

R-XPT-A4 Stainless Steel Throughbolt

Stainless steel throughbolt for non-cracked concrete



Product information

Features and benefits

- High performance in non-cracked concrete
- Stainless steel material for corrosion resistance
- Design of R-XPT allows drilling and installing directly through the fixture and helps to reduce installation effort
- Embedment depth markings help to ensure precise installation of the anchor
- R-XPT-A4 is suitable for reduced embedment to avoid contact with reinforcement
- Head marking helps to determine anchor length and setting depth after installation
- Optimized expander design with six grip features allows for a high load-bearing capacity
- Cold formed body ensures consistent dimensional accuracy

Applications

- Cladding restraint
- Curtain wall
- Balustrading
- Barriers
- Handrails
- Racking
- Structural steel
- Bollards

Base materials

Approved for use in:

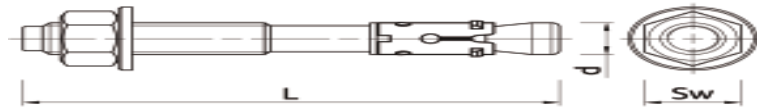
- Non-cracked concrete C20/25-C50/60
- Concrete

Installation guide



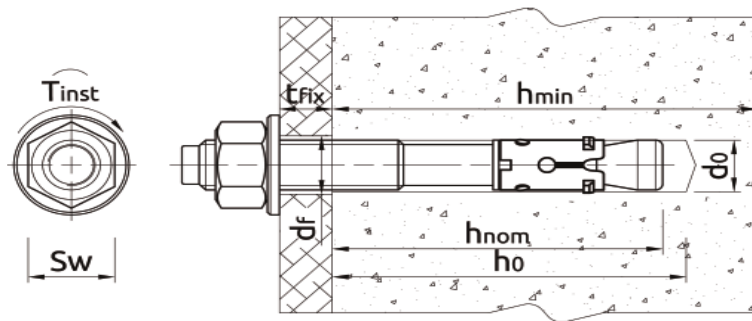
1. Drill a hole of required diameter and depth
2. Clear the hole of drilling dust and debris (using blowpump or equivalent method)
3. Lightly tap the throughbolt through the fixture into hole with a hammer, until fixing depth is reached
4. Tighten to the recommended torque

Product information



Size	Product Code	Anchor		Fixture		
		Diameter	Length	Max. thickness	Max. thickness t_{fix} for:	Hole diameter
		d	L	$t_{fix, r}$	$h_{nom, std}$	d_f
		[mm]	[mm]	[mm]	[mm]	[mm]
M6	R-XPT-A4-06050/10	6	50	10	0	7
	R-XPT-A4-06085/25	6	85	45	25	7
	R-XPT-A4-06100/40	6	100	60	40	7
M8	R-XPT-A4-08060/10	8	60	10	0	9
	R-XPT-A4-08065/15	8	65	15	0	9
	R-XPT-A4-08075/10	8	75	25	10	9
	R-XPT-A4-08080/15	8	80	30	15	9
	R-XPT-A4-08085/20	8	85	35	20	9
	R-XPT-A4-08095/30	8	95	45	30	9
	R-XPT-A4-08105/40	8	105	55	40	9
	R-XPT-A4-08115/50	8	115	65	50	9
	R-XPT-A4-10065/5	10	65	5	0	11
M10	R-XPT-A4-10080/10	10	80	20	10	11
	R-XPT-A4-10095/25	10	95	35	25	11
	R-XPT-A4-10115/45	10	115	55	45	11
	R-XPT-A4-10130/60	10	130	70	60	11
	R-XPT-A4-10140/70	10	140	80	70	11
M12	R-XPT-A4-12080/5	12	80	5	0	13
	R-XPT-A4-12100/5	12	100	25	5	13
	R-XPT-A4-12120/25	12	120	45	25	13
	R-XPT-A4-12125/30	12	125	50	30	13
	R-XPT-A4-12150/55	12	150	75	55	13
M16	R-XPT-A4-16125/5	16	125	25	5	18
	R-XPT-A4-16140/20	16	140	40	20	18
	R-XPT-A4-16150/30	16	150	50	30	18
	R-XPT-A4-16180/60	16	180	80	60	18
	R-XPT-A4-16220/100	16	220	120	100	18
M20	R-XPT-A4-20125/5	20	125	5	0	22
	R-XPT-A4-20160/20	20	160	40	20	22
	R-XPT-A4-20200/60	20	200	80	60	22
	R-XPT-A4-20300/160	20	300	180	160	22
M24	R-XPT-A4-24260/100	24	260	115	100	26

