

**Bespoke Implant Report for:**

**DePuy**

**C-Stem AMT - Pinnacle vs. All other Hybrid hips**

**Comprising PRIMARY hips implanted up to:** 06 October 2019  
**NJR Database extract:** 05 December 2019

**Produced on:** 10 December 2019  
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This report has been produced by the National Joint Registry of England, Wales and Northern Ireland (NJR). It summarises usage and outcomes associated with DePuy C-Stem AMT - Pinnacle vs. All other Hybrid hips used in primary hips, based on data collected by the NJR and PROMs data collected by NHS Digital.

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Both groups exclude metal-on-metal and ceramic-on-metal bearings

## Implant Usage

Totals Recorded in NJR	C-Stem AMT - Pinnacle	All other Hybrid hips
First usage in the NJR:	23-Jun-2005	01-Apr-2003
Last usage in this dataset:	06-Oct-2019	06-Oct-2019
Maximum implantation time (years):	14.3	16.5
Mean implantation time (years):	3.1	4.9
Procedures	16782	240005
Patients	15595	215243
Centres	170	458
Consultants	477	2440
Implanting Surgeons	779	4252

Group	Year of implantation													Total
	Pre-2008	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
<b>C-Stem AMT - Pinnacle</b>	303	139	186	280	437	652	861	1369	1738	2138	2560	3166	2953	16782
<b>All other Hybrid hips</b>	25241	9056	9905	10628	11763	13073	15991	19664	21958	25194	27193	27812	22527	240005
<b>Total</b>	25544	9195	10091	10908	12200	13725	16852	21033	23696	27332	29753	30978	25480	256787

## Patient / Procedure Details

## Patient Details

	C-Stem AMT - Pinnacle	All other Hybrid hips
<b>Total Procedures</b>	16782	240005
<b>Total Patients</b>	15595	215243
<b>Demographics</b>		
Mean age	<b>70.6</b>	<b>69.6</b>
< 50	3.3%	4.7%
50 – 59	9.8%	11.7%
60 – 69	26.7%	28.8%
70 – 79	42.1%	37.0%
≥ 80	18.1%	17.8%
Median BMI	<b>28</b>	<b>28</b>
% BMI information available	71.3%	68.4%
Underweight ( BMI < 18.5)	0.8%	1.0%
Normal (18.5 ≤ BMI < 25)	20.8%	21.6%
Overweight (25 ≤ BMI < 30)	39.7%	39.2%
Obese I (30 ≤ BMI < 35)	25.2%	25.3%
Obese II (35 ≤ BMI < 40)	10.4%	9.6%
Obese III (BMI ≥ 40)	3.2%	3.4%
% Male	37.5%	37.3%
<b>ASA Grades</b>		
P1 - Fit and healthy	9.4%	13.5%
P2 - Mild disease not incapacitating	71.3%	68.3%
P3 - Incapacitating systemic disease	18.8%	17.6%
P4 / P5	0.5%	0.6%
<b>Indications</b>		
Osteoarthritis	90.20%	89.28%
Rheumatoid Arthritis	1.36%	1.55%
Other Inflammatory Arthropathy	2.37%	2.87%
Previous Trauma	4.99%	5.27%
Avascular Necrosis	1.31%	1.86%
Other	1.67%	2.22%

Total of indications may exceed total number of implants, since more than one indication can be listed per case.

**Revision and Survivorship**

**Reasons for Revision**

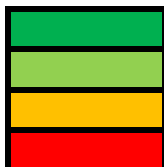
Reasons for revision of primary procedures in which the implant was used.

Reason for Revision	C-Stem AMT - Pinnacle		All other Hybrid hips		p value
	Revised <sup>†</sup>	Revised / Expected*	Revised <sup>†</sup>	Revised / Expected*	
Unexplained Pain	8	0.81	330	1.01	0.745
Dislocation / Subluxation	56	0.89	1140	1.01	0.436
Adverse Soft Tissue Reaction	3	0.87	85	1.01	1
Infection	46	0.80	953	1.01	0.119
Aseptic Loosening - Stem	6	0.56	327	1.01	0.162
Aseptic Loosening - Socket	7	0.66	316	1.01	0.346
Periprosthetic Fracture Stem	48	1.02	935	1.00	0.881
Periprosthetic Fracture Socket	6	0.81	116	1.01	0.707
Malalignment Stem	9	1.85	83	0.95	0.061
Malalignment Socket	13	1.17	239	0.99	0.538
Wear Of Acetabular Component	5	0.96	190	1.00	1
Lysis Stem	1	0.33	121	1.02	0.38
Lysis Socket	2	1.07	81	1.00	0.712
Implant Fracture Stem	0	0.00	103	1.03	0.119
Implant Fracture Socket	2	1.32	35	0.99	0.663
Implant Fracture Head	1	0.81	28	1.01	1
Dissociation of Liner	7	1.99	69	0.95	0.089
Other / reason not recorded	9	1.08	151	1.00	0.722
<b>Total Revised</b>	<b>193</b>	<b>0.89</b>	<b>4282</b>	<b>1.01</b>	<b>0.102</b>

