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PART EJECTION

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Hardened Throughtout® Ejector Pins

- Can be used as an ejector or core pin
- Reduces “dishing” effect common to nitrided pins
- Pins 6” and longer have annealed heads to minimize brittleness and allow for easier machining
- All pin sizes with diameter greater than 3/32” are etched for identification
- Made in the U.S.A.

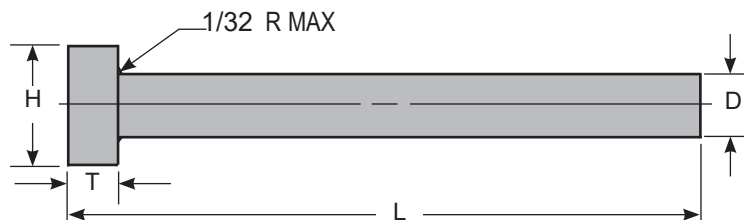


SPECIFICATIONS

R Pin to Head Radius	R.030
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch

D PIN DIAMETER TOLERANCES

P3 - P33	+ .0000 / - .0003
P34 - P47	+ .0000 / - .0005



D PIN DIA.	ACTUAL SIZE	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.062 / -.000								
				4"	6"		8"	10"		12"	14"	
				STD	STD	.005 OS	STD	STD	.005 OS	STD	STD	.005 OS
1/32	.0307	1/8	1/8	P3-4	P3-6	P3-6 OS						
3/64	.0464	5/32	1/8	P4-4	P4-6	P4-6 OS						
1/16	.0620	3/16	1/8	P5-4	P5-6	P5-6 OS	P5-8	P5-10	P5-10 OS			
5/64	.0776	13/64	1/8	P6-4	P6-6	P6-6 OS	P6-8	P6-10	P6-10 OS			
3/32	.0933	7/32	1/8	P7-4	P7-6	P7-6 OS	P7-8	P7-10	P7-10 OS			
7/64	.1089	15/64	1/8	P8-4	P8-6	P8-6 OS	P8-8	P8-10	P8-10 OS			
1/8	.1245	1/4	1/8	P9-4	P9-6	P9-6 OS	P9-8	P9-10	P9-10 OS	P9-12	P9-14	P9-14 OS
9/64	.1401	1/4	1/8	P10-4	P10-6	P10-6 OS		P10-10	P10-10 OS		P10-14	P10-14 OS
5/32	.1557	9/32	5/32	P11-4	P11-6	P11-6 OS	P11-8	P11-10	P11-10 OS	P11-12	P11-14	P11-14 OS
11/64	.1714	11/32	3/16	P12-4	P12-6	P12-6 OS		P12-10	P12-10 OS		P12-14	P12-14 OS
3/16	.1870	3/8	3/16	P13-4	P13-6	P13-6 OS	P13-8	P13-10	P13-10 OS	P13-12	P13-14	P13-14 OS
13/64	.2026	3/8	3/16	P14-4	P14-6	P14-6 OS		P14-10	P14-10 OS		P14-14	P14-14 OS
7/32	.2183	13/32	3/16	P15-4	P15-6	P15-6 OS	P15-8	P15-10	P15-10 OS		P15-14	P15-14 OS
15/64	.2339	13/32	3/16	P16-4	P16-6			P16-10	P16-10 OS		P16-14	P16-14 OS
1/4	.2495	7/16	3/16	P17-4	P17-6	P17-6 OS	P17-8	P17-10	P17-10 OS	P17-12	P17-14	P17-14 OS
17/64	.2651	7/16	1/4	P18-4	P18-6			P18-10	P18-10 OS		P18-14	P18-14 OS
9/32	.2807	7/16	1/4	P19-4	P19-6		P19-8	P19-10	P19-10 OS		P19-14	P19-14 OS
19/64	.2964	1/2	1/4	P20-4	P20-6			P20-10	P20-10 OS		P20-14	P20-14 OS
5/16	.3120	1/2	1/4	P21-4	P21-6	P21-6 OS	P21-8	P21-10	P21-10 OS		P21-14	P21-14 OS
21/64	.3276	9/16	1/4	P22-4	P22-6			P22-10	P22-10 OS		P22-14	P22-14 OS

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Hardened Throughtout® Ejector Pins

- Can be used as an ejector or core pin
- Reduces “dishing” effect common to nitrided pins
- Pins 6” and longer have annealed heads to minimize brittleness and allow for easier machining
- All pin sizes with diameter greater than 3/32” are etched for identification
- Made in the U.S.A.

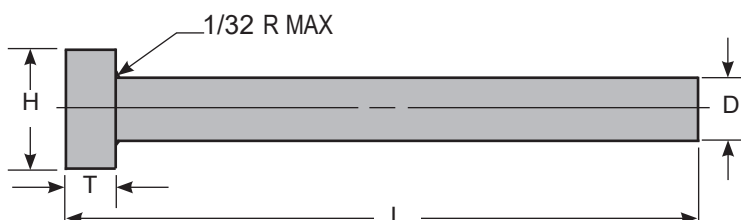


SPECIFICATIONS

R Pin to Head Radius	R.030
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch

D PIN DIAMETER TOLERANCES

P3 - P33	+.0000 / -.0003
P34 - P47	+.0000 / -.0005

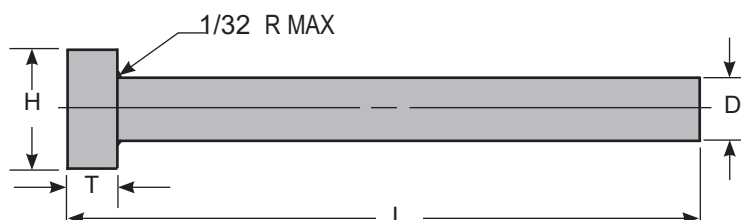


D PIN DIA.	ACTUAL SIZE	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.062 / -.000								
				4"	6"		8"	10"		12"	14"	
				STD	STD	.005 OS	STD	STD	.005 OS	STD	STD	.005 OS
11/32	.3433	9/16	1/4	P23-4	P23-6			P23-10	P23-10 OS		P23-14	P23-14 OS
23/64	.3589	5/8	1/4	P24-4	P24-6			P24-10	P24-10 OS		P24-14	P24-14 OS
3/8	.3745	5/8	1/4	P25-4	P25-6	P25-6 OS	P25-8	P25-10	P25-10 OS	P25-12	P25-14	P25-14 OS
25/64	.3901	37/64	1/4	P26-4	P26-6			P26-10	P26-10 OS		P26-14	P26-14 OS
13/32	.4057	11/16	1/4	P27-4	P27-6			P27-10	P27-10 OS		P27-14	P27-14 OS
27/64	.4214	11/16	1/4	P28-4	P28-6			P28-10	P28-10 OS		P28-14	P28-14 OS
7/16	.4370	11/16	1/4	P29-4	P29-6			P29-10	P29-10 OS		P29-14	P29-14 OS
29/64	.4526	45/64	1/4	P30-4	P30-6			P30-10	P30-10 OS		P30-14	P30-14 OS
15/32	.4683	3/4	1/4	P31-4	P31-6			P31-10	P31-10 OS		P31-14	P31-14 OS
31/64	.4839	3/4	1/4	P32-4	P32-6			P32-10	P32-10 OS		P32-14	P32-14 OS
1/2	.4995	3/4	1/4	P33-4	P33-6	P33-6 OS	P33-8	P33-10	P33-10 OS	P33-12	P33-14	P33-14 OS
17/32	.5307	25/32	1/4	P34-4	P34-6	P34-6 OS	P34-8	P34-10	P34-10 OS	P34-12	P34-14	P34-14 OS
9/16	.5620	13/16	1/4	P35-4	P35-6	P35-6 OS	P35-8	P35-10	P35-10 OS	P35-12	P35-14	P35-14 OS
5/8	.6245	7/8	1/4	P37-4	P37-6	P37-6 OS	P37-8	P37-10	P37-10 OS	P37-12	P37-14	P37-14 OS
11/16	.6870	15/16	1/4	P39-4	P39-6	P39-6 OS	P39-8	P39-10	P39-10 OS	P39-12	P39-14	P39-14 OS
3/4	.7495	1	1/4	P41-4	P41-6	P41-6 OS	P41-8	P41-10	P41-10 OS	P41-12	P41-14	P41-14 OS
7/8	.8745	1-1/8	1/4	P45-4	P45-6	P45-6 OS	P45-8	P45-10	P45-10 OS	P45-12	P45-14	P45-14 OS
1	.9995	1-1/4	1/4	P47-4	P47-6	P47-6 OS	P47-8	P47-10	P47-10 OS	P47-12	P47-14	P47-14 OS

Hardened Throughtout® Ejector Pins - Oversized

- Can be used as an ejector or core pin
- Reduces “dishing” effect common to nitrided pins
- Pins 6” and longer have annealed heads to minimize brittleness and allow for easier machining
- All pin sizes with diameter greater than 3/32” are etched for identification
- Made in the U.S.A.

SPECIFICATIONS	
R Pin to Head Radius	R.030
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



CATALOG NO.	ACTUAL PIN DIAMETER +.0000 / -.0003	D NOMINAL PIN DIAMETER	H HEAD DIAMETER +.000 / -.010	T HEAD THICKNESS +.000 / -.002	L OVERALL LENGTH +.062 / -.000	OVERSIZE INCREMENTS	
P9-8 OS-1	.1255	1/8	1/4	1/8	8	.001 Oversize	
P9-8 OS-2	.1265					.002 Oversize	
P9-8 OS-3	.1275					.003 Oversize	
P9-8 OS-4	.1285					.004 Oversize	
P11-8 OS-1	.1567	5/32	9/32	5/32		.001 Oversize	
P11-8 OS-2	.1577					.002 Oversize	
P11-8 OS-3	.1587					.003 Oversize	
P11-8 OS-4	.1597					.004 Oversize	
P13-8 OS-1	.1880	3/16	3/8	3/16		.001 Oversize	
P13-8 OS-2	.1890					.002 Oversize	
P13-8 OS-3	.1900					.003 Oversize	
P13-8 OS-4	.1910					.004 Oversize	
P17-8 OS-1	.2505	1/4	7/16			3/16	.001 Oversize
P17-8 OS-2	.2515						.002 Oversize
P17-8 OS-3	.2525						.003 Oversize
P17-8 OS-4	.2535						.004 Oversize
P17-8 OS-6	.2555						.006 Oversize
P17-8 OS-7	.2565						.007 Oversize
P17-8 OS-8	.2575						.008 Oversize

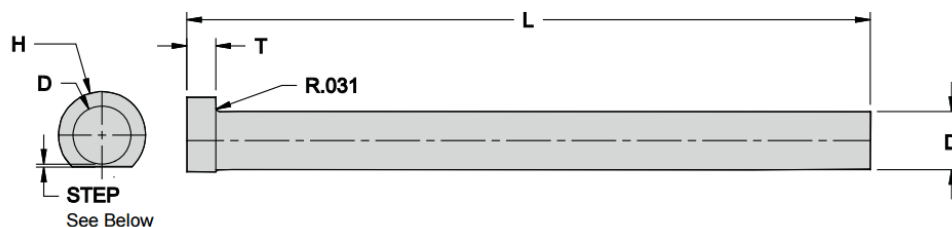
Hardened Throughtout® Ejector Pins - D-Head

- Designed to prevent pin rotation
- No secondary machining required
- Pins 6" and longer have annealed heads to minimize brittleness and allow for easier machining
- Reduces "dishing" effect common to nitrided pins
- Precision ground to 4 - 10 micro-inch finish
- Made in the U.S.A.