Installation data



Size			M6	M8	M10	M12	M16	M20	M24
Thread diameter	d	[mm]	6	8	10	12	16	20	24
Hole diameter in substrate	d ₀	[mm]	6	8	10	12	16	20	24
Installation torque	T _{inst}	[Nm]	5	15	25	60	110	180	320
Wrench size	Sw	[mm]	10	13	17	19	20	30	36
STANDARD EMBEDMENT DEPTH									
Min. hole depth in substrate	h _{0,s}	[mm]	50	55	60	80	100	120	135
Installation depth	h _{nom,s}	[mm]	50	55	60	80	100	120	135
Min. substrate thickness	h _{min,s}	[mm]	84	100	100	136	170	200	224
Min. spacing	s _{min,s}	[mm]	45	50	55	75	90	140	180
Min. edge distance	c _{min,s}	[mm]	50	40	50	65	80	100	200
REDUCED EMBEDMENT DEPTH									
Min. hole depth in substrate	h _{0,r}	[mm]	30	40	50	60	80	100	120
Installation depth	h _{nom,r}	[mm]	30	40	50	60	80	100	120
Min. substrate thickness	h _{min,r}	[mm]	80	100	100	100	130	158	194
Min. spacing	s _{min,r}	[mm]	40	45	55	100	100	125	160
Min. edge distance	c _{min,r}	[mm]	45	40	65	100	100	125	160

Mechanical properties

Size			M6	M8	M10	M12	M16	M20	M24
Nominal ultimate tensile strength - tension	f _{uk}	[N/mm ²]	545	545	545	500	500	636	636
Nominal ultimate tensile strength - shear	f _{uk}	[N/mm ²]	600	600	600	550	550	700	700
Nominal yield strength - tension	f _{yk}	[N/mm ²]	436	436	436	400	400	509	509
Nominal yield strength - shear	f _{yk}	[N/mm ²]	480	480	480	440	440	560	560
Cross sectional area - tension	A _s	[mm ²]	21.3	38.9	61.7	89.6	165.2	162.9	311
Cross sectional area - shear	A _s	[mm ²]	21.3	38.9	61.7	89.6	165.2	259.1	373.4
Elastic section modulus	W _{el}	[mm ³]	13.9	34.3	68.3	119.6	299.5	588.3	1017.5
Characteristic bending resistance	M ⁰ _{Rk,s}	[Nm]	9.1	22	45	72	180	449	777
Design bending resistance	M	[Nm]	7.3	18	36	57	144	359	621

