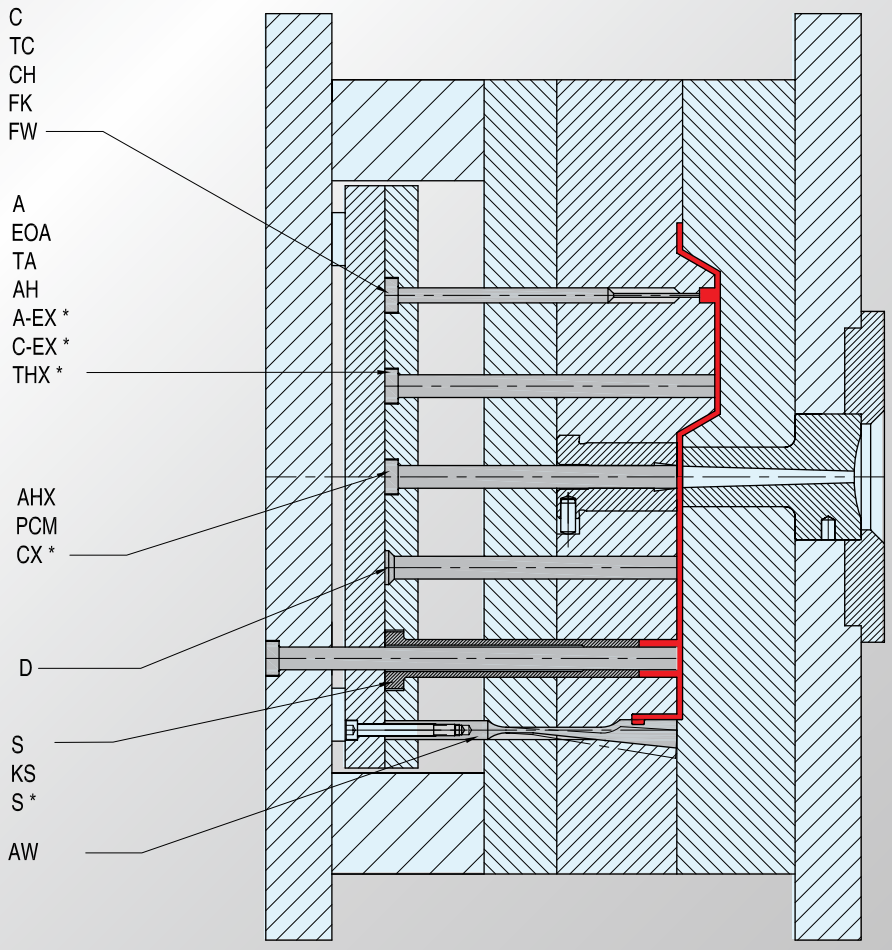
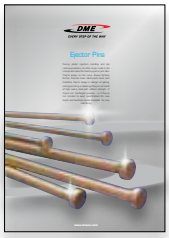
DME

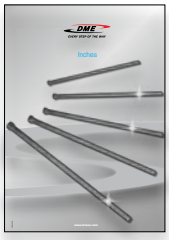
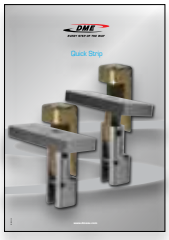
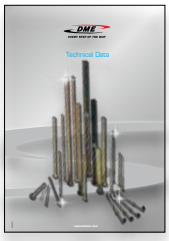
EVERY STEP OF THE WAY

Mold Ejection



* Inch



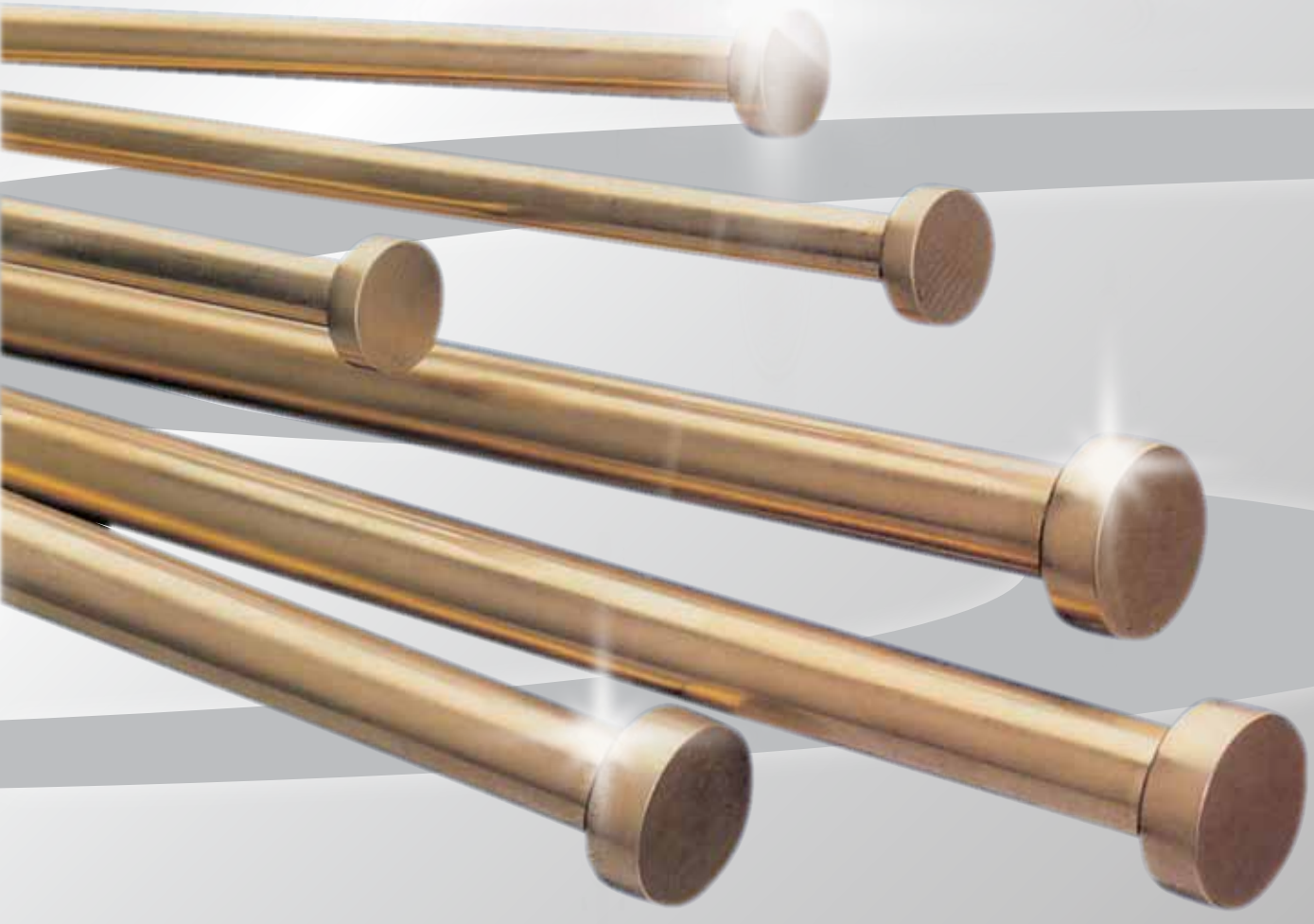
18/09/2012

DME

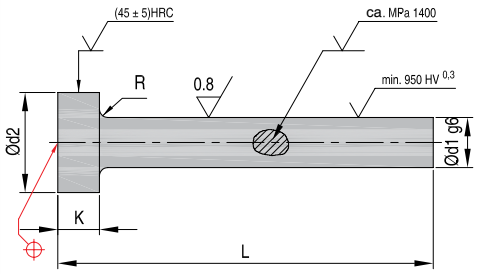
EVERY STEP OF THE WAY

Ejector Pins

During plastic injection molding and die casting operations, no other single mold or die component takes the beating ejector pins take. They're always on the move. Always fighting friction. Thermal stress. Mechanical stress. And therefore, they're always in danger of galling, seizing, bending or breaking if they're not made of high quality steel with uniform strength - if they're not hot-forged properly - or if they're not nitrided to exact specifications for case depth and hardness. Heads annealed for easy machining.



Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530/ISO6751
Mat.: WAS (~1.2344), pre-hardened
Max. Temp: 500-550 °C
Surface roughness: Ra

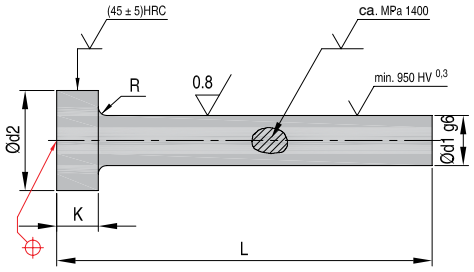


REF	Item Prefix	d1 g6	d2 0 -0,2	K 0 -0,05	R +0,2 0	L +2 0										
						0100	0125	0160	0200	0250	0315	0400	0500	0630	0800	1000	1250
A 01,00 x L		01,00	3,0	1,5	0,2												
A 01,20 x L		01,20	3,0	1,5	0,2												
A 01,50 x L		01,50	3,0	1,5	0,2												
A 01,60 x L		01,60	3,0	1,5	0,2												
A 01,70 x L		01,70	3,5	1,5	0,2												
A 02,00 x L		02,00	4,0	2,0	0,2												
A 02,20 x L		02,20	4,0	2,0	0,2												
A 02,50 x L		02,50	5,0	2,0	0,3												
A 02,70 x L		02,70	5,0	2,0	0,3												
A 03,00 x L		03,00	6,0	3,0	0,3												
A 03,10 x L		03,10	6,0	3,0	0,3												
A 03,20 x L		03,20	6,0	3,0	0,3												
A 03,50 x L		03,50	7,0	3,0	0,3												
A 03,70 x L		03,70	7,0	3,0	0,3												
A 04,00 x L		04,00	8,0	3,0	0,3												
A 04,10 x L		04,10	8,0	3,0	0,3												
A 04,20 x L		04,20	8,0	3,0	0,3												
A 04,50 x L		04,50	8,0	3,0	0,3												
A 05,00 x L		05,00	10,0	3,0	0,3												
A 05,10 x L		05,10	10,0	3,0	0,3												
A 05,20 x L		05,20	10,0	3,0	0,3												
A 05,50 x L		05,50	10,0	3,0	0,3												
A 06,00 x L		06,00	12,0	5,0	0,5												
A 06,10 x L		06,10	12,0	5,0	0,5												
A 06,20 x L	**EPA05**	06,20	12,0	5,0	0,5												
A 06,50 x L		06,50	12,0	5,0	0,5												
A 07,00 x L		07,00	12,0	5,0	0,5												
A 07,50 x L		07,50	12,0	5,0	0,5												
A 08,00 x L		08,00	14,0	5,0	0,5												
A 08,10 x L		08,10	14,0	5,0	0,5												
A 08,20 x L		08,20	14,0	5,0	0,5												
A 08,50 x L		08,50	14,0	5,0	0,5												
A 09,00 x L		09,00	14,0	5,0	0,5												
A 09,50 x L		09,50	14,0	5,0	0,5												
A 10,00 x L		10,00	16,0	5,0	0,5												
A 10,10 x L		10,10	16,0	5,0	0,5												
A 10,20 x L		10,20	16,0	5,0	0,5												
A 10,50 x L		10,50	16,0	5,0	0,5												
A 11,00 x L		11,00	16,0	5,0	0,5												
A 12,00 x L		12,00	18,0	7,0	0,8												
A 12,20 x L		12,20	18,0	7,0	0,8												
A 12,50 x L		12,50	18,0	7,0	0,8												
A 14,00 x L		14,00	22,0	7,0	0,8												
A 14,20 x L		14,20	22,0	7,0	0,8												
A 16,00 x L		16,00	22,0	7,0	0,8												
A 18,00 x L		18,00	24,0	7,0	0,8												
A 20,00 x L		20,00	26,0	8,0	1,0												
A 25,00 x L		25,00	32,0	8,0	1,0												
A 32,00 x L		32,00	40,0	10,0	1,0												

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530/ISO6751
Mat.: WAS (~1.2344), pre-hardened
Max. Temp: 500-550 °C
Surface roughness: Ra

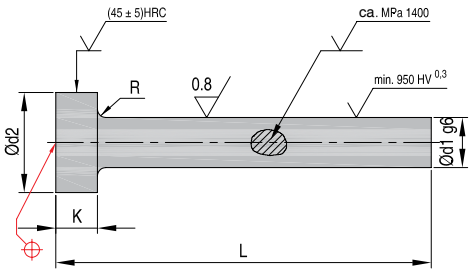


REF	Item Prefix	d1 g6	d2 0 -0,2	K 0 -0,05	R +0,2 0	L +2 0									
						0100	0125	0160	0200	0250	0315	0400	0500	0630	0800	1000
EOA 01,50 x L	EOA	01,50	3,0	1,5	0,2											
EOA 02,00 x L		02,00	4,0	2,0	0,2											
EOA 02,20 x L		02,20	4,0	2,0	0,2											
EOA 02,50 x L		02,50	5,0	2,0	0,3											
EOA 02,70 x L		02,70	5,0	2,0	0,3											
EOA 03,00 x L		03,00	6,0	3,0	0,3											
EOA 03,20 x L		03,20	6,0	3,0	0,3											
EOA 03,50 x L		03,50	7,0	3,0	0,3											
EOA 03,70 x L		03,70	7,0	3,0	0,3											
EOA 04,00 x L		04,00	8,0	3,0	0,3											
EOA 04,20 x L		04,20	8,0	3,0	0,3											
EOA 04,50 x L		04,50	8,0	3,0	0,3											
EOA 05,00 x L		05,00	10,0	3,0	0,3											
EOA 05,20 x L		05,20	10,0	3,0	0,3											
EOA 05,50 x L		05,50	10,0	3,0	0,3											
EOA 06,00 x L		06,00	12,0	5,0	0,5											
EOA 06,20 x L		06,20	12,0	5,0	0,5											
EOA 06,50 x L		06,50	12,0	5,0	0,5											
EOA 07,00 x L		07,00	12,0	5,0	0,5											
EOA 07,50 x L		07,50	12,0	5,0	0,5											
EOA 08,00 x L		08,00	14,0	5,0	0,5											
EOA 08,20 x L		08,20	14,0	5,0	0,5											
EOA 08,50 x L		08,50	14,0	5,0	0,5											
EOA 09,00 x L		09,00	14,0	5,0	0,5											
EOA 09,50 x L		09,50	14,0	5,0	0,5											
EOA 10,00 x L		10,00	16,0	5,0	0,5											
EOA 10,20 x L		10,20	16,0	5,0	0,5											
EOA 10,50 x L		10,50	16,0	5,0	0,5											
EOA 11,00 x L		11,00	16,0	5,0	0,5											
EOA 12,00 x L		12,00	18,0	7,0	0,8											
EOA 12,20 x L		12,20	18,0	7,0	0,8											
EOA 12,50 x L		12,50	18,0	7,0	0,8											
EOA 14,00 x L		14,00	22,0	7,0	0,8											
EOA 16,00 x L		16,00	22,0	7,0	0,8											
EOA 18,00 x L		18,00	22,0	7,0	0,8											
EOA 20,00 x L		20,00	26,0	8,0	1,0											
EOA 25,00 x L		25,00	26,0	8,0	1,0											
EOA 32,00 x L		32,00	40,0	10,0	1,0											

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530/ISO6751
Mat.: WAS (~1.2344), pre-hardened
Max. Temp: 500-550 °C
Surface roughness: Ra