SPECIFICATIONS

R Pin to Head Radius	R.030
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



D PIN DIAMETER TOLERANCES

DHP7 - DHP33	+0.0000 / -0.0003
DHP35 - DHP47	+0.0000 / -0.0005

D PIN DIA.	ACTUAL SIZE	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002	STEP TOLERANCE	L OVERALL LENGTH +.062 / -.000					
					4"	6"	8"	10"	12"	14"
3/32	.0933	7/32	1/8	.006 +/- .002	DHP7-4	DHP7-6				
1/8	.1245	1/4				DHP9-6		DHP9-10	DHP9-12	DHP9-14
9/64	.1401	1/4						DHP10-10		
5/32	.1557	9/32	5/32			DHP11-6	DHP11-8	DHP11-10		DHP11-14
3/16	.1870	3/8	3/16			DHP13-6	DHP13-8	DHP13-10	DHP13-12	DHP13-14
7/32	.2183	13/32				DHP15-6	DHP15-8	DHP15-10		DHP15-14
1/4	.2495	7/16			DHP17-4	DHP17-6	DHP17-8	DHP17-10		DHP17-14
9/32	.2807.	7/16	1/4					DHP19-10		
5/16	.3120	1/2			DHP21-4			DHP21-10	DHP21-12	DHP21-14
11/32	.3433	9/16						DHP23-10		
3/8	.3745	5/8				DHP25-6	DHP25-8	DHP25-10		DHP25-14
13/32	.4057	11/16			DHP27-4	DHP27-6		DHP27-10		
7/16	.4370	11/16				DHP29-6		DHP29-10		
1/2	.4995	3/4			DHP33-4	DHP33-6	DHP33-8	DHP33-10	DHP33-12	DHP33-14
9/16	.5620	13/16				DHP35-6	DHP35-8	DHP35-10	DHP35-12	
5/8	.6245	7/8			DHP37-4	DHP37-6		DHP37-10		DHP37-14
3/4	.7495	1				DHP41-6		DHP41-10		DHP41-14
7/8	.8745	1-1/8		1	.007 +/- .003		DHP45-6	DHP45-8		
1	.9995	1-1/4					DHP47-6		DHP47-10	DHP47-12

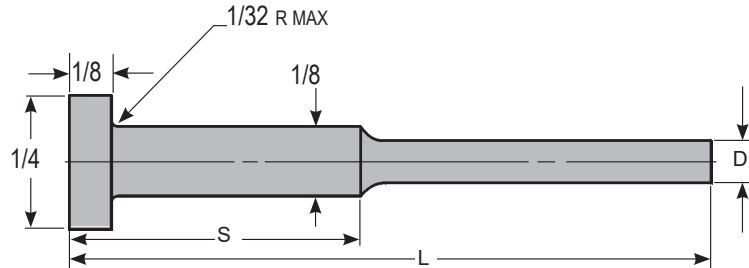
To order D-Head Ejector Pins with the flat ground tangent to the pin diameter, specify "T" after the PCS part number (Ex: DHP9-6T)

Hardened Throughtout® Step Pins

- Reduces “dishing” effect common to nitrided pins
- Pins 6” and longer have annealed heads to minimize brittleness and allow for easier machining
- All pin sizes with diameter greater than 3/32” are etched for identification

SPECIFICATIONS

Head Diameter Tolerance	+ .000 / - .010
Shoulder Diameter Tolerance	+ .000 / - .001
Head Thickness Tolerance	+ .000 / - .002
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



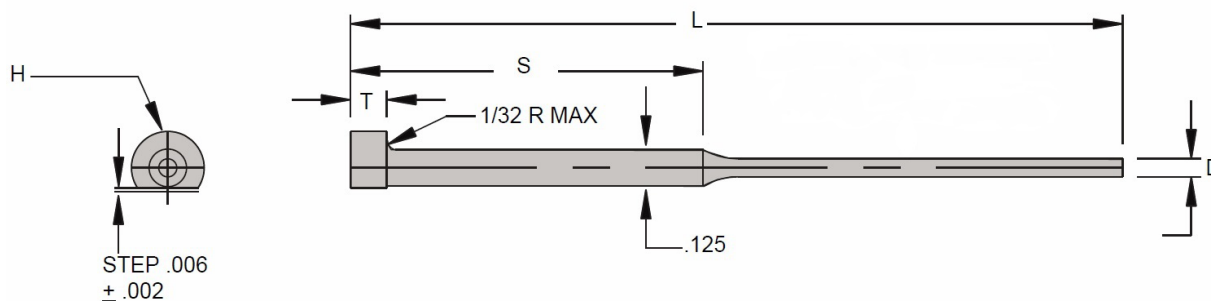
D NOMINAL PIN DIA.	ACTUAL PIN DIA. + .000 / - .0003	S SHOULDER LENGTH + .010 / - .010	L OVERALL LENGTH + .062 / - .000			
			6"	8"	10"	14"
1/32	.0307	1/2	SP3-6 1/2			
		2	SP3-62	SP3-82		SP3-142
		3		SP3-83		
		4		SP3-84		
3/64	.0464	1/2	SP4-6 1/2			
		2	SP4-62	SP4-82	SP4-102	
		3		SP4-83		
		4		SP4-84	SP4-104	
1/16	.0620	1/2	SP5-6 1/2		SP5-10 1/2	
		2	SP5-62	SP5-82	SP5-102	SP5-142
		3		SP5-83		
		4		SP5-84	SP5-104	
5/64	.0776	1/2	SP6-6 1/2		SP6-10 1/2	SP6-14 1/2
		2	SP6-62		SP6-102	SP6-142
		3		SP6-83		
		4		SP6-84	SP6-104	
3/32	.0933	1/2	SP7-6 1/2		SP7-10 1/2	SP7-14 1/2
		2	SP7-62	SP7-82	SP7-102	SP7-142
		3		SP7-83		
		4		SP7-84	SP7-104	
7/64	.1089	1/2	SP8-6 1/2		SP8-10 1/2	
		2	SP8-62	SP8-82	SP8-102	SP8-142
		3		SP8-83		
		4		SP8-84	SP8-104	

Hardened Throughtout® Step Pins - D-Head

- Designed to prevent pin rotation
- No secondary machining required
- Reduces “dishing” effect common to nitrided pins
- Precision ground to 4 - 10 micro-inch finish



SPECIFICATIONS	
Annealed Head	Yes
R Pin to Head Radius	R.030
SD Shoulder Diameter	.125
Step Tolerance	.006 + .002
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Etched for Identification	Yes
Material Type	Premium Hot Work Steel
Unit of Measure	Inch

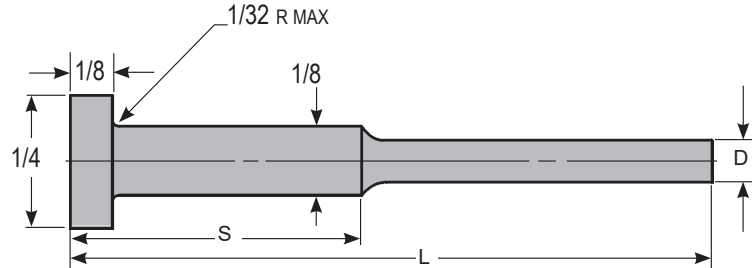


CATALOG NO.	ACTUAL PIN DIAMETER +.000 / -.0003	D NOMINAL PIN DIA.	H HEAD DIAMETER	T HEAD THICKNESS	S SHOULDER LENGTH	L OVERALL LENGTH
DSP3-62	.0307	1/32	1/4	1/8	2	6
DSP4-62	.0464	3/64	1/4	1/8	2	6
DSP5-62	.0620	1/16	1/4	1/8	2	6
DSP6-62	.0776	5/64	1/4	1/8	2	6
DSP6-83	.0776	5/64	1/4	1/8	2	6
DSP7-62	.0933	3/32	1/4	1/8	2	6
DSP8-62	.1089	7/64	1/4	1/8	2	6
DSP8-102	.1089	7/64	1/4	1/8	2	10

Hardened Throughtout® Step Pins - .005 Oversized

- Reduces “dishing” effect common to nitrided pins
- Pins 6” and longer have annealed heads to minimize brittleness and allow for easier machining
- All pin sizes with diameter greater than 3/32” are etched for identification

SPECIFICATIONS	
Head Diameter Tolerance	+.000 / -.010
Shoulder Diameter Tolerance	+.000 / -.001
Head Thickness Tolerance	+.000 / -.002
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



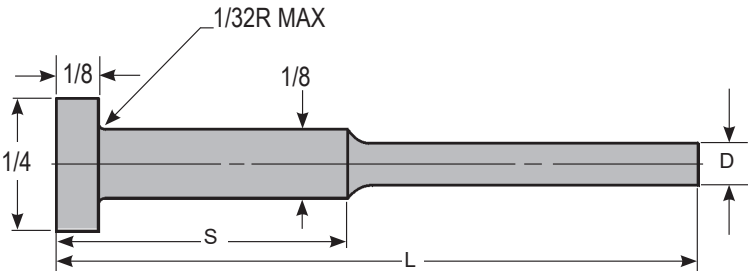
D NOMINAL PIN DIA.	ACTUAL PIN DIAMETER +.000 / -.0003	S SHOULDER LENGTH +.010 / -.010	L OVERALL LENGTH +.062 / -.000			
			6"	8"	10"	14"
			.005 OS	.005 OS	.005 OS	.005 OS
1/32	.0307	1/2	SP3-6 1/2 OS			
		2	SP3-62 OS			
		3		SP3-83 OS		
		4		SP3-84 OS		
3/64	.0464	1/2	SP4-6 1/2 OS			
		2	SP4-62 OS		SP4-102 OS	
		3		SP4-83 OS		
		4		SP4-84 OS	SP4-104 OS	
1/16	.0620	1/2	SP5-6 1/2 OS		SP5-10 1/2 OS	
		2	SP5-62 OS		SP5-102 OS	SP5-142 OS
		3		SP5-83 OS		
		4		SP5-84 OS	SP5-104 OS	
5/64	.0776	1/2	SP6-6 1/2 OS		SP6-10 1/2 OS	
		2	SP6-62 OS		SP6-102 OS	SP6-142 OS
		3		SP6-83 OS		
		4		SP6-84 OS	SP6-104 OS	
3/32	.0933	1/2	SP7-6 1/2 OS		SP7-10 1/2 OS	
		2	SP7-62 OS		SP7-102 OS	SP7-142 OS
		3		SP7-83 OS		
		4		SP7-84 OS	SP7-104 OS	
7/64	.1089	1/2	SP8-6 1/2 OS		SP8-10 1/2 OS	
		2	SP8-62 OS		SP8-102 OS	SP8-142 OS
		3		SP8-83 OS		
		4		SP8-84 OS	SP8-104 OS	

Hardened Throughtout® Step Pins - Oversized

- .001 increments oversized
- Reduces “dishing” effect common to nitrided pins
- All pin sizes with diameter greater than 3/32 are etched for identification.