† multiple reasons may be listed for one revision procedure

\* Logrank comparison, adjusted for Patient Gender, Age Group, Implantation year, and Indications (OA/non-OA)

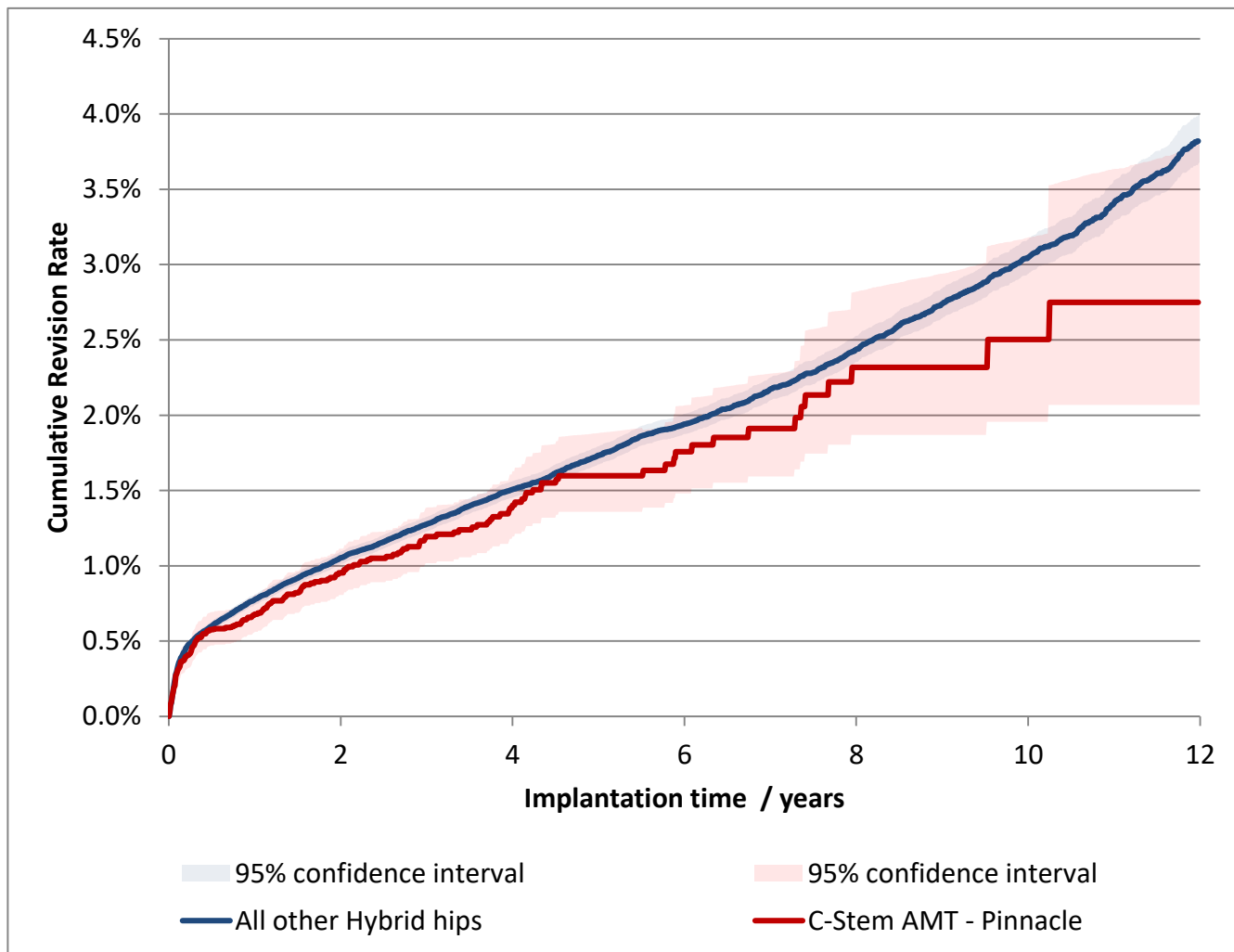
- Significantly better, p < 0.001
- Significantly better, p < 0.05
- Significantly worse p < 0.05
- Significantly worse p < 0.001



Components Revised	C-Stem AMT - Pinnacle		All other Hybrid hips	
Femoral only	59	30.6%	1257	29.4%
Acetabular only	37	19.2%	874	20.4%
Both femoral and acetabular	63	32.6%	1598	37.3%
Neither femoral nor acetabular revision recorded *	34	17.6%	553	12.9%

\* includes isolated head and/or liner exchange

**Endpoint: Revision for any reason**



Stratified Log-rank test, with observed and expected number of revisions

Adjustment	C-Stem AMT - Pinnacle		All other Hybrid hips		p-value
	Observed	Expected	Observed	Expected	
Unadjusted	193	215.0	4282	4260.0	0.123
Adjusted	193	216.8	4282	4258.2	0.093

Cox Proportional Hazards model for revision risk ratio of C-Stem AMT - Pinnacle / All other Hybrid hips

Adjustment	Hazard Ratio (95% CI)	p-value
Unadjusted	0.89 (0.77 - 1.03)	0.123
Adjusted	0.88 (0.76 - 1.02)	0.094

Adjustment includes Patient Gender, Age Group, Implantation year, and Indications (OA/non-OA)