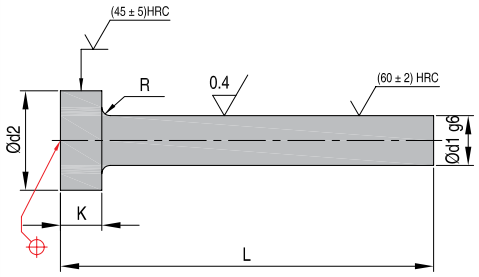


REF	Item Prefix	d1 g6	d2 0 -0,2	K 0 -0,05	R +0,2 0	L +2 0									
						0100	0125	0160	0200	0250	0315	0400	0500	0630	0800	1000
TA 01,50 x L		01,50	3,0	1,58	0,2											
TA 02,00 x L		02,00	4,0	2,0	0,2											
TA 02,20 x L		02,20	4,0	2,0	0,2											
TA 02,50 x L		02,50	5,0	2,0	0,3											
TA 02,70 x L		02,70	5,0	2,0	0,3											
TA 03,00 x L		03,00	6,0	3,0	0,3											
TA 03,20 x L		03,20	6,0	3,0	0,3											
TA 03,50 x L		03,50	7,0	3,0	0,3											
TA 03,70 x L		03,70	7,0	3,0	0,3											
TA 04,00 x L		04,00	8,0	3,0	0,3											
TA 04,20 x L		04,20	8,0	3,0	0,3											
TA 04,50 x L		04,50	8,0	3,0	0,3											
TA 05,00 x L		05,00	10,0	3,0	0,3											
TA 05,20 x L		05,20	10,0	3,0	0,3											
TA 05,50 x L		05,50	10,0	3,0	0,3											
TA 06,00 x L		06,00	12,0	5,0	0,5											
TA 06,20 x L		06,20	12,0	5,0	0,5											
TA 06,50 x L	**ENA05**	06,50	12,0	5,0	0,5											
TA 07,00 x L		07,00	12,0	5,0	0,5											
TA 08,00 x L		08,00	14,0	5,0	0,5											
TA 08,20 x L		08,20	14,0	5,0	0,5											
TA 08,50 x L		08,50	14,0	5,0	0,5											
TA 09,00 x L		09,00	14,0	5,0	0,5											
TA 10,00 x L		10,00	16,0	5,0	0,5											
TA 10,20 x L		10,20	16,0	5,0	0,5											
TA 10,50 x L		10,50	16,0	5,0	0,5											
TA 11,00 x L		11,00	16,0	5,0	0,5											
TA 12,00 x L		12,00	18,0	7,0	0,8											
TA 12,20 x L		12,20	18,0	7,0	0,8											
TA 12,50 x L		12,50	18,0	7,0	0,8											
TA 14,00 x L		14,00	22,0	7,0	0,8											
TA 16,00 x L		16,00	22,0	7,0	0,8											
TA 18,00 x L		18,00	24,0	7,0	0,8											
TA 20,00 x L		20,00	26,0	8,0	1,0											
TA 25,00 x L		25,00	32,0	10,0	1,0											

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530/ISO6751
Mat.: WS (~1.2067)
Max. Temp: 250°C
Surface roughness: Ra

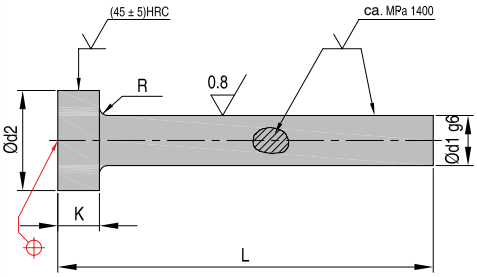


REF	Item Prefix	d1 g6	d2 0 -0,2	K 0 -0,05	R +0,2 0	L +2 0											
						0040	0063	0080	0100	0125	0160	0200	0250	0315	0400	0500	0630	0800	1000
AH 01,50 x L	EAH28	01,50	3,0	1,5	0,2														
AH 01,60 x L		01,60	3,0	1,5	0,2														
AH 01,70 x L		01,70	3,0	1,5	0,2														
AH 01,80 x L		01,80	3,0	1,5	0,2														
AH 02,00 x L		02,00	4,0	2,0	0,2														
AH 02,10 x L		02,10	4,0	2,0	0,2														
AH 02,20 x L		02,20	4,0	2,0	0,2														
AH 02,50 x L		02,50	5,0	2,0	0,3														
AH 02,70 x L		02,70	5,0	2,0	0,3														
AH 03,00 x L		03,00	6,0	3,0	0,3														
AH 03,10 x L		03,10	6,0	3,0	0,3														
AH 03,20 x L		03,20	6,0	3,0	0,3														
AH 03,50 x L		03,50	7,0	3,0	0,3														
AH 03,70 x L		03,70	7,0	3,0	0,3														
AH 04,00 x L		04,00	8,0	3,0	0,3														
AH 04,10 x L		04,10	8,0	3,0	0,3														
AH 04,20 x L		04,20	8,0	3,0	0,3														
AH 04,50 x L		04,50	8,0	3,0	0,3														
AH 04,70 x L		04,70	8,0	3,0	0,3														
AH 05,00 x L		05,00	10,0	3,0	0,3														
AH 05,10 x L		05,10	10,0	3,0	0,3														
AH 05,20 x L		05,20	10,0	3,0	0,3														
AH 05,50 x L		05,50	10,0	3,0	0,3														
AH 06,00 x L		06,00	12,0	5,0	0,5														
AH 06,10 x L		06,10	12,0	5,0	0,5														
AH 06,20 x L		06,20	12,0	5,0	0,5														
AH 06,50 x L		06,50	12,0	5,0	0,5														
AH 07,00 x L		07,00	12,0	5,0	0,5														
AH 08,00 x L		08,00	14,0	5,0	0,5														
AH 08,10 x L		08,10	14,0	5,0	0,5														
AH 08,20 x L		08,20	14,0	5,0	0,5														
AH 08,50 x L		08,50	14,0	5,0	0,5														
AH 09,00 x L		09,00	14,0	5,0	0,5														
AH 10,00 x L		10,00	16,0	5,0	0,5														
AH 10,10 x L		10,10	16,0	5,0	0,5														
AH 10,20 x L		10,20	16,0	5,0	0,5														
AH 10,50 x L		10,50	16,0	5,0	0,5														
AH 11,00 x L		11,00	16,0	5,0	0,5														
AH 12,00 x L		12,00	18,0	7,0	0,8														
AH 12,10 x L		12,10	18,0	7,0	0,8														
AH 12,20 x L		12,20	18,0	7,0	0,8														
AH 12,50 x L		12,50	18,0	7,0	0,8														
AH 14,00 x L		14,00	22,0	7,0	0,8														
AH 16,00 x L		16,00	22,0	7,0	0,8														
AH 18,00 x L		18,00	24,0	7,0	0,8														
AH 20,00 x L		20,00	26,0	8,0	1,0														

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530/ISO6751
Mat.: WAS (~1.2344), pre-hardened
Max. Temp: 500-550 °C
Surface roughness: Ra

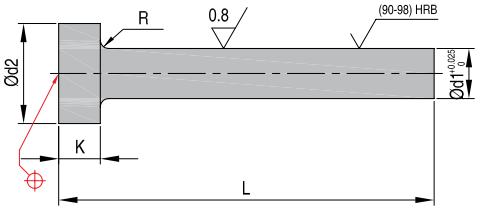


REF	Item Prefix	d1 g6	d2 0 -0,2	K 0 -0,05	R +0,2 0	L +2 0										
						0080	0100	0125	0160	0200	0250	0315	0400	0500	0630	0800	1000
AHX 01,00 x L		01,00	3,0	1,5	0,2												
AHX 01,50 x L		01,50	3,0	1,5	0,2												
AHX 02,00 x L		02,00	4,0	2,0	0,2												
AHX 02,20 x L		02,20	4,0	2,0	0,2												
AHX 02,50 x L		02,50	5,0	2,0	0,3												
AHX 02,70 x L		02,70	5,0	2,0	0,3												
AHX 03,00 x L		03,00	6,0	3,0	0,3												
AHX 03,20 x L		03,20	6,0	3,0	0,3												
AHX 03,50 x L		03,50	7,0	3,0	0,3												
AHX 03,70 x L		03,70	7,0	3,0	0,3												
AHX 04,00 x L		04,00	8,0	3,0	0,3												
AHX 04,20 x L		04,20	8,0	3,0	0,3												
AHX 04,50 x L		04,50	8,0	3,0	0,3												
AHX 05,00 x L		05,00	10,0	3,0	0,3												
AHX 05,20 x L		05,20	10,0	3,0	0,3												
AHX 05,50 x L		05,50	10,0	3,0	0,3												
AHX 06,00 x L		06,00	12,0	5,0	0,5												
AHX 06,20 x L		06,20	12,0	5,0	0,5												
AHX 06,50 x L		06,50	12,0	5,0	0,5												
AHX 07,00 x L	**ERA05**	07,00	12,0	5,0	0,5												
AHX 07,50 x L		07,50	12,0	5,0	0,5												
AHX 08,00 x L		08,00	14,0	5,0	0,5												
AHX 08,20 x L		08,20	14,0	5,0	0,5												
AHX 08,50 x L		08,50	14,0	5,0	0,5												
AHX 09,00 x L		09,00	14,0	5,0	0,5												
AHX 09,50 x L		09,50	14,0	5,0	0,5												
AHX 10,00 x L		10,00	16,0	5,0	0,5												
AHX 10,20 x L		10,20	16,0	5,0	0,5												
AHX 10,50 x L		10,50	16,0	5,0	0,5												
AHX 11,00 x L		11,00	16,0	5,0	0,5												
AHX 12,00 x L		12,00	18,0	7,0	0,8												
AHX 12,20 x L		12,20	18,0	7,0	0,8												
AHX 12,50 x L		12,50	18,0	7,0	0,8												
AHX 14,00 x L		14,00	22,0	7,0	0,8												
AHX 16,00 x L		16,00	22,0	7,0	0,8												
AHX 18,00 x L		18,00	24,0	7,0	0,8												
AHX 20,00 x L		20,00	26,0	8,0	1,0												
AHX 25,00 x L		25,00	32,0	10,0	1,0												
AHX 32,00 x L		32,00	40,0	10,0	1,0												

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530/ISO6751
Mat.: copper-based alloy
Max. Temp: 360°C
Surface roughness: Ra



REF	Item Prefix	d1 +0,025 0	d2 0 -0,2	K 0 -0,05	R +0,2 0	L +2 0			
						0100	0160	0250	0315
PCM 01,50 x L	PCM	01,50	3,0	1,5	0,2				
PCM 02,00 x L		02,00	4,0	2,0	0,2				
PCM 02,50 x L		02,50	5,0	2,0	0,3				
PCM 03,00 x L		03,00	6,0	3,0	0,3				
PCM 03,50 x L		03,50	7,0	3,0	0,3				
PCM 04,00 x L		04,00	8,0	3,0	0,3				
PCM 04,50 x L		04,50	8,0	3,0	0,3				
PCM 05,00 x L		05,00	10,0	3,0	0,3				
PCM 06,00 x L		06,00	12,0	5,0	0,5				
PCM 07,00 x L		07,00	12,0	5,0	0,5				
PCM 08,00 x L		08,00	14,0	5,0	0,5				
PCM 10,00 x L		10,00	16,0	5,0	0,5				
PCM 12,00 x L		12,00	18,0	7,0	0,8				
PCM 14,00 x L		14,00	22,0	7,0	0,8				
PCM 16,00 x L		16,00	22,0	7,0	0,8				

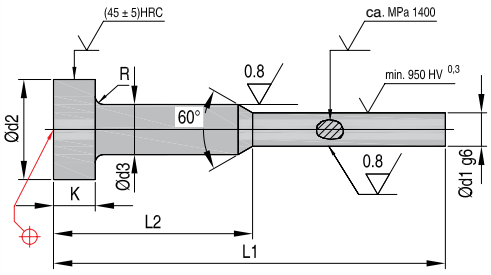
High thermal conductivity pins

Advantages:
- Reduced cycle time
- 5 times better conductivity than steel
- Improved part quality
- Lower machining costs
- Longer service life

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
d3 = Shoulder ø
K = Head thickness
L1 = Length
L2 = Shoulder length + head thickness
Standard: DIN1530/ISO8694
Mat.: WAS (~1.2344)
Max. Temp: 500-550 °C
Surface roughness: Ra



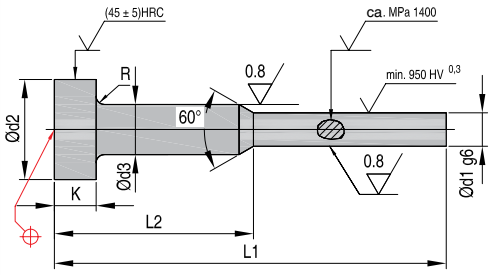
REF	Item Prefix	d1 g6	d2 0 -0,2	d3 h11	K 0 -0,05	R +0,2 0	L 1 +2 0								
							0080	0100	0125	0160	0160	0160	0200	0250	0250
							L 2 -1 -2								
							0035	0050	0050	0050	0063	0075	0075	0075	0100
C 0,7 x L1-L2		0,700	4,0	2,0	2,0	0,2									
C 0,8 x L1-L2		0,800	4,0	2,0	2,0	0,2									
C 0,9 x L1-L2		0,900	4,0	2,0	2,0	0,2									
C 1,0 x L1-L2		01,00	4,0	2,0	2,0	0,2									
C 1,1 x L1-L2		01,10	4,0	2,0	2,0	0,2									
C 1,2 x L1-L2		01,20	4,0	2,0	2,0	0,2									
C 1,3 x L1-L2		01,30	4,0	2,0	2,0	0,2									
C 1,4 x L1-L2		01,40	4,0	2,0	2,0	0,2									
C 1,5 x L1-L2		01,50	6,0	3,0	3,0	0,3									
C 1,6 x L1-L2		01,60	6,0	3,0	3,0	0,3									
C 1,7 x L1-L2		01,70	6,0	3,0	3,0	0,3									
C 1,8 x L1-L2		01,80	6,0	3,0	3,0	0,3									
C 1,9 x L1-L2		01,90	6,0	3,0	3,0	0,3									
C 2,0 x L1-L2		02,00	6,0	3,0	3,0	0,3									
C 2,1 x L1-L2	**EPC05**	02,10	6,0	3,0	3,0	0,3									
C 2,2 x L1-L2		02,20	6,0	3,0	3,0	0,3									
C 2,3 x L1-L2		02,30	6,0	3,0	3,0	0,3									
C 2,4 x L1-L2		02,40	6,0	3,0	3,0	0,3									
C 2,5 x L1-L2		02,50	6,0	3,0	3,0	0,3									
C 2,6 x L1-L2		02,60	6,0	3,0	3,0	0,3									
C 2,7 x L1-L2		02,70	6,0	3,0	3,0	0,3									
C 2,8 x L1-L2		02,80	6,0	3,0	3,0	0,3									
C 2,9 x L1-L2		02,90	6,0	3,0	3,0	0,3									
C 3,0 x L1-L2		03,00	8,0	4,0	3,0	0,3									
C 3,1 x L1-L2		03,10	8,0	4,0	3,0	0,3									
C 3,2 x L1-L2		03,20	8,0	4,0	3,0	0,3									
C 3,3 x L1-L2		03,30	8,0	4,0	3,0	0,3									
C 3,4 x L1-L2		03,40	8,0	4,0	3,0	0,3									
C 3,5 x L1-L2		03,50	8,0	4,0	3,0	0,3									

* For L1 0160 0250 add (5), (6), (7) for L2

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
d3 = Shoulder ø
K = Head thickness
L1 = Length
L2 = Shoulder length + head thickness
Standard: DIN1530/ISO8694
Mat.: WAS (~1.2344)
Max. Temp: 500-550 °C
Surface roughness: Ra



