22), short-lay, PETP separator tape
6	Inner sheath	Special rubber compound 5GM3
7	Anti-torsion braid	High-tenacity polyester braid
8	Outer sheath	PCP rubber 5GM5, black, Ø 37.0 ± 0.8 mm

Design principle: the hanging load is carried by the aramid strength member, not the copper. Conductors are therefore not stretched during hoisting, which preserves conductor resistance and avoids core breakage at the reel inlet.

04 FC-FLX™ RND-X / RND-XC Festoon Cables — Items PC-03 to PC-14

TYPE B **FC-FLX™ RND-X (N)GRDGÖU-J · RND-XC (N)GRDGCGÖU-J**

PC-03 … PC-14 · ≡ RONDOFLEX (FC) XPRT

Round festoon cables for crane trolley festoon systems. Fine-stranded copper conductors with EPR insulation are laid up with a short lay and the interstices filled by the PCP sheath compound, giving a compact, kink-free cable for 270 m/min travel. Screened versions (RND-XC) carry a tinned copper braid between inner and outer sheaths for EMC on VFD-fed trolley and hoist motors.

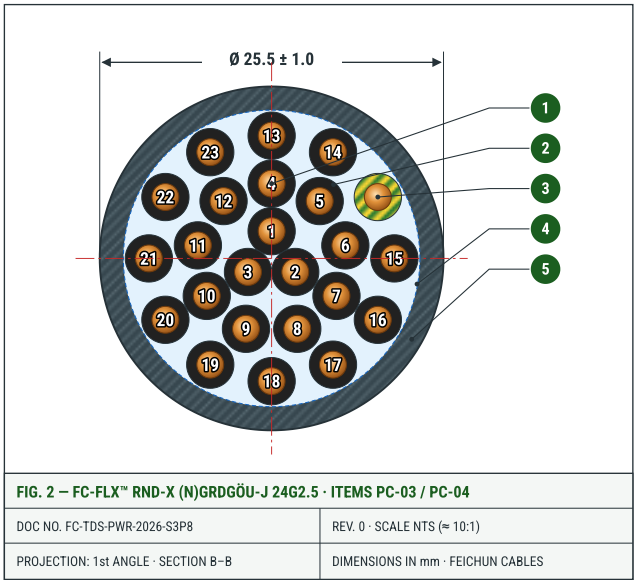


FIG. 2 — FC-FLX™ RND-X (N)GRDGÖU-J 24G2.5 · ITEMS PC-03 / PC-04	
DOC NO. FC-TDS-PWR-2026-S3P8	REV. 0 · SCALE NTS (≈ 10:1)
PROJECTION: 1st ANGLE · SECTION B–B	DIMENSIONS IN mm · FEICHUN CABLES

Pos.	Element	Material / Detail
1	Conductor	Plain copper, fine wire class 5 (IEC 60228), 2.5 mm²
2	Insulation	EPR rubber 3GI3, black with white numerals 1 – 23
3	Protective conductor	Green/yellow core, 2.5 mm² (-J version)
4	Core assembly	3 + 9 + 12, short lay, interstices filled, PETP tape
5	Outer sheath	PCP rubber 5GM5, black, festoon-grade, extruded into interstices

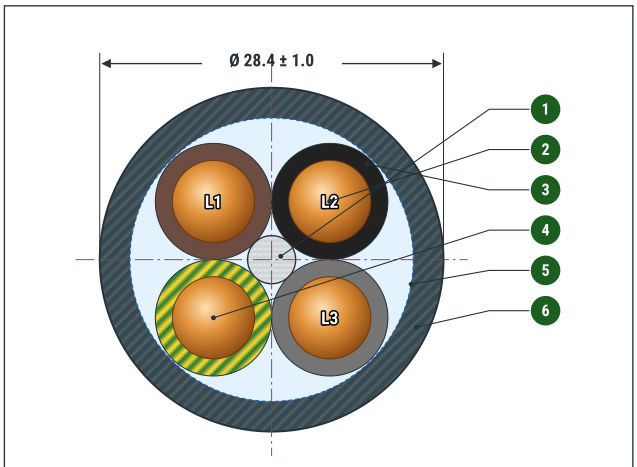


FIG. 3 — FC-FLX™ RND-X (N)GRDGÖU-J 4G25 · ITEM PC-10 (TYPICAL 4/5-CORE)	
DOC NO. FC-TDS-PWR-2026-S3P8	REV. 0 · SCALE NTS (≈ 9:1)
PROJECTION: 1st ANGLE · SECTION C–C	DIMENSIONS IN mm · FEICHUN CABLES

Pos.	Element	Material / Detail
1	Centre filler	Rubber filler cord
2	Conductor	Plain copper, fine wire class 5, 25 mm²
3	Insulation	EPR 3GI3 — brown / black / grey (VDE colour code)
4	Protective conductor	Green/yellow core, 25 mm²
5	Separator	PETP tape over core assembly
6	Outer sheath	PCP rubber 5GM5, black, festoon-grade

Core colours: up to 5 cores — brown / black / grey / blue + green/yellow (HD 308 S2). Multicore — black with white numerals + green/yellow. PC-14 — numbered pairs.