## Revision and Survivorship

### Cumulative Revision Rate

Endpoint: Revision for any reason

Period /years	C-Stem AMT - Pinnacle		All other Hybrid hips	
	At Risk	Revision Rate	At Risk	Revision Rate
0	16,782	-	240,005	-
1	12,744	0.68% (0.56% - 0.81%)	205,957	0.78% (0.74% - 0.81%)
2	9,605	0.95% (0.81% - 1.11%)	175,618	1.05% (1.01% - 1.10%)
3	7,086	1.19% (1.02% - 1.39%)	146,520	1.28% (1.23% - 1.32%)
4	5,038	1.40% (1.19% - 1.63%)	120,170	1.51% (1.45% - 1.56%)
5	3,407	1.60% (1.36% - 1.88%)	97,561	1.73% (1.67% - 1.79%)
6	2,266	1.76% (1.48% - 2.06%)	78,125	1.94% (1.87% - 2.01%)
7	1,508	1.91% (1.59% - 2.28%)	62,971	2.17% (2.10% - 2.25%)
8	1,002	2.32% (1.87% - 2.82%)	50,443	2.44% (2.35% - 2.53%)
9	649	2.32% (1.87% - 2.94%)	39,535	2.74% (2.64% - 2.84%)
10	434	2.50% (1.96% - 3.18%)	30,196	3.05% (2.93% - 3.16%)
11	306	2.75% (2.07% - 3.63%)	22,262	3.41% (3.28% - 3.55%)
12	213	2.75% (2.07% - 3.81%)	15,456	3.83% (3.67% - 4.00%)
13	82	2.75% (2.07% - 4.44%)	9,833	4.13% (3.95% - 4.32%)
14		( - )	5,472	4.51% (4.28% - 4.74%)
15		( - )	2,443	5.14% (4.81% - 5.50%)

Cumulative revision rate with 95% confidence intervals

Rate is only reported for times where more than 40 remain at risk

## Patient Reported Outcomes

## PROMs Analysis

Comprising PROMs data up to: 29 March 2018

Oxford Hip Score (0 - 48)	C-Stem AMT - Pinnacle	All other Hybrid hips
Paired Records	4,457	56,881
PreOp score	18.6 (18.3 - 18.8)	17.9 (17.8 - 18.0)
6 month score	40.5 (40.3 - 40.8)	39.8 (39.8 - 39.9)
6 month score (adjusted)	40.2 (39.9 - 40.4)	39.9 (39.8 - 39.9)
Health gain	22.0 (21.7 - 22.3)	21.9 (21.9 - 22.0)
Health gain (adjusted)	22.1 (21.9 - 22.4)	21.9 (21.8 - 21.9)
p value (adjusted health gain)	0.077	
Score Improved	97.7%	97.6%

EQ-5D Index (-0.59 - 1.00)	C-Stem AMT - Pinnacle	All other Hybrid hips
Paired Records	4,072	52,345
PreOp score	0.378 (0.368 - 0.388)	0.351 (0.348 - 0.354)
6 month score	0.815 (0.808 - 0.822)	0.801 (0.799 - 0.803)
6 month score (adjusted)	0.803 (0.796 - 0.809)	0.802 (0.800 - 0.804)
Health gain	0.437 (0.427 - 0.448)	0.450 (0.447 - 0.453)
Health gain (adjusted)	0.448 (0.442 - 0.455)	0.447 (0.445 - 0.449)
p value (adjusted health gain)	0.94	
Score Improved	89.4%	90.5%

EQ-VAS (0 - 100)	C-Stem AMT - Pinnacle	All other Hybrid hips
Paired Records	3,866	50,357
PreOp score	66.1 (65.4 - 66.8)	64.8 (64.7 - 65.0)
6 month score	78.5 (77.9 - 79.0)	77.3 (77.2 - 77.5)
6 month score (adjusted)	77.6 (77.1 - 78.1)	77.4 (77.2 - 77.5)
Health gain	12.3 (11.6 - 13.1)	12.5 (12.3 - 12.7)
Health gain (adjusted)	12.6 (12.1 - 13.1)	12.3 (12.2 - 12.5)
p value (adjusted health gain)	0.75	
Score Improved	66.9%	66.7%

Adjusted scores correspond to the NHS Digital version 3 casemix-adjustment model. This includes patient variables from PROMs, HES, and IMD data.

Bespoke report on:

C-Stem AMT - Pinnacle vs. All other Hybrid hips

Responses are not case mix adjusted

**Patient Reported Outcomes**





## Disclaimer

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# Appendix A1

Catalogue Number	Description	Number Implanted
CUPS		
121701048	PINNACLE SHELL 100 48mm	363
121701050	PINNACLE SHELL 100 50mm	532
121701052	PINNACLE SHELL 100 52mm	565
121701054	PINNACLE SHELL 100 54mm	474
121701056	PINNACLE SHELL 100 56mm	337
121701058	PINNACLE SHELL 100 58mm	172
121701060	PINNACLE SHELL 100 60mm	47
121701062	PINNACLE SHELL 100 62mm	18
121701064	PINNACLE SHELL 100 64mm	4
121702052	PINNACLE SECTOR ACET CUP 52MM	2
121702054	PINNACLE SECTOR ACET CUP 54MM	1
121702056	PINNACLE SECTOR ACET CUP 56MM	1
121702060	PINNACLE SECTOR ACET CUP 60MM	1
121703048	PINNACLE SHELL 300 48mm	28
121703050	PINNACLE SHELL 300 50mm	33
121703052	PINNACLE SHELL 300 52mm	18
121703054	PINNACLE SHELL 300 54mm	15
121703056	PINNACLE SHELL 300 56mm	13
121703058	PINNACLE SHELL 300 58mm	7
121711048	PINN 100 HA ACET CUP 48MM	287
121711050	PINN 100 HA ACET CUP 50MM	422
121711052	PINN 100 HA ACET CUP 52MM	629
121711054	PINN 100 HA ACET CUP 54MM	513
121711056	PINN 100 HA ACET CUP 56MM	357
121711058	PINN 100 HA ACET CUP 58MM	180
121711060	PINN 100 HA ACET CUP 60MM	61
121711062	PINN 100 HA ACET CUP 62MM	25
121711064	PINN 100 HA ACET CUP 64MM	9
121711066	PINN 100 HA ACET CUP 66MM	1
121712048	PINN SECTOR HA ACET CUP 48MM	601
121712050	PINN SECTOR HA ACET CUP 50MM	1128
121712052	PINN SECTOR HA ACET CUP 52MM	1718
121712054	PINN SECTOR HA ACET CUP 54MM	1288
121712056	PINN SECTOR HA ACET CUP 56MM	900
121712058	PINN SECTOR HA ACET CUP 58MM	457
121712060	PINN SECTOR HA ACET CUP 60MM	174
121712062	PINN SECTOR HA ACET CUP 62MM	57
121712064	PINN SECTOR HA ACET CUP 64MM	21
121712066	PINN SECTOR HA ACET CUP 66MM	5
121716062	PINNACLE REVISION SHELL W/GRIPTION 62MM	1
121716066	PINNACLE REVISION SHELL W/GRIPTION 66MM	1
121717058	PINNACLE DEEP PROFILE REVISION SHELL W/GRIPTION 58MM	1
121720042	PINN BANTAM CUP 42MM	1
121720044	PINN BANTAM CUP 44MM	33
121720046	PINN BANTAM CUP 46MM	113

# Appendix A1

Catalogue Number	Description	Number Implanted
121720048	PINNACLE SHELL MULTIHOLE 48mm	2
121720050	PINNACLE SHELL MULTIHOLE 50mm	5
121720052	PINNACLE SHELL MULTIHOLE 52mm	10
121720054	PINNACLE SHELL MULTIHOLE 54mm	4
121720056	PINNACLE SHELL MULTIHOLE 56mm	2
121720058	PINNACLE SHELL MULTIHOLE 58mm	3
121720060	PINNACLE SHELL MULTIHOLE 60mm	1
121722048	PINNACLE SHELL SECTOR 48mm	521
121722050	PINNACLE SHELL SECTOR 50mm	708
121722052	PINNACLE SHELL SECTOR 52mm	937
121722054	PINNACLE SHELL SECTOR 54mm	671
121722056	PINNACLE SHELL SECTOR 56mm	406
121722058	PINNACLE SHELL SECTOR 58mm	187
121722060	PINNACLE SHELL SECTOR 60mm	83
121722062	PINNACLE SHELL SECTOR 62mm	34
121722064	PINNACLE SHELL SECTOR 64mm	12
121722066	PINNACLE SHELL SECTOR 66mm	4
121730044	PINNACLE BANTAM SHELL W/GRIPTION 44MM	3
121730046	PINNACLE BANTAM SHELL W/GRIPTION 46MM	2
121730048	PINNACLE MULTIHOLE SHELL W/GRIPTION 48MM	29
121730050	PINNACLE MULTIHOLE SHELL W/GRIPTION 50MM	24
121730052	PINNACLE MULTIHOLE SHELL W/GRIPTION 52MM	51
121730054	PINNACLE MULTIHOLE SHELL W/GRIPTION 54MM	37
121730056	PINNACLE MULTIHOLE SHELL W/GRIPTION 56MM	24
121730058	PINNACLE MULTIHOLE SHELL W/GRIPTION 58MM	15
121730060	PINNACLE MULTIHOLE SHELL W/GRIPTION 60MM	16
121730062	PINNACLE MULTIHOLE SHELL W/GRIPTION 62MM	6
121730064	PINNACLE MULTIHOLE SHELL W/GRIPTION 64MM	3
121730066	PINNACLE MULTIHOLE SHELL W/GRIPTION 66MM	3
121730068	PINNACLE MULTIHOLE SHELL W/GRIPTION 68MM	2
121730070	PINNACLE MULTIHOLE SHELL W/GRIPTION 70MM	1
121731044	PINNACLE 100 SHELL W/GRIPTION 44MM	5
121731046	PINNACLE 100 SHELL W/GRIPTION 46MM	29
121731048	PINNACLE 100 SHELL W/GRIPTION 48MM	27
121731050	PINNACLE 100 SHELL W/GRIPTION 50MM	47
121731052	PINNACLE 100 SHELL W/GRIPTION 52MM	68
121731054	PINNACLE 100 SHELL W/GRIPTION 54MM	70
121731056	PINNACLE 100 SHELL W/GRIPTION 56MM	62
121731058	PINNACLE 100 SHELL W/GRIPTION 58MM	24
121731060	PINNACLE 100 SHELL W/GRIPTION 60MM	14
121731062	PINNACLE 100 SHELL W/GRIPTION 62MM	3
121731064	PINNACLE 100 SHELL W/GRIPTION 64MM	1
121732048	PINNACLE SECTOR SHELL W/GRIPTION 48MM	136
121732050	PINNACLE SECTOR SHELL W/GRIPTION 50MM	207
121732052	PINNACLE SECTOR SHELL W/GRIPTION 52MM	266
121732054	PINNACLE SECTOR SHELL W/GRIPTION 54MM	171