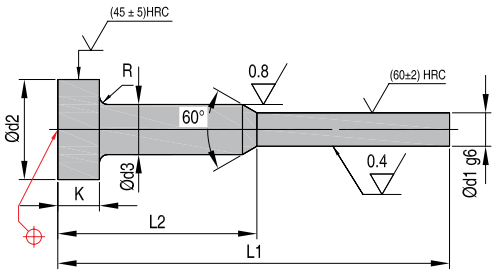
REF	Item Prefix	d1 g6	d2 0 -0,2	d3 h11	K 0 -0,05	R +0,2 0	L 1 +2 0								
							0080	0100	0125	0160	0160	0160	0200	0250	0250
							L 2 -1 -2								
							0035	0050	0050	0050	0063	0075	0075	0075	0100
TC 0,7 x L1-L2		0,700	4,0	2,0	2,0	0,2									
TC 0,8 x L1-L2		0,800	4,0	2,0	2,0	0,2									
TC 0,9 x L1-L2		0,900	4,0	2,0	2,0	0,2									
TC 1,0 x L1-L2		01,00	4,0	2,0	2,0	0,2									
TC 1,1 x L1-L2		01,10	4,0	2,0	2,0	0,2									
TC 1,2 x L1-L2		01,20	4,0	2,0	2,0	0,2									
TC 1,3 x L1-L2		01,30	4,0	2,0	2,0	0,2									
TC 1,4 x L1-L2		01,40	4,0	2,0	2,0	0,2									
TC 1,5 x L1-L2		01,50	6,0	3,0	3,0	0,3									
TC 1,6 x L1-L2		01,60	6,0	3,0	3,0	0,3									
TC 1,7 x L1-L2		01,70	6,0	3,0	3,0	0,3									
TC 1,8 x L1-L2		01,80	6,0	3,0	3,0	0,3									
TC 1,9 x L1-L2		01,90	6,0	3,0	3,0	0,3									
TC 2,0 x L1-L2		02,00	6,0	3,0	3,0	0,3									
TC 2,1 x L1-L2	**ENC05**	02,10	6,0	3,0	3,0	0,3									
TC 2,2 x L1-L2		02,20	6,0	3,0	3,0	0,3									
TC 2,3 x L1-L2		02,30	6,0	3,0	3,0	0,3									
TC 2,4 x L1-L2		02,40	6,0	3,0	3,0	0,3									
TC 2,5 x L1-L2		02,50	6,0	3,0	3,0	0,3									
TC 2,6 x L1-L2		02,60	6,0	3,0	3,0	0,3									
TC 2,7 x L1-L2		02,70	6,0	3,0	3,0	0,3									
TC 2,8 x L1-L2		02,80	6,0	3,0	3,0	0,3									
TC 2,9 x L1-L2		02,90	6,0	3,0	3,0	0,3									
TC 3,0 x L1-L2		03,00	8,0	4,0	3,0	0,3									
TC 3,1 x L1-L2		03,10	8,0	4,0	3,0	0,3									
TC 3,2 x L1-L2		03,20	8,0	4,0	3,0	0,3									
TC 3,3 x L1-L2		03,30	8,0	4,0	3,0	0,3									
TC 3,4 x L1-L2		03,40	8,0	4,0	3,0	0,3									
TC 3,5 x L1-L2		03,50	8,0	4,0	3,0	0,3									

* For L1 0160 0250 add (5), (6), (7) for L2

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
d3 = Shoulder ø
K = Head thickness
L1 = Length
L2 = Shoulder length + head thickness
Standard: DIN1530/ISO8694
Mat.: WS (~1.2067)
Max. Temp: 250°C
Surface roughness: Ra



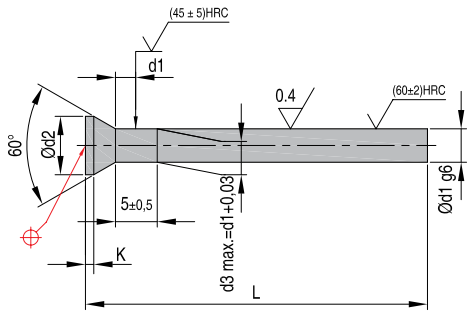
REF	Item Prefix	d1 g6	d2 0 -0,2	d3 h11	K 0 -0,05	R +0,2 0	L 1 +2 0									
							0063	0080	0100	0125	0160	0160	0160	0200	0250	0250
							L 2 -1 -2									
							0025	0035	0050	0050	0050	0063	0075	0075	0075	0100
CH 0,5 x L1-L2		00,50	4,0	2,0	2,0	0,2										
CH 0,6 x L1-L2		00,60	4,0	2,0	2,0	0,2										
CH 0,7 x L1-L2		00,70	4,0	2,0	2,0	0,2										
CH 0,8 x L1-L2		00,80	4,0	2,0	2,0	0,2										
CH 0,9 x L1-L2		00,90	4,0	2,0	2,0	0,2										
CH 1,0 x L1-L2		01,00	4,0	2,0	2,0	0,2										
CH 1,1 x L1-L2		01,10	4,0	2,0	2,0	0,2										
CH 1,2 x L1-L2		01,20	4,0	2,0	2,0	0,2										
CH 1,3 x L1-L2		01,30	4,0	2,0	2,0	0,2										
CH 1,4 x L1-L2		01,40	4,0	2,0	2,0	0,2										
CH 1,5 x L1-L2		01,50	6,0	3,0	3,0	0,3										
CH 1,6 x L1-L2		01,60	6,0	3,0	3,0	0,3										
CH 1,7 x L1-L2	**CHE28**	01,70	6,0	3,0	3,0	0,3										
CH 1,8 x L1-L2		01,80	6,0	3,0	3,0	0,3										
CH 1,9 x L1-L2		01,90	6,0	3,0	3,0	0,3										
CH 2,0 x L1-L2		02,00	6,0	3,0	3,0	0,3										
CH 2,1 x L1-L2		02,10	6,0	3,0	3,0	0,3										
CH 2,2 x L1-L2		02,20	6,0	3,0	3,0	0,3										
CH 2,3 x L1-L2		02,30	6,0	3,0	3,0	0,3										
CH 2,4 x L1-L2		02,40	6,0	3,0	3,0	0,3										
CH 2,5 x L1-L2		02,50	6,0	3,0	3,0	0,3										
CH 2,6 x L1-L2		02,60	6,0	3,0	3,0	0,3										
CH 2,7 x L1-L2		02,70	6,0	3,0	3,0	0,3										
CH 2,8 x L1-L2		02,80	6,0	3,0	3,0	0,3										
CH 2,9 x L1-L2		02,90	6,0	3,0	3,0	0,3										

* For L1 0160 0250 add (5), (6), (7) for L2

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530
Mat.: WS (~1.2067)
Max. Temp: 250°C
SSurface roughness: Ra

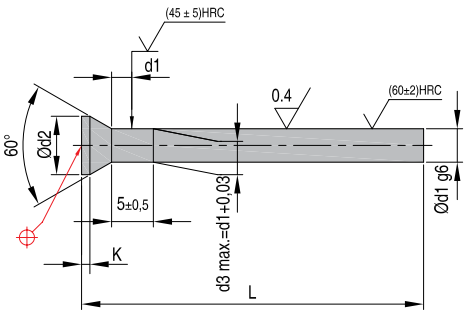


REF	Item Prefix	d1 g6	d2 0 -0,2	K +0,2 0	L +2 0							
					0063	0071	0080	0100	0125	0160	0200	0250	0315
D 01,00 x L	EPD28	01,00	1,8	0,5									
D 01,10 x L		01,10	1,8	0,5									
D 01,20 x L		01,20	2,0	0,5									
D 01,25 x L		01,25	2,0	0,5									
D 01,30 x L		01,30	2,0	0,5									
D 01,40 x L		01,40	2,2	0,5									
D 01,50 x L		01,50	2,2	0,5									
D 01,60 x L		01,60	2,5	0,5									
D 01,70 x L		01,70	2,5	0,5									
D 01,75 x L		01,75	2,8	0,5									
D 01,80 x L		01,80	2,8	0,5									
D 01,90 x L		01,90	2,8	0,5									
D 02,00 x L		02,00	3,0	0,5									
D 02,10 x L		02,10	3,2	0,5									
D 02,20 x L		02,20	3,2	0,5									
D 02,25 x L		02,25	3,5	0,5									
D 02,30 x L		02,30	3,5	0,5									
D 02,40 x L		02,40	3,5	0,5									
D 02,50 x L		02,50	3,5	0,5									
D 02,60 x L		02,60	4,0	0,5									
D 02,70 x L		02,70	4,0	0,5									
D 02,75 x L		02,75	4,0	0,5									
D 02,80 x L		02,80	4,0	0,5									
D 02,90 x L		02,90	4,0	0,5									
D 03,00 x L		03,00	4,5	0,5									
D 03,10 x L		03,10	4,5	0,5									
D 03,20 x L		03,20	4,5	0,5									
D 03,25 x L		03,25	4,5	0,5									
D 03,30 x L		03,30	4,5	0,5									
D 03,40 x L		03,40	4,5	0,5									
D 03,50 x L		03,50	5,0	0,5									
D 03,60 x L		03,60	5,0	0,5									
D 03,70 x L		03,70	5,0	0,5									
D 03,75 x L		03,75	5,0	0,5									
D 03,80 x L		03,80	5,0	0,5									
D 03,90 x L		03,90	5,0	0,5									
D 04,00 x L		04,00	5,5	0,5									
D 04,10 x L		04,10	5,5	0,5									
D 04,20 x L		04,20	5,5	0,5									
D 04,25 x L		04,25	5,5	0,5									
D 04,40 x L		04,40	5,5	0,5									
D 04,50 x L		04,50	6,1	0,5									
D 04,60 x L		04,60	6,0	0,5									
D 04,75 x L		04,75	6,0	0,5									
D 05,00 x L		05,00	6,5	0,5									
D 05,10 x L		05,10	6,5	0,5									
D 05,20 x L		05,20	6,5	0,5									
D 05,25 x L		05,25	6,5	0,5									
D 05,30 x L		05,30	6,5	0,5									
D 05,40 x L		05,40	6,5	0,5									
D 05,50 x L		05,50	7,0	0,5									
D 05,60 x L		05,60	7,0	0,5									

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530
Mat.: WS (~1.2067)
Max. Temp: 250°C
SSurface roughness: Ra

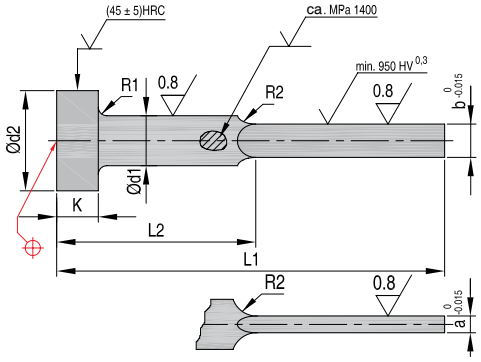


REF	Item Prefix	d1 g6	d2 0 -0,2	K +0,2 0	L +2 0								
					0063	0071	0080	0100	0125	0160	0200	0250	0315
D 01,00 x L	EPD28	01,00	1,8	0,5									
D 01,10 x L		01,10	1,8	0,5									
D 01,20 x L		01,20	2,0	0,5									
D 01,25 x L		01,25	2,0	0,5									
D 01,30 x L		01,30	2,0	0,5									
D 01,40 x L		01,40	2,2	0,5									
D 01,50 x L		01,50	2,2	0,5									
D 01,60 x L		01,60	2,5	0,5									
D 01,70 x L		01,70	2,5	0,5									
D 01,75 x L		01,75	2,8	0,5									
D 01,80 x L		01,80	2,8	0,5									
D 01,90 x L		01,90	2,8	0,5									
D 02,00 x L		02,00	3,0	0,5									
D 02,10 x L		02,10	3,2	0,5									
D 02,20 x L		02,20	3,2	0,5									
D 02,25 x L		02,25	3,5	0,5									
D 02,30 x L		02,30	3,5	0,5									
D 02,40 x L		02,40	3,5	0,5									
D 02,50 x L		02,50	3,5	0,5									
D 02,60 x L		02,60	4,0	0,5									
D 02,70 x L		02,70	4,0	0,5									
D 02,75 x L		02,75	4,0	0,5									
D 02,80 x L		02,80	4,0	0,5									
D 02,90 x L		02,90	4,0	0,5									
D 03,00 x L		03,00	4,5	0,5									
D 03,10 x L		03,10	4,5	0,5									
D 03,20 x L		03,20	4,5	0,5									
D 03,25 x L		03,25	4,5	0,5									
D 03,30 x L		03,30	4,5	0,5									
D 03,40 x L		03,40	4,5	0,5									
D 03,50 x L		03,50	5,0	0,5									
D 03,60 x L		03,60	5,0	0,5									
D 03,70 x L		03,70	5,0	0,5									
D 03,75 x L		03,75	5,0	0,5									
D 03,80 x L		03,80	5,0	0,5									
D 03,90 x L		03,90	5,0	0,5									
D 04,00 x L		04,00	5,5	0,5									
D 04,10 x L		04,10	5,5	0,5									
D 04,20 x L		04,20	5,5	0,5									
D 04,25 x L		04,25	5,5	0,5									
D 04,40 x L		04,40	5,5	0,5									
D 04,50 x L		04,50	6,1	0,5									
D 04,60 x L		04,60	6,0	0,5									
D 04,75 x L		04,75	6,0	0,5									
D 05,00 x L		05,00	6,5	0,5									
D 05,10 x L		05,10	6,5	0,5									
D 05,20 x L		05,20	6,5	0,5									
D 05,25 x L		05,25	6,5	0,5									
D 05,30 x L		05,30	6,5	0,5									
D 05,40 x L		05,40	6,5	0,5									
D 05,50 x L		05,50	7,0	0,5									
D 05,60 x L		05,60	7,0	0,5									
D 05,75 x L	EPD28	05,75	7,0	0,5									
D 05,00 x L		05,00	6,5	0,5									
D 06,00 x L		06,00	8,0	0,5									
D 06,20 x L		06,20	8,0	0,5									
D 06,50 x L		06,50	9,0	1									
D 07,00 x L		07,00	9,0	1									
D 07,50 x L		07,50	10,0	1									
D 08,00 x L		08,00	10,0	1									
D 08,20 x L		08,20	10,0	1									
D 08,50 x L		08,50	11,0	1									
D 09,00 x L		09,00	11,0	1									
D 10,00 x L		10,00	12,0	1									
D 11,00 x L		11,00	13,0	1									
D 12,00 x L		12,00	14,0	1									
D 14,00 x L		14,00	16,0	1,5									
D 16,00 x L		16,00	18,0	1,5									

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
a =
b =
L1 = Length
L2 = Shoulder length + head thickness
Standard: DIN1530/ISO8693
Mat.: WAS (~1.2344), pre-hardened
Max. Temp: 500-550 °C
Surface roughness: Ra