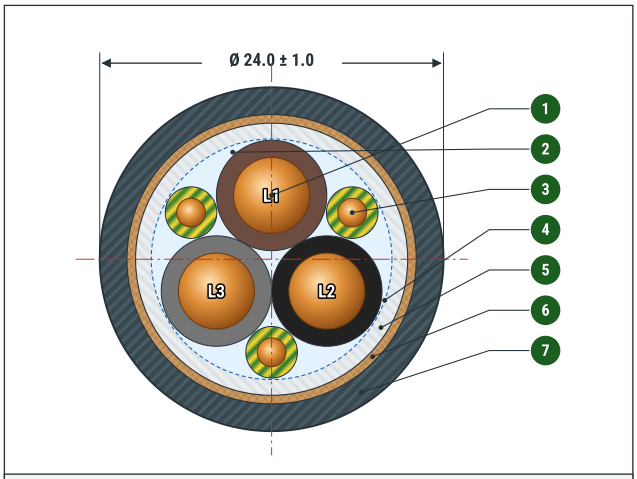


FIG. 4 — FC-FLX™ RND-XC (N)GRDGCGÖU-J 3x16+3G2.5/3 · ITEM PC-09	
DOC NO. FC-TDS-PWR-2026-S3P8	REV. 0 · SCALE NTS (≈ 11:1)
PROJECTION: 1st ANGLE · SECTION D–D	DIMENSIONS IN mm · FEICHUN CABLES

Pos.	Element	Material / Detail
1	Phase conductor	Plain copper, fine wire class 5, 16 mm²
2	Insulation	EPR 3GI3 — brown / black / grey
3	Protective conductor	3 × 2.5 mm² G/Y, split and placed symmetrically in the outer interstices (EMC design)
4	Separator	PETP tape
5	Inner sheath	Rubber 5GM3
6	Screen	Tinned copper wire braid, optical coverage ≥ 85 %
7	Outer sheath	PCP rubber 5GM5, black, Ø 24.0 ± 1.0 mm

PC-07 (4G10, screened) uses the same RND-XC build-up: four cores (L1/L2/L3 + G/Y) under inner sheath, tinned copper braid and PCP outer sheath.

Summary data — festoon series

Item	FeiChun Type	Screen	OD (mm)	Weight (kg/km)	Perm. tensile (N)	Min. bend radius (mm)	R20 max (Ω/km)	Speed (m/min)
PC-03	FC-FLX™ RND-X (N)GRDGÖU-J 24G2.5	—	25.5 ± 1.0	≈ 1,120	900	128	7.98	270
PC-04	FC-FLX™ RND-X (N)GRDGÖU-J 24G2.5	—	25.5 ± 1.0	≈ 1,120	900	128	7.98	270
PC-05	FC-FLX™ RND-X (N)GRDGÖU-J 30G2.5	—	27.8 ± 1.0	≈ 1,340	1,125	139	7.98	270
PC-06	FC-FLX™ RND-X (N)GRDGÖU-J 4G4	—	14.4 ± 0.6	≈ 345	240	72	4.95	270
PC-07	FC-FLX™ RND-XC (N)GRDGCGÖU-J 4G10	Cu braid	21.3 ± 1.0	≈ 875	600	106	1.91	270
PC-08	FC-FLX™ RND-X (N)GRDGÖU-J 4G16	—	24.3 ± 0.8	≈ 1,095	960	122	1.21	270
PC-09	FC-FLX™ RND-XC (N)GRDGCGÖU-J 3x16+3G2.5/3	Cu braid	24.0 ± 1.0	≈ 1,135	720	120	1.21 / 7.98	270
PC-10	FC-FLX™ RND-X (N)GRDGÖU-J 4G25	—	28.4 ± 1.0	≈ 1,590	1,500	142	0.780	270
PC-11	FC-FLX™ RND-X (N)GRDGÖU-J 5G25	—	31.4 ± 1.0	≈ 1,965	1,875	157	0.780	270
PC-12	FC-FLX™ RND-X (N)GRDGÖU-J 1x35	—	13.2 ± 0.6	≈ 425	525	66	0.554	270

Item	FeiChun Type	Screen	OD (mm)	Weight (kg/km)	Perm. tensile (N)	Min. bend radius (mm)	R_{20} max (Ω/km)	Speed (m/min)
PC-13	FC-FLX™ RND-X (N)GRDGÖU-J 5G35	—	36.2 ± 1.0	≈ 2,670	2,625	181	0.554	270
PC-14	FC-FLX™ RND-X (N)GRDGÖU 6x2x1	—	15.5 ± 0.8	≈ 330	180	78	19.5	270

05 Individual Item Data Sheets

One data sheet per Item Ref., for direct cross-checking against the RFQ schedule. RFQ values are shown in brackets beside the FeiChun values.

PC-01 FC-CFX™ SPR-V (N)SHTÖU 44G2.5

≡ CORDAFLEX (SMK)-V (N)SHTÖU · 0.6/1kV SPD(RE)-FHNCT 44x2.5 · WS-RLIN-V 44C x 2.5 · SPREADERFLEX REEL XPRT

CONSTRUCTION	
Cores × cross-section	44 × 2.5 mm²
Conductor	Tinned copper, class 6, max. wire Ø 0.21 mm, Ø ≈ 2.05 mm
Insulation	EPR 3GI3, nom. 0.8 mm
Core identification	Black, white numerals 1 – 43 + green/yellow
Core assembly	44 cores in 3 layers (8 + 14 + 22), short lay, around central aramid strength member Ø 7.0 mm; PETP separator tape
Screen	–
Inner sheath	Rubber 5GM3, nom. 1.45 mm
Outer sheath	Polyester anti-torsion braid · PCP 5GM5, nom. 1.7 mm, black
DIMENSIONS & MASS	
Outer diameter	**37.0 ± 0.8 mm** (RFQ 33.1 – 38.8 mm)
Cable weight	≈ 1,950 kg/km (RFQ 1,980 kg/km)
Copper content	≈ 978 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	8.21 / 10.5 Ω/km
Current rating (30 °C, air)	10.5 A per core (multicore-derated)
Short-circuit current 1 s	0.36 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	180 m/min hoisting (design 240)
Permissible tensile load	**7,000 N** (RFQ 5,100 N min.)
Min. bending radius	185 mm (5 × D)
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	9 × 93 m wooden drums = 837 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-02 FC-CFX™ SPR-V (N)SHTÖU 44G2.5