SPECIFICATIONS	
Head Diameter Tolerance	+.000 / -.010
Shoulder Diameter Tolerance	+.000 / -.001
Head Thickness Tolerance	+.000 / -.002
Overall Length	8
Core Hardness	50 - 52 Rc
Surface Hardness	62 - 65 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



D NOMINAL PIN DIA.	ACTUAL PIN DIAMETER +.000 / -.0003	S SHOULDER LENGTH +.010 / -.010	L OVERALL LENGTH = 8" +.062 / -.000			
			.001 OS	.002 OS	.003 OS	.004 OS
1/32	.0307	2	SP3-82 OS-1	SP3-82 OS-2	SP3-82 OS-3	SP3-82 OS-4
3/64	.0464	1/2	SP4-8 1/2 OS-1	SP4-8 1/2 OS-2	SP4-8 1/2 OS-3	SP4-8 1/2 OS-4
		2	SP4-82 OS-1	SP4-82 OS-2	SP4-82 OS-3	SP4-82 OS-4
1/16	.0620	1/2	SP5-8 1/2 OS-1	SP5-8 1/2 OS-2	SP5-8 1/2 OS-3	SP5-8 1/2 OS-4
		2	SP5-82 OS-1	SP5-82 OS-2	SP5-82 OS-3	SP5-82 OS-4
5/64	.0776	1/2	SP6-8 1/2 OS-1	SP6-8 1/2 OS-2	SP6-8 1/2 OS-3	SP6-8 1/2 OS-4
		2	SP6-82 OS-1	SP6-82 OS-2	SP6-82 OS-3	SP6-82 OS-4
3/32	.0933	1/2	SP7-8 1/2 OS-1	SP7-8 1/2 OS-2	SP7-8 1/2 OS-3	SP7-8 1/2 OS-4
		2	SP7-82 OS-1	SP7-82 OS-2	SP7-82 OS-3	SP7-82 OS-4
7/64	.1089	2	SP8-82 OS-1	SP8-82 OS-2	SP8-82 OS-3	SP8-82 OS-4

Nitrided Ejector Pins

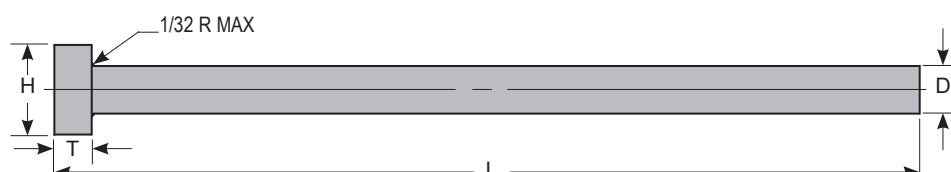
- Precision ground hotwork steel
- 4 - 10 micro-inch finish minimizes wear & prolongs life
- All heads annealed
- All pin sizes with diameter greater than 3/32" are etched for identification

SPECIFICATIONS	
R Pin to Head Radius	R.030
Core Hardness	40 - 45 Rc
Surface Hardness	65 - 74 Rc
Material Type	Hot Work Tool Steel
Unit of Measure	Inch



D PIN DIAMETER TOLERANCES

NP3 - NP33	+.0000/- .0003
NP35 - NP47	+.0000/- .0005



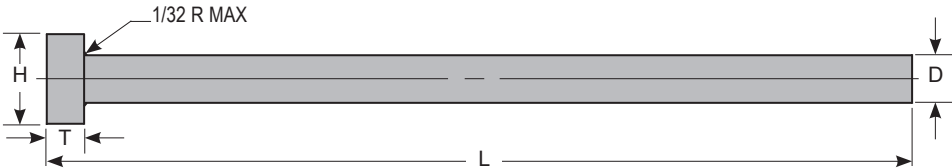
D PIN DIA.	ACTUAL SIZE	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.062 / -.000						
				6"	10"	14"	18"	25"	36"	39"
1/32	.0307	1/4	1/8	NP3-6						
1/16	.0620	1/4	1/8	NP5-6						
5/64	.0776	1/4	1/8	NP6-6	NP6-10					
3/32	.0933	1/4	1/8	NP7-6	NP7-10					
7/64	.1089	1/4	1/8	NP8-6	NP8-10					
1/8	.1245	1/4	1/8	NP9-6	NP9-10	NP9-14	NP9-18	NP9-25		
9/64	.1401	1/4	1/8		NP10-10	NP10-14				
5/32	.1557	9/32	5/32	NP11-6	NP11-10	NP11-14	NP11-18	NP11-25		
11/64	.1714	11/32	3/16		NP12-10	NP12-14				
3/16	.1870	3/8	3/16	NP13-6	NP13-10	NP13-14	NP13-18	NP13-25		NP13-39
13/64	.2026	3/8	3/16		NP14-10	NP14-14				
7/32	.2183	13/32	3/16	NP15-6	NP15-10	NP15-14		NP15-25		
15/64	.2339	13/32	3/16		NP16-10	NP16-14				
1/4	.2495	7/16	3/16	NP17-6	NP17-10	NP17-14	NP17-18	NP17-25	NP17-36	NP17-39
17/64	.2651	7/16	1/4		NP18-10	NP18-14		NP18-25		
9/32	.2807	7/16	1/4	NP19-6	NP19-10	NP19-14	NP19-18	NP19-25		
19/64	.2964	1/2	1/4		NP20-10	NP20-14				
5/16	.3120	1/2	1/4	NP21-6	NP21-10	NP21-14	NP21-18	NP21-25	NP21-36	
21/64	.3276	9/16	1/4		NP22-10	NP22-14		NP22-25		
11/32	.3433	9/16	1/4	NP23-6	NP23-10	NP23-14		NP23-25		
23/64	.3589	5/8	1/4		NP24-10	NP24-14				
3/8	.3745	5/8	1/4	NP25-6	NP25-10	NP25-14	NP25-18	NP25-25	NP25-36	NP25-39
13/32	.4057	11/16	1/4	NP27-6	NP27-10	NP27-14	NP27-18	NP27-25		
7/16	.4370	11/16	1/4	NP29-6	NP29-10	NP29-14	NP29-18	NP29-25	NP29-36	
15/32	.4683	3/4	1/4		NP31-10		NP31-18	NP31-25		
1/2	.4995	3/4	1/4	NP33-6	NP33-10	NP33-14	NP33-18	NP33-25	NP33-36	NP33-39
9/16	.5620	13/16	1/4	NP35-6	NP35-10	NP35-14	NP35-18	NP35-25		
5/8	.6245	7/8	1/4	NP37-6	NP37-10	NP37-14	NP37-18	NP37-25	NP37-36	NP37-39
11/16	.6870	15/16	1/4		NP39-10		NP39-18	NP39-25		
3/4	.7495	1	1/4	NP41-6	NP41-10	NP41-14	NP41-18	NP41-25	NP41-36	NP41-39
7/8	.8745	1-1/8	1/4		NP45-10		NP45-18	NP45-25		
1	.9995	1-1/4	1/4	NP47-6	NP47-10	NP47-14	NP47-18	NP47-25	NP47-36	NP47-39

Nitrided Ejector Pins - Oversized

- Precision ground hotwork steel
- 4 - 10 micro-inch finish minimizes wear & prolongs life
- All heads annealed
- All pin sizes with diameter greater than 3/32" are etched for identification



SPECIFICATIONS	
R Pin to Head Radius	R.030
Core Hardness	40 - 45 Rc
Surface Hardness	65 - 74 Rc
Material Type	Hot Work Tool Steel
Unit of Measure	Inch

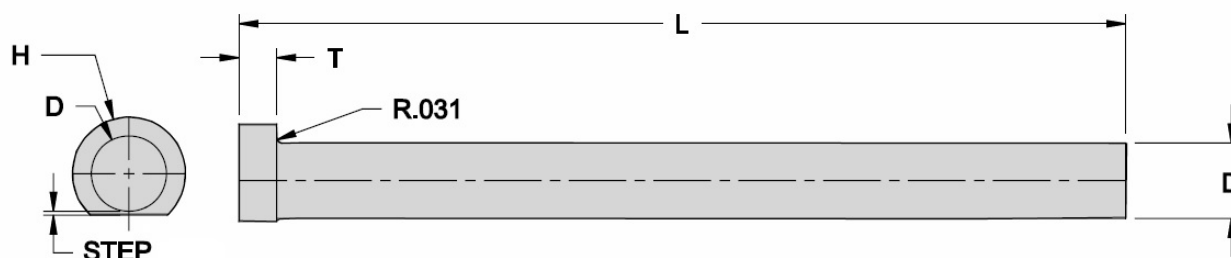


D PIN DIA.	ACTUAL SIZE +.0005/- .0008	H HEAD DIA. +.000 /-.010	T HEAD THICK. +.000 /-.002	L OVERALL LENGTH +.062 / -.000		
				10" .005 OS	14" .005 OS	18" .005 OS
1/8	.1245	1/4	1/8	NP9-10 OS	NP9-14 OS	
9/64	.1401	1/4	1/8			
5/32	.1557	9/32	5/32	NP11-10 OS	NP11-14 OS	
11/64	.1714	11/32	3/16			
3/16	.1870	3/8	3/16	NP13-10 OS	NP13-14 OS	
13/64	.2026	3/8	3/16			
7/32	.2183	13/32	3/16	NP15-10 OS		
15/64	.2339	13/32	3/16			
1/4	.2495	7/16	3/16	NP17-10 OS	NP17-14 OS	NP17-18 OS
17/64	.2651	7/16	1/4			
9/32	.2807	7/16	1/4	NP19-10 OS		
19/64	.2964	1/2	1/4			
5/16	.3120	1/2	1/4	NP21-10 OS	NP21-14 OS	NP21-18 OS
21/64	.3276	9/16	1/4			
11/32	.3433	9/16	1/4	NP23-10 OS		
23/64	.3589	5/8	1/4			
3/8	.3745	5/8	1/4	NP25-10 OS	NP25-14 OS	NP25-18 OS
13/32	.4057	11/16	1/4	NP27-10 OS		
7/16	.4370	11/16	1/4	NP29-10 OS	NP29-14 OS	
15/32	.4683	3/4	1/4	NP31-10 OS		
1/2	.4995	3/4	1/4	NP33-10 OS	NP33-14 OS	