Basic performance data

Size		M6	M8	M10	M12	M16	M20	M24
Standard embedment depth h_{ef}	[mm]	42.00	48.00	52.00	69.00	89.00	105.00	112.00
Reduced embedment depth h_{ef}	[mm]	22.00	33.00	42.00	49.00	69.00	85.00	97.00
MEAN ULTIMATE LOAD								
TENSION LOAD $N_{Ru,m}$								
Standard embedment depth	[kN]	14.50	18.50	19.00	24.50	31.50	37.70	48.00
Reduced embedment depth	[kN]	2.50	5.50	7.00	10.00	13.00	20.50	23.00
SHEAR LOAD $V_{Ru,m}$								
Standard embedment depth	[kN]	14.50	18.50	19.00	39.50	58.00	73.00	90.00
Reduced embedment depth	[kN]	2.50	5.50	7.00	10.00	25.00	41.00	52.00
CHARACTERISTIC LOAD								
TENSION LOAD N_{Rk}								
Standard embedment depth	[kN]	7.50	9.00	9.00	12.00	16.00	20.00	25.00
Reduced embedment depth	[kN]	1.50	4.00	6.00	7.50	7.50	12.00	16.00
SHEAR LOAD V_{Rk}								
Standard embedment depth	[kN]	7.50	9.00	9.00	21.00	32.00	40.00	50.00
Reduced embedment depth	[kN]	1.50	4.00	6.00	7.50	15.00	24.00	32.00
DESIGN LOAD								
TENSION LOAD N_{Rd}								
Standard embedment depth	[kN]	3.00	3.60	3.60	4.80	6.30	7.90	9.90
Reduced embedment depth	[kN]	0.60	1.60	2.40	3.00	3.00	4.80	6.30
SHEAR LOAD V_{Rd}								
Standard embedment depth	[kN]	6.00	7.20	7.20	16.80	25.60	32.00	40.00
Reduced embedment depth	[kN]	1.20	3.20	4.80	6.00	12.00	19.20	25.60
RECOMMENDED LOAD								
TENSION LOAD N_{rec}								
Standard embedment depth	[kN]	2.10	2.60	2.60	3.40	4.50	5.70	7.10
Reduced embedment depth	[kN]	0.40	1.10	1.70	2.10	2.10	3.40	4.50
SHEAR LOAD V_{rec}								
Standard embedment depth	[kN]	4.30	5.10	5.10	12.00	18.30	22.90	28.60
Reduced embedment depth	[kN]	0.90	2.30	3.40	4.30	8.60	13.70	18.30

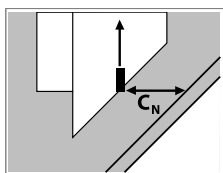
Design performance data

Standard embedment depth

Size			M6	M8	M10	M12	M16	M20	M24
Effective embedment depth		h_{ef} [mm]	42.00	47.00	50.00	68.00	85.00	100.00	112.00
TENSION LOAD									
STEEL FAILURE									
Characteristic resistance	$N_{Rk,s}$	[kN]	11.60	21.20	33.60	44.80	82.60	103.60	197.80
Design resistance $V_{Ms} = 1.5$	$N_{Rd,s}$	[kN]	7.80	14.10	22.40	29.90	55.10	69.10	131.90
PULL-OUT FAILURE; NON-CRACKED CONCRETE C20/25									
Characteristic resistance	$N_{Rk,p}$	[kN]	8.40	10.30	11.00	15.70	19.60	23.40	25.70
Design resistance $V_{Mp} = 2.52$	$N_{Rd,p}$	[kN]	3.30	4.10	4.30	6.20	7.80	9.30	10.20
Increasing factors for $N_{Rd,p}$ - C30/37	ψ_c	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Increasing factors for $N_{Rd,p}$ - C40/50	ψ_c	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Increasing factors for $N_{Rd,p}$ - C50/60	ψ_c	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Spacing	$s_{cr,N}$	[mm]	126.00	141.00	150.00	204.00	255.00	300.00	336.00
Edge distance	$c_{cr,N}$	[mm]	63.00	71.00	75.00	102.00	128.00	150.00	168.00
SHEAR LOAD									
CONCRETE EDGE FAILURE; NON-CRACKED CONCRETE C20/25									
Edge distance	c_1	[mm]	50.00	40.00	50.00	65.00	80.00	100.00	200.00
Characteristic resistance for c_1	$V_{Rk,c}$	[kN]	6.40	5.00	7.10	11.00	15.80	22.60	58.60
Design resistance $V_{Mc} = 2.52$	$V_{Rd,c}$	[kN]	2.50	2.00	2.80	4.30	6.30	9.00	23.30
CONCRETE PRY-OUT FAILURE; NON-CRACKED CONCRETE C20/25									
	k	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Characteristic resistance	$V_{Rk,cp}$	[kN]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Design resistance $V_{Mc} = 2.52$	$V_{Rd,cp}$	[kN]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STEEL FAILURE									
Characteristic resistance without lever arm	$V_{Rk,s}$	[kN]	8.40	10.30	11.00	15.70	19.60	23.40	25.70
Design resistance $V_{Ms} = 2.52$	$V_{Rd,s}$	[kN]	3.30	4.10	4.30	6.20	7.80	9.30	10.20