≡ 0.6/1kV SPD(RE)-FHNCT · CORDAFLEX (SMK)-V (N)SHTÖU

CONSTRUCTION

Cores × cross-section	44 × 2.5 mm²
Conductor	Tinned copper, class 6, max. wire Ø 0.21 mm, Ø ≈ 2.05 mm
Insulation	EPR 3GI3, nom. 0.8 mm
Core identification	Black, white numerals 1 – 43 + green/yellow
Core assembly	44 cores in 3 layers (8 + 14 + 22), short lay, around central aramid strength member Ø 7.0 mm; PETP separator tape
Screen	–
Inner sheath	Rubber 5GM3, nom. 1.45 mm
Outer sheath	Polyester anti-torsion braid · PCP 5GM5, nom. 1.7 mm, black

DIMENSIONS & MASS

Outer diameter	**37.0 ± 0.8 mm** (RFQ 36 – 37.8 mm)
Cable weight	≈ 1,950 kg/km (RFQ 1,980 kg/km)
Copper content	≈ 978 kg/km

ELECTRICAL

Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	8.21 / 10.5 Ω/km
Current rating (30 °C, air)	10.5 A per core (multicore-derated)
Short-circuit current 1 s	0.36 kA (90 → 250 °C)

MECHANICAL & OPERATING

Service speed	180 m/min hoisting (design 240)
Permissible tensile load	**7,000 N** (RFQ 7,000 N min.)
Min. bending radius	185 mm (5 × D)
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	23 × 100 m wooden drums = 2,300 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-03 FC-FLX™ RND-X (N)GRDGÖU-J 24G2.5

≡ RONDOFLEX XPRT · SAP 20003577 · 5DG6674

CONSTRUCTION

Cores × cross-section	24 × 2.5 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.26 mm, Ø ≈ 1.9 mm
Insulation	EPR 3GI3, nom. 0.8 mm
Core identification	Black, white numerals 1 – 23 + G/Y
Core assembly	24 cores in layers (3 + 9 + 12), short lay
Screen	–
Outer sheath	PCP 5GM5, nom. 2.0 mm, black

DIMENSIONS & MASS

Outer diameter	**25.5 ± 1.0 mm** (RFQ 24 – 27 mm)
Cable weight	≈ 1,120 kg/km (RFQ 1,140 kg/km)
Copper content	≈ 533 kg/km

ELECTRICAL

Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	7.98 / 10.2 Ω/km
Current rating (30 °C, air)	12.0 A per core (multicore-derated)
Short-circuit current 1 s	0.36 kA (90 → 250 °C)

MECHANICAL & OPERATING

Service speed	270 m/min trolley travel
Permissible tensile load	**900 N** (RFQ 900 N max.)
Min. bending radius	128 mm (5 × D) · RFQ 135 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 182 m wooden drum = 182 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-04 FC-FLX™ RND-X (N)GRDGÖU-J 24G2.5

≡ RONDOFLEX XPRT · SAP 20003577 · 5DG6674

CONSTRUCTION	
Cores × cross-section	24 × 2.5 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.26 mm, Ø ≈ 1.9 mm
Insulation	EPR 3GI3, nom. 0.8 mm
Core identification	Black, white numerals 1 – 23 + G/Y
Core assembly	24 cores in layers (3 + 9 + 12), short lay
Screen	–
Outer sheath	PCP 5GM5, nom. 2.0 mm, black
DIMENSIONS & MASS	
Outer diameter	**25.5 ± 1.0 mm** (RFQ 24 – 27 mm)
Cable weight	≈ 1,120 kg/km (RFQ 1,140 kg/km)
Copper content	≈ 533 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	7.98 / 10.2 Ω/km
Current rating (30 °C, air)	12.0 A per core (multicore-derated)
Short-circuit current 1 s	0.36 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**900 N** (RFQ 900 N max.)
Min. bending radius	128 mm (5 × D) · RFQ 135 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 212 m wooden drum = 212 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-05 FC-FLX™ RND-X (N)GRDGÖU-J 30G2.5

≡ RONDOFLEX XPRT · SAP 20003578 · 5DG6675

CONSTRUCTION	
Cores × cross-section	30 × 2.5 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.26 mm, Ø ≈ 1.9 mm
Insulation	EPR 3GI3, nom. 0.8 mm
Core identification	Black, white numerals 1 – 29 + G/Y
Core assembly	30 cores in layers (1 + 6 + 11 + 12), short lay
Screen	–
Outer sheath	PCP 5GM5, nom. 2.1 mm, black
DIMENSIONS & MASS	
Outer diameter	**27.8 ± 1.0 mm** (RFQ 26.4 – 29.4 mm)
Cable weight	≈ 1,340 kg/km (RFQ 1,360 kg/km)
Copper content	≈ 667 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	7.98 / 10.2 Ω/km
Current rating (30 °C, air)	11.4 A per core (multicore-derated)
Short-circuit current 1 s	0.36 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**1,125 N** (RFQ 1,120 N max.)
Min. bending radius	139 mm (5 × D) · RFQ 147 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 208 m wooden drum = 208 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-06 FC-FLX™ RND-X (N)GRDGÖU-J 4G4

≡ RONDOFLEX XPRT · SAP 20003550 · 5DG6642

CONSTRUCTION	
Cores × cross-section	4 × 4 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.31 mm, Ø ≈ 2.6 mm
Insulation	EPR 3GI3, nom. 1.0 mm
Core identification	Brown, black, grey + G/Y
Core assembly	4 cores laid up round centre filler
Screen	–
Outer sheath	PCP 5GM5, nom. 1.6 mm, black
DIMENSIONS & MASS	
Outer diameter	**14.4 ± 0.6 mm** (RFQ 13.6 – 15.2 mm)
Cable weight	≈ 345 kg/km (RFQ 350 kg/km)
Copper content	≈ 142 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	4.95 / 6.31 Ω/km
Current rating (30 °C, air)	41.0 A per core
Short-circuit current 1 s	0.57 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**240 N** (RFQ 240 N max.)
Min. bending radius	72 mm (5 × D) · RFQ 76 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 212 m wooden drum = 212 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-07 FC-FLX™ RND-XC (N)GRDGCGÖU-J 4G10

