











Introduction to **ZETASASSI** Belt and Chain Tensioners

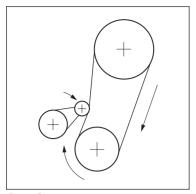


fig. 1 - Correct

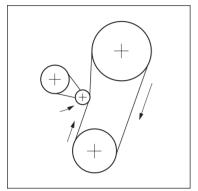


fig. 2 - Incorrect

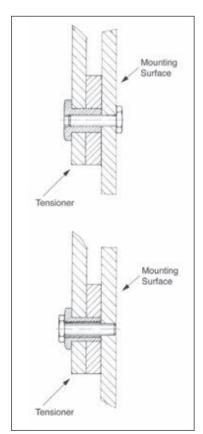


fig. 3 - Mounting Surface Illustration

Quality Transmission Components is the exclusive distributor of Zetasassi Belt and Chain Tensioners in the US, Canada and Mexico. These well-made tensioners will improve the operation of belt and chain drives by many hours by keeping the tension constant. This occurs because the tensioners create:

- 1) Automatic reduction in the belt or chain slack.
- 2) Reduction of noise and vibration
- 3) Uniform and more efficient transmission of drive torque.
- 4) Decrease in sprocket, pulley, belt or chain wear.
- 5) Increased life of belts and chains.
- 6) Possibility to adjust the tension of the drive.

These units are easy to install and maintenance-free. The spring-loaded units, available in rotational and linear movement types, will automatically keep the tension constant, eliminating frequent manual adjustments which would interrupt the operation of the machinery.

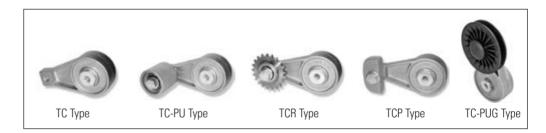
All tensioners should be installed on the slack side of belts and chains. For rotational movement units, please make sure to install the units, as shown in fig. 1.

It is also recommended, for both rotational and linear tensioners, that the tension force be applied from the outside of the belt or chain loop as to not reduce the wrap-around angles of the belt or chain over the pulleys or sprockets.

As shown in the pictorial index on page 6, several designs of tensioners are offered as arm only, arm with roller attached for belts, arm with sprocket attached for chains, arm with polyethylene sliding head for chains, or arm with V-belt pulley attached.

Further variations are offered, as well as replacement heads, as shown in the pictorial index on page 7.

Most chain tensioners are also offered with ASA or ISO single, double and triple chain heads. Availability of heads other than for single chain is given on each product page.



Type TC, TC-PU, TCR, TCP and TC-PUG (pages 3-5 thru 3-9)

- Levers in high-tensile light alloy (except the smallest size which is plastic).
- Idler rollers in zinc plated steel, aluminum or nylon.
- V-belt pulleys in nylon.
- Sprockets in steel or hardened steel.
- Pulleys, sprockets and rollers have double-seal permanently oiled ball bearings.
- Sliding head's orientation is adjustable, and it is made of low friction, wear-resistant polyethylene (dynamic friction coefficient of 0.06 on dry steel) with maximum operating temperature of 65°C (149°F).

These tensioners take up the chain or belt slack, and keep the tension constant without the operator making any adjustments over a range of approximately 45° (30° for the largest size).

- Can operate at temperatures above 100°C (212°F) (except TCP series).
- Uses special steel springs with an extreme high yield point and prestress, so as to maintain the pressure as constant as possible throughout the range.
- Can be assembled either from inside or outside of the machine (see fig. 3).



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Introduction to **ZETASASSI** Belt and Chain Tensioners



Type RH, RH-PU, RHR RHP and RH-PUG (pages 3-10 thru 3-14)

- · Levers in high-tensile light alloy.
- Idler rollers in zinc plated steel, aluminum or nylon.
- V-belt pulleys in nylon.
- Sprockets in steel or hardened steel.
- Pulleys, sprockets and idler rollers have double-seal permanently oiled ball bearings.
- Sliding head's orientation is adjustable, and it is made of low-friction, wear-resistant polyethylene (dynamic friction coefficient of 0.06 on dry steel) with maximum operating temperature of 65°C (149°F).

