

دوكاب Ducab

Ducab Ru BICC



الكابلات المطاطية المرنة H07RN - F RUBBER FLEXIBLES

حلول متقدمة للكابلات من خلال التقنية والابداع
Advanced Cable Solutions Through Technology and Innovation

BICC

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INTRODUCTION

Established in 1979, Ducab is the leading cable manufacturing company in the region and is equally owned by the Governments of Dubai and Abu Dhabi. Ducab has three major manufacturing facilities that support its continuous growth, one in Jebel Ali and two in Abu Dhabi Industrial City. Ducab-HV, inaugurated in November 2011, is a joint venture between Ducab, ADWEA and DEWA offering High Voltage cable systems up to 400 kV. Ducab-HV will sell cable systems in the voltage range 66kV (66,000 Volts) to 400kV (400,000 Volts) covering the highest voltage currently used in the GCC.

To meet the growing demand of customers around the region and the world, Ducab continues to expand its world-class facilities across the Middle East, North Africa, Europe and India. Ducab prides itself on setting and maintaining the highest quality standards of power cables. Experienced and highly skilled employees operate state-of-the-art equipment, and conduct extensive testing at every phase of production.

When it comes to advanced cable solutions, Ducab continues its status as the superbrand across the world in 40 countries. Ducab product range covers High Voltage cables up to 400kV, Ducab Powerplus Medium Voltage cables up to 33kV, Low Voltage power cables, Control & Auxiliary, Wiring and Lead-Sheathed cables, Ducab Smokemaster - Low Smoke Zero Halogen cables, and Ducab Flam BICC (Fire Resistance cables), DuFlex cables, THHN/THWN cables, Instrumentation and Pilot cables, cable components and cable accessories, Drum Handling & Installation of Cables, as well as copper rod manufactured in Ducab's own copper rod plant.

This catalogue provides working information on Ducab RuBICC - H07RN-F Rubber Flexibles. Separate catalogues are available for the remaining range of Ducab Cables.

ORDERING ADVICE

Due to the wide range of cables in the catalogue, it is advisable, when ordering, to provide as much information as possible. Please use the following table as a guide:

1. Cable standard / specification number.
2. Voltage designation.
3. Number of cores.
4. Conductor size and type/class.
5. Colour of outer sheath.
6. Length of cables required and individual drum lengths.*
7. Any other special requirement, e.g. drum weight limitation, etc.

* Cables are normally supplied in lengths of 100 metres, 500 metres and 1000 metres depending on conductor size. Other lengths can be supplied if required.

TECHNICAL ADVISORY SERVICE

For any specialist advice and assistance on the entire Ducab product range contact the Technical Department, Dubai Cable Company (Private) Limited, P. O. Box 11529, Dubai, U. A. E., Tel: 971-4-815 8888, Fax: 971-4-815 8111.

CUSTOMER SERVICE

Ducab is the premier cable manufacturer in the United Arab Emirates and, since 1979, has been meeting the requirements of customers throughout the GCC, Middle East and Asian markets. Ducab cables are preferred for the following reasons:

PRODUCT QUALITY



Ducab is committed to supplying its customers with the highest quality of product and of service. Ducab's cables have been type approved by recognized certifying bodies such as BASEC UK (British Approval Service for Cables), Lloyd's Register of the UK, KEMA Netherland, LPCB UK (Loss Prevention Certification Board), ESMA (Emirates Authority for standardization and Metrology). They fully conform to BS, IEC other international and national specifications.

In addition, Ducab was presented with the Dubai Quality Award 1994, for the best local industrial company of the year. Ducab won Dubai Quality Gold Category award twice, in 1998 and in 2004.

The Gold Award rewards the most distinguished companies which are judged to be world class and Ducab is the only manufacturing company in the region to win such acclaim.

Ducab has won the Sheikh Mohammed Bin Rashid Al Maktoum (MRM) Business Excellence Award in manufacturing category in 2009. Recognizing quality products and services, Ducab has also won the Superbrand award for 4 years consecutively from 2009.

RELIABILITY

Specifying the right cable for a particular application is the first step. The key to reliability however, is in the manufacturing process. The cable must be free from material and manufacturing defects, and weaknesses that will be revealed in service.

Ducab constantly monitors its manufacturing processes and operates stringent quality assurance procedures to give long term reliability. This is of vital significance where cables are to be installed in locations where future access would be difficult and this is where Ducab's reputation and resources give peace of mind.

PERFORMANCE

Optimum cable performance can be provided only by a company such as Ducab, with access to the latest developments in materials technology. In addition, Ducab's knowledge of application requirements throughout the Middle and Far East is an assurance of high performance.