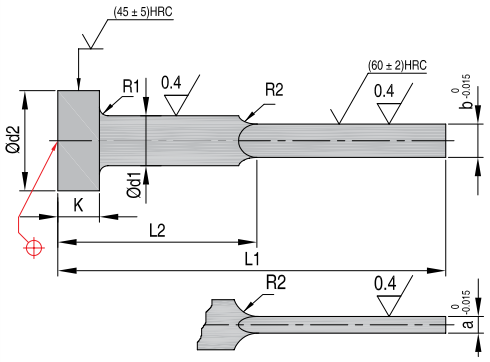


REF	Item Prefix	R1 +0,2 0	R2	K 0 -0,05	d2 0 -0,2	d1 h11	a 0 -0,015	b 0 -0,015	L 1 +2 0								
									0063	0080	0100	0125	0160	0200	0250	0315	0400
									L 2 -1 -2								
									0032	0040	0050	0063	0080	0100	0125	0160	0200
FW 0,8-3,5 x L1-L2		0,3	10	3	8,0	4,0	0,8	3,5									
FW 0,8-3,8 x L1-L2		0,3	10	3	8,0	4,2	0,8	3,8									
FW 1,0-3,5 x L1-L2		0,3	10	3	8,0	4,0	1,0	3,5									
FW 1,2-3,5 x L1-L2		0,3	10	3	8,0	4,0	1,2	3,5									
FW 1,0-3,8 x L1-L2		0,3	10	3	8,0	4,2	1,0	3,8									
FW 1,2-3,8 x L1-L2		0,3	10	3	8,0	4,2	1,2	3,8									
FW 1,0-4,5 x L1-L2		0,3	10	3	10,0	5,0	1,0	4,5									
FW 1,2-4,5 x L1-L2		0,3	10	3	10,0	5,0	1,2	4,5									
FW 1,5-4,5 x L1-L2		0,3	10	3	10,0	5,0	1,5	4,5									
FW 1,6-4,5 x L1-L2		0,3	10	3	10,0	5,0	1,6	4,5									
FW 1,8-4,5 x L1-L2		0,3	10	3	10,0	5,0	1,8	4,5									
FW 1,0-5,5 x L1-L2		0,5	10	5	12,0	6,0	1,0	5,5									
FW 1,2-5,5 x L1-L2		0,5	10	5	12,0	6,0	1,2	5,5									
FW 1,5-5,5 x L1-L2		0,5	10	5	12,0	6,0	1,5	5,5									
FW 1,6-5,5 x L1-L2		0,5	10	5	12,0	6,0	1,6	5,5									
FW 1,8-5,5 x L1-L2		0,5	10	5	12,0	6,0	1,8	5,5									
FW 2,0-5,5 x L1-L2		0,5	10	5	12,0	6,0	2,0	5,5									
FW 1,2-7,5 x L1-L2	**FW**	0,5	10	5	14,0	8,0	1,2	7,5									
FW 1,5-7,5 x L1-L2		0,5	10	5	14,0	8,0	1,5	7,5									
FW 1,6-7,5 x L1-L2		0,5	10	5	14,0	8,0	1,6	7,5									
FW 1,8-7,5 x L1-L2		0,5	10	5	14,0	8,0	1,8	7,5									
FW 2,0-7,5 x L1-L2		0,5	10	5	14,0	8,0	2,0	7,5									
FW 1,5-9,5 x L1-L2		0,5	10	5	16,0	10,0	1,5	9,5									
FW 1,8-9,5 x L1-L2		0,5	10	5	16,0	10,0	1,8	9,5									
FW 2,0-9,5 x L1-L2		0,5	10	5	16,0	10,0	2,0	9,5									
FW 2,0-11,5 x L1-L2		0,8	10	7	18,0	12,0	2,0	11,5									
FW 2,5-11,5 x L1-L2		0,8	10	7	18,0	12,0	2,5	11,5									
FW 2,0-12,0 x L1-L2		0,8	10	7	18,0	12,5	2,0	12,0									
FW 2,5-12,0 x L1-L2		0,8	10	7	18,0	12,5	2,5	12,0									
FW 2,0-15,0 x L1-L2		0,8	10	7	22,0	16,0	2,0	15,0									
FW 2,5-15,0 x L1-L2		0,8	10	7	22,0	16,0	2,5	15,0									
FW 2,0-15,5 x L1-L2		0,8	10	7	22,0	16,0	2,0	15,5									
FW 2,5-15,5 x L1-L2		0,8	10	7	22,0	16,0	2,5	15,5									

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
a =
b =
L1 = Length
L2 = Shoulder length + head thickness
Standard: DIN1530/ISO8693
Mat.: WS (~1.2067)
Max. Temp: 250°C
Surface roughness: Ra



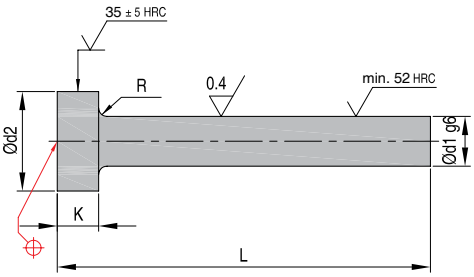
REF	Item Prefix	R1 +0,2 0	R2	K 0 -0,05	d2 0 -0,2	d1 h11	a 0 -0,015	b 0 -0,015	L 1 +2 0								
									0063	0080	0100	0125	0160	0200	0250	0315	0400
									L 2 -1 -2								
									0032	0040	0050	0063	0080	0100	0125	0160	0200
FK 0,8-3,8 x L1-L2		0,3	10	3	8	4,2	0,8	3,8									
FK 1,0-3,5 x L1-L2		0,3	10	3	8	4,0	1,0	3,5									
FK 1,2-3,5 x L1-L2		0,3	10	3	8	4,0	1,2	3,5									
FK 1,0-3,8 x L1-L2		0,3	10	3	8	4,2	1,0	3,8									
FK 1,2-3,8 x L1-L2		0,3	10	3	8	4,2	1,2	3,8									
FK 1,0-4,5 x L1-L2		0,3	10	3	10	5,0	1,0	4,5									
FK 1,2-4,5 x L1-L2		0,3	10	3	10	5,0	1,2	4,5									
FK 1,5-4,5 x L1-L2		0,3	10	3	10	5,0	1,5	4,5									
FK 1,0-5,5 x L1-L2		0,5	10	5	12	6,0	1,0	5,5									
FK 1,2-5,5 x L1-L2		0,5	10	5	12	6,0	1,2	5,5									
FK 1,5-5,5 x L1-L2		0,5	10	5	12	6,0	1,5	5,5									
FK 2,0-5,5 x L1-L2	**FK**	0,5	10	5	12	6,0	2,0	5,5									
FK 1,2-7,5 x L1-L2		0,5	10	5	14	8,0	1,2	7,5									
FK 1,5-7,5 x L1-L2		0,5	10	5	14	8,0	1,5	7,5									
FK 2,0-7,5 x L1-L2		0,5	10	5	14	8,0	2,0	7,5									
FK 1,5-9,5 x L1-L2		0,5	10	5	16	10,0	1,5	9,5									
FK 2,0-9,5 x L1-L2		0,5	10	5	16	10,0	2,0	9,5									
FK 2,0-11,5 x L1-L2		0,8	10	7	18	12,0	2,0	11,5									
FK 2,5-11,5 x L1-L2		0,8	10	7	18	12,0	2,5	11,5									
FK 2,0-15,5 x L1-L2		0,8	10	7	22	16,0	2,0	15,5									
FK 2,5-15,5 x L1-L2		0,8	10	7	22	16,0	2,5	15,5									

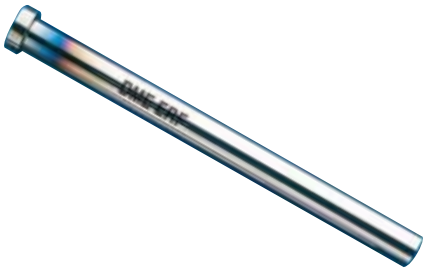
CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN ISO6751
Mat.: 1.4125
Max. Temp: 250°C
Surface roughness: Ra

Other custom dimensions upon request, delivery 2 weeks





REF	Item Prefix	d1 g6	d2 0 -0,2	K 0 -0,05	R +0,2 0	L +2 0									
						0100	0125	0160	0200	0250	0315	0400	0500	0630	0800	1000
ERF 01,00 x L	ERFAQ	01,00	2,5	1,2	0,2											
ERF 01,50 x L		01,50	3,0	1,5	0,2											
ERF 02,00 x L		02,00	4,0	2,0	0,2											
ERF 02,50 x L		02,50	5,0	2,0	0,3											
ERF 03,00 x L		03,00	6,0	3,0	0,3											
ERF 03,50 x L		03,50	7,0	3,0	0,3											
ERF 04,00 x L		04,00	8,0	3,0	0,3											
ERF 04,50 x L		04,50	8,0	3,0	0,3											
ERF 05,00 x L		05,00	10,0	3,0	0,3											
ERF 05,50 x L		05,50	10,0	3,0	0,3											
ERF 06,00 x L		06,00	12,0	5,0	0,5											
ERF 06,50 x L		06,50	12,0	5,0	0,5											
ERF 08,00 x L		08,00	14,0	5,0	0,5											
ERF 10,00 x L		10,00	16,0	5,0	0,5											

available from stock

upon request, delivery time 2 weeks

Applications
- for processing plastics with abrasive and corrosive fillers that form acidic gasses
- for use with fire resistant additives
- tools for the medical and food industry
- for molding of PVC

Features
- high wear resistance
- suitable for polished finish
- longer life of the mold
- excellent dimension stability
- low maintenance and service costs

CAD reference point

18/09/2012

When you want pins with special shapes such as tapers or contours - special head sizes- special hardness, special material up to any length.

DME has the manufacturing, heat treating and sophisticated quality control equipment to meet your requirements for special ejector pins, core pins or ejector sleeves.

Special pins match the precision manufacturing of all our standards in every detail.

Step 1: Photocopy this form.

Step 2: Specify required tolerances on all dimensions.

Step 3: Contact ***DME***

Special Pins

Comments:

.....

.....

Company:.....

Contact:.....

Tel.:.....

Fax:.....

Quantity:.....

Mat.:.....

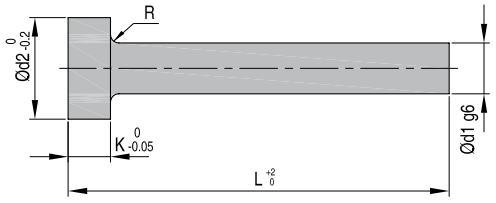
Hardness:..... HRC

Delivery date: .....

Nitrite: ☐ Yes

Signature:.....

Order Number: .....



	Dim.	Tol.
d1		
d2		
K		
R		
L		

Comments:

.....

.....

Company:.....

Contact:.....

Tel.:.....

Fax:.....

Quantity:.....

Mat.:.....

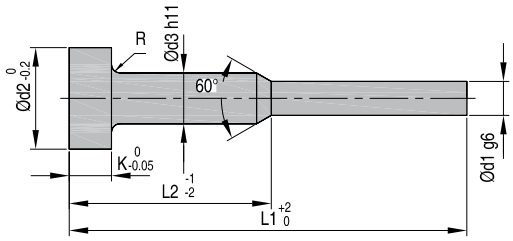
Hardness:..... HRC

Delivery date: .....

Nitrite: ☐ Yes

Signature:.....

Order Number: .....



	Dim.	Tol.
d1		
d2		
d3		
L1		
L2		
K		
R		

Comments:

.....

.....

.....

Company:.....

Contact:.....

Tel.:.....

Fax:.....

Quantity:.....

Mat.:.....

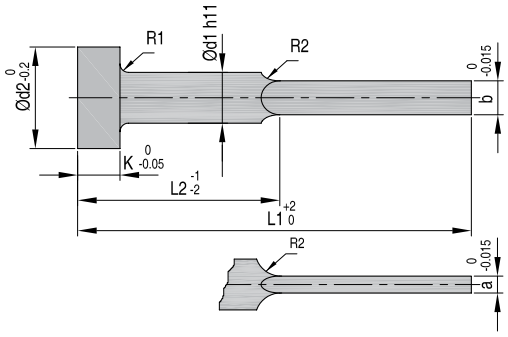
Hardness:..... HRC

Delivery date: .....

Nitrite: ☐ Yes

Signature:.....

Order Number: .....



	Dim.	Tol.
d1		
d2		
K		
R1		
R2		
a		
b		
L1		
L2		

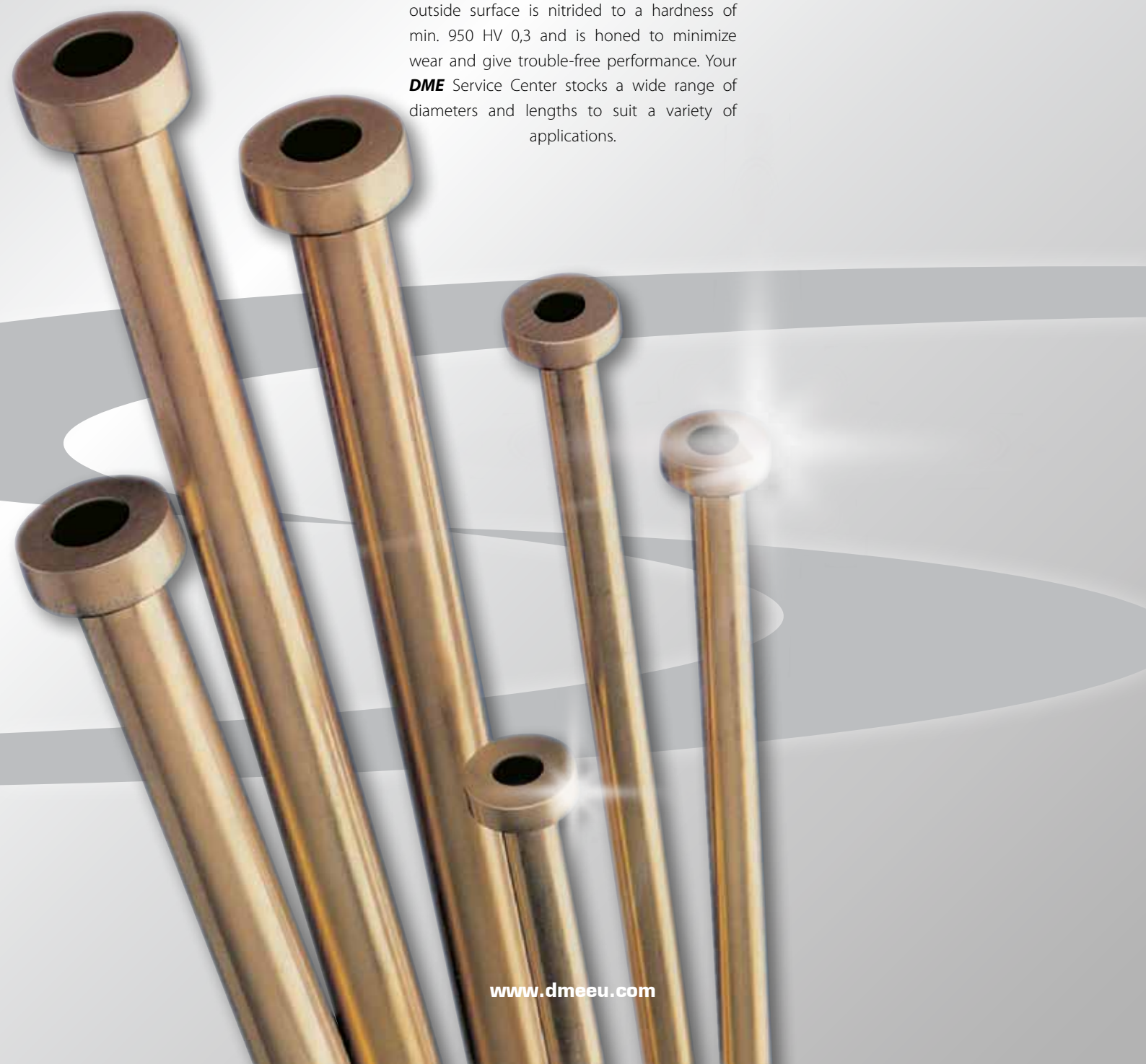
18/09/2012

DME

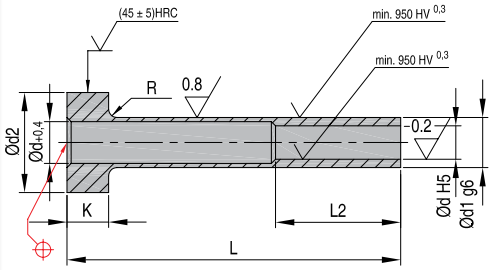
EVERY STEP OF THE WAY

Ejector Sleeves

DME ejector sleeves are made of the finest grade nitriding steel. They are gun drilled, finish reamed and honed for accurate concentricity of O.D./I.D. over full bearing length. The heads are hot-forged for uniform, consistent tensile strength and longer mold life. The outside surface is nitrided to a hardness of min. 950 HV 0,3 and is honed to minimize wear and give trouble-free performance. Your ***DME*** Service Center stocks a wide range of diameters and lengths to suit a variety of applications.