These lightweight tensioners take up the chain or belt slack, and keep the tension constant without the operator making any adjustments over a range of approximately 30° of motion.

In a typical application, the following benefits were achieved*:

- 23% increase of chain life.
- 7% reduction of vibration.
- 12% reduction of noise.
- · Reduction in chain slackening.
- Elimination of the need for maintenance.

^{*} The actual values will vary depending on the operating environment, type of lubricant, the conditions of the machine and the performance capabilities of the drive.



The ET, ET-PU, ETR and ET-PUG consist of die-cast alloy bases and mounting heads on which rollers or sprockets are attached via spring-loaded steel sliding arms. These units are also available with an integral "End-of-stroke" sensing switch which is not retrofittable and must be ordered at the time of initial purchase. (The availability is detailed on each product page).

The ET series are especially suitable for high-temperature operations over 100°C (212°F), since they are 100% metal.





Introduction to **ZETASASSI** Belt and Chain Tensioners



The Orient1 series tensioners are not spring-loaded. They have the feature of being able to swivel in any direction, both before and after installation. The teeth built into the two mating parts allow the arm to be positioned every 15° throughout the entire 360° revolution relative to the base. At each of these 15° positions, two of the eight holes in the arm align with the threaded holes in the base, so that the screws supplied with the unit can fasten the arm at the desired position. While these units lack the convenience of automatic tension adjustment, their simplicity and versatility in orienting and positioning offer an advantage in certain applications. Pages **3-**19 thru **3-**23.



The TO-05 consists of a plastic base and sliding head, spring-loaded for chain drives only. It is also available with metal components such as AISI 304 stainless steel, for use in the food industry.

The TO and TOT consist of die-cast alloy bases and polyethylene heads, spring-loaded for chain drives only. See each product page for head shape availability.

The NT is the evolution of TO type and presents the following advantages, keeping the same operation:

- Closed bottom, which minimizes dust and fluid infiltration inside the tensioner.
- Plastic bushes, for a lower sliding friction, which also reduces dust and fluid infiltration.
- Lower cost.

Pages 3-24 thru 3-24.

Quality Transmission Components



TC Type Tensioner Arms

Spring-Loaded • Automatically keeps the tension constant





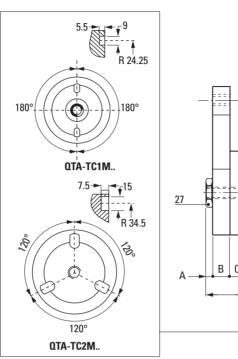


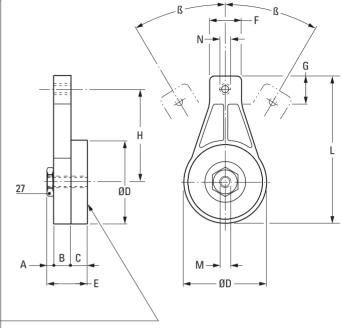
MATERIAL:

Arm -QTA-TC0... - Acetal

QTA-TC1... & QTA-TC2... -

High-Tensile Die-Cast Aluminum Alloy





ANTIROTATION HOLES

All dimensions are in mm unless otherwise noted.

Catalog Number		ad V)	A	В	C	ØD	E	F	G	Н	L	M	N	ß
Maninei	Min	Max												
QTA-TCOM08* QTA-TCOM10* QTA-TCOM12*	80	160	5	15	15	63.3	36	23	23	75.5	118	M10	M8 M10 M12	45°
QTA-TC1M10 QTA-TC1M12 QTA-TC1M16	120	240	5	15.3	15.3	69.5	36	29.5	25	86.5	133.5	M10	M10 M12 M16	45°
QTA-TC2M10 QTA-TC2M12 QTA-TC2M16 QTA-TC2M20	240	380	7	18	18	89.5	43	34	30	100	159	M12	M10 M12 M16 M20	30°

^{*}Acetal arm.

NOTE: Select N dimension to match the mounting bolt of the selected head (see pages 3-30 thru 3-34).