Reduction / increasing resistance factors for edge distance and spacing

Edge distance (tension)



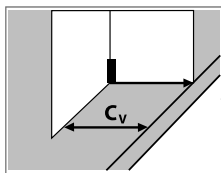
[English]: Tabela ważna tylko dla jednej krawędzi $c_{cr,N} \geq s_{cr,N}$. W innym wypadku skorzystać z programu obliczeniowego Rawlplug EasyFix Anchor Calculator.

Reduction factors for edge distance $c_{cr,N}$ applicable to N_{Rd} or N_{rec} for non-cracked concrete from 'Basic Performance' table

c_N [mm]	M8		M10		M12		M16	
	$h > 1.84h_{min}$	h_{min}	$h > 1.84h_{min}$	h_{min}	$h > 1.84h_{min}$	h_{min}	$h > 1.84h_{min}$	h_{min}
50	1,00	1,00						
60			0,86	0,86				
70			0,95	0,95				
75			1,00	1,00				
90					0,86	0,86	0,72	0,72
100					0,94	0,94	0,77	0,77
120					1,00	1,00	0,88	0,88
140							0,97	0,97
160							1,00	1,00

Design performance data

Edge distance (shear)

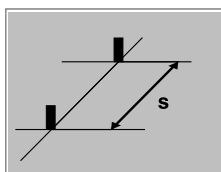


[English]: Tabela ważna tylko dla jednej krawędzi $> c_{min}$ and $s \geq 3c_v$ W innym wypadku skorzystać z programu obliczeniowego Rawlplug EasyFix Anchor Calculator.

[English]: Współczynniki zwiększające dla odległości od krawędzi $> c_{min}$ stosowane dla VRd,c lub Vrec dla betonu niespękanego.

c_v [m]	M8		M10		M12		M16	
	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}
50	0,58	0,58						
55	0,66	0,66						
60	0,74	0,74	0,50	0,50				
70	0,91	0,89	0,62	0,62				
75	1,00	0,95	0,68	0,68				
90		1,00	0,87	0,82	0,69	0,69	0,40	0,40
100			1,00	0,90	0,79	0,76	0,46	0,46
120				1,00	1,00	0,89	0,59	0,57
140						1,00	0,72	0,65
160							0,87	0,73
180							1,00	0,81
200								0,88
250								1,00

Spacing



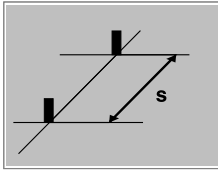
[English]: Tabela ważna tylko dla jednego rozstawu kotew $< s_{cr,N}$ i $c \geq c_{cr,N}$. W innym wypadku skorzystać z programu obliczeniowego Rawlplug Easy-Fix Anchor Calculator.

[English]: Współczynniki redukcyjne dla rozstawu kotew $< s_{cr,N}$ stosowane dla NRd lub Nrec dla betonu niespękanego.

s_N [m]	M8		M10		M12		M16	
	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}
70	0,99	0,99						
75	1,00	1,00						
90			0,86	0,86				
100			0,89	0,89				
120			0,95	0,95	0,76	0,76		
140			1,00	1,00	0,80	0,80		
160					0,85	0,85		
180					0,90	0,90	0,79	0,79
200					0,94	0,94	0,83	0,83
250					1,00	1,00	0,92	0,92
300							1,00	1,00

Design performance data

Spacing



[English]: Tabela ważna tylko dla jednego rozstawu kotew $c_{cr,N}$ i $c \geq c_{cr,N}$. W innym wypadku skorzystać z programu obliczeniowego Rawlplug Easy-Fix Anchor Calculator.