# Appendix A1

Catalogue Number	Description	Number Implanted
121732056	PINNACLE SECTOR SHELL W/GRIPTION 56MM	113
121732058	PINNACLE SECTOR SHELL W/GRIPTION 58MM	69
121732060	PINNACLE SECTOR SHELL W/GRIPTION 60MM	28
121732062	PINNACLE SECTOR SHELL W/GRIPTION 62MM	15
121732064	PINNACLE SECTOR SHELL W/GRIPTION 64MM	3
121732066	PINNACLE SECTOR SHELL W/GRIPTION 66MM	4
LINERS		
121828048	PINNACLE ENDURON PE LINER NEUTRAL 48X28mm	22
121828050	PINNACLE ENDURON PE LINER NEUTRAL 50X28mm	53
121828052	PINNACLE ENDURON PE LINER NEUTRAL 52X28mm	27
121828054	PINNACLE ENDURON PE LINER NEUTRAL 54X28mm	18
121828056	PINNACLE ENDURON PE LINER NEUTRAL 56X28mm	15
121828058	PINNACLE ENDURON PE LINER NEUTRAL 58X28mm	3
121828060	PINNACLE ENDURON PE LINER NEUTRAL 60X28mm	7
121828148	PINNACLE ENDURON PE LINER +4 10 DEGREE 48X28mm	3
121828150	PINNACLE ENDURON PE LINER +4 10 DEGREE 50X28mm	2
121828152	PINNACLE ENDURON PE LINER +4 10 DEGREE 52X28mm	3
121828154	PINNACLE ENDURON PE LINER +4 10 DEGREE 54X28mm	1
121828156	PINNACLE ENDURON PE LINER +4 10 DEGREE 56X28mm	4
121828160	PINNACLE ENDURON PE LINER +4 10 DEGREE 60X28mm	1
121828248	PINNACLE ENDURON PE LINER LIPPED 48X28mm	24
121828250	PINNACLE ENDURON PE LINER LIPPED 50X28mm	46
121828252	PINNACLE ENDURON PE LINER LIPPED 52X28mm	51
121828254	PINNACLE ENDURON PE LINER LIPPED 54X28mm	37
121828256	PINNACLE ENDURON PE LINER LIPPED 56X28mm	32
121828258	PINNACLE ENDURON PE LINER LIPPED 58X28mm	8
121828260	PINNACLE ENDURON PE LINER LIPPED 60X28mm	5
121828262	PINNACLE ENDURON PE LINER LIPPED 62X28mm	5
121828264	PINNACLE ENDURON PE LINER LIPPED 64X28mm	1
121828454	PINNACLE ENDURON PE LINER +4 NEUTRAL 54X28mm	1
121828648	Pinnacle ESConstrained 28mm +4 GVF Liner OD 48mm	17
121828650	Pinnacle ESConstrained 28mm +4 GVF Liner OD 50mm	11
121828748	Pinnacle ESConstrained 28mm +4/10 Degree GVF Liner OD 48mm	1
121828750	Pinnacle ESConstrained 28mm +4/10 Degree GVF Liner OD 50mm	2
121832052	PINNACLE ENDURON PE LINER NEUTRAL 52X32mm	12
121832054	PINNACLE ENDURON PE LINER NEUTRAL 54X32mm	20
121832056	PINNACLE ENDURON PE LINER NEUTRAL 56X32mm	7
121832058	PINNACLE ENDURON PE LINER NEUTRAL 58X32mm	5
121832060	PINNACLE ENDURON PE LINER NEUTRAL 60X32mm	1
121832062	PINNACLE ENDURON PE LINER NEUTRAL 62X32mm	1
121832252	PINNACLE ENDURON PE LINER LIPPED 52X32mm	11
121832254	PINNACLE ENDURON PE LINER LIPPED 54X32mm	7
121832256	PINNACLE ENDURON PE LINER LIPPED 56X32mm	4
121832258	PINNACLE ENDURON PE LINER LIPPED 58X32mm	2
121832262	PINNACLE ENDURON PE LINER LIPPED 62X32mm	1