Spring-Loaded • Automatically keeps the tension constant



MATERIAL:

Arm -

QBT-TCOP... - Acetal

QBT-TC1P... & QBT-TC2P... -

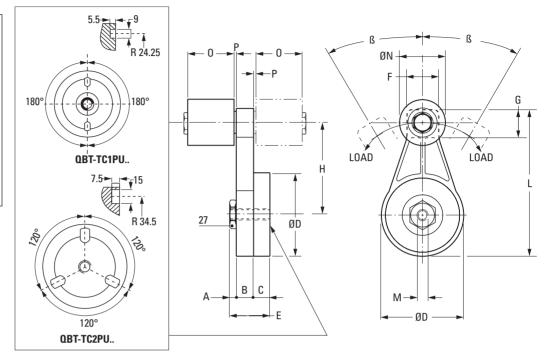
High-Tensile Die-Cast Aluminum Alloy

Roller - Material Code

- **A** Aluminum
- Nylon
- Steel (Zinc Plated)

MAX. OPERATING TEMPERATURE:

100°C (212°F) - Aluminum and Steel Roller 60°C (140°F) - Nylon Roller



ANTIROTATION HOLES

All dimensions are in mm unless otherwise noted.

Catalog Number		oad N)	A	В	C	ØD	E	F	G	н	L	M	ØN	0	Р	ß
	Min	Max														
* QBT-TC0PU30X35													30	35	2.5	
*# QBT-TC0PU40X45N	80	160	5	15	15	63.3	36	23	23	75.5	118	M10	40	45	6	45°
* QBT-TC0PU50X50													50	50	2.5	
# QBT-TC1PU40X45N	120	240	-	15.0	15.0	CO F	00	20.5	OF.	00.5	100 5	N/10	40	45	6	450
QBT-TC1PU50X50	120	240	5	15.3	15.3	69.5	36	29.5	25	86.5	133.5	M10	50	50	2.5	45°
QBT-TC2PU50X50	240	200	7	10	10	00 E	40	24	20	100	150	N/12	50	50	2.5	200
QBT-TC2PU60X60	240	380	′	18	18	89.5	43	34	30	100	159	M12	60	60	2.5	30°

- * Acetal arm.
- # Nylon roller only.
- **NOTES:** 1. Orientation of roller is supplied as shown. End user can reposition if necessary.
 - 2. Fill in the box with desired roller material code to complete part number.





TCR Type Tensioners





Sprocket with Ball Bearing - Spring-Loaded • Automatically keeps the tension constant



MATERIAL:

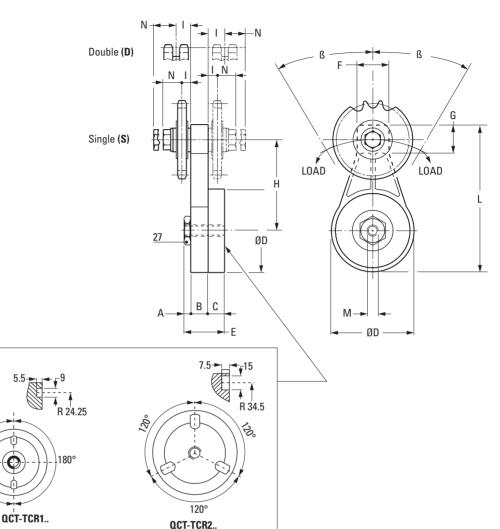
QCT-TCR0... - Acetal QCT-TCR1... & QCT-TCR2... -

High-Tensile Die-Cast Aluminum Alloy

Sprocket – Steel (Heat-Treated)

MAX. OPERATING TEMPERATURE:

100°C (212°F)



ANTIROTATION HOLES

All dimensions are in mm unless otherwise noted.