Reduction factors for spacing $< s_{cr,N}$ applicable to N_{Rd}/V_{Rd} or N_{rec}/V_{rec} for non-cracked concrete from 'Basic Performance' table

s_v [m]	M8		M10		M12		M16	
	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}
70	1,00	1,00						
75								
90			1,00	1,00				
100								
120					1,00	1,00		
140								
160								
180							0,94	0,89
200							0,97	0,92
250							1,00	1,00

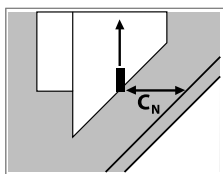
Reduced embedment depth

Size			M6	M8	M10	M12	M16	M20	M24
Effective embedment depth	h_{ef}	[mm]	22.00	32.00	40.00	48.00	65.00	80.00	97.00
TENSION LOAD									
STEEL FAILURE									
Characteristic resistance	$N_{Rk,s}$	[kN]	11.60	21.20	33.60	44.80	82.60	103.60	197.80
Design resistance $V_{Ms} = 1.5$	$N_{Rd,s}$	[kN]	7.80	14.10	22.40	29.90	55.10	69.10	131.90
PULL-OUT FAILURE; NON-CRACKED CONCRETE C20/25									
Characteristic resistance	$N_{Rk,p}$	[kN]	3.20	5.90	7.40	9.10	12.80	17.00	19.20
Design resistance $V_{Mp} = 2.52$	$N_{Rd,p}$	[kN]	1.30	2.30	2.90	3.60	5.10	6.70	7.60
Increasing factors for $N_{Rd,p} - C30/37$	ψ_c	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Increasing factors for $N_{Rd,p} - C40/50$	ψ_c	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Increasing factors for $N_{Rd,p} - C50/60$	ψ_c	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Spacing	$s_{cr,N}$	[mm]	66.00	96.00	120.00	144.00	195.00	240.00	291.00
Edge distance	$c_{cr,N}$	[mm]	33.00	48.00	60.00	72.00	98.00	120.00	146.00
SHEAR LOAD									
CONCRETE EDGE FAILURE; NON-CRACKED CONCRETE C20/25									
Edge distance	c_i	[mm]	45.00	40.00	65.00	100.00	100.00	125.00	160.00
Characteristic resistance for c_i	$V_{Rk,c}$	[kN]	5.10	4.70	9.70	18.40	20.00	28.80	42.50
Design resistance $V_{Mc} = 2.52$	$V_{Rd,c}$	[kN]	2.00	1.90	3.90	7.30	8.00	11.40	16.90
CONCRETE PRY-OUT FAILURE; NON-CRACKED CONCRETE C20/25									
	k	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Characteristic resistance	$V_{Rk,cp}$	[kN]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Design resistance	$V_{Rd,cp}$	[kN]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STEEL FAILURE									
Characteristic resistance without lever arm	$V_{Rk,s}$	[kN]	3.20	5.90	7.40	9.10	12.80	17.00	19.20
Design resistance $V_{Ms} = 2.52$	$V_{Rd,s}$	[kN]	1.30	2.30	2.90	3.60	5.10	6.70	7.60

Design performance data

Reduction / increasing resistance factors for edge distance and spacing

Edge distance (tension)

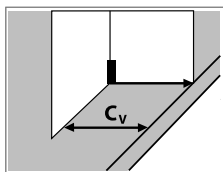


[English]: Tabela ważna tylko dla jednej krawędzi $c_{cr,N}$ i $s \geq s_{cr,N}$. W innym wypadku skorzystać z programu obliczeniowego Rawlplug EasyFix Anchor Calculator.