# Appendix A1

Catalogue Number	Description	Number Implanted
121832652	Pinnacle ESConstrained 32mm +4 Neutral GVF Liner OD 52mm	23
121832654	Pinnacle ESConstrained 32mm +4 Neutral GVF Liner OD 54mm	12
121832752	Pinnacle ESConstrained 32mm +4/10 Degree GVF Liner OD 52mm	1
121836656	Pinnacle ESConstrained 36mm +4 Neutral GVF Liner OD 56mm	12
121836658	Pinnacle ESConstrained 36mm +4 Neutral GVF Liner OD 58mm	5
121836660	Pinnacle ESConstrained 36mm +4 Neutral GVF Liner OD 60mm	2
121840662	PINNACLE GVF LINER +4 62X40mm	1
121840666	PINNACLE GVF LINER +4 66X40mm	1
121840766	PINNACLE GVF LINER +4 10 DEGREE 66X40mm	1
121881752	PINN DELTA CER INSRT 52ODX36ID	359
121881754	PINN DELTA CER INSRT 54ODX36ID	338
121881756	PINN DELTA CER INSRT 56ODX36ID	219
121881758	PINN DELTA CER INSRT 58ODX36ID	88
121881760	PINN DELTA CER INSRT 60ODX36ID	44
121881762	PINN DELTA CER INSRT 62ODX36ID	16
121881764	PINN DELTA CER INSRT 64ODX36ID	13
121881766	PINN DELTA CER INSRT 66ODX36ID	2
121882748	PINN DELTA CER INSERT 48ODX32ID	120
121882750	PINN DELTA CER INSERT 50ODX32ID	218
121882752	PINN DELTA CER INSRT 52ODX32ID	51
121883744	PINN DELTA CER INSRT 44ODX28ID	12
121883746	PINN DELTA CER INSRT 46ODX28ID	28
121883748	PINN DELTA CER INSRT 48ODX28ID	51
121883750	PINN DELTA CER INSRT 50ODX28ID	65
121883752	PINN DELTA CER INSRT 52ODX28ID	13
121883754	PINN DELTA CER INSRT 54ODX28ID	11
121883756	PINN DELTA CER INSRT 56ODX28ID	4
121883758	PINN DELTA CER INSRT 58ODX28ID	1
1219-32-148	Pinnacle Marathon PE Liner + 4 Neutral 32x48mm	14
121922042	PINN MAR NEUT 42ODX22.225ID	1
121926046	PINN MAR NEUT 46ODX26ID	1
121928044	Pinnacle Marathon PE Liner Neutral 44mm x 28mm	19
121928046	PINN MAR NEUT 46ODX28ID	93
121928048	PINNACLE MARATHON PE LINER NEUTRAL 48X28mm	367
121928050	PINNACLE MARATHON PE LINER NEUTRAL 50X28mm	481
121928052	PINNACLE MARATHON PE LINER NEUTRAL 52X28mm	221
121928054	PINNACLE MARATHON PE LINER NEUTRAL 54X28mm	125
121928056	PINNACLE MARATHON PE LINER NEUTRAL 56X28mm	70
121928058	PINNACLE MARATHON PE LINER NEUTRAL 58X28mm	25
121928060	PINNACLE MARATHON PE LINER NEUTRAL 60X28mm	11
121928062	PINNACLE MARATHON PE LINER NEUTRAL 62X28mm	2
121928144	Pinnacle Marathon PE Liner +4 10D 44mm x 28mm	8
121928146	PINN MAR +4 10D 46ODX28ID	22
121928148	PINNACLE MARATHON PE LINER +4 10 DEGREE 48X28mm	37
121928150	PINNACLE MARATHON PE LINER +4 10 DEGREE 50X28mm	47
121928152	PINNACLE MARATHON PE LINER +4 10 DEGREE 52X28mm	15