≡ RONDOFLEX FC XPRT · SAP 20003585 · 5DG6684

CONSTRUCTION	
Cores × cross-section	4 × 10 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.41 mm, Ø ≈ 4.2 mm
Insulation	EPR 3GI3, nom. 1.2 mm
Core identification	Brown, black, grey + G/Y
Core assembly	4 cores laid up round centre filler
Screen	Tinned Cu braid ≥ 85 %
Outer sheath	Inner 5GM3 0.8 mm · outer PCP 5GM5 1.4 mm, black
DIMENSIONS & MASS	
Outer diameter	**21.3 ± 1.0 mm** (RFQ 19.6 – 22.6 mm)
Cable weight	≈ 875 kg/km (RFQ 890 kg/km)
Copper content	≈ 356 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	1.91 / 2.44 Ω/km
Current rating (30 °C, air)	74.0 A per core
Short-circuit current 1 s	1.43 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**600 N** (RFQ 600 N max.)
Min. bending radius	106 mm (5 × D) · RFQ 113 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 208 m wooden drum = 208 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-08 FC-FLX™ RND-X (N)GRDGÖU-J 4G16

≡ RONDOFLEX XPRT · SAP 20003553 · 5DG6645

CONSTRUCTION	
Cores × cross-section	4 × 16 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.41 mm, Ø ≈ 5.3 mm
Insulation	EPR 3GI3, nom. 1.2 mm
Core identification	Brown, black, grey + G/Y
Core assembly	4 cores laid up round centre filler
Screen	–
Outer sheath	PCP 5GM5, nom. 2.8 mm, black
DIMENSIONS & MASS	
Outer diameter	**24.3 ± 0.8 mm** (RFQ 23.3 – 25.3 mm)
Cable weight	≈ 1,095 kg/km (RFQ 1,110 kg/km)
Copper content	≈ 569 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	1.21 / 1.54 Ω/km
Current rating (30 °C, air)	99.0 A per core
Short-circuit current 1 s	2.29 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**960 N** (RFQ 960 N max.)
Min. bending radius	122 mm (5 × D) · RFQ 127 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 212 m wooden drum = 212 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-09 FC-FLX™ RND-XC (N)GRDGCGÖU-J 3×16+3G2.5/3

≡ RONDOFLEX FC XPRT · SAP 20003586 · 5DG6685

CONSTRUCTION	
Cores × cross-section	3 × 16 mm² + 3 × 2.5/3 mm² (G/Y split)
Conductor	Plain copper, class 5, max. wire Ø 0.41 mm, Ø ≈ 5.3 mm
Insulation	EPR 3GI3, nom. 1.2 mm
Core identification	Brown, black, grey + 3 × G/Y
Core assembly	3 phase cores + 3 split G/Y earth cores in outer interstices (symmetrical EMC design)
Screen	Tinned Cu braid ≥ 85 %
Outer sheath	Inner 5GM3 1.1 mm · outer PCP 5GM5 1.9 mm, black
DIMENSIONS & MASS	
Outer diameter	**24.0 ± 1.0 mm** (RFQ 22.4 – 25.4 mm)
Cable weight	≈ 1,135 kg/km (RFQ 1,150 kg/km)
Copper content	≈ 493 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	1.21 / 1.54 Ω/km
Current rating (30 °C, air)	99.0 A per core
Short-circuit current 1 s	2.29 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**720 N** (RFQ 720 N max.)
Min. bending radius	120 mm (5 × D) · RFQ 127 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 208 m wooden drum = 208 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-10 FC-FLX™ RND-X (N)GRDGÖU-J 4G25

≡ RONDOFLEX XPRT · SAP 20003554 · 5DG6646

CONSTRUCTION	
Cores × cross-section	4 × 25 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.41 mm, Ø ≈ 6.8 mm
Insulation	EPR 3GI3, nom. 1.4 mm
Core identification	Brown, black, grey + G/Y
Core assembly	4 cores laid up round centre filler
Screen	–
Outer sheath	PCP 5GM5, nom. 2.6 mm, black
DIMENSIONS & MASS	
Outer diameter	**28.4 ± 1.0 mm** (RFQ 26.9 – 29.9 mm)
Cable weight	≈ 1,590 kg/km (RFQ 1,610 kg/km)
Copper content	≈ 889 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	0.78 / 0.994 Ω/km
Current rating (30 °C, air)	131.0 A per core
Short-circuit current 1 s	3.58 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**1,500 N** (RFQ 1,500 N max.)
Min. bending radius	142 mm (5 × D) · RFQ 150 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 212 m wooden drum = 212 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-11 FC-FLX™ RND-X (N)GRDGÖU-J 5G25

≡ RONDOFLEX XPRT · SAP 20003563 · 5DG6656

CONSTRUCTION	
Cores × cross-section	5 × 25 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.41 mm, Ø ≈ 6.8 mm
Insulation	EPR 3GI3, nom. 1.4 mm
Core identification	Brown, black, grey, blue + G/Y
Core assembly	5 cores laid up round centre filler
Screen	–
Outer sheath	PCP 5GM5, nom. 2.75 mm, black
DIMENSIONS & MASS	
Outer diameter	**31.4 ± 1.0 mm** (RFQ 29.9 – 32.9 mm)
Cable weight	≈ 1,965 kg/km (RFQ 1,990 kg/km)
Copper content	≈ 1,111 kg/km