Our experienced Technical Staff can provide guidance on cable selection and installation and can ensure that you get the right cable for the job.

HEALTH & SAFETY MANAGEMENT SYSTEM CERTIFIED TO OHSAS 18001



Ducab is able to maintain a close watch on world developments in cable technology and regulations and therefore ensure that its products are designed and constructed to be hazard-free under the prescribed conditions of use.

Ducab uses only tried and tested materials and processes in full compliance with all relevant British and International Standards. Our cables are therefore manufactured for safe use without risk to health on the understanding that users will exercise the same degree of care in their selection and application.



Safety is an important issue for Ducab, and the strictest standards are adhered to throughout the company. Ducab is proud of its safety record and has been awarded RoSPA (Royal Society for the Prevention of Accidents) Gold Awards for safety from 1991 to 1999. From 2000 onward, Ducab was awarded the prestigious President's Award for Health and

Safety which is a recognition of Ducab winning 10 consecutive annual Gold awards and acknowledges Ducab's total commitment to health and safety. In 2002, Ducab was declared the joint winner of the Manufacturing Industry Sector Award from RoSPA.

Ducab is the first organisation in the Middle East to receive accreditation to OHSAS 18001 by BASEC (British Approvals Service for Cables). Certification to OHSAS 18001 provides a recognisable Occupational Health and Safety Management standard against which an organisation's management systems can be assessed and certified. Based on the structure of OHSAS 18001, the standard requires continual improvement in health and safety related activities.

QUALITY MANAGEMENT SYSTEM CERTIFIED TO ISO 9001



Ducab's Quality Management System conforms to the ISO 9001 International Quality System Standard and is certified by BASEC (British Approvals Service for Cables), a specialist certifying body for cables who are an internationally recognised quality authority accredited in the UK and throughout the world.

Certification to the ISO 9001 International standard demonstrates that Ducab has drawn up written procedures to ensure full compliance with all requirements of the standard and that these procedures are followed by every department in the company, thus ensuring that goods leaving Ducab's factory are of the highest quality and meet each customer's requirements in every respect.

Ducab is particularly proud to have achieved certification to the stringent ISO 9001 standard as it is an independent conformation that the company designs, manufactures and tests cables consistently to accepted standards. ISO 9001 is widely used throughout Europe, and is therefore a reassurance to Ducab's customers that the products and service supplied by the company are equal to the best in the world.

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFIED TO ISO 14001

Ducab's Environmental Management System conforms to the ISO 14001 International Environmental Management Standard and is certified by BASEC who are an internationally recognised certifying authority accredited in the UK and throughout Europe.

Certification to the ISO 14001 International standard shows that Ducab has a well defined structure and established working practices aimed at limiting its impact on the environment. Measurement and monitoring of effects, issuing work instructions, training of personnel and taking corrective actions are all essential elements to limiting the impact on the environment.

Ducab has set improvement targets to reduce the significant environmental impacts associated with its activities.

Ducab is proud to be the first cable manufacturer in the region to achieve certification to ISO 14001 and this certification along with its quality, business success and safety record demonstrates that Ducab is a world class organisation and can hold its head up to any business community throughout the world.



BASEC CERTIFICATION

Ducab is also proud to hold a Process capability certification issued by BASEC (British Approvals Service for Cables) for several cables in its product range.

DUCAB SHAREEK

Ducab's customer satisfaction programme is designed to ensure that customers receive a consistently high level of service from Ducab's dedicated staff.




INTRODUCTION TO H07RN-F RUBBER FLEXIBLES

Ducab RuBICC - H07RN-F Rubber Flexibles are designed to provide excellent flexibility during usage. These cables can withstand weather, medium mechanical and thermal stress. They exhibit very good oil resistance property.

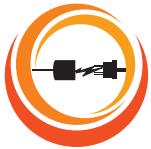


CABLE DETAILS

Conductor:	Annealed flexible stranded tin coated or bare copper class 5 to IEC/BS EN 60228
Separator:	A suitable tape separator between the conductor and insulation as and when required.
Insulation:	Ethylene Propylene Rubber (EPR) type EI 7 to BS standard
Core identification:	<p>Colour coding of power conductors comply to HD 308, BSEN 50525 specification</p> <p>Two core - Blue, Brown</p> <p>Three core - Green/Yellow, Blue, Brown</p> <p>Four core - Green/Yellow, Brown, Black, Grey or Green/Yellow, Blue, Brown, Black</p> <p>Five core - Green/Yellow, Blue, Brown, Black, Grey</p> 
Outer Sheath:	A synthetic thermosetting compound to BSEN 50363-2-1
Colour of outer jacket:	Black (Other colours on request)
Operating temperature:	Temperature range of -25°C to +90°C. For fixed installation lowest temperature is -40°C
Short circuit temperature:	250°C
Voltage:	450/750 V
Cable standard:	BS EN 50525 - 2 - 21
Flame propagation:	IEC 60332-1-2:2004, EN 60332-1-2:2004

APPLICATION:

- To power electrical appliances and building
- Installation with moving equipment at work site
- Handling equipment and mobile power supplies
- For use in cold environment / refrigerating installations
- Oil resistant applications
- For use in submersible pumps.