# Appendix A1

Catalogue Number	Description	Number Implanted
121928154	PINNACLE MARATHON PE LINER +4 10 DEGREE 54X28mm	9
121928156	PINNACLE MARATHON PE LINER +4 10 DEGREE 56X28mm	3
121928248	PINNACLE MARATHON PE LINER LIPPED 48X28mm	685
121928250	PINNACLE MARATHON PE LINER LIPPED 50X28mm	887
121928252	PINNACLE MARATHON PE LINER LIPPED 52X28mm	241
121928254	PINNACLE MARATHON PE LINER LIPPED 54X28mm	125
121928256	PINNACLE MARATHON PE LINER LIPPED 56X28mm	93
121928258	PINNACLE MARATHON PE LINER LIPPED 58X28mm	45
121928260	PINNACLE MARATHON PE LINER LIPPED 60X28mm	11
121928262	PINNACLE MARATHON PE LINER LIPPED 62X28mm	5
121928264	PINNACLE MARATHON PE LINER LIPPED 64X28mm	1
121928448	PINNACLE MARATHON PE LINER +4 NEUTRAL 48X28mm	8
121928450	PINNACLE MARATHON PE LINER +4 NEUTRAL 50X28mm	13
121928452	PINNACLE MARATHON PE LINER +4 NEUTRAL 52X28mm	3
121928454	PINNACLE MARATHON PE LINER +4 NEUTRAL 54X28mm	3
121928456	PINNACLE MARATHON PE LINER +4 NEUTRAL 56X28mm	3
121928460	PINNACLE MARATHON PE LINER +4 NEUTRAL 60X28mm	1
121932052	PINNACLE MARATHON PE LINER NEUTRAL 52X32mm	814
121932054	PINNACLE MARATHON PE LINER NEUTRAL 54X32mm	486
121932056	PINNACLE MARATHON PE LINER NEUTRAL 56X32mm	260
121932058	PINNACLE MARATHON PE LINER NEUTRAL 58X32mm	153
121932060	PINNACLE MARATHON PE LINER NEUTRAL 60X32mm	44
121932062	PINNACLE MARATHON PE LINER NEUTRAL 62X32mm	20
121932064	PINNACLE MARATHON PE LINER NEUTRAL 64X32mm	8
121932150	Pinnacle Marathon PE Liner +4 10D 50mm x 32mm	33
121932152	PINNACLE MARATHON PE LINER +4 10 DEGREE 52X32mm	16
121932154	PINNACLE MARATHON PE LINER +4 10 DEGREE 54X32mm	25
121932156	PINNACLE MARATHON PE LINER +4 10 DEGREE 56X32mm	11
121932158	PINNACLE MARATHON PE LINER +4 10 DEGREE 58X32mm	12
121932160	PINNACLE MARATHON PE LINER +4 10 DEGREE 60X32mm	6
121932162	PINNACLE MARATHON PE LINER +4 10 DEGREE 62X32mm	1
121932252	PINNACLE MARATHON PE LINER LIPPED 52X32mm	1251
121932254	PINNACLE MARATHON PE LINER LIPPED 54X32mm	952
121932256	PINNACLE MARATHON PE LINER LIPPED 56X32mm	593
121932258	PINNACLE MARATHON PE LINER LIPPED 58X32mm	314
121932260	PINNACLE MARATHON PE LINER LIPPED 60X32mm	108
121932262	PINNACLE MARATHON PE LINER LIPPED 62X32mm	47
121932264	PINNACLE MARATHON PE LINER LIPPED 64X32mm	9
121932266	PINNACLE MARATHON PE LINER LIPPED 66X32mm	8
121932268	Pinnacle Marathon PE Liner Lipped 68mm x 32mm	1
121932448	PINNACLE MARATHON PE Liner +4 NEUTRAL 48/32mm	4
121932450	32MM MARATHON +4 10 DEGREE ES LINER OD 50MM	9
121932452	PINNACLE MARATHON PE LINER +4 NEUTRAL 52X32mm	9
121932454	PINNACLE MARATHON PE LINER +4NEUTRAL 54X32mm	13
121932456	PINNACLE MARATHON PE LINER +4 NEUTRAL 56X32mm	10
121932458	PINNACLE MARATHON PE LINER +4 NEUTRAL 58X32mm	4

# Appendix A1

Catalogue Number	Description	Number Implanted
121932460	PINNACLE MARATHON PE LINER +4 NEUTRAL 60X32mm	7
121932464	PINNACLE MARATHON PE LINER +4 NEUTRAL 64X32mm	2
121936056	PINNACLE MARATHON PE LINER NEUTRAL 56X36mm	379
121936058	PINNACLE MARATHON PE LINER NEUTRAL 58X36mm	216
121936060	PINNACLE MARATHON PE LINER NEUTRAL 60X36mm	96
121936062	PINNACLE MARATHON PE LINER NEUTRAL 62X36mm	21
121936064	PINNACLE MARATHON PE LINER NEUTRAL 64X36mm	10
121936066	PINNACLE MARATHON PE LINER NEUTRAL 66X36mm	3
121936068	Pinnacle Marathon PE Liner Neutral 68mm x 36mm	1
121936070	Pinnacle Marathon PE Liner Neutral 70mm x 36mm	1
121936152	PINNACLE MARATHON PE LINER +4 10 DEGREE 52X36mm	79
121936154	PINNACLE MARATHON PE LINER +4 10 DEGREE 54X36mm	107
121936156	PINNACLE MARATHON PE LINER +4 10 DEGREE 56X36mm	92
121936158	PINNACLE MARATHON PE LINER +4 10 DEGREE 58X36mm	47
121936160	PINNACLE MARATHON PE LINER +4 10 DEGREE 60X36mm	19
121936162	PINNACLE MARATHON PE LINER +4 10 DEGREE 62X36mm	13
121936164	PINNACLE MARATHON PE LINER +4 10 DEGREE 64X36mm	3
121936166	PINNACLE MARATHON PE LINER +4 10 DEGREE 66X36mm	2
121936452	PINNACLE MARATHON PE LINER +4 NEUTRAL 52X36mm	20
121936454	PINNACLE MARATHON PE LINER +4 NEUTRAL 54X36mm	26
121936456	PINNACLE MARATHON PE LINER +4 NEUTRAL 56X36mm	19
121936458	PINNACLE MARATHON PE LINER +4 NEUTRAL 58X36mm	10
121936460	PINNACLE MARATHON PE LINER +4 NEUTRAL 60X36mm	2
121936462	PINNACLE MARATHON PE LINER +4 NEUTRAL 62X36mm	3
121936464	PINNACLE MARATHON PE LINER +4 NEUTRAL 64X36mm	1
1221-28-044	Pinnacle AltrX polyethylene liner neutral 28x44mm	2
1221-28-048	Pinnacle AltrX polyethylene liner neutral 28x48mm	1
1221-32-048	Pinnacle AltrX polyethylene liner neutral 32x48mm	629
1221-32-050	Pinnacle AltrX polyethylene liner neutral 32x50mm	1213
1221-32-052	Pinnacle AltrX polyethylene liner neutral 32x52mm	290
1221-32-054	Pinnacle AltrX polyethylene liner neutral 32x54mm	211
1221-32-056	Pinnacle AltrX polyethylene liner neutral 32x56mm	132
1221-32-058	Pinnacle AltrX polyethylene liner neutral 32x58mm	64
1221-32-060	Pinnacle AltrX polyethylene liner neutral 32x60mm	6
1221-32-062	Pinnacle AltrX polyethylene liner neutral 32x68mm	3
1221-32-064	Pinnacle AltrX polyethylene liner neutral 32x64mm	1
1221-32-148	Pinnacle AltrX polyethylene liner +4 10deg 32x48mm	10
1221-32-150	Pinnacle AltrX polyethylene liner +4 10deg 32x50mm	26
1221-32-152	Pinnacle AltrX polyethylene liner +4 10deg 32x52mm	2
1221-32-154	Pinnacle AltrX polyethylene liner +4 10deg 32x54mm	2
1221-32-252	Pinnacle AltrX polyethylene liner lipped 32x52mm	179
1221-32-254	Pinnacle AltrX polyethylene liner lipped 32x54mm	137
1221-32-258	Pinnacle AltrX polyethylene liner lipped 32x58mm	46
1221-32-260	Pinnacle AltrX polyethylene liner lipped 32x60mm	19
1221-32-262	Pinnacle AltrX polyethylene liner lipped 32x62mm	8
1221-32-264	Pinnacle AltrX polyethylene liner lipped 32x64mm	3