Info
d = Pin body inside ø
d1 = Pin body outside ø
d2 = Head ø
K = Head thickness
L1 = Total length
L2 = Fit length
Standard: DIN16756/ISO8405
Mat.: WAS (~1.2344)
Max. Temp: 500-550 °C
Surface roughness: Ra

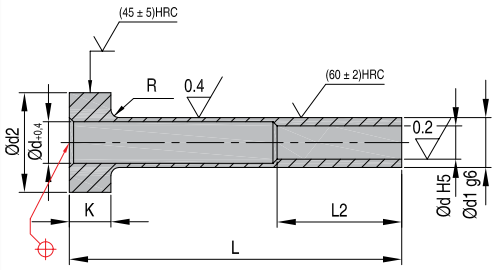


REF	Item Prefix	d H5	d1 g6	d2 0 -0,2	L2	R	K 0 -0,05	L 1 +0 2 60	75	80	95	100	110	125	150	175	200	225	250	275	300	325	350
S153 x L		1,5	3,0	6,0	35	0,3	3																
S163 x L		1,6	3,0	6,0	35	0,3	3																
S173 x L		1,7	3,0	6,0	35	0,3	3																
S183 x L		1,8	3,0	6,0	35	0,3	3																
S24 x L		2,0	4,0	8,0	35	0,3	3																
S224 x L		2,2	4,0	8,0	35	0,3	3																
S255 x L		2,5	5,0	10,0	35	0,3	3																
S275 x L		2,7	5,0	10,0	45	0,3	3																
S285 x L		2,8	5,0	10,0	45	0,3	3																
S35 x L		3,0	5,0	10,0	45	0,3	3																
S325 x L		3,2	5,0	10,0	45	0,3	3																
S356 x L		3,5	6,0	12,0	45	0,5	5																
S376 x L		3,7	6,0	12,0	45	0,5	5																
S46 x L		4,0	6,0	12,0	45	0,5	5																
S428 x L		4,2	8,0	14,0	45	0,5	5																
S458 x L		4,5	8,0	14,0	45	0,5	5																
S58 x L	**S**	5,0	8,0	14,0	45	0,5	5																
S528 x L		5,2	8,0	14,0	45	0,5	5																
S610 x L		6,0	10,0	16,0	45	0,5	5																
S6210 x L		6,2	10,0	16,0	45	0,5	5																
S6510 x L		6,5	10,0	16,0	45	0,5	5																
S812 x L		8,0	12,0	20,0	45	0,8	7																
S8212 x L		8,2	12,0	20,0	45	0,8	7																
S8512 x L		8,5	12,0	20,0	45	0,8	7																
S1014 x L		10,0	14,0	22,0	45	0,8	7																
S10214 x L		10,2	14,0	22,0	45	0,8	7																
S10514 x L		10,5	14,0	22,0	45	0,8	7																
S1114 x L		11,0	14,0	22,0	45	0,8	7																
S1216 x L		12,0	16,0	22,0	45	0,8	7																
S12516 x L		12,5	16,0	22,0	45	0,8	7																
S1418 x L		14,0	18,0	24,0	45	0,8	9																
S1620 x L		16,0	20,0	26,0	50	0,8	9																
S1822 x L		18,0	22,0	28,0	50	0,8	9																

CAD reference point

18/09/2012

Info
d = Pin body inside ø
d1 = Pin body outside ø
d2 = Head ø
K = Head thickness
L1 = Total length
L2 = Fit length
Standard: DIN16756/ISO8405
Mat.: WS (~1.2067)
Max. Temp: 200-250 °C
Surface roughness: Ra



REF	Item Prefix	d H5	d1 g6	d2 0 -0,2	L2	R	K 0 -0,05	L 1 +0 -2 60	75	100	125	150	175	200	225	250	275	300	325	350
KS153 x L	KS	1,5	3	6,0	30	0,3	3													
KS163 x L		1,6	3	6,0	30	0,3	3													
KS173 x L		1,7	3	6,0	30	0,3	3													
KS183 x L		1,8	3	6,0	30	0,3	3													
KS24 x L		2,0	4	8,0	35	0,3	3													
KS224 x L		2,2	4	8,0	35	0,3	3													
KS255 x L		2,5	5	10,0	35	0,3	3													
KS275 x L		2,7	5	10,0	45	0,3	3													
KS35 x L		3,0	5	10,0	45	0,3	3													
KS325 x L		3,2	5	10,0	45	0,3	3													
KS356 x L		3,5	6	12,0	45	0,5	5													
KS376 x L		3,7	6	12,0	45	0,5	5													
KS46 x L		4,0	6	12,0	45	0,5	5													
KS428 x L		4,2	8	14,0	45	0,5	5													
KS458 x L		4,5	8	14,0	45	0,5	5													
KS58 x L		5,0	8	14,0	45	0,5	5													
KS528 x L		5,2	8	14,0	45	0,5	5													
KS558 x L		5,5	8	14,0	45	0,5	5													
KS610 x L		6,0	10	16,0	45	0,5	5													
KS6210 x L		6,2	10	16,0	45	0,5	5													
KS6510 x L		6,5	10	16,0	45	0,8	5													
KS812 x L		8,0	12	20,0	45	0,8	7													
KS8212 x L		8,2	12	20,0	45	0,8	7													
KS8512 x L		8,5	12	20,0	45	0,8	7													
KS1014 x L		10,0	14	22,0	45	0,8	7													
KS10514		10,5	14	22,0	45	0,8	7													
KS1114 x L		11,0	14	22,0	45	0,8	7													
KS1216 x L		12,0	16	22,0	45	0,8	7													
KS12516		12,5	16	22,0	45	0,8	7													
KS1418 x L		14,0	18	24,0	45	0,8	9													
KS1620 x L		16,0	20	26,0	50	0,8	9													
KS1822 x L		18,0	22	28,0	50	0,8	9													

CAD reference point

18/09/2012

When you want pins with special shapes such as tapers or contours - special head sizes- special hardness, special material up to any length.

DME has the manufacturing, heat treating and sophisticated quality control equipment to meet your requirements for special ejector pins, core pins or ejector sleeves.

Special pins match the precision manufacturing of all our standards in every detail.

Step 1: Photocopy this form.

Step 2: Specify required tolerances on all dimensions.

Step 3: Contact ***DME***

Special Sleeves

Comments:

.....

.....

.....

Company:.....

Contact:.....

Tel.:.....

Fax:.....

Quantity:.....

Mat.:.....

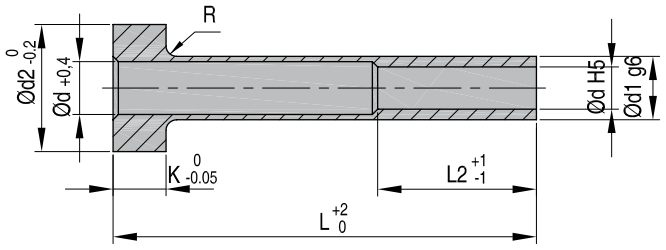
Hardness:..... HRC

Delivery date: .....

Nitrite: ☐ Yes

Signature:.....

Order Number:.....



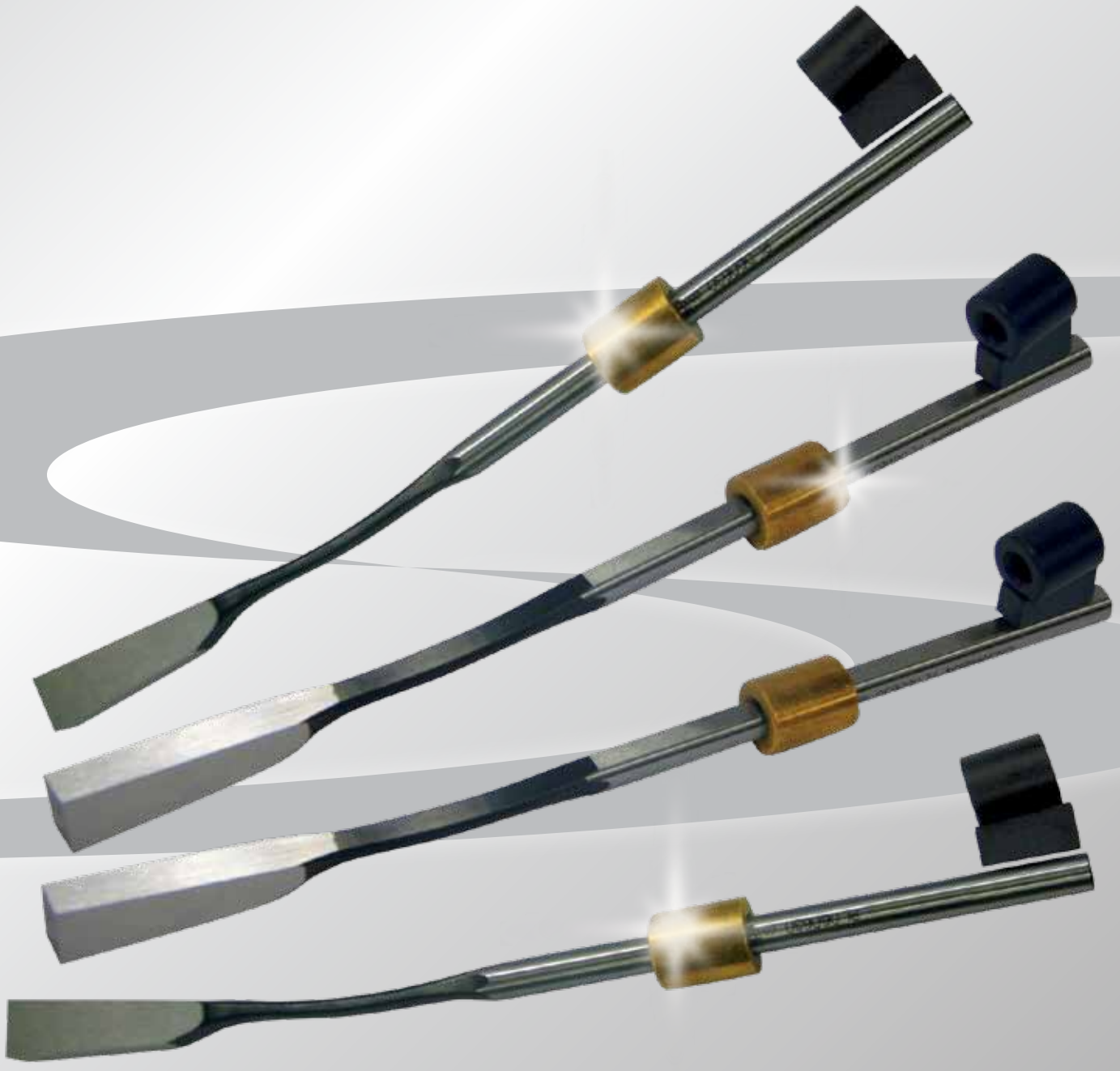
	Dim.	Tol.
d1		
d2		
d3		
L1		
L2		
K		
R		

DME

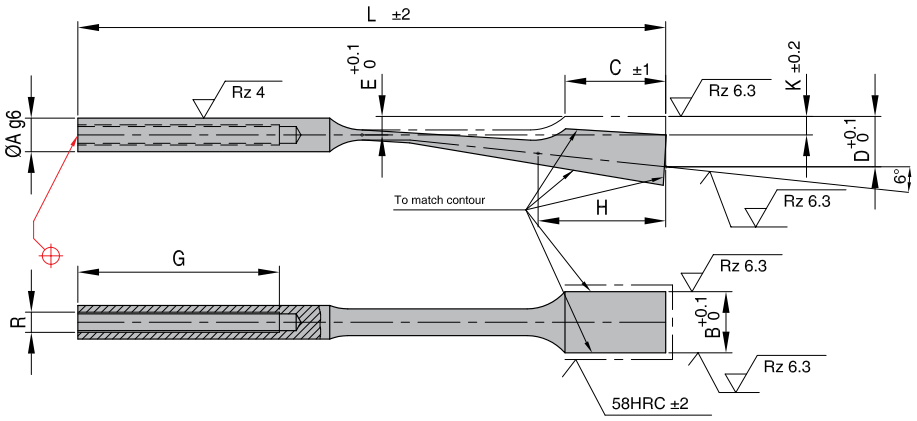
EVERY STEP OF THE WAY

Flexible Cores

Manufactured from spring steel this unit allows the release of small undercuts. It is activated by the ejector plates as a standard ejector. They come with a reference plane and a conical fixing system, which saves cutting the flexible core to fix it.



Info
L = Length
G = Shoulder length + head thickness
Standard: DIN16756/ISO8405
Mat.: 1.8159 - 45 ±3 HRC
Surface roughness: Ra



REF A-B	Item prefix	C	D	E	G	H	K	L	R
AW275 06 - 6,2	AW275	22	9	3,5	40	25	3,5	125	M4
AW275 06 - 8,2	AW275	22	9	3,5	40	25	3,5	125	M4
AW275 08 - 8,2	AW275	25	11,5	4,5	50	30	4,5	140	M5
AW275 08 - 10,2	AW275	25	11,5	4,5	50	30	4,5	140	M5
AW275 08 - 12,2	AW275	25	11,5	4,5	50	30	4,5	140	M5
AW275 10 - 14,2	AW275	30	15	5,5	60	38	5,5	175	M6
AW275 10 - 16,2	AW275	30	15	5,5	60	38	5,5	175	M6
AW275 10 - 18,2	AW275	30	15	5,5	60	38	5,5	175	M6

Frequently Asked Questions (FAQ)

1 How many shots do the Flexible Cores stand?
As any mobile element, their lifetime depends essentially on their adjustment, as well as the tolerances used (which might be H7/g6). Flexible cores not being properly installed, may last a short period, but if they are installed as they should, they might produce more than 2 million pieces. Please, read our instructions for installation.

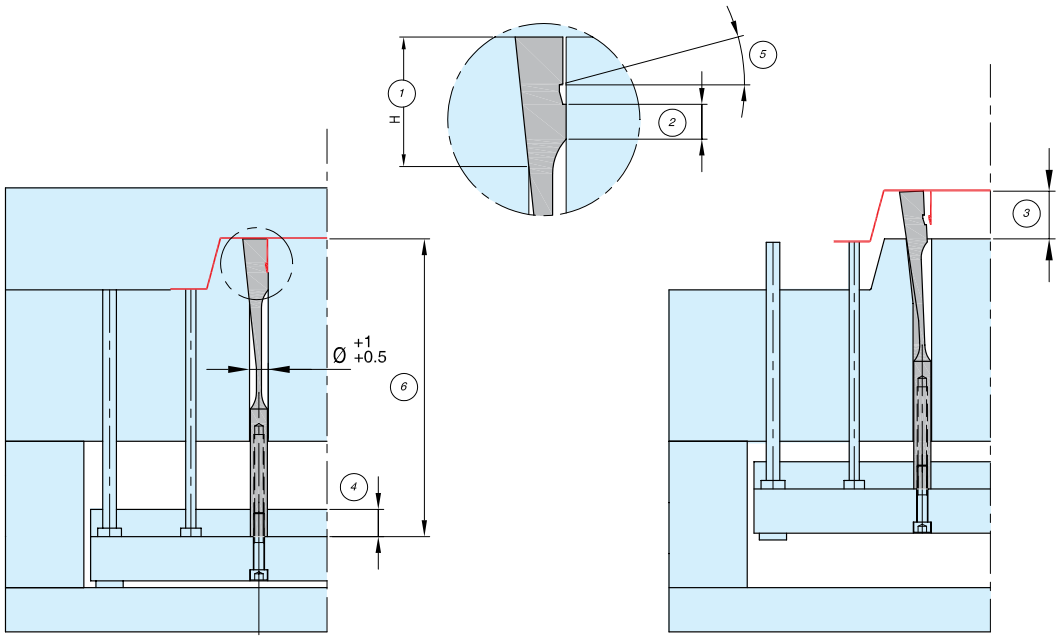
2 How is a Flexible Core correctly installed?
Please, carefully read the instructions for installation. Furthermore, we want to stress that it is very important to correctly calculate the Flexible Cores length. If this is machined shorter than its emplacement, once the Flexible Core gets attached to the ejector plates, the central part gets elongated, bringing weakness.