Reduction factors for edge distance $c_{cr,N}$ applicable to N_{Rd} or N_{rec} for non-cracked concrete from 'Basic Performance' table

c_v [m]	M8		M10		M12		M16	
	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}
50	0,82	0,82						
55	0,86	0,86						
60	0,91	0,91						
70	0,99	0,99						
75	1,00	1,00						
90			0,90	0,90				
100			0,97	0,97	0,88	0,88		
120			1,00	1,00	0,99	0,99	0,92	0,92
140					1,00	1,00	1,00	1,00

Edge distance (shear)



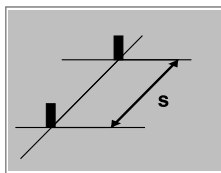
[English]: Tabela ważna tylko dla jednej krawędzi c_{min} and $s \geq 3c_v$. W innym wypadku skorzystać z programu obliczeniowego Rawlplug EasyFix Anchor Calculator.

[English]: Współczynniki zwiększające dla odległości od krawędzi $> c_{min}$ stosowane dla $VR_{d,c}$ lub V_{rec} dla betonu niespękanego.

c_v [m]	M8		M10		M12		M16	
	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}
50	0,54	0,54						
55	0,62	0,62						
60	0,70	0,70						
70	0,87	0,84						
75	0,95	0,90						
90	1,00	1,00	0,90	0,90				
100			0,97	0,97	0,75	0,61		
120			1,09	1,09	0,96	0,71	0,56	0,48
140			1,21	1,21	1,00	0,82	0,69	0,55
160			1,28	1,28		0,92	0,83	0,61
180						1,00	0,98	0,68
200							1,00	0,74
250								0,90
300								1,00

Design performance data

Spacing

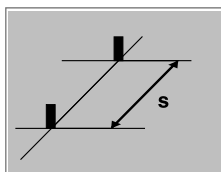


[English]: Tabela ważna tylko dla jednego rozstawu kotew $< s_{cr,N}$ i $c \geq c_{cr,N}$. W innym wypadku skorzystać z programu obliczeniowego Rawlplug Easy-Fix Anchor Calculator.

[English]: Współczynniki redukcyjne dla rozstawu kotew $< s_{cr,N}$ stosowane dla N_{Rd} lub N_{rec} dla betonu niespękanego.

s_N [m]	M8		M10		M12		M16	
	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}	$h > 1,84h_{min}$	h_{min}
70	0,70	0,70						
75	0,72	0,72						
90	0,78	0,78						
100	0,82	0,82						
120	0,91	0,91	0,72	0,72				
140	0,99	0,99	0,78	0,78				
160	1,00	1,00	0,84	0,84	0,78	0,78		
180			0,90	0,90	0,83	0,83		
200			0,97	0,97	0,88	0,88	0,84	0,84
250			1,00	1,00	1,00	1,00	0,94	0,94
300							1,00	1,00

Spacing



[English]: Tabela ważna tylko dla jednego rozstawu kotew $< s_{cr,N}$ i $c \geq c_{cr,N}$. W innym wypadku skorzystać z programu obliczeniowego Rawlplug Easy-Fix Anchor Calculator.

Reduction factors for spacing $< s_{cr,N}$ applicable to N_{Rd}/V_{Rd} or N_{rec}/V_{rec} for non-cracked concrete from 'Basic Performance' table

s_v [m]	M8		M10		M12		M16	
	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}	$h > 1,5c_v$	h_{min}
70	0,77	0,77						
75	0,78	0,78						
90	0,84	0,84						
100	0,87	0,87						
120	0,94	0,94	0,72	0,72				
140	1,00	1,00	0,78	0,78				
160			0,84	0,84	0,83	0,80		
180			0,90	0,90	0,88	0,84		
200			0,97	0,97	0,92	0,89	0,72	0,68
250			1,12	1,12	1,00	0,99	0,79	0,75
300			1,27	1,27		1,00	0,86	0,82
350			1,28	1,28			0,94	0,88
400							1,00	0,95
450								1,00