# Appendix A1

Catalogue Number	Description	Number Implanted
1221-322-56	Pinnacle AltrX polyethylene liner lipped 32x56mm	97
1221-36-256	Pinnacle AltrX polyethylene liner lipped 36x56mm	34
1221-36-258	Pinnacle AltrX polyethylene liner lipped 36x58mm	11
1221-36-260	Pinnacle AltrX polyethylene liner lipped 36x60mm	8
1221-36-262	Pinnacle AltrX polyethylene liner lipped 36x62mm	1
1221-36-264	Pinnacle AltrX polyethylene liner lipped 36x64mm	1
122132450	Pinnacle AltrX polyethylene liner +4 32x50mm	1
122132452	Pinnacle AltrX polyethylene liner +4 32x52mm	1
122136052	Pinnacle AltrX polyethylene liner neutral 36x52mm	557
122136054	Pinnacle AltrX polyethylene liner neutral 36x54mm	567
122136056	Pinnacle AltrX polyethylene liner neutral 36x56mm	120
122136058	Pinnacle AltrX polyethylene liner neutral 36x58mm	49
122136060	Pinnacle AltrX polyethylene liner neutral 36x60mm	24
122136062	Pinnacle AltrX polyethylene liner neutral 36x62mm	12
122136064	Pinnacle AltrX polyethylene liner neutral 36x64mm	2
122136152	Pinnacle AltrX polyethylene liner +4 10deg 36x52mm	9
122136154	Pinnacle AltrX polyethylene liner +4 10deg 36x54mm	9
122136156	Pinnacle AltrX polyethylene liner +4 10deg 36x56mm	6
122136158	Pinnacle AltrX polyethylene liner +4 10deg 36x58m	1
122136160	Pinnacle AltrX polyethylene liner +4 10deg 36x60mm	6
122136452	Pinnacle AltrX polyethylene liner +4 36x52mm	1
122136454	Pinnacle AltrX polyethylene liner +4 36x54mm	1
122136456	Pinnacle AltrX polyethylene liner +4 36x56mm	1
122136458	Pinnacle AltrX polyethylene liner +4 36x58mm	1
122140456	Pinnacle AltrX polyethylene liner LD +4 40x56mm	1
STEMS		
157004070	C-STEM AMT Std Offset Size 1	2563
157004085	C-STEM AMT Std Offset Size 2	3408
157004090	C-STEM AMT Std Offset Size 3	1885
157004100	C-STEM AMT Std Offset Size 4	666
157004110	C-STEM AMT Std Offset Size 5	157
157004120	C-STEM AMT Std Offset Size 6	34
157004135	C-STEM AMT Std Offset Size 7	12
157004150	C-STEM AMT Std Offset Size 8	6
157014070	C-STEM AMT High Offset Size 1	1470
157014085	C-STEM AMT High Offset Size 2	2651
157014090	C-STEM AMT High Offset Size 3	2456
157014100	C-STEM AMT High Offset Size 4	1060
157014110	C-STEM AMT High Offset Size 5	284
157014120	C-STEM AMT High Offset Size 6	90
157014135	C-STEM AMT High Offset Size 7	29
157014150	C-STEM AMT High Offset Size 8	9
157024060	C-STEM AMT RSA Std Offset Size 2	1
157024090	C-STEM AMT RSA Std Offset Size 5	1