ELECTRICAL	
Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	0.78 / 0.994 Ω/km
Current rating (30 °C, air)	131.0 A per core
Short-circuit current 1 s	3.58 kA (90 → 250 °C)
MECHANICAL & OPERATING	
Service speed	270 m/min trolley travel
Permissible tensile load	**1,875 N** (RFQ 1,870 N max.)
Min. bending radius	157 mm (5 × D) · RFQ 165 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 208 m wooden drum = 208 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-12 FC-FLX™ RND-X (N)GRDGÖU-J 1×35

≡ RONDOFLEX XPRT · SAP 20003533 · 5DG6611

CONSTRUCTION

Cores × cross-section	1 × 35 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.41 mm, Ø ≈ 8.0 mm
Insulation	EPR 3GI3, nom. 1.4 mm
Core identification	Black
Core assembly	Single core
Screen	–
Outer sheath	PCP 5GM5, nom. 1.2 mm, black

DIMENSIONS & MASS

Outer diameter	**13.2 ± 0.6 mm** (RFQ 12.3 – 13.9 mm)
Cable weight	≈ 425 kg/km (RFQ 430 kg/km)
Copper content	≈ 311 kg/km

ELECTRICAL

Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	0.554 / 0.706 Ω/km
Current rating (30 °C, air)	162.0 A per core
Short-circuit current 1 s	5.00 kA (90 → 250 °C)

MECHANICAL & OPERATING

Service speed	270 m/min trolley travel
Permissible tensile load	**525 N** (RFQ 520 N max.)
Min. bending radius	66 mm (5 × D) · RFQ 70 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 212 m wooden drum = 212 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-13 FC-FLX™ RND-X (N)GRDGÖU-J 5G35

≡ RONDOFLEX XPRT · SAP 20003564 · 5DG6657

CONSTRUCTION

Cores × cross-section	5 × 35 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.41 mm, Ø ≈ 8.0 mm
Insulation	EPR 3GI3, nom. 1.4 mm
Core identification	Brown, black, grey, blue + G/Y
Core assembly	5 cores laid up round centre filler
Screen	–
Outer sheath	PCP 5GM5, nom. 3.5 mm, black

DIMENSIONS & MASS

Outer diameter	**36.2 ± 1.0 mm** (RFQ 34.7 – 37.7 mm)
Cable weight	≈ 2,670 kg/km (RFQ 2,700 kg/km)
Copper content	≈ 1,556 kg/km

ELECTRICAL

Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	0.554 / 0.706 Ω/km
Current rating (30 °C, air)	162.0 A per core
Short-circuit current 1 s	5.00 kA (90 → 250 °C)

MECHANICAL & OPERATING

Service speed	270 m/min trolley travel
Permissible tensile load	**2,625 N** (RFQ 2,620 N max.)
Min. bending radius	181 mm (5 × D) · RFQ 189 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 208 m wooden drum = 208 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

PC-14 **FC-FLX™ RND-X (N)GRDGÖU 6×2×1**

≡ RONDOFLEX XPRT · SAP 20003594 · 5DG6694

CONSTRUCTION

Cores × cross-section	12 × 1.0 mm²
Conductor	Plain copper, class 5, max. wire Ø 0.21 mm, Ø ≈ 1.3 mm
Insulation	EPR 3GI3, nom. 0.8 mm
Core identification	Black with white numerals, pairs 1 – 6 (a/b)
Core assembly	12 cores twisted in 6 numbered pairs, pairs stranded in layers
Screen	–
Outer sheath	PCP 5GM5, nom. 1.75 mm, black

DIMENSIONS & MASS

Outer diameter	**15.5 ± 0.8 mm** (RFQ 27.2 – 30.2 mm)
Cable weight	≈ 330 kg/km (RFQ 1,280 kg/km)
Copper content	≈ 107 kg/km

ELECTRICAL

Rated voltage U_0/U	0.6/1 kV · test 3.5 kV AC 5 min
R_{20} max. / R_{90} (DC)	19.5 / 24.9 Ω/km
Current rating (30 °C, air)	9.5 A per core (multicore-derated)
Short-circuit current 1 s	0.14 kA (90 → 250 °C)

MECHANICAL & OPERATING

Service speed	270 m/min trolley travel
Permissible tensile load	**180 N** (RFQ 180 N max.)
Min. bending radius	78 mm (5 × D) · RFQ 151 mm min.
Temperature	Flexing −25 … +80 °C · fixed −40 … +80 °C
Supply	1 × 212 m wooden drum = 212 m

✓ OD ✓ Weight ✓ Speed ✓ Tensile ✓ Bending radius ✓ Wooden drum c/w test certificate

Remark: OD / weight below RFQ values — see Deviation Register DR-01.

06 Electrical Ratings & Derating

Current ratings are for continuous operation at 90 °C conductor temperature, 30 °C ambient, cable in free air, based on DIN VDE 0298-4 for heat-resistant rubber-insulated flexible cables. Multicore items carry the reduction factor for the number of loaded cores. Voltage drop is three-phase at cos φ = 0.8 and 90 °C.