												7 (11 (41	111011010111	3 arc iii ii	iiii aiiiiooc	Othorwi	oo notoa.
Catalog Number		ad N)	Chain Pitch	Teeth	A	В	C	ØD	E	F	G	н	1	ı.	M	N	ß
	Min	Max															
QCT-TCR003S*	80	160	3/8" x 7/32"	21	5	15	15	63.3	36	23	23	75.5	9.2	119	M10	19.7	45°
QCT-TCR103S QCT-TCR103D	120	240	3/8" x 7/32"	21	5	15.3	15.3	69.5	36	29.5	25	86.5	9.2 11	133.5	M10	19.7 18	45°
QCT-TCR104S QCT-TCR104D	120	240	1/2" x 5/16"	16	5	15.3	15.3	69.5	36	29.5	25	86.5	9.2 12.5	133.5	M10	19.7 16.5	45°
QCT-TCR105S QCT-TCR105D	120	240	5/8" x 3/8"	17	5	15.3	15.3	69.5	36	29.5	25	86.5	9.2 15.2	133.5	M10	19.7 17.7	45°
QCT-TCR205S QCT-TCR205D	240	380	5/8" x 3/8"	17	7	18	18	89.5	43	34	30	100	9.2 15.2	159	M12	19.7 17.7	30°
QCT-TCR206S QCT-TCR206D	240	380	3/4" x 7/16"	15	7	18	18	89.5	43	34	30	100	9.2 17.6	159	M12	19.7 19.2	30°
QCT-TCR208S QCT-TCR208D	240	380	1" x 17 mm	12	7	18	18	89.5	43	34	30	100	8.9 26.6	159	M12	19.4 34.6	30°

NOTE: Orientation of sprocket is supplied as shown. End user can reposition if necessary.

180°



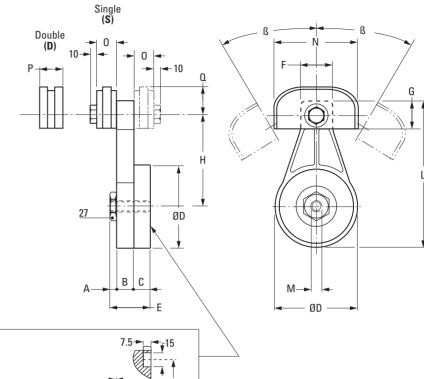


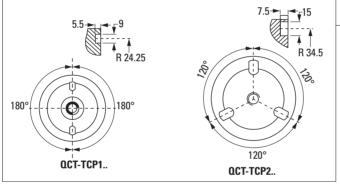
MATERIAL:

Arm — High-Tensile Die-Cast Aluminum Alloy (See*) Head — Polyethylene (UHMW-PE)

MAX. OPERATING TEMPERATURE:

65°C (149°F)





ANTIROTATION HOLES

All dimensions are in mm unless otherwise noted.

Catalog Number	Chain Pitch		ad V)	A	В	С	ØD	E	F	G	н	L	М	N	0	Q	P	ß
Number	FILGII	Min	Max															
QCT-TCP003S*#	3/8" x 7/32"	80	160	5	15	15	63.3	36	23	23	75.5	119	M10	70	20	23.5	20	45°
QCT-TCP103S QCT-TCP103D	3/8" x 7/32"	120	240	5	15.3	15.3	69.5	36	29.5	25	86.5	133.5	M10	70	20	23.5	20	45°
QCT-TCP104S QCT-TCP104D	1/2" x 5/16"	120	240	5	15.3	15.3	69.5	36	29.5	25	86.5	133.5	M10	70	20	23.5	20	45°
QCT-TCP105S QCT-TCP105D	5/8" x 3/8"	120	240	5	15.3	15.3	69.5	36	29.5	25	86.5	133.5	M10	90	22	29.5	25	45°
QCT-TCP205S QCT-TCP205D	5/8" x 3/8"	240	380	7	18	18	89.5	43	34	30	100	159	M12	90	22	29.5	25	30°
QCT-TCP206S QCT-TCP206D	3/4" x 7/16"	240	380	7	18	18	89.5	43	34	30	100	159	M12	90	22	29.5	30	30°
QCT-TCP208S#	1" x 17 mm	240	380	7	18	18	89.5	43	34	30	100	159	M12	110	25	34.5	-	30°

^{*}Acetal arm.

NOTE: Orientation of head is supplied as shown. End user can reposition if necessary.



[#]He ad for double chain is not available.