Nitrided Ejector Pins - D-Head

- Designed to prevent pin rotation
- Manufactured from premium hot work steel
- Annealed heads
- All pin sizes with diameter greater than 3/32 are etched for identification.
- Precision ground to 4 - 10 micro-inch finish

SPECIFICATIONS	
R Pin to Head Radius	R.030
Core Hardness	40 - 45 Rc
Surface Hardness	65 - 74 Rc
Material Type	Hot Work Tool Steel
Unit of Measure	Inch



D PIN DIA. +.000 -.001	ACTUAL SIZE	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002	STEP TOLERANCE	L OVERALL LENGTH +.062 / -.000				
					6"	10"	14"	18"	25"
1/8	.1245	1/4	1/8	.006 +/- .002	DNP9-6	DNP9-10	DNP9-14		
5/32	.1557	9/32	5/32		DNP11-6	DNP11-10	DNP11-14	DNP11-18	DNP11-25
3/16	.1870	3/8	3/16		DNP13-6	DNP13-10	DNP13-14	DNP13-18	DNP13-25
7/32	.2183	13/32	3/16						DNP15-25
1/4	.2495	7/16	3/16		DNP17-6	DNP17-10	DNP17-14	DNP17-18	DNP17-25
5/16	.3120	1/2	3/16		DNP21-6	DNP21-10	DNP21-14	DNP21-18	DNP21-25
3/8	.3745	5/8	1/4	.007 +/- .003	DNP25-6	DNP25-10	DNP25-14	DNP25-18	DNP25-25
1/2	.4995	3/4	1/4		DNP33-6	DNP33-10	DNP33-14	DNP33-18	DNP33-25
5/8	.6245	7/8	1/4		DNP37-6	DNP37-10	DNP37-14	DNP37-18	DNP37-25
3/4	.8745	1	1/4		DNP41-6	DNP41-10	DNP41-14	DNP41-18	DNP41-25
1	.9995	1-1/4	1/4		DNP47-6	DNP47-10	DNP47-14	DNP47-18	DNP47-25

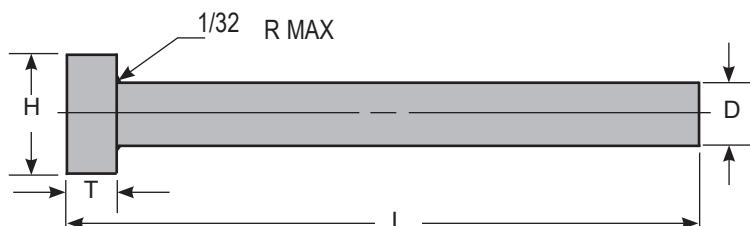
To order D-Head Ejector Pins with the flat ground tangent to the pin diameter, specify "T" after the PCS part number (Ex: DNP9-6T)

Armor Coated Ejector Pins

- Surface treatment reduces wear, friction, and inhibits corrosion
- Coating will not chip, crack, or peel from base metal
- Enhances metal hardness, adds lubricity
- Coating thickness of 5 to 7 microns
- All pin sizes with diameter greater than 3/32" are etched for identification
- Pins 6" and longer have annealed heads to minimize brittleness and allow for easier machining



SPECIFICATIONS	
Coating Thickness	0.000050 - 0.000070
Coating Type	Armor Coated
Core Hardness	50 - 52 Rc
Surface Hardness	70 - 72 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



D PIN DIAMETER TOLERANCES	
AR3 - AR33	+.0000/- .0003
AR34 - AR47	+.0000/- .0005

CATALOG NO.	D PIN DIA.	ACTUAL SIZE +.0000 -.0003	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.062 / -.000								
					4"	6"	8"	10"	12"	14"	18"	25"	36"
AR3-	1/32	.0307	1/8	1/8		•							
AR4-	3/64	.0464	5/32	1/8		•							
AR5-	1/16	.0620	3/16	1/8	•	•		•					
AR6-	5/64	.0776	13/64	1/8		•		•					
AR7-	3/32	.0933	7/32	1/8		•	•	•					
AR8-	7/64	.1089	15/64	1/8	•			•					
AR9-	1/8	.1245	1/4	1/8		•		•	•	•	•		
AR10-	9/64	.1401	1/4	1/8				•		•			
AR11-	5/32	.1557	9/32	5/32		•		•	•	•	•	•	
AR12-	11/64	.1714	11/32	3/16				•					
AR13-	3/16	.1870	3/8	3/16		•	•	•	•	•	•	•	
AR14-	13/64	.2026	3/8	3/16		•		•		•			
AR15-	7/32	.2183	13/32	3/16		•		•		•		•	
AR16-	15/64	.2339	13/32	3/16				•		•			
AR17-	1/4	.2495	7/16	3/16		•	•	•	•	•	•	•	•
AR18	17/64	.2651	7/16	1/4		•		•		•			
AR19-	9/32	.2807	7/16	1/4	•	•		•		•	•		
AR20-	19/64	.2964	1/2	1/4		•		•		•			

Add length to catalog number (I.E. AR3-6)

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Armor Coated Ejector Pins

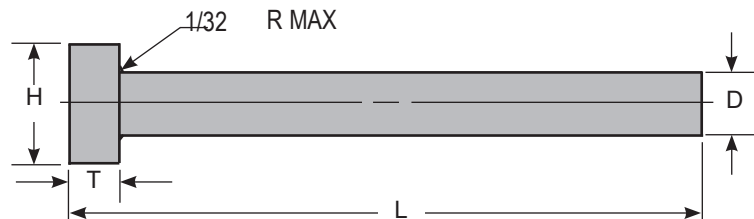
- Surface treatment reduces wear, friction, and inhibits corrosion
- Coating will not chip, crack, or peel from base metal
- Enhances metal hardness, adds lubricity
- Coating thickness of 5 to 7 microns
- All pin sizes with diameter greater than 3/32" are etched for identification
- Pins 6" and longer have annealed heads to minimize brittleness and allow for easier machining

SPECIFICATIONS	
Coating Thickness	0.000050 - 0.000070
Coating Type	Armor Coated
Core Hardness	50 - 52 Rc
Surface Hardness	70 - 72 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



D PIN DIAMETER TOLERANCES

AR3 - AR33	+.0000/-0.0003
AR34 - AR47	+.0000/-0.0005



CATALOG NO.	D PIN DIA.	ACTUAL SIZE +.0000 -.0003	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.062 / -.000								
					4"	6"	8"	10"	12"	14"	18"	25"	36"
AR21-	5/16	.3120	1/2	1/4		•	•	•	•	•	•	•	
AR22-	21/64	.3276	9/16	1/4						•			
AR23-	11/32	.3433	9/16	1/4	•	•		•		•			
AR24-	23/64	.3589	5/8	1/4				•		•			
AR25-	3/8	.3745	5/8	1/4		•		•	•	•	•	•	•
AR26-	25/64	.3901	37/64	1/4		•		•					
AR27-	13/32	.4057	11/16	1/4		•				•			
AR29-	7/16	.4370	11/16	1/4	•	•		•		•	•	•	
AR30-	29/64	.4526	45/64	1/4				•					
AR33-	1/2	.4995	3/4	1/4		•		•	•	•	•	•	•
AR34-	17/32	.5307	25/32	1/4				•					
AR35-	9/16	.5620	13/16	1/4		•		•		•			
AR37-	5/8	.6245	7/8	1/4		•		•		•	•	•	
AR39-	11/16	.6870	15/16	1/4								•	
AR41-	3/4	.7495	1	1/4		•		•	•	•	•	•	
AR45-	7/8	.8745	1-1/8	1/4							•		
AR47-	1	.9995	1-1/4	1/4			•	•		•	•	•	•

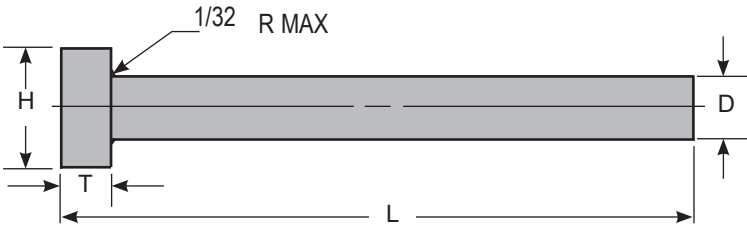
Add length to catalog number (I.E. AR21-6)

Armor Coated Ejector Pins - Oversized

- Surface treatment reduces wear, friction, and inhibits corrosion
- Coating will not chip, crack, or peel from base metal
- Enhances metal hardness, adds lubricity
- All pin sizes with diameter greater than 3/32" are etched for identification
- Pins 6" and longer have annealed heads to minimize brittleness and allow for easier machining



SPECIFICATIONS	
Coating Thickness	0.000050 - 0.000070
Coating Type	Armor Coated
Core Hardness	50 - 52 Rc
Material Type	Premium Hot Work Steel
Surface Hardness	70 - 72 Rc
Unit of Measure	Inch



D PIN DIAMETER TOLERANCES	
AR5 - AR33	+.0000/- .0003
AR37 - AR41	+.0000/- .0005

D PIN DIA.	ACTUAL SIZE	H HEAD DIA. +.000 /-.010	T HEAD THICK. +.000 /-.002	L OVERALL LENGTH +.062 / -.000		
				6" .005 OS	10" .005 OS	14" .005 OS
1/16	.067	3/16	1/8		AR5-10 OS	
5/64	.0826	13/64	1/8		AR6-10 OS	
3/32	.0983	7/32	1/8		AR7-10 OS	
7/64	.1139	15/64	1/8		AR8-10 OS	
1/8	.1295	1/4	1/8	AR9-6 OS	AR9-10 OS	AR9-14 OS
9/64	.1451	1/4	1/8	AR10-6 OS	AR10-10 OS	
5/32	.1607	9/32	5/32	AR11-6 OS	AR11-10 OS	AR11-14 OS
11/64	.1764	11/32	3/16		AR12-10 OS	
3/16	.1920	3/8	3/16	AR13-6 OS	AR13-10 OS	AR13-14 OS
13/64	.2076	3/8	3/16		AR14-10 OS	
7/32	.2233	13/32	3/16	AR15-6 OS	AR15-10 OS	AR15-14 OS
15/64	.2389	13/32	3/16		AR16-10 OS	
1/4	.2545	7/16	3/16	AR17-6 OS	AR17-10 OS	AR17-14 OS

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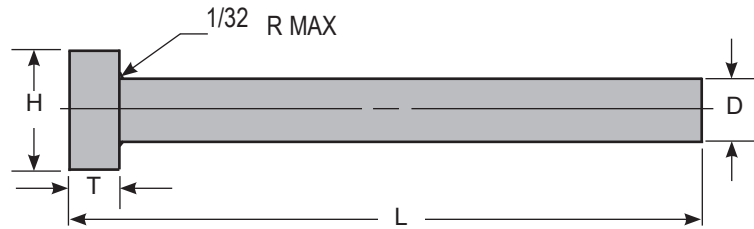
Armor Coated Ejector Pins - Oversized