Electrical appliances



Moving equipment



Mobile power supplies



Cold environment



Oil resistant

KEY FEATURES:

- UV, Sunlight and Ozone resistant
- Suitable for both indoor and outdoor use
- Useful in wide range of industrial applications

PACKING:

- 1000m on drums. Other forms of packing and delivery are available on request

TECHNICAL DATA



Size No. of cores X mm ²	Nominal thickness of insulation	Nominal thickness of jacket	Approx. O. D. of cable	Voltage Drop	Approx. weight of cable
	mm	mm	mm	V/A/km	kg/km
1x1.5	0.8	1.4	6.1	29.8	51
1x2.5	0.9	1.4	6.8	17.9	67
1x4	1	1.5	7.8	11.1	93
1x6	1	1.6	8.5	7.4	120
1x10	1.2	1.8	10.3	4.3	184
1x16	1.2	1.9	11.5	2.7	255
1x25	1.4	2	13.4	1.7	372
1x35	1.4	2.2	15	1.2	482
1x50	1.6	2.4	17.2	0.9	656
1x70	1.6	2.6	19.2	0.6	887
1x95	1.8	2.8	21.9	0.5	1178
1x120	1.8	3	23.8	0.4	1441
1x150	2	3.2	26.3	0.3	1758
1x185	2.2	3.4	28.7	0.2	2171
1x240	2.4	3.5	32	0.2	2800
1x300	2.6	3.6	34.8	0.1	3415
1x400	2.8	3.8	38.9	0.1	4303
1x500	3	4	43.2	0.1	5453
1x630	3	4.1	47.9	0.1	6946
2x1	0.8	1.3	8.6	50.5	96
2x1.5	0.8	1.5	9.5	34.4	119
2x2.5	0.9	1.7	11.2	20.7	172
2x4	1	1.8	13	12.8	240
2x6	1	2	14.6	8.5	316
2x10	1.2	3.1	19.4	4.9	552
2x16	1.2	3.3	21.9	3.1	752

TECHNICAL DATA



Size No. of cores X mm ²	Nominal thickness of insulation	Nominal thickness of jacket	Approx. O. D. of cable	Voltage Drop	Approx. weight of cable
	mm	mm	mm	V/A/km	kg/km
2x25	1.4	3.6	25.9	2	1093
2x35	1.4	3.8	28.6	1.4	1376
2x50	1.6	4.2	33	1	1870
2x70	1.6	4.6	37.2	0.7	2497
2x95	1.8	5	42.4	0.5	3298
3x1	0.8	1.4	9.3	43.7	116
3x1.5	0.8	1.6	10.2	29.8	143
3x2.5	0.9	1.8	12.1	17.9	211
3x4	1	1.9	14	11.1	294
3x6	1	2.1	15.6	7.4	387
3x10	1.2	3.3	20.8	4.3	681
3x16	1.2	3.5	23.5	2.7	938
3x25	1.4	3.8	27.8	1.7	1375
3x35	1.4	4.1	30.9	1.2	1757
3x50	1.6	4.5	35.6	0.9	2390
3x70	1.6	4.8	39.8	0.6	3188
3x95	1.8	5.3	45.6	0.5	4246
3x120	1.8	5.6	49.6	0.4	5163
3x150	2	6	54.8	0.3	6308
3x185	2.2	6.4	59.9	0.2	7759
3x240	2.4	7.1	68.1	0.2	10138
3x300	2.6	7.1	74.8	0.1	12433