3 What would happen if the ejection stroke is more than C-dimension?
When the Flexible Core head goes free out of its emplacement, due to the rounded shaft and screw attachment, this is prone to twist. This torsionnal movement affects to the thinnest zone which could, after several shots, break. A solution is to use our Keyed Flexible Cores, which have a flat on the shaft that prevents the rotation to occur. You could also make a flat on the rear zone of the Flexible Core shaft yourself, placing a cotter pin to hold it.

CAD reference point

18/09/2012

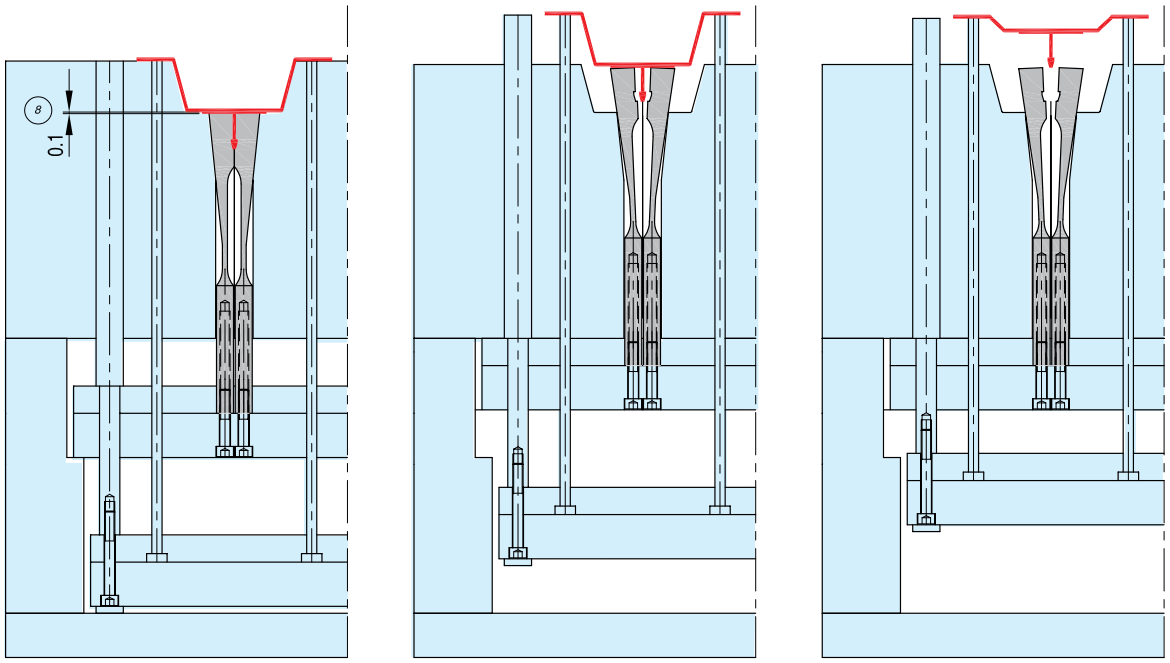
Simple Ejection



1. This area of support must be the same length as dimension H on the Sprung Core.
2. The adjustment area must be at least 1/3 of the dimension C.
3. The stroke of the sprung Core must be the same or smaller than the dimension C.
4. The plate that houses the shaft of the core must be minimum 15 mm in all cases.
5. The draft angle must be minimum 5°.
6. The core length must be 0,02-0,05 larger than its own hole.
7. After the core is adjusted, remove 0,1 to ensure smooth ejection.

General tolerance of adjustment H7/g6

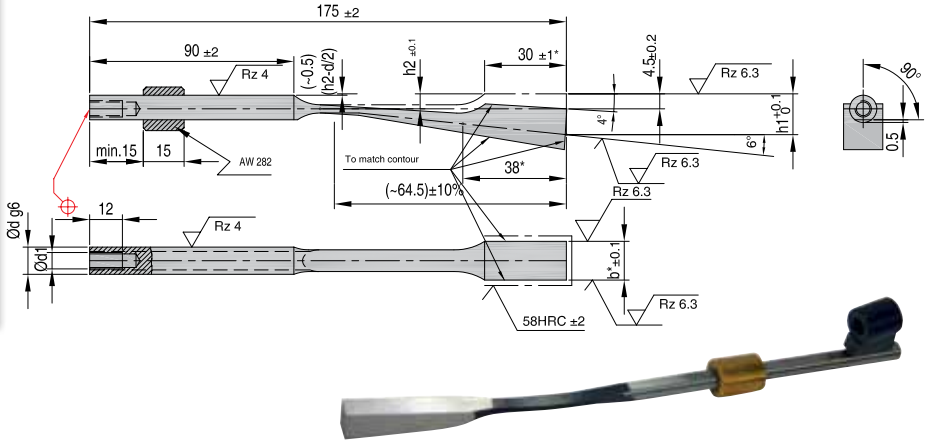
Ejection With Double Plate



CAD reference point

18/09/2012

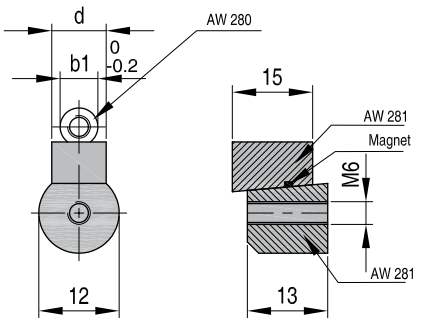
Info
L = Length
Standard: DIN16756/ISO8405
Mat.: 1.8159 - 45 ±3 HRC
Surface roughness: Ra



REF d-b*	Item prefix	d1	h1	h2	incl.	incl.
AW280 06 - 6,2	**AW280**	M4	10,0	3,5	**AW 282 06**	**AW 281 06**
AW280 06 - 8,2	**AW280**	M4	10,0	3,5	**AW 282 06**	**AW 281 06**
AW280 08 - 10,2	**AW280**	M5	11,2	4,5	**AW 282 08**	**AW 281 08**
AW280 08 - 12,2	**AW280**	M5	11,2	4,5	**AW 282 08**	**AW 281 08**
AW280 10 - 15,2	**AW280**	M6	13,6	5,5	**AW 282 10**	**AW 281 10**
AW280 10 - 18,2	**AW280**	M6	13,6	5,5	**AW 282 10**	**AW 281 10**

AW 281
Clamping guides

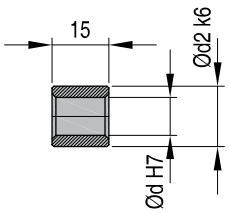
Info
Mat.: 1.8159 - 45 ±3 HRC



REF d	Item Prefix	b1	l3
AW 281 06	AW281	6	13,5
AW 281 08	AW281	8	14,5
AW 281 10	AW281	10	15,5

AW 282
Guide Bushes

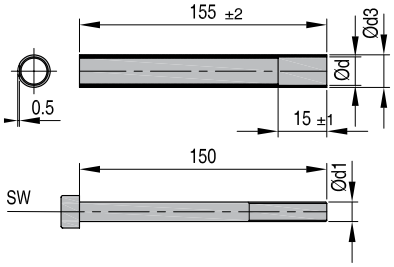
Info
Mat.: Bronze



REF d	Item Prefix	d2
AW 282 06	**AW282**	12
AW 282 08	**AW282**	12
AW 282 10	**AW282**	16

AW 283
Extensions

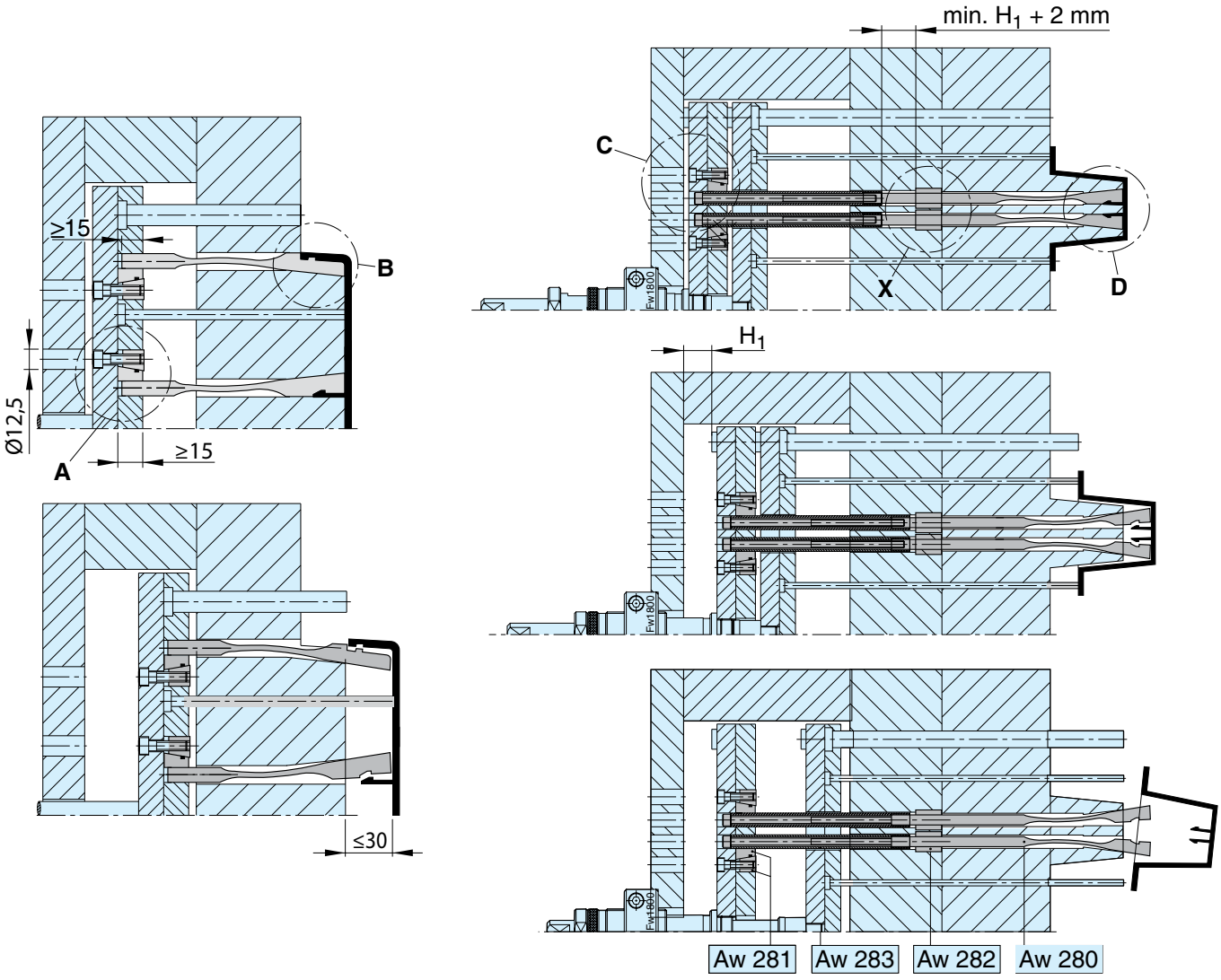
Info
Mat.: 1.7225 - 50 ±3 HRC

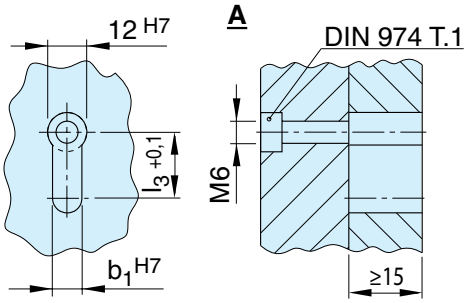


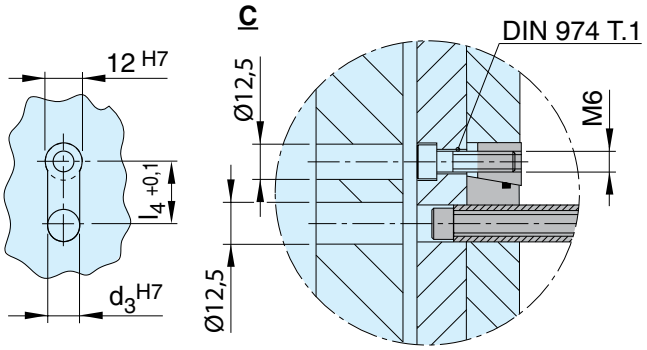
REF d	Item Prefix	d1	sw	d3	l4
AW 283 06	**AW283**	M4	3	08	14,5
AW 283 08	**AW283**	M5	4	10	15,5
AW 283 10	**AW283**	M6	5	12	16,5

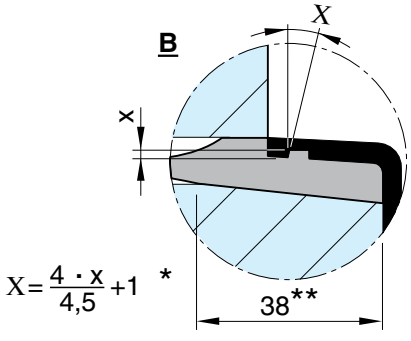
CAD reference point

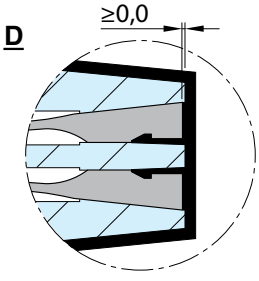
Installation Instructions











X

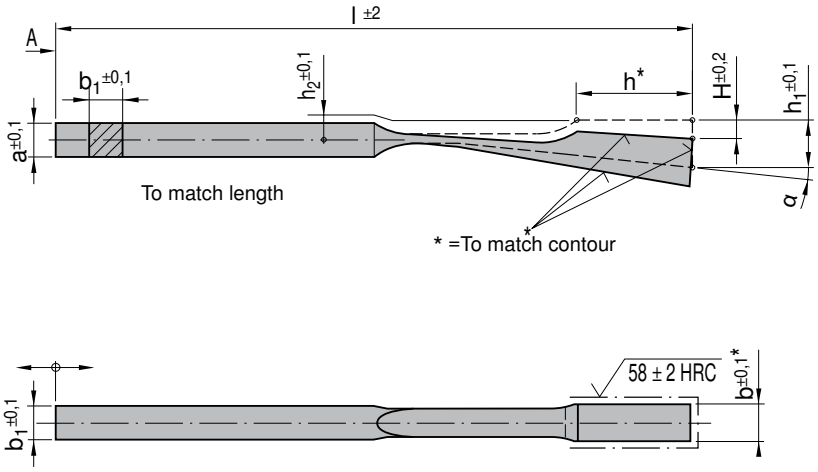
For large buckling lengths, please use guide bushes **AW 282**

* = Depending on surface roughness
** = To match the contour

CAD reference point

Special applications require perhaps deviations from the listed standard components **AW 275** and **AW 280**. Please fill your desired dimensions into the chart below. In order to maintain quality features (Service life tec.) the dependency of particular parameters in relation to eachother have to be observed. Agreement between customer and supplier in regard to dimensions or requirements (by example spring travel in relation to spring length) form the basis of well-performing parts.

Mat.: 1.8159 - 45 ±3 HRC



Step 1: Photocopy this form.

Step 2: Specify required tolerances on all dimensions.

Step 3: Contact ***DME***

Item prefix	a	b	b1	h	h1	h2	H	l	α	Quantity	Delivery
AW 285											

Special Ejectors

Comments:

.....

.....

.....

Company:.....

Contact:.....

Tel.: .....

Fax: .....

Quantity:.....

Mat.: .....

Hardness: ..... HRC

Delivery date: .....

Nitrite: ☐ Yes

Signature: .....

Order Number: .....