TC-PUG Type Tensioners





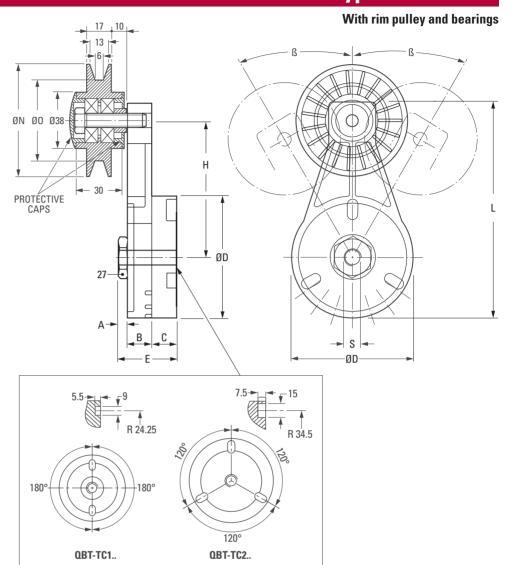


MATERIAL:

Arm - High-Tensile Die-Cast Aluminum Alloy Pulley - Black, Polyamide-6

MAX. OPERATING TEMPERATURE:

100°C (212°F)



ANTIROTATION HOLES

All dimensions are in mm unless otherwise noted.

Catalog Number	Lo (1	ad N)	A	В	С	ØD	E	Н	L	ØN	ØO	S	ß
Tuliibo.	Min	Max											
QBT-TC1PUG03	120	240	5	15.3	15.3	69.5	36	86.5	133.5	76.5	50	M10	45°
QBT-TC1PUG04										101.6	75		
QBT-TC2PUG03	240	380	7	18	18	89.5	43	100	159	76.5	50	M12	30°
QBT-TC2PUG04	240	300	,	10	10	03.3	45	100	133	101.6	75	IVIIZ	30
*QBT-TC5PUG03	80	160	5	15	15	63.3	36	75.5	118	76.5	50	M10	45°
*QBT-TC5PUG04	80	100	Э	10	15	03.3	30	/5.5	118	101.6	75	IVITU	45

^{*}Plastic arm





RH Type Tensioner Arms

Elastomer-Loaded • Automatically keeps the tension constant

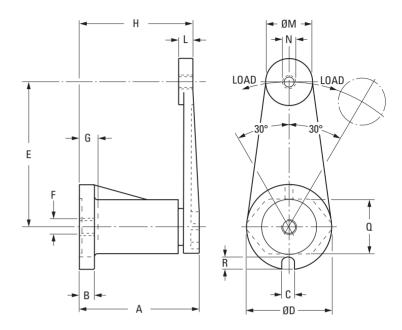






MATERIAL:

Arm - High-Tensile Die-Cast Aluminum Alloy



All dimensions are in mm unless otherwise noted.

Catalog Number	Max Load (N)	A ±1	В	С	ØD	E	F	G	H ±1	L	ØM	N	Q	R
QTA-RH111M08 QTA-RH111M10 QTA-RH111M12	100	52.5	6	8	35	80	M6	8.5	47.5	8	22	M8 M10 M12	22	4
QTA-RH155M08 QTA-RH155M10 QTA-RH155M12	150	66	8	8.5	45	100	M8	10.5	61	8	28	M8 M10 M12	30	5
QTA-RH188M10 QTA-RH188M12	300	79	10	8.5	58	100	M10	13	75	10	32	M10 M12	37	7.5
QTA-RH277M10 QTA-RH277M12 QTA-RH277M16	900	110	15	10.5	78	130	M12	17	104	12	50	M10 M12 M16	53	9.5

NOTE: Select N dimension to match the mounting bolt of the selected head (See pages 3-30, 3-31 & 3-34 for available heads).





표







MATERIAL:

Arm - High-Tensile Die-Cast Aluminum Alloy Roller - Material Code

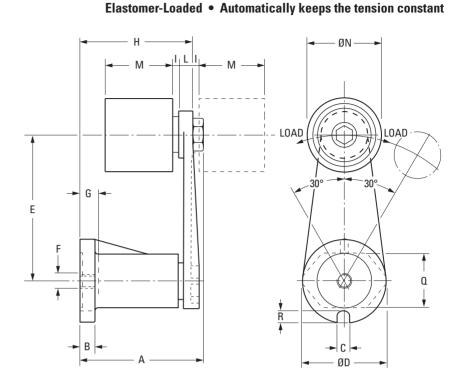
A Aluminum

N Nylon

Steel (Zinc Plated)

MAX. OPERATING TEMPERATURE:

100°C (212°F) - Aluminum and Steel Rollers 60°C (140°F) - Nylon Roller



All dimensions are in mm unless otherwise noted.