- Surface treatment reduces wear, friction, and inhibits corrosion
- Coating will not chip, crack, or peel from base metal
- Enhances metal hardness, adds lubricity
- All pin sizes with diameter greater than 3/32" are etched for identification
- Pins and longer have annealed heads to minimize brittleness and allow for easier machining

SPECIFICATIONS	
Coating Thickness	0.000050 - 0.000070
Coating Type	Armor Coated
Core Hardness	50 - 52 Rc
Material Type	Premium Hot Work Steel
Surface Hardness	70 - 72 Rc
Unit of Measure	Inch



D PIN DIAMETER TOLERANCES	
AR5 - AR33	+.0000/- .0003
AR37 - AR41	+.0000/- .0005



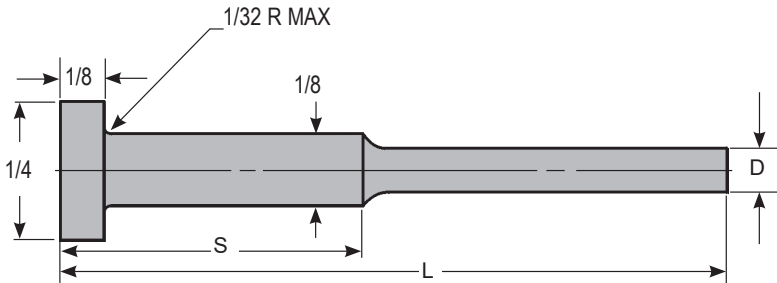
D PIN DIA.	ACTUAL SIZE	H HEAD DIA. +.000 /-.010	T HEAD THICK. +.000 /-.002	L OVERALL LENGTH +.062 / -.000		
				6" .005 OS	10" .005 OS	14" .005 OS
17/64	.2701	7/16	1/4	AR18-6 OS	AR18-10 OS	
9/32	.2857	7/16	1/4	AR19-6 OS	AR19-10 OS	
19/64	.3014	1/2	1/4		AR20-10 OS	
5/16	.3170	1/2	1/4		AR21-10 OS	AR21-14 OS
21/64	.3326	9/16	1/4		AR22-10 OS	
11/32	.3433	9/16	1/4		AR23-10 OS	
3/8	.3795	5/8	1/4		AR25-10 OS	AR25-14 OS
7/16	.4420	11/16	1/4		AR29-10 OS	AR29-14 OS
1/2	.5045	3/4	1/4		AR33-10 OS	AR33-14 OS
5/8	.6295	7/8	1/4			AR37-14 OS
11/16	.6920	15/16	1/4			AR39-14 OS
3/4	.7545	1	1/4			AR41-14 OS

Armor Coated Step Pins

- Surface treatment reduces wear, friction, and inhibits corrosion
- Coating will not chip, crack, or peel from base metal
- All pin sizes with diameter greater than 3/32" are etched for identification
- Pins 6" and longer have annealed heads to minimize brittleness and allow for easier machining



SPECIFICATIONS	
Head Diameter Tolerance	+.000 / -.010
Shoulder Diameter Tolerance	+.000 / -.001
Head Thickness Tolerance	+.000 / -.002
Coating Thickness	0.000050 - 0.000070
Coating Type	Armor Coated
Core Hardness	50 - 52 Rc
Surface Hardness	70 - 72 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch

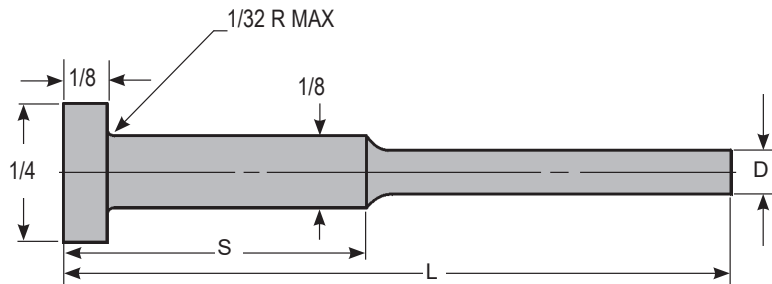


D NOMINAL PIN DIA.	ACTUAL PIN DIA. +.0000 -.0003	S SHOULDER LENGTH +.010 / -.010	L OVERALL LENGTH +.062 / -.000			
			6"	8"	10"	14"
1/32	.0307	1/2	ARS3-6 1/2			
		2	ARS3-62	ARS3-82		
		3		ARS3-83		
		4		ARS3-84		
3/64	.0464	1/2	ARS4-6 1/2			
		2	ARS4-62	ARS4-82	ARS4-102	
		3		ARS4-83		
		4		ATS4-84	ARS4-104	
1/16	.0620	1/2	ARS5-6 1/2		ARS5-10 1/2	
		2	ARS5-62		ARS5-102	ARS5-142
		3		ARS5-83		
		4		ARS5-84	ARS5-104	
5/64	.0776	1/2	ARS6-6 1/2			
		2	ARS6-62		ARS6-102	
		3		ARS6-83		
		4		ARS6-84	ARS6-104	
3/32	.0933	1/2	ARS7-6 1/2			
		2	ARS7-62		ARS7-102	ARS7-142
		3		ARS7-83		
		4		ARS7-84	ARS7-104	
7/64	.1089	1/2	ARS8-6 1/2			
		2	ARS8-62		ARS8-102	ARS8-142

Armor Coated Step Pins - Oversized

- Surface treatment reduces wear, friction, and inhibits corrosion
- Coating will not chip, crack, or peel from base metal
- Enhanced metal hardness and added lubricity
- All pin sizes with diameter greater than 3/32" are etched for identification
- Pins 6" and longer have annealed heads to minimize brittleness and allow for easier machining

SPECIFICATIONS	
Head Diameter Tolerance	+ .000 / - .010
Shoulder Diameter Tolerance	+ .000 / - .001
Head Thickness Tolerance	+ .000 / - .002
Coating Thickness	0.000050 - 0.000070
Coating Type	Armor Coated
Core Hardness	50 - 52 Rc
Surface Hardness	70 - 72 Rc
Material Type	Premium Hot Work Steel
Unit of Measure	Inch



D NOMINAL PIN DIA.	ACTUAL PIN DIA. +.0000 -.0003	S SHOULDER LENGTH +.010 / -.010	L OVERALL LENGTH +.062 / -.000		
			6" .005 OS	8" .005 OS	10" .005 OS
1/32	.0307	1/2	ARS3-6 1/2 OS		
		2	ARS3-62 OS	ARS3-82 OS	
		3		ARS3-83 OS	
3/64	.0464	1/2	ARS4-6 1/2 OS		
		2	ARS4-62 OS		ARS4-102 OS
1/16	.0620	1/2	ARS5-6 1/2 OS		
		2	ARS5-62 OS		ARS5-102 OS
		4			ARS5-104 OS
5/64	.0776	1/2	ARS6-6 1/2 OS		
		2	ARS6-62 OS		ARS6-102 OS
		3		ARS6-83 OS	
3/32	.0933	1/2	ARS7-6 1/2 OS		
		2	ARS7-62 OS		
7/64	.1089	1/2	ARS8-6 1/2 OS		
		2	ARS8-62 OS		ARS8-102 OS

Ejector Blades

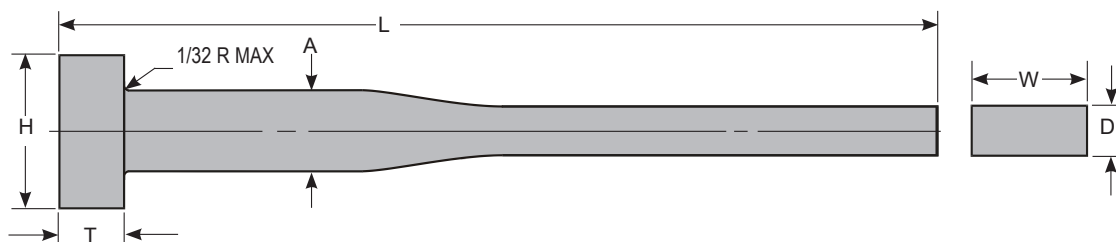
- One piece construction to improve strength
- Blades are etched for identification
- Corner radius on blade cross-section can be special ordered



SPECIFICATIONS

Core Hardness	50 - 52 Rc
Surface Hardness	50 - 52 Rc
Material Type	Hot Work Tool Steel
Unit of Measure	Inch

CATALOG NO.	W BLADE WIDTH +.0000 -.0003	A PIN DIA. +.000 -.001	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002
BE9-	.100	.125	1/4	1/8
BE11-	.140	.156	9/32	5/32
BE13-	.172	.187	3/8	3/16



D BLADE THICK. +.0000 / -.0003	BLADE LENGTH	L OVERALL LENGTH +.062 / -.000					
		5"	6"	6-3/8"	7-3/8"	8"	8-3/8"
.024	4-3/8		BE9-2446				
.032	3	BE9-3235	BE9-3236				
.032	4-3/8			BE9-3246	BE9-3247		
.046	3	BE9-4635	BE9-4636				
.046	4-3/8			BE9-4646	BE9-4647		
.024	4-3/8			BE11-2446			
.032	3		BE11-3236			BE11-3238	
.032	4-3/8			BE11-3246	BE11-3247		BE11-3248
.046	3		BE11-4636			BE11-4638	
.046	4-3/8			BE11-4646	BE11-4647		BE11-4648
.024	4-3/8			BE13-2446			
.032	3		BE13-3236			BE13-3238	
.032	4-3/8			BE13-3246	BE13-3247		BE13-3248
.046	3		BE13-4636			BE13-4638	
.046	4-3/8			BE13-4646	BE13-4647		BE13-4648
.062	3		BE13-6236			BE13-6238	
.062	4-3/8			BE13-6246	BE13-6247		BE13-6248

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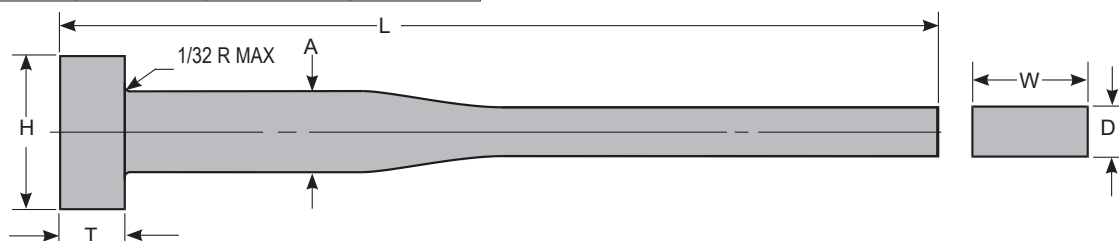
Ejector Blades

- One piece construction to improve strength
- Blades are etched for identification
- Corner radius on blade cross-section can be special ordered