Item	Cores × size	R_{20} max (Ω/km)	R_{90} DC (Ω/km)	Base rating (A)	Multicore factor	Rating (A)	I_{sc} 1 s (kA)	Δu 3φ (mV/A/m)
PC-01	44 × 2.5 mm²	8.21	10.5	30	0.35	**10.5**	0.36	14.59
PC-02	44 × 2.5 mm²	8.21	10.5	30	0.35	**10.5**	0.36	14.59
PC-03	24 × 2.5 mm²	7.98	10.2	30	0.40	**12.0**	0.36	14.18
PC-04	24 × 2.5 mm²	7.98	10.2	30	0.40	**12.0**	0.36	14.18
PC-05	30 × 2.5 mm²	7.98	10.2	30	0.38	**11.4**	0.36	14.18
PC-06	4 × 4 mm²	4.95	6.31	41	1.00	**41.0**	0.57	8.83
PC-07	4 × 10 mm²	1.91	2.44	74	1.00	**74.0**	1.43	3.46
PC-08	4 × 16 mm²	1.21	1.54	99	1.00	**99.0**	2.29	2.22
PC-09	3 × 16 mm² + 3 × 2.5/3 mm² (G/Y split)	1.21	1.54	99	1.00	**99.0**	2.29	2.22
PC-10	4 × 25 mm²	0.78	0.994	131	1.00	**131.0**	3.58	1.46
PC-11	5 × 25 mm²	0.78	0.994	131	1.00	**131.0**	3.58	1.46
PC-12	1 × 35 mm²	0.554	0.706	162	1.00	**162.0**	5.00	1.06
PC-13	5 × 35 mm²	0.554	0.706	162	1.00	**162.0**	5.00	1.06
PC-14	12 × 1.0 mm²	19.5	24.9	19	0.50	**9.5**	0.14	34.53

Correction factors (multiply the rating above)

Ambient temperature	Factor (90 °C)
30 °C	1.00
35 °C	0.96
40 °C	0.91
45 °C	0.87
50 °C	0.82

Spreader reel — wound layers (PC-01/02)	Factor
Monospiral reel (1 layer)	0.80
2 layers	0.61
3 layers	0.49
4 layers	0.42
Festoon systems (PC-03 – PC-14)	1.00

For the Singapore climate, the 35 – 40 °C factor (0.96 – 0.91) is normally applied for cables exposed on the crane structure. The 44-core spreader cables are signal/control duty; their per-core rating is well above typical control currents even after reel derating.

Material Properties

Property	Method	EPR insulation 3GI3	Inner sheath 5GM3	Outer sheath PCP 5GM5
Tensile strength (unaged)	IEC 60811-501	≥ 5.0 N/mm²	≥ 10.0 N/mm²	≥ 15.0 N/mm²
Elongation at break (unaged)	IEC 60811-501	≥ 200 %	≥ 300 %	≥ 300 %
Ageing in air oven	IEC 60811-401	7 d / 135 °C, ± 30 %	7 d / 100 °C, ± 30 %	7 d / 100 °C, ± 30 %
Hot set (load / perm. set)	IEC 60811-507	≤ 175 % / ≤ 15 %	–	–
Oil immersion (IRM 902, 24 h, 100 °C)	IEC 60811-404	–	–	± 40 %
Tear resistance	DIN VDE 0207-21	–	–	≥ 10 N/mm
Ozone resistance	IEC 60811-403	No cracks	–	No cracks
Flame propagation (complete cable)	IEC 60332-1-2	Pass		

08 Compliance Matrix against RFQ Parameters

Statement of compliance per RFQ Commercial Instruction (7). "Exceeds" denotes a value better than the specified requirement. Tensile and bending-radius values are offered at or within the RFQ limits, so the cables work within the buyer's existing festoon and reel design.

Item	Parameter	RFQ requirement	FeiChun offer	Status	Remarks
PC-01 / PC-02 · FC-CFX™ SPR-V (N)SHTÖU 44G2.5					
PC-01	Outer diameter	33.1 – 38.8 mm	37.0 ± 0.8 mm	Comply	
PC-01	Weight	1,980 kg/km	≈ 1,950 kg/km	Comply	
PC-01	Hoisting speed	180 m/min	180 m/min (design rating 240 m/min)	Exceeds	
PC-01	Permissible tensile strength	5,100 N (min.)	7,000 N	Exceeds	
PC-02	Outer diameter	36 – 37.8 mm	37.0 ± 0.8 mm	Comply	
PC-02	Weight	1,980 kg/km	≈ 1,950 kg/km	Comply	
PC-02	Hoisting speed	180 m/min	180 m/min (design rating 240 m/min)	Exceeds	
PC-02	Permissible tensile strength	7,000 N (min.)	7,000 N	Comply	
PC-02	Split delivery 8 / 7 / 8 drums	7 drums by 1 Feb 2027 · 8 drums by 1 Apr 2027	Accepted	Comply	
PC-03 – PC-14 · FC-FLX™ RND-X / RND-XC festoon cables (trolley travel speed 270 m/min — comply for all items)					
PC-03	OD / weight	24 – 27 mm · 1,140 kg/km	25.5 ± 1.0 mm · ≈ 1,120 kg/km	Comply	
PC-03	Tensile (max.) / bending radius (min.)	900 N · 135 mm	900 N · 128 mm	Comply	
PC-04	OD / weight	24 – 27 mm · 1,140 kg/km	25.5 ± 1.0 mm · ≈ 1,120 kg/km	Comply	
PC-04	Tensile (max.) / bending radius (min.)	900 N · 135 mm	900 N · 128 mm	Comply	
PC-05	OD / weight	26.4 – 29.4 mm · 1,360 kg/km	27.8 ± 1.0 mm · ≈ 1,340 kg/km	Comply	
PC-05	Tensile (max.) / bending radius (min.)	1,120 N · 147 mm	1,125 N · 139 mm	Comply	
PC-06	OD / weight	13.6 – 15.2 mm · 350 kg/km	14.4 ± 0.6 mm · ≈ 345 kg/km	Comply	