TECHNICAL DATA



Size No. of cores X mm ²	Nominal thickness of insulation	Nominal thickness of jacket	Approx. O. D. of cable	Voltage Drop	Approx. weight of cable
	mm	mm	mm	V/A/km	kg/km
4x1	0.8	1.5	10.3	43.7	142
4x1.5	0.8	1.7	11.2	29.8	174
4x2.5	0.9	1.9	13.3	17.9	257
4x4	1	2	15.4	11.1	360
4x6	1	2.3	17.4	7.4	485
4x10	1.2	3.4	22.8	4.3	831
4x16	1.2	3.6	25.6	2.7	1150
4x25	1.4	4.1	30.8	1.7	1724
4x35	1.4	4.4	34.2	1.2	2204
4x50	1.6	4.8	39.4	0.9	2997
4x70	1.6	5.2	44.2	0.6	4030
4x95	1.8	5.9	51	0.5	5410
4x120	1.8	6	55	0.4	6528
4x150	2	6.5	60.9	0.3	7994
4x185	2.2	7	66.8	0.2	9870
4x240	2.4	7.7	75.8	0.2	12881
4x300	2.6	8.4	83.4	0.1	15830
5x1	0.8	1.6	11.3	43.7	175
5x1.5	0.8	1.8	12.3	29.8	215
5x2.5	0.9	2	14.5	17.9	318
5x4	1	2.2	17.1	11.1	455
5x6	1	2.5	19.2	7.4	608
5x10	1.2	3.6	25	4.3	1029
5x16	1.2	3.9	28.4	2.7	1441

TECHNICAL DATA



Size No. of cores X mm ²	Nominal thickness of insulation	Nominal thickness of jacket	Approx. O. D. of cable	Voltage Drop	Approx. weight of cable
	mm	mm	mm	V/A/km	kg/km
5x25	1.4	4.4	34	1.7	2154
5x35	1.4	4.6	37.6	1.2	2738
5x50	1.6	5.2	43.6	0.9	3762
5x70	1.6	5.7	49.1	0.6	5077
5x95	1.8	6.3	56.3	0.5	6773
6x1.5	0.8	2.5	14.7	30	287
7x1.5	0.8	2.6	14.9	30	303
12x1.5	0.8	2.9	19.2	30	482
18x1.5	0.8	3.2	22.5	30	678
24x1.5	0.8	3.5	26.2	30	889
36x1.5	0.8	3.8	30	30	1247
6x2.5	0.9	2.7	17.1	18	409
7x2.5	0.9	2.8	17.3	18	433
12x2.5	0.9	3.1	22.4	18	694
18x2.5	0.9	3.5	26.5	18	995
24x2.5	0.9	3.9	31.1	18	1321
36x2.5	0.9	4.3	35.8	18	1880
6x4	1	2.9	19.9	11.09	570
7x4	1	3.1	20.3	11.09	615
12x4	1	3.5	26.5	11.09	1001
18x4	1	3.9	31.2	11.09	1430



CURRENT CARRYING CAPACITY

Size mm ²	Single core (for three phase circuit) (A)	Two Cores (A)	Three Cores (A)	Four Cores (A)	Five Cores (A)
1	-	20	18	18	18
1.5	27	29	25	25	25
2.5	34	39	32	32	32
4	47	52	44	44	44
6	59	66	56	56	56
10	83	90	78	78	78
16	108	115	102	102	102
25	135	149	127	127	127
35	167	185	158	158	158
50	204	225	192	192	192
70	261	289	246	246	246
95	316	352	298	298	298
120	367	-	346	346	-
150	423	-	399	399	-
185	483	-	456	456	-
240	570	-	538	538	-
300	658	-	621	621	-
400	792	-	-	-	-
500	904	-	-	-	-
630	1033	-	-	-	-

NOTE: AMBIENT TEMPERATURE = 30° C
CABLE OPERATING TEMPERATURE = 90° C

TEMPERATURE CORRECTION FACTORS:

Temperature of air °C	25	30	35	40	45	50	55
Correction factors:	1.02	1.0	0.96	0.91	0.87	0.82	0.76

CLASS 5 FLEXIBLE COPPER CONDUCTOR DATA

Size mm ²	Maximum diameter of wires in conductor	Maximum conductor resistance at 20° C (Plain wires)	Maximum conductor resistance at 20° C (Tinned wires)
	mm	Ω/km	Ω/km
1	0.21	19.5	20
1.5	0.26	13.3	13.7
2.5	0.26	7.98	8.21
4	0.31	4.95	5.09
6	0.31	3.3	3.39
10	0.41	1.91	1.95
16	0.41	1.21	1.24
25	0.41	0.78	0.795
35	0.41	0.554	0.565
50	0.41	0.386	0.393
70	0.51	0.272	0.277
95	0.51	0.206	0.210
120	0.51	0.161	0.164
150	0.51	0.129	0.132
185	0.51	0.106	0.108
240	0.51	0.0801	0.0817
300	0.51	0.0641	0.0654
400	0.51	0.0486	0.0495
500	0.61	0.0384	0.0391
630	0.61	0.0287	0.0292



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