Catalog Number	Max Load (N)	A ±1	В	С	ØD	E	F	G	H ±1	1	L	M	ØN	Q	R
QBT-RHU11130X35 🗆	100	52.5	6	8	35	80	M6	8.5	47.5	2	8	35	30	22	4
QBT-RHU15530X35 ☐ QBT-RHU15550X50 ☐	150	66	8	8.5	45	100	M8	10.5	61	2.5	8	35 50	30 50	30	5
QBT-RHU18850X50 QBT-RHU18860X60	300	79	10	8.5	58	100	M10	13	75	2.5	10	50 60	50 60	37	7.5
QBT-RHU27760X60 ☐ QBT-RHU27780X90 ☐	900	110	15	10.5	78	130	M12	17	104	2.5	12	60 90	60 80	53	9.5

NOTES: 1. Orientation of roller is supplied as shown. End user can reposition if necessary.

2. Fill in the box with desired roller material code to complete part number.





Sprocket with Ball Bearing – Elastomer-Loaded • Automatically keeps the tension constant

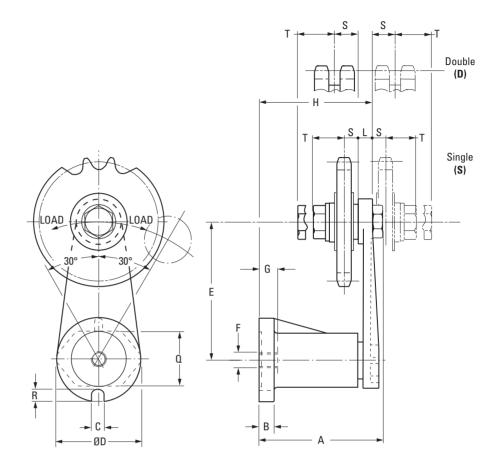


MATERIAL:

Arm – High-Tensile Die-Cast Aluminum Alloy Sprocket – Steel (Heat-Treated)

MAX. OPERATING TEMPERATURE:

100°C (212°F)



All dimensions are in mm unless otherwise noted.

Catalog Number	Chain Pitch	No. of Teeth	Max Load (N)	A ±1	В	С	ØD	E	F	G	H ±1	ι	Q	R	s	т
QCT-RHR11103S QCT-RHR11103D	3/8" x 7/32"	21	100	52.5	6	8	35	80	M6	8.5	47.5	8	22	4	9.2 11	19.7 18
QCT-RHR15503S QCT-RHR15503D	3/0 X //32	21	150	66	8	8.5	45	100	M8	10.5	61	8	30	5	9.2 11	19.7 18
QCT-RHR15504S QCT-RHR15504D	1/2" x 5/16"	16	150	66	8	8.5	45	100	M8	10.5	61	8	30	5	9.2 12.5	19.7 16.5
QCT-RHR18804S QCT-RHR18804D	1/2 x 3/10	10	300	79	10	8.5	58	100	M10	13	75	10	37	7.5	9.2 12.5	19.7 16.5
QCT-RHR18805S QCT-RHR18805D	5/8" x 3/8"	17	300	79	10	8.5	58	100	M10	13	75	10	37	7.5	9.2 15.2	19.7 17.7
QCT-RHR27706S QCT-RHR27706D	3/4" x 7/16"	15	900	110	15	10.5	78	130	M12	17	104	12	53	9.5	9.2 17.6	19.7 19.2
QCT-RHR27708S QCT-RHR27708D	1" x 17 mm	12	900	110	15	10.5	78	130	M12	17	104	12	53	9.5	8.9 26.6	19.4 34.6

NOTE: Orientation of sprocket is supplied as shown. End user can reposition if necessary.