SPECIFICATIONS	
Core Hardness	50 - 52 Rc
Surface Hardness	50 - 52 Rc
Material Type	Hot Work Tool Steel
Unit of Measure	Inch



CATALOG NO.	W BLADE WIDTH +.0000 -.0003	A PIN DIA. +.000 -.001	H HEAD DIA. +.000 -.010	T HEAD THICK. +.000 -.002
BE17-	.234	.250	7/16	3/16
BE21-	.296	.312	1/2	1/4
BE25-	.359	.375	5/8	1/4
BE33-	.484	.500	3/4	1/4



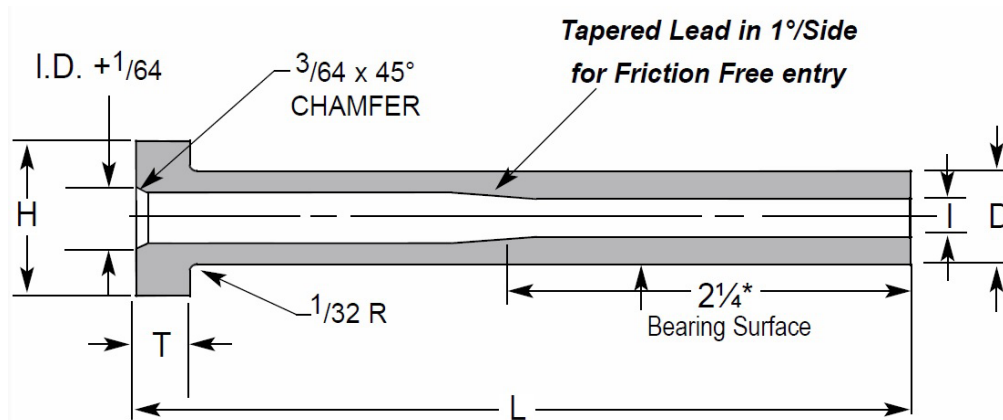
D BLADE THICK. +.0000 -.0003	BLADE LENGTH	L OVERALL LENGTH +.062 / -.000							
		5"	6"	6-3/8"	7-3/8"	8"	8-3/8"	9-3/8"	10-3/8"
.032	3	BE17-3235	BE17-3236			BE17-3238			
.032	4-3/8			BE17-3246	BE17-3247		BE17-3248	BE17-3249	BE17-32410
.046	3	BE17-4635	BE17-4636			BE17-4638			
.046	4-3/8			BE17-4646	BE17-4647		BE17-4648	BE17-4649	BE17-46410
.062	3	BE17-6235	BE17-6236			BE17-6238			
.062	4-3/8			BE17-6246	BE17-6247		BE17-6248	BE17-6249	BE17-62410
.032	4-3/8			BE21-3246	BE21-3247		BE21-3248	BE21-3249	BE21-32410
.046	4-3/8			BE21-4646	BE21-4647		BE21-4648	BE21-4649	BE21-46410
.062	4-3/8			BE21-6246	BE21-6247		BE21-6248	BE21-6249	BE21-62410
.078	4-3/8			BE21-7846	BE21-7847		BE21-7848	BE21-7849	BE21-78410
.032	4-3/8			BE25-3246	BE25-3247		BE25-3248	BE25-3249	BE25-32410
.046	4-3/8			BE25-4646	BE25-4647		BE25-4648	BE25-4649	BE25-46410
.062	4-3/8			BE25-6246	BE25-6247		BE25-6248	BE25-6249	BE25-62410
.078	4-3/8			BE25-7846	BE25-7847		BE25-7848	BE25-7849	BE25-78410
.062	4-3/8			BE33-6256	BE33-6257		BE33-6258	BE33-6259	BE33-62510
.078	4-3/8			BE33-7856	BE33-7857		BE33-7858	BE33-7859	BE33-78510

Nitrided Ejector Sleeves

- Can be used to eject the part
- Serve as a bushing for the ejector pin
- Etched for easy identification



SPECIFICATIONS	
Bearing Length Tolerance	+ .032 / -.000
I.D. Hardness	68 - 74 Rc Nitrided
O.D. Hardness	68 - 74 Rc Nitrided
Material Type	Hot Work Tool Steel
Unit of Measure	Inch



CATALOG NO.	I I.D. +.0005 -.0000	D O.D. +.000 -.001	H HEAD DIA. +.000 -.001	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.032 / -.000											
					3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"
SL13-*	3/32	3/16	3/8	3/16	•	•	•	•	•							
SL15-*	1/8	7/32	13/32	3/16	•	•	•	•	•	•						
SL17-	5/32	1/4	7/16	3/16		•	•	•	•	•	•	•	•	•	•	•
SL21-	3/16	5/16	1/2	1/4		•	•	•	•	•	•	•	•	•	•	•
SL23-	7/32	11/32	9/16	1/4		•	•	•	•	•	•	•	•	•	•	•
SL25-	1/4	3/8	5/8	1/4		•	•	•	•	•	•	•	•	•	•	•
SL29-	5/16	7/16	11/16	1/4		•	•	•	•	•	•	•	•	•	•	•
SL33-	3/8	1/2	3/4	1/4		•	•	•	•	•	•	•	•	•	•	•
SL37-	7/16	5/8	7/8	1/4		•	•	•	•	•	•	•	•	•	•	•
SL39-	1/2	11/16	15/16	1/4		•	•	•	•	•	•	•	•	•	•	•
SL41-	9/16	3/4	1	1/4		•	•	•	•	•	•	•	•	•	•	•
SL45-	5/8	7/8	1-1/8	1/4		•	•	•	•	•	•	•	•	•	•	•
SL47-	3/4	1	1-1/4	1/4		•	•	•	•	•	•	•	•	•	•	•

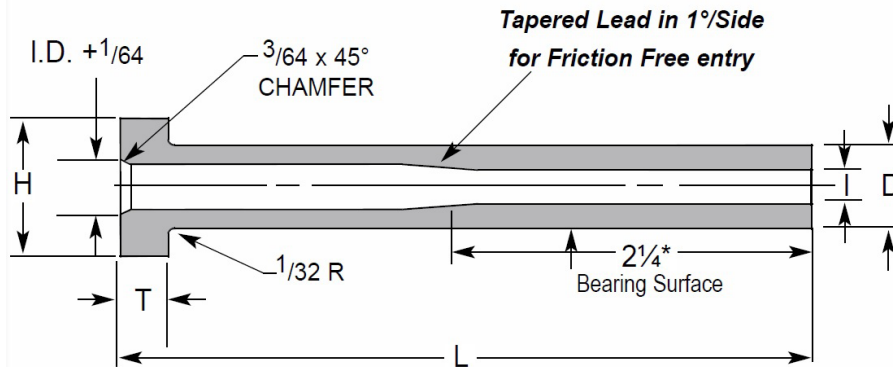
*SL13 & SL15 Bearing Length is 1-3/4"

Add length to catalog number (i.e. SL13-3)

Oversized Ejector Sleeves

- Can be used to eject the part
- Serve as a bushing for the ejector pin
- Etched for easy identification
- O.D. is .005 oversized

SPECIFICATIONS	
I.D. Hardness	65 - 74 Rc
O.D. Hardness	65 - 74 Rc
Material Type	Hot Work Tool Steel
Unit of Measure	Inch



CATALOG NO.	I I.D. +.0005 -.0000	D O.D. +.000 -.001	H HEAD DIA. +.000 -.001	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.032 / -.000						
					4"	5"	6"	7"	8"	9"	10"
OSL13-*	3/32	3/16	3/8	3/16	•	•	•	•	•	•	•
OSL15-*	1/8	7/32	13/32	3/16	•	•	•	•	•	•	•
OSL17-	5/32	1/4	7/16	3/16	•	•	•	•	•	•	•
OSL21-	3/16	5/16	1/2	1/4	•	•	•	•	•	•	•
OSL25-	1/4	3/8	5/8	1/4	•	•	•	•	•	•	•
OSL29-	5/16	7/16	11/16	1/4	•	•	•	•	•	•	•
OSL33-	3/8	1/2	3/4	1/4	•	•	•	•	•	•	•

*OSL13 & OSL15 Bearing Length is 1-3/4"

Add length to catalog number (i.e. OSL13-4)

Nitrided Ejector Sleeves - D-Head

CATALOG NO.	I I.D. +.0005 -.0000	D O.D. +.000 -.001	H HEAD DIA. +.000 -.001	T HEAD THICK. +.000 -.002	L OVERALL LENGTH +.032 / -.000								
					6"	7"	8"	9"	10"	11"	12"	13"	14"
DSL15-	1/8	7/32	13/32	3/16			•						
DSL17-	5/32	1/4	7/16	3/16	•				•	•	•	•	•
DSL21-	3/16	5/16	1/2	1/4			•						
DSL23-	7/32	11/32	9/16	1/4							•		
DSL25-	1/4	3/8	5/8	1/4								•	
DSL29-	5/16	7/16	11/16	1/4				•					

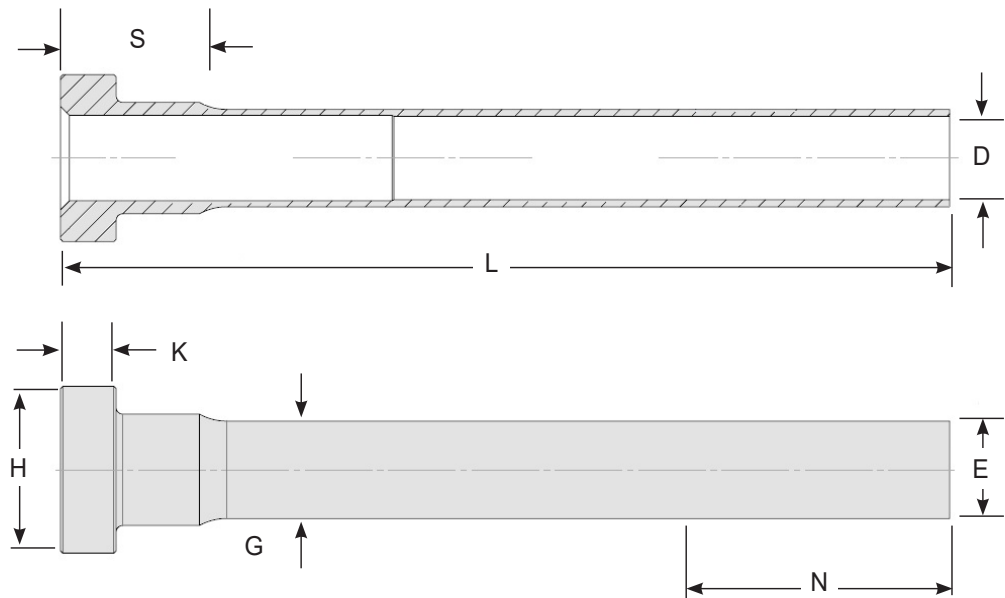
Add length to catalog number (i.e. DSL15-6)