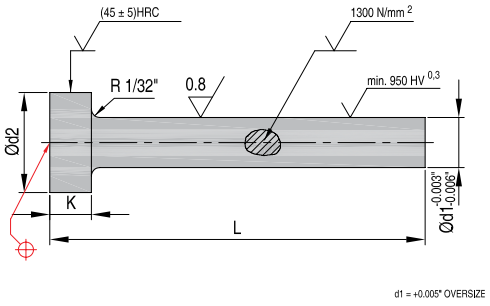
DME

EVERY STEP OF THE WAY

Inches

www.dmeeu.com

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Mat.: H 13
Max. Temp: 500-550 °C
Surface roughness: Ra

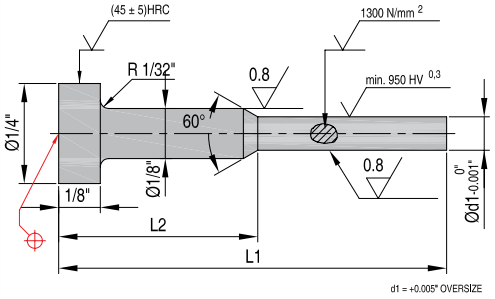


REF	Item Prefix	d1 -0,0003" -0,0006"	d2 +0,000" -0,001"	K +0,000" -0,004"	L +0,375" -0,000"								
					6"	10"	10"OS	14"	14"OS	18"	18"OS	25"	36"
EX 3* - L	EX3M*	3/64"	1/4"	1/8"									
EX 5* - L	EX5M*	1/16"	1/4"	1/8"									
EX 6* - L	EX6M*	5/64"	1/4"	1/8"									
EX 7* - L	EX7M*	3/32"	1/4"	1/8"									
EX 8* - L	EX8M*	7/64"	1/4"	1/8"									
EX 09 - L	EX9M	1/8"	1/4"	1/8"									
EX 10 - L	EX10M	9/64"	1/4"	1/8"									
EX 11 - L	EX11M	5/32"	9/32"	5/32"									
EX 12 - L	EX12M	11/64"	11/32"	3/16"									
EX 13 - L	EX13M	3/16"	3/8"	3/16"									
EX 14 - L	EX14M	13/64"	3/8"	3/16"									
EX 15 - L	EX15M	7/32"	13/32"	3/16"									
EX 16 - L	EX16M	15/64"	13/32"	3/16"									
EX 17 - L	EX17M	1/4"	7/16"	3/16"									
EX 18 - L	EX18M	17/64"	7/16"	1/4"									
EX 19 - L	EX19M	9/32"	7/16"	1/4"									
EX 20 - L	EX20M	19/64"	1/2"	1/4"									
EX 21 - L	EX21M	5/16"	1/2"	1/4"									
EX 22 - L	EX22M	21/64"	9/16"	1/4"									
EX 23 - L	EX23M	11/32"	9/16"	1/4"									
EX 24 - L	EX24M	23/64"	5/8"	1/4"									
EX 25 - L	EX25M	3/8"	5/8"	1/4"									
EX 27 - L	EX27M	13/32"	11/16"	1/4"									
EX 29 - L	EX29M	7/16"	11/16"	1/4"									
EX 31 - L	EX31M	15/32"	3/4"	1/4"									
EX 33 - L	EX33M	1/2"	3/4"	1/4"									
EX 35 - L	EX35M	9/16"	13/16"	1/4"									
EX 37 - L	EX37M	5/8"	7/8"	1/4"									
EX 39 - L	EX39M	11/16"	15/16"	1/4"									
EX 41 - L	EX41M	3/4"	1"	1/4"									
EX 45 - L	EX45M	7/8"	1 1/8"	1/4"									
EX 47 - L	EX47M	1"	1 1/4"	1/4"									

* Extra specifications for ordering (online)
EX3M6NS (no shoulder)
EX5M6NS (no shoulder)
EX6M6NS (no shoulder)
EX7M6NS (no shoulder)
EX8M6NS (no shoulder)

18/09/2012

Info
d1 = Pin body ø
L1 = Length
L2 = Shoulder length + head thickness
Mat.: H 13
Max. Temp: 500-550 °C
Surface roughness: Ra



REF	Item Prefix	d1 +0,000" -0,001"	L 1 +0,375" -0,000"				
			6"	6"OS	10"	10"OS	14"
			L 2 +0,000" -0,010"				
			1/2"	1/2"	1/2"	1/2"	1/2"
EX 2-1/2 x L1-L2 SHLDR EJ PIN	**EX2M***	1/32"					
EX 3-1/2 x L1-L2 SHLDR EJ PIN	**EX3M***	3/64"					
EX 5-1/2 x L1-L2 SHLDR EJ PIN	**EX5M***	1/16"					
EX 6-1/2 x L1-L2 SHLDR EJ PIN	**EX6M***	5/64"					
EX 7-1/2 x L1-L2 SHLDR EJ PIN	**EX7M***	3/32"					
EX 8-1/2 x L1-L2 SHLDR EJ PIN	**EX8M***	7/64"					

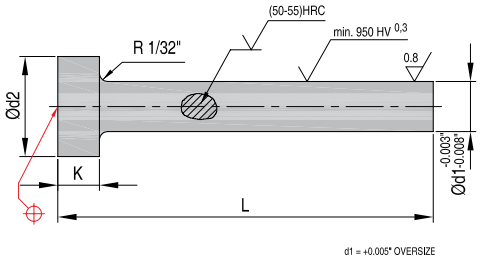
REF	Item Prefix	d1 +0,000" -0,001"	L 1 +0,375" -0,000"				
			6"	6"OS	10"	10"OS	14"
			L 2 +0,000" -0,010"				
			2"	2"	2"	2"	2"
EX 2-2 x L1-L2 SHLDR EJ PIN	**EX2M***	1/32"					
EX 3-2 x L1-L2 SHLDR EJ PIN	**EX3M***	3/64"					
EX 5-2 x L1-L2 SHLDR EJ PIN	**EX5M***	1/16"					
EX 6-2 x L1-L2 SHLDR EJ PIN	**EX6M***	5/64"					
EX 7-2 x L1-L2 SHLDR EJ PIN	**EX7M***	3/32"					
EX 8-2 x L1-L2 SHLDR EJ PIN	**EX8M***	7/64"					

* Extra specifications for ordering (online)
EX3M612SH (= EX3-1/2"/shoulder/M6)
EX3M6 (= EX3-2"/shoulder/M6)
EX3M1012SH (= EX3-1/2"/shoulder/M10)
EX3M1012SHOS (= EX3-1/2"/shoulder/M10OS)
EX3M102SH (= EX3-2"/shoulder/M10)
EX3M10OS (= EX3-2"/shoulder/M10OS)
EX3M14 (= EX3-2"/shoulder/M14)

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Standard: DIN1530/ISO8694
Mat.: H 13
Max. Temp: 500-550 °C
Surface roughness: Ra
Core hardness: 50-55 HRC
Surface treatment: 65-74 HRC



REF	Item Prefix	d1	d1 tol	d2	K	L +0,375" -0,000"						
						06"	06"OS	10"	10"OS	14"	14"OS	18"
THX03 x L	THX03*	3/64"		1/4"	1/8							
THX05 x L	THX05*	1/16"		1/4"	1/8							
THX06 x L	THX06*	5/64"	+0,000 -0,001	1/4"	1/8							
THX07 x L	THX07*	3/32"		1/4"	1/8							
THX08 x L	THX08*	7/64"		1/4"	1/8							
THX09 x L	THX09	1/8"		1/4"	1/8							
THX10 x L	THX10	9/64"		1/4"	1/8							
THX11 x L	THX11	5/32"		9/32"	5/32							
THX12 x L	THX12	11/64"		11/32"	3/16							
THX13 x L	THX13	3/16"		3/8"	3/16							
THX14 x L	THX14	13/64"		3/8"	3/16							
THX15 x L	THX15	7/32"		13/32"	3/16							
THX16 x L	THX16	15/64"		13/32"	3/16							
THX17 x L	THX17	1/4"		7/16"	3/16							
THX18 x L	THX18	17/64"		7/16"	1/4							
THX19 x L	THX19	9/32"		7/16"	1/4							
THX20 x L	THX20	19/64"	-0,0003	1/2"	1/4							
THX21 x L	THX21	5/16"	-0,0006	1/2"	1/4							
THX22 x L	THX22	21/64"		9/16"	1/4							
THX23 x L	THX23	11/32"		9/16"	1/4							
THX24 x L	THX24	23/64"		5/8"	1/4							
THX25 x L	THX25	3/8"		5/8"	1/4							
THX26 x L	THX26	25/64"		5/8"	1/4							
THX27 x L	THX27	13/32"		11/16"	1/4							
THX28 x L	THX28	27/64"		11/16"	1/4							
THX29 x L	THX29	7/16"		11/16"	1/4							
THX30 x L	THX30	29/64"		11/16"	1/4							
THX31 x L	THX31	15/32"		3/4"	1/4							
THX32 x L	THX32	31/64"		3/4"	1/4							
THX33 x L	THX33	1/2"		3/4"	1/4							
THX34 x L	THX34	17/32"		3/4"	1/4							
THX35 x L	THX35	9/16"		13/16"	1/4							
THX37 x L	THX37	5/8"	-0,003	7/8"	1/4							
THX39 x L	THX39	11/16"	-0,008	15/16"	1/4							
THX41 x L	THX41	3/4"		1	1/4							
THX45 x L	THX45	7/8"		1-1/8"	1/4							
THX47 x L	THX47	1"		1-1/4"	1/4							

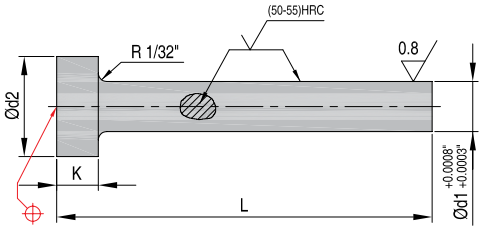
- Higher core hardness makes the THX pins ideal for use in die cast dies or other high temperature applications
- Core hardness of 50-55 HRc minimizes nicking, dishing and bending
- Non-chipping surface treatment of 65-74 HRc alleviates flashing
- Annealed and finished heads permit easy machining
- Centerless ground and polished outer diameter
- Final finish minimizes wear and prolongs pin life

* Add NS (no schoulder)

CAD reference point

18/09/2012

Info
d1 = Pin body ø
d2 = Head ø
K = Head thickness
L = Length
Mat.: H 13
Max. Temp: 500-550 °C
Surface roughness: Ra

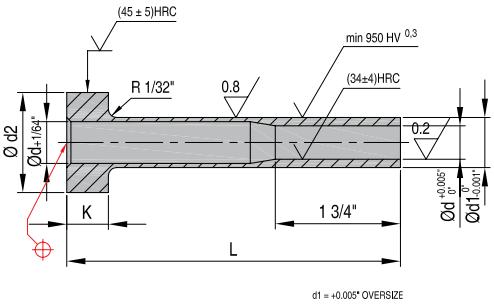


REF	Item Prefix	d1 -0,0001" -0,0000"	d2 +0,000" -0,010"	K +0,000" -0,002"	L +0,375" -0,000"			
					3"	6"	10"	14"
CX 07 - L	**CX7M**	3/32"	1/4"	1/8"				
CX 08 - L	**CX8M**	7/64"	1/4"	1/8"				
CX 09 - L	**CX9M**	1/8"	1/4"	1/8"				
CX 10 - L	**CX10M**	9/64"	1/4"	1/8"				
CX 11 - L	**CX11M**	5/32"	9/32"	5/32"				
CX 12 - L	**CX12M**	11/64"	11/32"	3/16"				
CX 13 - L	**CX13M**	3/16"	3/8"	3/16"				
CX 14 - L	**CX14M**	13/64"	3/8"	3/16"				
CX 15 - L	**CX15M**	7/32"	16/32"	3/16"				
CX 17 - L	**CX17M**	1/4"	7/16"	3/16"				
CX 19 - L	**CX19M**	9/32"	7/16"	1/4"				
CX 21 - L	**CX21M**	5/16"	1/2"	1/4"				
CX 23 - L	**CX23M**	11/32"	9/16"	1/4"				
CX 25 - L	**CX25M**	3/8"	5/8"	1/4"				
CX 27 - L	**CX27M**	13/32"	11/16"	1/4"				
CX 29 - L	**CX29M**	7/16"	11/16"	1/4"				
CX 31 - L	**CX31M**	15/32"	3/4"	1/4"				
CX 33 - L	**CX33M**	1/2"	3/4"	1/4"				
CX 35 - L	**CX35M**	9/16"	13/16"	1/4"				
CX 37 - L	**CX37M**	5/8"	7/8"	1/4"				
CX 41 - L	**CX41M**	3/4"	1"	1/4"				

CAD reference point

18/09/2012

Info
d = Pin body outside ø
d1 = Pin body outside ø
d2 = Head ø
K = Head thickness
L = Length
Mat.: H 13
Max. Temp: 500-550 °C
Surface roughness: Ra



REF	Item Prefix	d +0,0005" -0,0000"	d1 +0,0005" -0,0000"	d2 +0,000" -0,010"	K +0,000" -0,002"	L +0,375" -0,000"									
						3"	4"	5"	6"	7"	8"	9"	10"	11"	12"
S13M x L	S13M	3/32"	3/16"	3/8"	3/16"										
S15M x L	S15M	1/8"	7/32"	12/32"	3/16"										
S17M x L	S17M	5/32"	1/4"	7/16"	3/16"										
S21M x L	S21M	3/16"	5/16"	1/2"	1/4"										
S23M x L	S23M	7/32"	11/32"	9/16"	1/4"										
S25M x L	S25M	1/4"	3/8"	5/8"	1/4"										
S29M x L	S29M	5/16"	7/16"	11/16"	1/4"										
S33M x L	S33M	3/8"	1/2"	3/4"	1/4"										
S37M x L	S37M	7/16"	5/8"	7/8"	1/4"										
S39M x L	S39M	1/2"	11/16"	15/16"	1/4"										
S41M x L	S41M	9/16"	3/4"	1"	1/4"										
S45M x L	S45M	5/8"	7/8"	1 1/8"	1/4"										
S47M x L	S47M	3/4"	1"	1 1/4"	1/4"										

CAD reference point

18/09/2012

DME

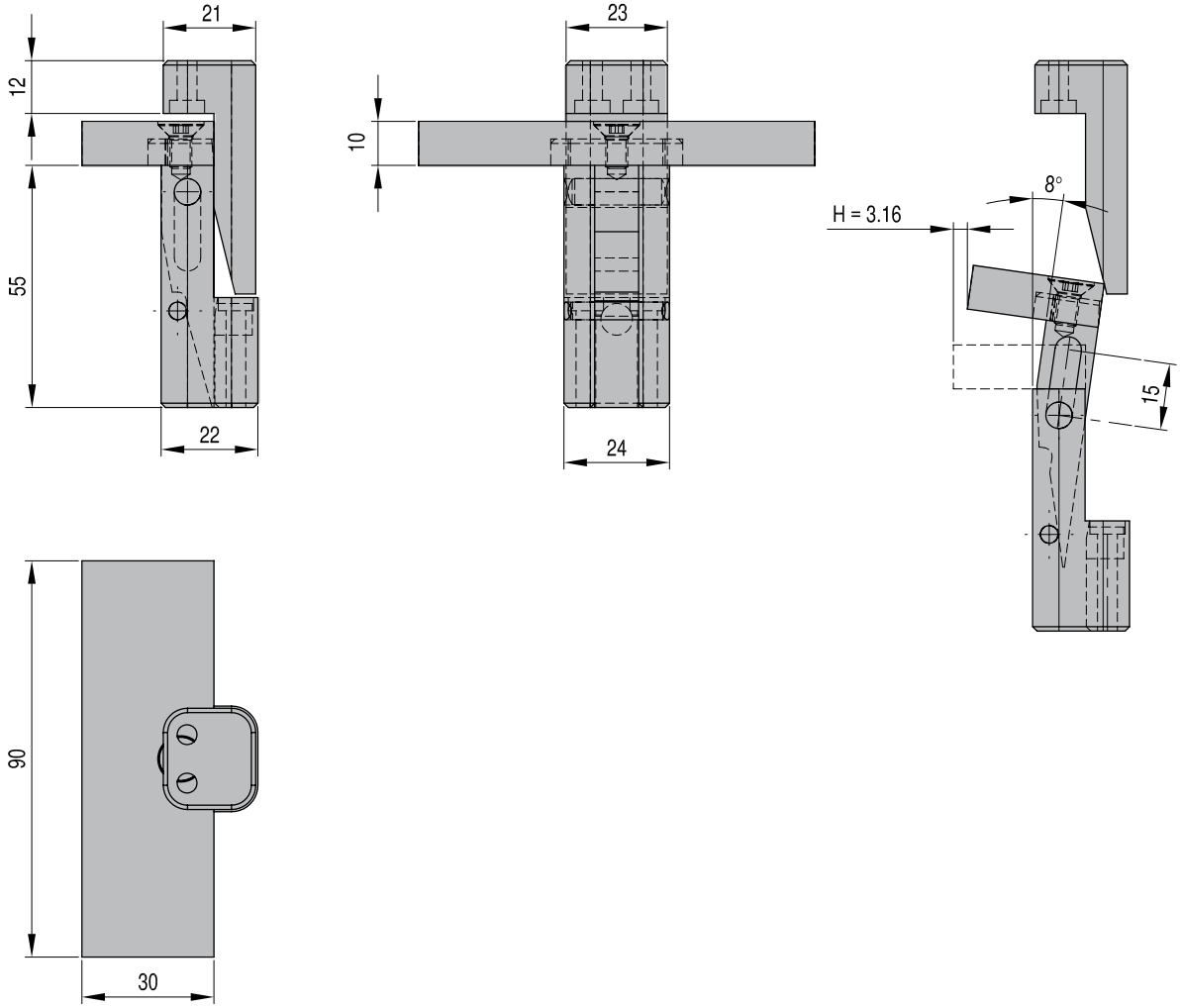
EVERY STEP OF THE WAY

Quick Strip

18/09/2012

QS 24 22 015

Quick Strip 24 x 22 mm - stroke 15 mm - 8°



Spoon to be adjusted by toolmaker
to fit mold and product contour.
Standard material type 1.2312,
other steel qualities available upon request

