Polyurethane Round Belts

Welded Joints / Open End / Hollow Rope

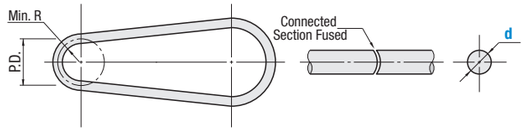
Feature: Suitable for transferring light loads. There are cut-and-heat-welded endless belts, and per meter cut open ended belts.

Polyurethane Round Belts – Welded Joints / Open End / Hollow Rope

RoHS 10

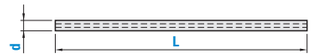
Type		Type	Color	Material	Heat Resistant Temperature
Welded Joint	Open End				
MBT	MBT-N	Standard	Orange	Polyurethane	80°C
MBTH	MBTH-N	High Tension	Green		80°C
MBTD	—	Antistatic Type	Black		50°C
—	MBQ	Hollow Rope	Orange		80°C

Welded Joint



Open End

Hollow Rope



Welded Joint Type – Standard / High Tension / Conductive

Part Number Type	d	L (Belt Length) 1 m Increment
Standard MBT	2	100–2000
	3	100–3000
	4	100–4000
	5	135–5000
	6	140–6000
	8	190–6000
	10	250–6000
High Tension MBTH	2	100–2000
	3	100–3000
	4	100–4000
	5	135–5000
	6	140–6000
	8	190–6000
	10	250–6000
Conductive MBTD	3	200–3000
	4	200–4000
	5	200–5000

Open End Type - Standard / High Tension / Hollow Rope

Part Number Type	d	L (Belt Length) 1 m Increment	Applicable Joint Hardware
Standard MBT-N / High Tension MBTH-N	1.5	10–20	—
	2		
	2.5		
	3		
	3.5		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	12		
	15		
MBQ	5	1–20	MBQC5
	6		MBQC6

Metal Joints for Hollow Ropes

Part Number Type	d	Material
MBQC	5	5052 Aluminum Alloy
	6	

Features

Welded Joints

MBT, MBTH, MBTD (Standard Type / High Tension Type / Conductive)

Round belt of rope shape is cut into any specified length and made endless with heat welding. Though connecting section may look thicker, appropriate diameter can be obtained when tension is being applied during operation.

Both MBT and MBTH satisfy the Food Hygienic Regulations.

MBTD is a Round Belt with conductive material (Carbon) mixed in the base material. Suitable for use in applications where static charge effects are unwanted.

Open End

MBT-N, MBTH-H (Standard / High Tension)

Cut by the meter sections only. Endless jointing is not applied.

Both MBT-N and MBTH-N satisfy the Food Hygienic Regulations.

Hollow Rope Type

MBQ

The cross section is hollow in the center, and no endless jointing is applied before shipping. Simple and reliable endless connection is possible by cutting the belt, in any length, and inserting the dedicated metal jointing parts. Satisfies the food and hygiene standard in accordance to Notice No. 434 of Japanese Ministry of Health and Welfare.

How to Connect

Cut the round belt 5% shorter than the calculated or actual measured length with a knife at a right angle. Hold the dedicated metal joint MBQC with a pair of pliers. Insert the metal joint up to the center of the hollow belt end. To help the insertion in a cold season, warm the belt by immersing in warm water of 40°C for 1–2 minutes. Be sure not to damage the edge of the metal joint. Insert the metal joint into the other side of the belt.

Part Number Example

Part Number	-	L
MBT5	-	150
MBTH-N6	-	12
MBQ6	-	5
MBQC5		

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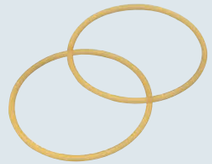
Polyurethane Round Belts

Seamless

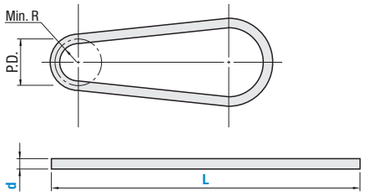
Feature: Belt has no joint as it is made endless by molding.

Polyurethane Round Belts – Seamless



RoHS 10

Part Number	Type	Color	Material	Heat Resistant Temperature
MBN	Seamless	Natural Color	Polyurethane	70°C



Part Number Example

Part Number	-	L
MBN2	-	100

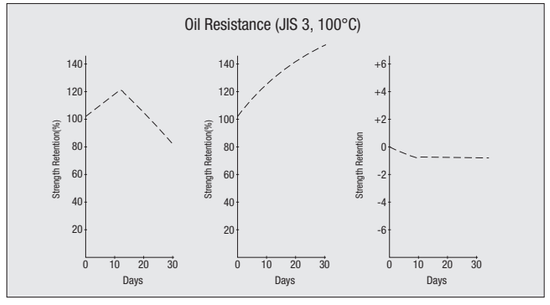
Seamless

Part Number Type	d	Circumference Length L (mm)	Part Number Type	d	Circumference Length L (mm)
MBN	2	100	MBN	4	200
		125			225
		140			250
		160			258
		170			275
		180			290
		190			305
		200			390
		239			
		250			
	3	150		5	225
		160			250
		170			275
		180			290
		200			305
		213			330
		223			348
		236			380
		250			440
		260			460
		290			
		305			
		330			
		390			

Physical Properties kgf=Nx0.101972

Item	Test Method	Unit	MBT	MBTH	MBN
Specific Gravity	—	—	1.22	1.22	1.26
Hardness	JIS K 6301	JIS A	88	92	72
5% Modulus		N/mm²	1.2	2.0	0.44
10% Modulus			1.8	3.1	0.88
100% Modulus			6.3	8.8	6.0
300% Modulus			16.9	14.7	9.0
Tensile Strength			24.5 or More	32.4 or More	30 or More
Tensile Elongation at Breakage		%	400 or More	400 or More	600 or More
Tear Strength		kN/mm²	88	93	90 or More

Oil Resistance



Features of Polyurethane Round Belts

Minimum P.D. of Pulleys (mm)

d	Cross Section Area mm²	Minimum P.D. of Pulleys MBT, MBN	MBTH	MBTD	MBQ
2	3.14	15	20	—	—
3	7.07	20	30	30 (40)*	—
4	12.57	30	40	40 (50)*	—
5	19.63	40	50	50 (60)*	40
6	28.27	50	60	—	50
8	50.24	70	80	—	—
10	78.5	90, 95	100	—	—

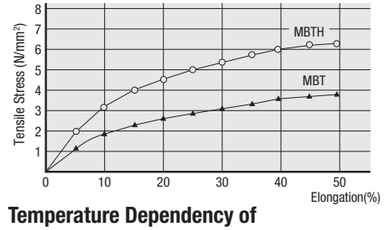
*Values in ( ) are the min. P.D. when using by turning 90°.

Tensile Strength (N)–Shows the tensile strength (N) when belt is extended (elongation:%)

d	MBT 5%	MBTH 5%	MBTD 8%	MBN 8%	MBQ 5%
2	1.9	2.8	—	1.274	—
3	4.1	6.2	13.0	2.940	—
4	7.4	11.1	22.0	5.292	—
5	12.5	18.7	33.0	8.232	24.5
6	16.6	24.9	—	—	44.1
8	29.4	44.1	—	—	—
10	46.2	69.3	—	—	—

Use 3–4% of the total length as a reference tension when installing Round Belts.

Tensile Stress (Low Elongation)



Temperature Dependency of Tensile Strength, Stretch & Surface Hardness