Thin Wall Ejector Sleeves

- Eliminate the need to machine a step in standard sleeves
- Can be used as alternative to standard sleeves in applications where the wall foot print is too large
- Nickel coating provides added durability & increased corrosion protection
- Electroless Nickel Coated .00003" - .00007" thick



SPECIFICATIONS	
Material Type	A2 Tool Steel
Core Hardness	58 - 60 Rc
Unit of Measure	Inch

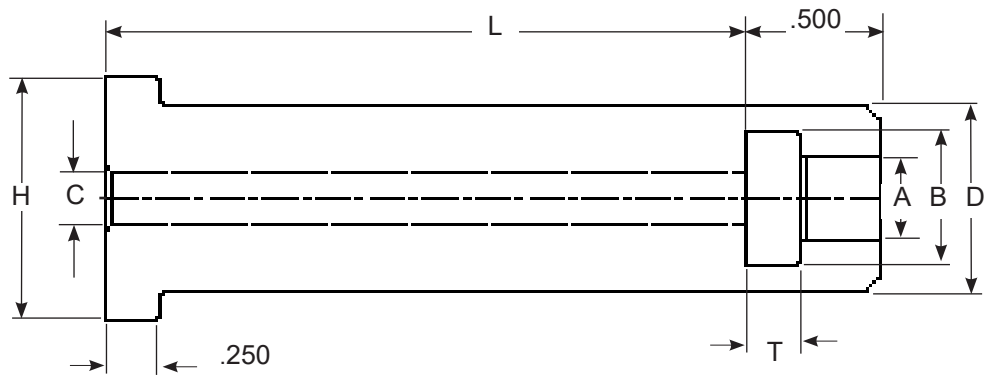
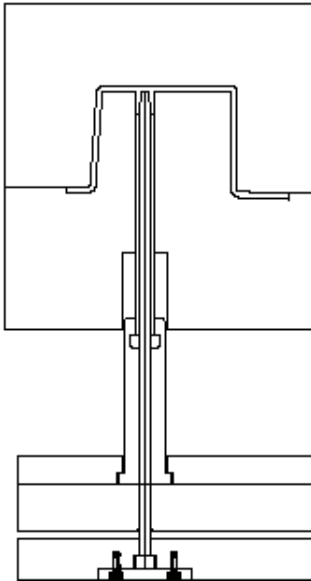


NOMINAL SLEEVE I.D.	D I.D. +.0003 -.0000	E O.D. -.0003 -.0007	G SHOULDER DIAMETER +.000 -.001	H HEAD DIA. +.000 -.010	K HEAD THICK. +.000 -.002	N BEARING LENGTH	S SHOULDER LENGTH +.010 -.010	L OVERALL LENGTH +.032 / -.000	
								4"	6"
3/32	.0937	.1563	.188	.37	.187	1.75	.500	TWS13-4	TWS13-6
1/8	.1250	.1875	.219	.40	.187	1.75	.500	TWS15-4	TWS15-6
5/32	.1562	.2187	.250	.43	.187	2.50	.500	TWS17-4	TWS17-6
3/16	.1875	.2500	.312	.50	.250	2.50	.625	TWS21-4	TWS21-6
7/32	.2187	.2813	.344	.56	.250	2.50	.625	TWS23-4	TWS23-6
1/4	.2500	.3125	.375	.62	.250	2.50	.625	TWS25-4	TWS25-6
5/16	.3125	.3750	.438	.68	.250	2.50	.625	TWS29-4	TWS29-6
3/8	.3750	.4375	.500	.75	.250	2.50	.625	TWS33-4	TWS33-6

Ejector Sleeve Extensions

- Lengthens sleeves quickly and inexpensively
- Four lengths available for more versatility
- Special lengths available upon request

SPECIFICATIONS	
Extension Head Thickness	.250
Pin Head Cavity Length	.500
Material Type	12L14
Unit of Measure	Inch



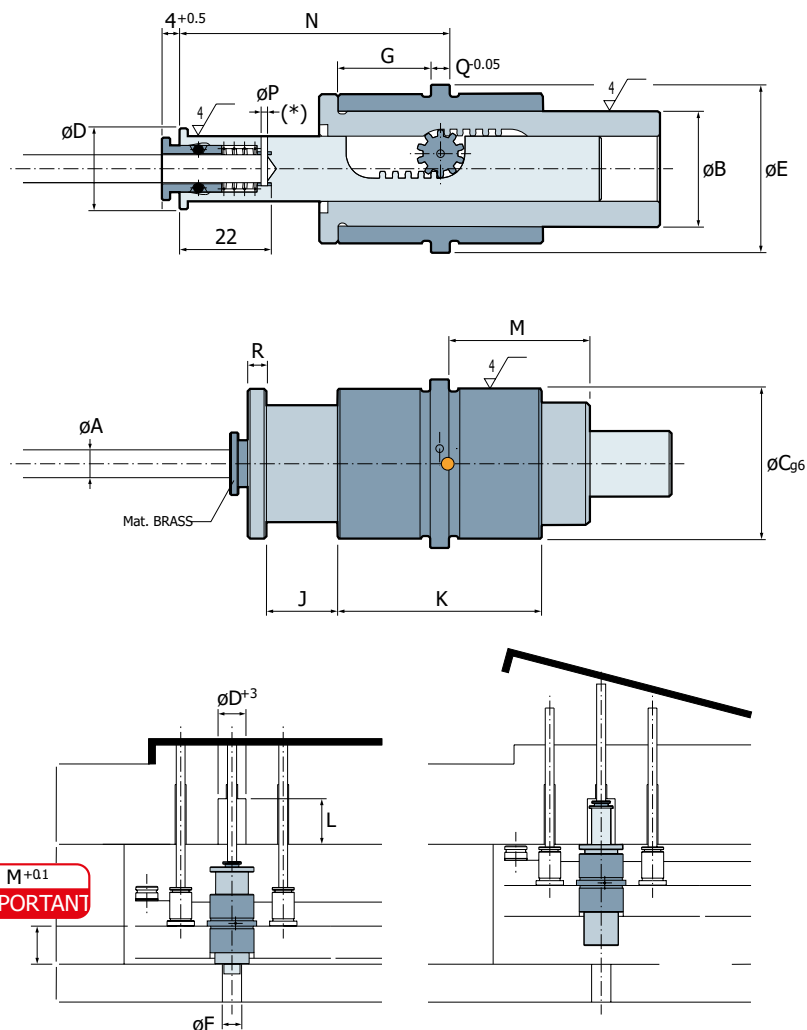
NOMINAL SLEEVE I.D.	D O.D. +.000 -.002	A +.002 -.000	B +.005 -.000	T +.002 -.0000	C I.D. +.03 -.00	H +.000 -.010	OVERALL LENGTH			
							2.50"	3.00"	3.50"	4.00"
							L			
							SHOULDER LENGTH			
							2.00"	2.50"	3.00"	3.50"
3/32	.625	.193	.385	.188	.17	.875	SLX13-20	SLX13-25	SLX13-30	
1/8	.625	.224	.416	.188	.17	.875	SLX15-20	SLX15-25	SLX15-30	
5/32	.625	.255	.448	.188	.17	.875	SLX17-20	SLX17-25	SLX17-30	SLX17-35
3/16	.875	.318	.510	.251	.22	1.125	SLX21-20	SLX21-25	SLX21-30	SLX21-35
7/32	.875	.349	.570	.251	.25	1.125	SLX23-20	SLX23-25	SLX23-30	SLX23-35
1/4	.875	.380	.630	.251	.28	1.125	SLX25-20	SLX25-25	SLX25-30	SLX25-35
5/16	1.000	.443	.698	.251	.34	1.250	SLX29-20	SLX29-25	SLX29-30	SLX29-35
3/8	1.000	.505	.760	.251	.41	1.250	SLX33-20	SLX33-25	SLX33-30	SLX33-35

PCS CUMSA™ Accelerated Ejector

- Compact size with increase stroke length to assist in part ejection
- Cylindrical shape for easy installation
- Provides increased stroke of selected ejector pins 2:1
- Utilizes the ejector base retainer system



SPECIFICATIONS	
Hardness	53 - 57 Rc
Material Type	1.7225
Unit of Measure	Metric DIN



CATALOG NO.	A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R
AE 031620	3	16	20	12.5	22	13	14	8	32	22	17	37	-	4	3
AE 032430	3	24	30	12.5	22	13	14	8	32	22	17	37	-	4	3
AE 041620	4	16	20	12.5	22	13	14	8	32	22	17	37	2	4	3
AE 052430	5	24	30	16	34	16	20	15	44	36	27	57	2	4	3
AE 062430	6	24	30	16	34	16	20	15	44	36	27	57	2	4	3
AE 082430	8	24	30	17	34	17	20	15	44	36	27	57	2	4	3
AE 103036	10	30	36	21.5	40	21	28	20	62	46	34	78	2	6	4
AE 123036	12	30	36	21.5	40	21	28	20	62	46	34	78	2	6	4

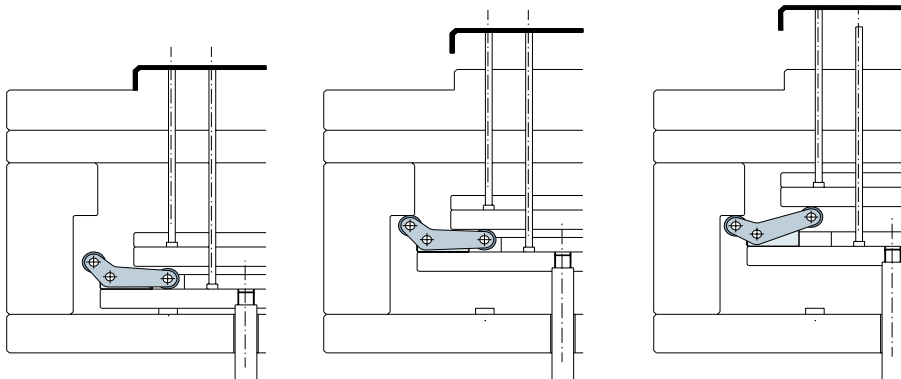
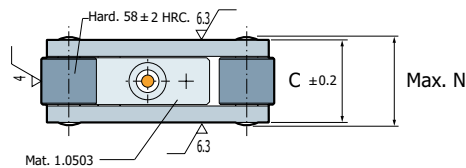
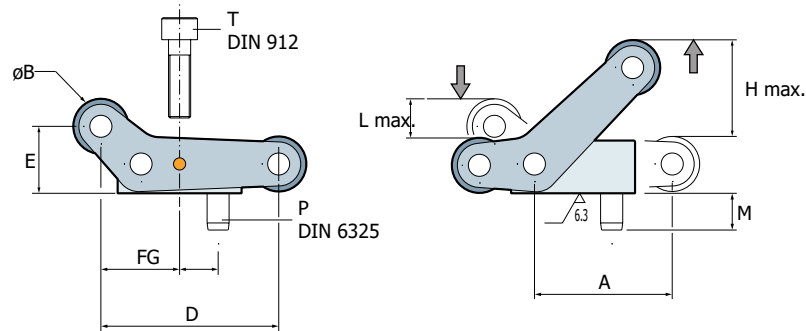
PCS CUMSA™ Plate Accelerator