Product commercial data

Size	Product Code	Anchor		Quantity [pcs]			Weight [kg]			Bar Codes
		Diameter [mm]	Length [mm]	Box	Outer	Pallet	Box	Outer	Pallet	
M6	R-XPT-A4-06050/10	6	50	100	100	16000	1.23	1.23	227.4	5906675233802
	R-XPT-A4-06085/25	6	85	100	100	16000	1.89	1.89	332.4	5906675233819
	R-XPT-A4-06100/40	6	100	100	100	16000	2.1	2.1	363.6	5906675277950
M8	R-XPT-A4-08060/10	8	60	100	100	16000	2.4	2.4	414.0	5906675250434
	R-XPT-A4-08065/15	8	65	100	100	16000	2.0	2.0	350.0	5906675999609
	R-XPT-A4-08075/10	8	75	100	100	16000	3.1	3.1	532.4	5906675233826
	R-XPT-A4-08080/15	8	80	100	100	25000	2.8	2.8	730.0	5906675293462
	R-XPT-A4-08085/20	8	85	100	100	16000	3.4	3.4	574.0	5906675251592
	R-XPT-A4-08095/30	8	95	100	100	12000	3.7	3.7	475.2	5906675233833
	R-XPT-A4-08105/40	8	105	100	100	16000	4.1	4.1	678.0	5906675271842
	R-XPT-A4-08115/50	8	115	100	100	16000	2.0	2.0	350.0	5906675233840
M10	R-XPT-A4-10065/5	10	65	50	50	8000	2.4	2.4	414.0	5906675250441
	R-XPT-A4-10080/10	10	80	50	50	8000	2.8	2.8	471.6	5906675233857
	R-XPT-A4-10095/25	10	95	50	50	8000	3.1	3.1	529.2	5906675233864
	R-XPT-A4-10115/45	10	115	50	50	6000	3.6	3.6	466.2	5906675233871
	R-XPT-A4-10130/60	10	130	50	50	6000	2.0	2.0	270.0	5906675251608
	R-XPT-A4-10140/70	10	140	50	50	8000	2.9	2.9	486.0	5906675233888
M12	R-XPT-A4-12080/5	12	80	50	50	8000	4.1	4.1	686.8	5906675250458
	R-XPT-A4-12100/5	12	100	50	50	8000	4.8	4.8	797.2	5906675233895
	R-XPT-A4-12120/25	12	120	50	50	6000	5.5	5.5	690.0	5906675999616
	R-XPT-A4-12125/30	12	125	50	50	6000	5.8	5.8	720.0	5906675233901
	R-XPT-A4-12150/55	12	150	50	50	4000	6.0	6.0	510.0	5906675233918
M16	R-XPT-A4-16125/5	16	125	25	25	4000	5.3	5.3	882.0	5906675233925
	R-XPT-A4-16140/20	16	140	25	25	4000	6.1	6.1	1002.0	5906675250465
	R-XPT-A4-16150/30	16	150	25	25	4000	6.2	6.2	1024.0	5906675249698
	R-XPT-A4-16180/60	16	180	25	25	3000	6.0	6.0	750.0	5906675249704
	R-XPT-A4-16220/100	16	220	25	25	3000	8.7	8.7	1068.3	5906675233956
M20	R-XPT-A4-20125/5	20	125	25	25	3000	8.6	8.6	1056.0	5906675233963
	R-XPT-A4-20160/20	20	160	25	25	3000	10.2	10.2	1254.3	5906675233970
	R-XPT-A4-20200/60	20	200	10	10	1200	5.0	5.0	635.0	5906675233987
	R-XPT-A4-20300/160	20	300	10	10	1200	7.3	7.3	906.8	5906675233994
M24	R-XPT-A4-24260/100	24	260	10	10	1200	8.6	8.6	1066.7	5906675249711