Item	Parameter	RFQ requirement	FeiChun offer	Status	Remarks
PC-06	Tensile (max.) / bending radius (min.)	240 N · 76 mm	240 N · 72 mm	Comply	
PC-07	OD / weight	19.6 – 22.6 mm · 890 kg/km	21.3 ± 1.0 mm · ≈ 875 kg/km	Comply	
PC-07	Tensile (max.) / bending radius (min.)	600 N · 113 mm	600 N · 106 mm	Comply	
PC-08	OD / weight	23.3 – 25.3 mm · 1,110 kg/km	24.3 ± 0.8 mm · ≈ 1,095 kg/km	Comply	
PC-08	Tensile (max.) / bending radius (min.)	960 N · 127 mm	960 N · 122 mm	Comply	
PC-09	OD / weight	22.4 – 25.4 mm · 1,150 kg/km	24.0 ± 1.0 mm · ≈ 1,135 kg/km	Comply	
PC-09	Tensile (max.) / bending radius (min.)	720 N · 127 mm	720 N · 120 mm	Comply	
PC-10	OD / weight	26.9 – 29.9 mm · 1,610 kg/km	28.4 ± 1.0 mm · ≈ 1,590 kg/km	Comply	
PC-10	Tensile (max.) / bending radius (min.)	1,500 N · 150 mm	1,500 N · 142 mm	Comply	
PC-11	OD / weight	29.9 – 32.9 mm · 1,990 kg/km	31.4 ± 1.0 mm · ≈ 1,965 kg/km	Comply	
PC-11	Tensile (max.) / bending radius (min.)	1,870 N · 165 mm	1,875 N · 157 mm	Comply	
PC-12	OD / weight	12.3 – 13.9 mm · 430 kg/km	13.2 ± 0.6 mm · ≈ 425 kg/km	Comply	
PC-12	Tensile (max.) / bending radius (min.)	520 N · 70 mm	525 N · 66 mm	Comply	
PC-13	OD / weight	34.7 – 37.7 mm · 2,700 kg/km	36.2 ± 1.0 mm · ≈ 2,670 kg/km	Comply	
PC-13	Tensile (max.) / bending radius (min.)	2,620 N · 189 mm	2,625 N · 181 mm	Comply	
PC-14	OD / weight	27.2 – 30.2 mm · 1,280 kg/km	15.5 ± 0.8 mm · ≈ 330 kg/km	Remark	Deviation Register DR-01
PC-14	Tensile (max.) / bending radius (min.)	180 N · 151 mm	180 N · 78 mm	Comply	

09 Deviation & Clarification Register

No.	Item	RFQ requirement	FeiChun offer	Reason / proposal	Owner decision
DR-01	PC-14	OD 27.2 – 30.2 mm · 1,280 kg/km · tensile 180 N max.	OD 15.5 ± 0.8 mm · ≈ 330 kg/km · 180 N	The RFQ tensile limit (12 × 1 mm² × 15 N/mm²) fits a 12-core 1 mm² cable, whose natural OD is 15 – 16 mm. **Option A:** standard design as offered. **Option B:** build-up sheath to 28.7 ± 1.0 mm if the festoon saddles/clamps require it — electrical design unchanged.	A ☐ B ☐
CL-01	PC-09	3C × 16 + 3C × 2.5 mm², screened	3 × 16 mm² + 3 × 2.5/3 mm² G/Y split earth	Symmetrical EMC design for VFD motors. If the 3 × 2.5 mm² cores are needed as control cores, please advise.	Confirm ☐
CL-02	PC-01	Tensile 5,100 N min.	7,000 N	Common design with PC-02 — exceeds requirement; no impact on reel.	Note

10 Inspection & Test Plan (ITP)

Owner/Engineer intervention points: H Hold — production does not proceed without release; W Witness — Owner may attend with 7 days' notice; R Review — records reviewed in the test certificate. Routine tests are reported in FeiChun in-house laboratory test reports; third-party witnessing is available at the buyer's cost.

No.	Activity	Standard / procedure	Frequency	Acceptance	Point
1	Raw material inspection (Cu rod, EPR, PCP, aramid)	Supplier CoC + incoming test	Each lot	Per material spec	R
2	Conductor stranding — wire Ø, lay, resistance	IEC 60228	Each production length	Class 5 / 6 limits	R
3	Insulation thickness & spark test	IEC 60811-201 · EN 62230	100 % continuous	No breakdown	R
4	Core assembly & sheath dimensions	IEC 60811-201/202/203	Each drum	Within tolerance	R
5	Conductor resistance	IEC 60228 / IEC 60468	Each drum, all cores	≤ R_{20} max.	W
6	AC voltage test 3.5 kV, 5 min	IEC 60245-2	Each drum	No breakdown	W
7	Insulation resistance	IEC 60245-2	Each drum	Per standard	W
8	Screen continuity (RND-XC)	FeiChun QP	Each drum	Continuous	R
9	Marking, length, visual	DIN VDE 0293-334	Each drum	Legible, correct Item Ref.	R
10	Sample tests: hot set, tensile/elongation, ageing	IEC 60811-507 / -501 / -401	Per batch	VDE 0207-20/-21	R
11	Final inspection & test certificate issue	FeiChun QP	Each drum	Certificate signed	H
12	Packing, drum labelling, fumigation	ISPM 15	Each drum	Labels per Item Ref.	R

Documents supplied with each delivery

Per drum	Manufacturer's test certificate stating Item Ref., drum no., length, routine test results
Per shipment	Commercial invoice, packing list, certificate of origin (on request)
On request	Type test reports (in-house), material certificates, FeiChun CE / UKCA / VDE certificates

11 Installation, Handling & Storage

Spreader reel cables (PC-01 / PC-02)

1. Unwind from the drum by rotating the drum — never pull off over the flange, which twists the cable.
2. Lay the cable out straight and free of twist before installation; the longitudinal marking line must stay straight.
3. Wind onto the reel in the same direction as on the delivery drum, with the cable under light tension.
4. Fix the reel end with a strain relief that grips the outer sheath over at least 3 × D; do not clamp on the cores.
5. Guide rollers and inlet funnels: radius ≥ 7.5 × D (≈ 280 mm). Reel drum radius ≥ 5 × D (≈ 185 mm).
6. Run 10 – 20 slow full cycles before full speed, and re-check twist and tension.
7. The hanging tensile load must not exceed 7,000 N, including dynamic peaks.