- Simple mechanical double ejector system
- Minimum space required for installation
- Avoids complex systems
- Offers a standard solution for molders



SPECIFICATIONS

Hardness	56 - 60 Rc
Material Type	1.0503
Unit of Measure	Metric DIN



CATALOG NO.	A	B	C	D	E	F	G	H MAX.	L MAX.	M	N	P	T	MAX. FORCE
EP 200813	20	8	13.2	25.8	9.4	11.4	6	13.6	5.5	5	15	Ø 2.5 X 10	M3 X 12	125 kg
EP 251016	25	10	16	32.3	11.8	14.3	7	17	6.8	6	18.5	Ø 3 X 12	M4 X 16	250 kg
EP 371522	37.5	15	22	48.5	17.7	21.5	10.5	25.5	10.2	8	25	Ø 4 X 16	M6 X 25	350 kg
EP 502030	50	20	30	64.6	23.6	28.6	14	34	13.6	10	34	Ø 5 X 20	M8 X 30	800 kg

PCS CUMSA™ Headless Ejector Pin Bases

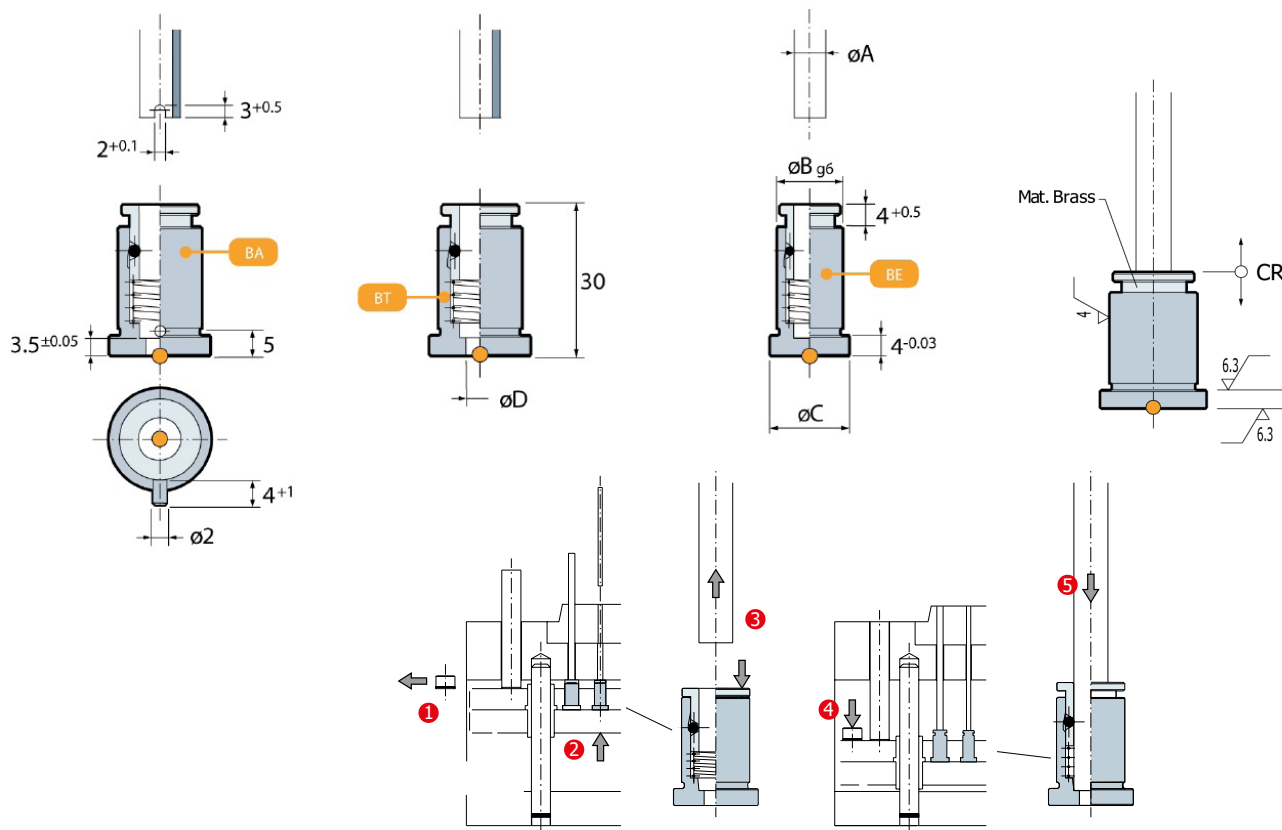
- Removes pin from the Parting Line
- Compact design
- Pins can be replaced from the front of the mold, eliminating the need to disassemble
- Mating headless pins available upon request



The Headless Ejector Pin Base incorporates a unique locking design that holds the ejector pin in place until the top collar is compressed. Due to the special design of the base, Headless Ejector Pins can be replaced from the front of the mold, eliminating the need to disassemble.

SPECIFICATIONS

Material Type	1.7242
Surface Hardness	56 - 60 Rc
Unit of Measure	Metric DIN

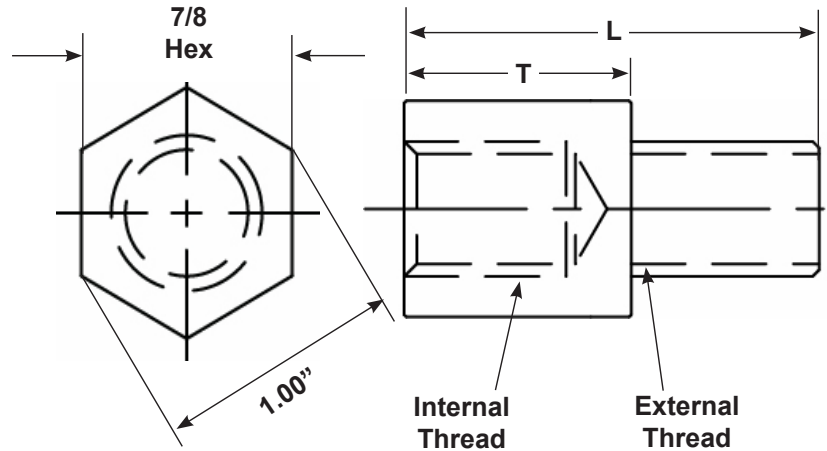
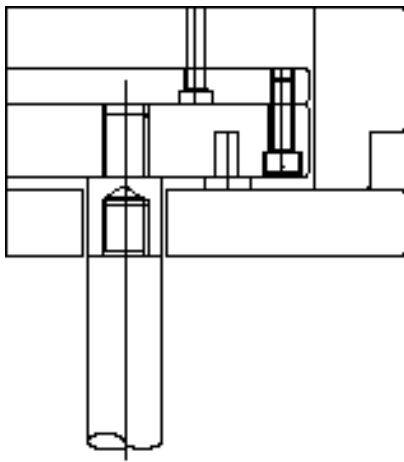


CATALOG NO.			A MATING PIN DIA.	B BASE O.D.	C HEAD O.D.	D KNOCKOUT DIAMETER	CR (N) ROTATIONAL TORQUE
BE 031115	-	-	3	11	15	—	> =2.550
BE 041216	-	-	4	12	16	—	> =2.500
BE 051317	-	-	5	13	17	—	> =3.800
-	BA 061418	BT 061418	6	14	18	3.5	> =3.800
-	BA 081620	BT 081620	8	16	20	5.5	> =5.100
-	BA 101822	BT 101822	10	18	22	7	>= 6.400
-	BA 122024	BT 122024	12	20	24	9	> =7.600

Hex Series Knockout Rod Extensions

- Increases ejection stroke for knockout rod
- Black oxide coating helps to inhibit corrosion

SPECIFICATIONS	
Hex Size	7/8
Material Type	4140
Surface Hardness	28 - 32 Rc
Unit of Measure	Inch



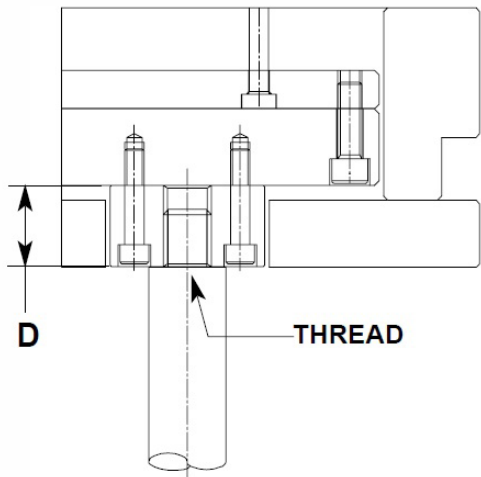
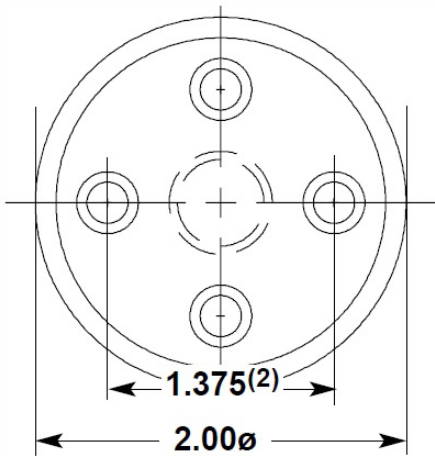
CATALOG NO.	L OVERALL LENGTH	T SHOULDER LENGTH	THREAD SIZE
KRE37-10	1.672	1.052	3/8-16
KRE50-10	1.672	1.052	1/2-13
KRE50-15	2.175	1.552	1/2-13
KRE62-10	1.922	1.052	5/8-11
KRE62-15	2.422	1.552	5/8-11
KRE75-10	1.672	1.052	3/4-10
KRE75-15	2.422	1.552	3/4-10
KRE75-10NT	1.922	1.052	No Female Thread
KRE75-15NT	2.422	1.552	No Female Thread

Round Series Knockout Rod Extensions

- Increases ejection stroke for knockout rod
- Black oxide coating helps to inhibit corrosion
- 1/4 -20 SCHS included



SPECIFICATIONS	
Material Type	4140
Surface Hardness	28 - 32 Rc
Unit of Measure	Inch



CATALOG NO.	D OVERALL HEIGHT	THREAD SIZE
KR37-10	1.052	3/8-16
KR37-15	1.552	3/8-16
KR50-10	1.052	1/2-13
KR50-15	1.552	1/2-13
KR62-10	1.052	5/8-11
KR62-15	1.552	5/8-11
KR75-10	1.052	3/4-10
KR75-15	1.552	3/4-10
KR75-10NT	1.052	No Female Thread
KR75-15NT	1.552	No Female Thread