Low Friction Polyethylene Head – Elastomer-Loaded • Automatically keeps the tension constant

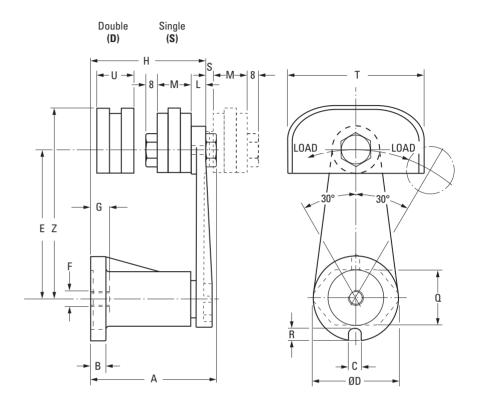


MATERIAL:

Arm – High-Tensile Die-Cast Aluminum Alloy Head – Polyethylene (UHMW-PE)

MAX. OPERATING TEMPERATURE:

65°C (149°F)



All dimensions are in mm unless otherwise noted.

Catalog Number	Chain Pitch	Max Load (N)	A ±1	В	С	ØD	E	F	G	H ±1	L	M	Q	R	S	т	U	Z
QCT-RHP11103S QCT-RHP11103D	3/8" x 7/32"	100	52.5	6	8	35	80	M6	8.5	47.5	8	20 –	22	4	4	70	- 20	103.5
QCT-RHP15503S QCT-RHP15503D	3/8" x 7/32"	150	66	8	8.5	45	100	M8	10.5	61	8	20 -	30	5	4	70	- 20	123.5
QCT-RHP15504S QCT-RHP15504D	1/2" x 5/16"	150	66	8	8.5	45	100	M8	10.5	61	8	20 -	30	5	4	70	- 20	123.5
QCT-RHP18804S QCT-RHP18804D	1/2" x 5/16"	300	79	10	8.5	58	100	M10	13	75	10	20 –	37	7.5	4	70	- 20	123.5
QCT-RHP18805S QCT-RHP18805D	5/8" x 3/8"	300	79	10	8.5	58	100	M10	13	75	10	22 -	37	7.5	5	90	- 25	129.5
QCT-RHP27706S QCT-RHP27706D	3/4" x 7/16	900	110	15	10.5	78	130	M12	17	104	12	22 -	53	9.5	5	90	- 30	159.5
QCT-RHP27708S*	1" x 17 mm											25				110	_	164.5

^{*}Head for double chain is not available.

NOTE: Orientation of head is supplied as shown. End user can reposition if necessary.





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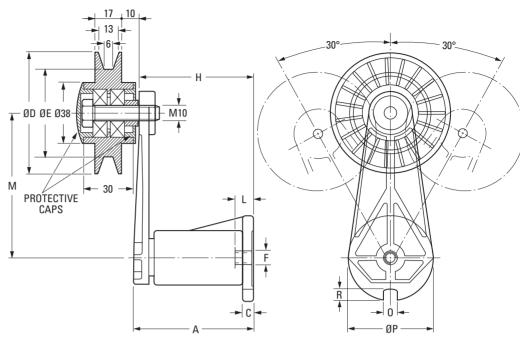


MATERIAL:

Arm – High-Tensile Die-Cast Aluminum Alloy Pulley – Black, Polyamide-6

MAX. OPERATING TEMPERATURE:

100°C (212°F)



All dimensions are in mm unless otherwise noted.

Catalog Number	Load (N)	A ±1	С	ØD	ØE	F	H ±1	ØP	ι	M	0	R
QBT-RH111PUG03 QBT-RH111PUG04	100	52.5	6	76.5 101.6	50 75	M6	47.5	35 45	8.5	80	8	4
QBT-RH155PUG03 QBT-RH155PUG04	150	66	8	76.5 101.6	50 75	M8	61	58 78	10.5	100	8.5	5
QBT-RH188PUG03 QBT-RH188PUG04	300	79	10	76.5 101.6	50 75	M10	75	35 45	13	100	8.5	7.5
QBT-RH277PUG03 QBT-RH277PUG04	900	110	15	76.5 101.6	50 75	M12	104	58 78	17	130	10.5	9.5