Festoon cables (PC-03 – PC-14)

1. Unwind by rotating the drum and let the cable relax, hanging free or laid straight, for at least 12 h before fitting.
2. Saddle radius must be at least the minimum bending radius in the item sheet (5 × D).
3. Arrange cables in the saddle by size, with the heaviest in the centre, keeping 2 – 3 mm clearance between cables.
4. Clamp without crushing the sheath; use rubber-lined clamps sized to the cable OD.
5. Loop depths should be equal across all cables in one carrier.
6. Ground screened cables (PC-07, PC-09) 360° at both ends via EMC glands.
7. Inspect festoon loops after the first week of operation and adjust if any loop has lengthened.

Storage & handling: store drums upright on firm ground, never flat. Keep cable ends sealed until termination. Store between −40 and +50 °C. Do not install below −25 °C. Roll drums only in the direction of the arrow. Lift with a spindle through the arbor hole or a forklift under both flanges — never by the cable layers.

12 Marking, Packing & Logistics

Sheath marking (every 1 m)	
Example PC-10	`FEICHUN FC-FLX RND-X (N)GRDGÖU-J 4G25 0.6/1kV PC-10 2026 0001m`
Example PC-02	`FEICHUN FC-CFX SPR-V (N)SHTÖU 44G2.5 0.6/1kV PC-02 2026 0001m`

Drum packing	
Drum type	Fumigated wooden drum (ISPM 15), battened
Cable ends	Rubber end caps; inner end accessible for testing
Drum label	Item Ref., type, length, gross/net weight, drum no.
Length tolerance	0 / +1 % per drum
PC-02 delivery split	8 drums per quoted lead time · 7 drums by 1 Feb 2027 · 8 drums by 1 Apr 2027 — accepted

Item logistics summary (drum sizes and weights approximate)

Item	Type	Length / drum	Drums	Drum Ø × W (mm)	Net cable / drum (kg)	Gross / drum (kg)	HS code	Origin
PC-01	FC-CFX™ SPR-V 44G2.5	93 m	9	1400 × 850	≈ 181	≈ 326	8544.49	China

Item	Type	Length / drum	Drums	Drum Ø × W (mm)	Net cable / drum (kg)	Gross / drum (kg)	HS code	Origin
PC-02	FC-CFX™ SPR-V 44G2.5	100 m	23	1400 × 850	≈ 195	≈ 340	8544.49	China
PC-03	RND-X (N)GRDGÖU-J 24G2.5	182 m	1	1100 × 700	≈ 204	≈ 289	8544.49	China
PC-04	RND-X (N)GRDGÖU-J 24G2.5	212 m	1	1100 × 700	≈ 237	≈ 322	8544.49	China
PC-05	RND-X (N)GRDGÖU-J 30G2.5	208 m	1	1250 × 750	≈ 279	≈ 389	8544.49	China
PC-06	RND-X (N)GRDGÖU-J 4G4	212 m	1	900 × 600	≈ 73	≈ 128	8544.49	China
PC-07	RND-XC (N)GRDGCGÖU-J 4G10	208 m	1	1100 × 700	≈ 182	≈ 267	8544.49	China
PC-08	RND-X (N)GRDGÖU-J 4G16	212 m	1	1100 × 700	≈ 232	≈ 317	8544.49	China
PC-09	RND-XC (N)GRDGCGÖU-J 3x16+3G2.5/3	208 m	1	1100 × 700	≈ 236	≈ 321	8544.49	China
PC-10	RND-X (N)GRDGÖU-J 4G25	212 m	1	1250 × 750	≈ 337	≈ 447	8544.49	China
PC-11	RND-X (N)GRDGÖU-J 5G25	208 m	1	1250 × 750	≈ 409	≈ 519	8544.49	China
PC-12	RND-X (N)GRDGÖU-J 1x35	212 m	1	900 × 600	≈ 90	≈ 145	8544.49	China
PC-13	RND-X (N)GRDGÖU-J 5G35	208 m	1	1400 × 850	≈ 555	≈ 700	8544.49	China
PC-14	RND-X (N)GRDGÖU 6x2x1	212 m	1	900 × 600	≈ 70	≈ 125	8544.49	China

13 Standards, Abbreviations & Warranty

Standard	Title (abridged)
IEC 60228	Conductors of insulated cables
IEC 60245-2	Rubber-insulated cables – test methods
IEC 60811 series	Electric and optical fibre cables – test methods for non-metallic materials
IEC 60332-1-2	Vertical flame propagation, single cable
DIN VDE 0250-814	(N)SHTÖU reeling cables (design reference)
DIN VDE 0207-20 / -21	Insulating and sheathing compounds
DIN VDE 0298-4	Current-carrying capacity of cables
DIN VDE 0293-334 · HD 308 S2	Core identification
EN 62230	Spark test
ISPM 15	Wood packaging material

Abbreviation	Meaning
EPR	Ethylene-propylene rubber
PCP	Polychloroprene rubber
G/Y	Green/yellow protective conductor
D	Cable outer diameter
R_{20} / R_{90}	Conductor DC resistance at 20 °C / 90 °C
I_{sc}	Short-circuit current
VFD	Variable-frequency drive
IFA	Issued for approval
ITP	Inspection and test plan
STS / RTG	Ship-to-shore / rubber-tyred gantry crane

Warranty: FeiChun accepts the RFQ warranty of 12 months from installation, to a maximum of 18 months from delivery. FeiChun's standard commitment of a minimum 3-year warranty against manufacturing defects applies in addition.

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Authorised Signature & Company Stamp
Date: 14 Oct 2026

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