Info

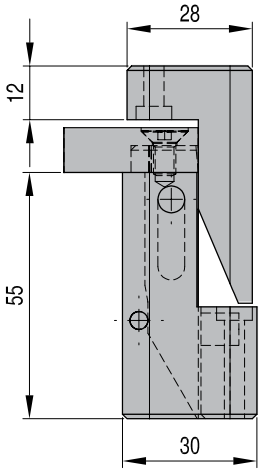
Pre-engineered Components

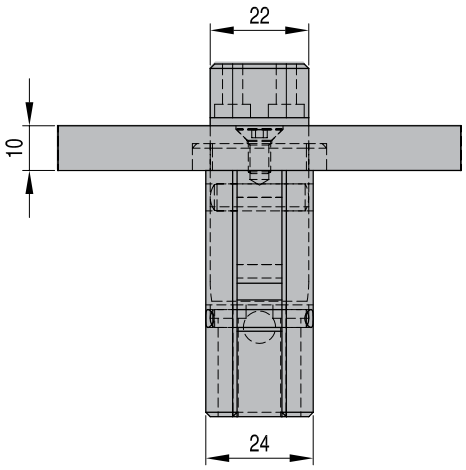
REF
QS 24 22 015

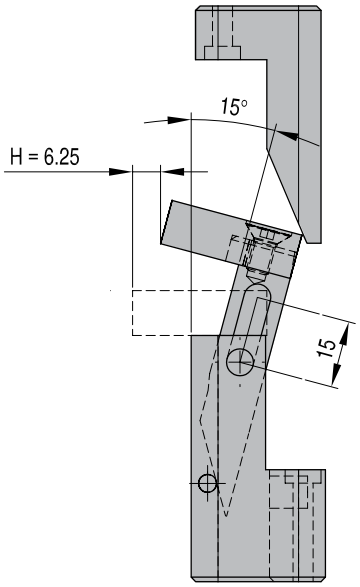
CAD reference point

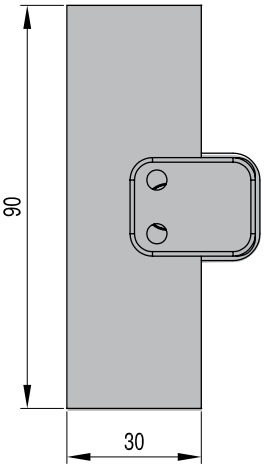
Quick Strip 24 x 30 mm - stroke 15 mm - 15°

QS 24 30 015









Spoon to be adjusted by toolmaker
to fit mold and product contour.
Standard material type 1.2312,
other steel qualities available upon request

REF
QS 24 30 015

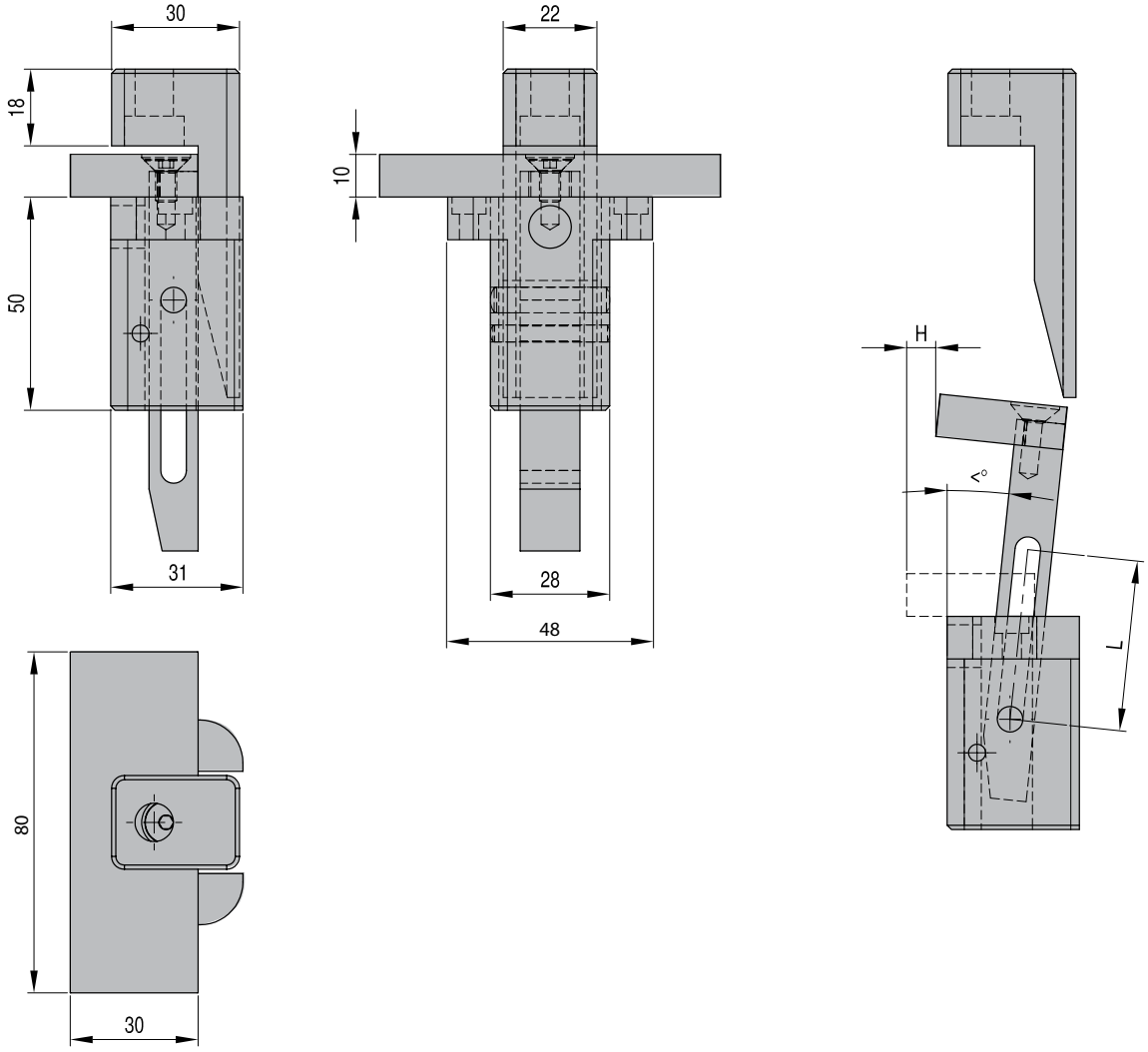
Info ?

Pre-engineered Components

CAD reference point

QS 28 31 100

Quick Strip 31 x 28 mm - stroke 40-100 mm - 8°



Spoon to be adjusted by toolmaker
to fit mold and product contour.
Standard material type 1.2312,
other steel qualities available upon request

Info ?

Pre-engineered Components

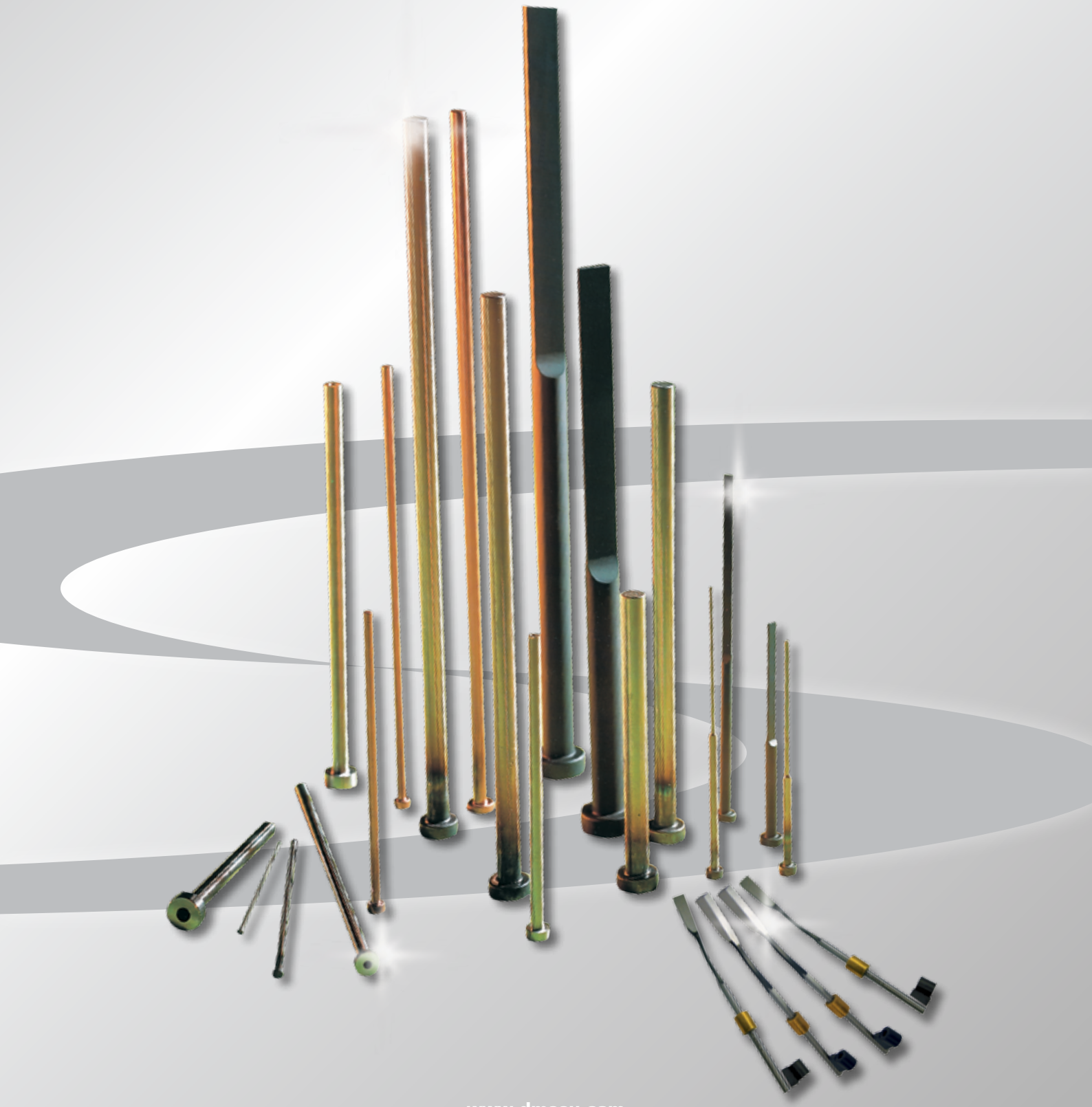
REF	Stroke
QS 28 31 040	40
QS 28 31 060	60
QS 28 31 080	80
QS 28 31 100	100

CAD reference point

DME

EVERY STEP OF THE WAY

Technical Data



www.dmeeu.com

PVD Coating Service

Your coating plan for greater economy

DME standard coatings

LAM-A = chromium nitride (CrN)
LAM-B = titanium nitride (TiN)
LAM-C = titanium carbon nitride (TiCN)
LAM-D = titanium aluminium nitride (TiAlN)
LAMCOAT® = modified WS2 coating
Further coatings on request

Correctly coated - for long-term use

Excessive wear on tools for sheet metal and plastics processing results in shorter service lives.
This in turn means high maintenance costs and problems caused by frequent production downtime.
By using a coating that is adapted to the specific problem the wear caused by corrosion, abrasion and adhesion can be significantly reduced.
Benefits: clearly measurable extension in service life, reduction in lubricants, improved flow properties for plastics and thus an increase in cost-effectiveness.

The PVD Coating Service business unit at ***DME*** Normalien GmbH has many years' experience and the optimum technology for coating tool steels, HSS, carbides and other electrically conductive materials at temperatures of between 200 and 550 degrees Celsius. We can find the right coating for your needs, depending on the material to be processed, the processing method, the product geometry and the target outcome.

The treatment prior to coating is also an extremely important element in the successful use of a tool. Not only does our company have a range of methods to choose from, we also have experts with many years' experience to ensure you receive the optimum surface quality. Depending on the requirement, rough polishing, fine-finishing and technical polished finishes are carried out in our own workshop, in order to achieve the optimum result in combination with the coating.

Your benefit: coatings which work economically

LAM-A coating
The CrN coating features excellent bonding strength and outstanding chemical resistance. Its high elasticity means that it can also be used on thin-walled workpieces, even those that are partially elastic.

Plastics processing: for curved and functional surfaces where wear and corrosion problems occur as a result of chemically aggressive and abrasive fillers. Numerous benefits in terms of cost-effectiveness and durability of tools:
- High wear resistance, particularly with glass-fibre- or mineral-reinforced plastics
- Reduction in mould-release forces, fewer or no parting agents required
- Increased corrosion resistance to acids and enclosed hot gases
- Reduced wear in the feed orifice area
- Lower edge wear
- Improved cavity-filling process
- Shorter cooling time
- Reduced cleaning and repair costs
- Increased productivity

LAM-B coating
Golden yellow colour, suitable for cutting and forming tools and some applications with plastics moulding tools, particularly in the processing of soft plastics, silicon and rubber.

LAM-C coating
A PVD carbide coating in which two reactive gases (nitrogen and a carbonaceous gas) are made to react with titanium. The carbonaceous gas makes the TiCN coating harder with a lower coefficient of friction at the same time. Mainly suitable for processing extremely ductile and hard materials for machining and stamping, for highly-stressed forming tools, clipping punches, die plates, bending tools and extrusion punches.

LAM-D coating
The particular features of TiAlN coatings are their good oxidation resistance and excellent hardness. The main areas of application are in machining, particularly for hard, ductile materials. The best results are achieved with HSC tools and dry processing. TiAlN is also suitable for special requirements in the fields of forming and stamping.

The soft coating with proven hardness

LAMCOAT® coating
Developed in the US for the space industry and successfully used since then in many mechanical, electrical and hydraulic engineering fields, LAMCOAT® is a soft coating based on tungsten disulphide. Applied at room temperature, the coating thickness is between 0.0005 and 0.0015 mm and reduces friction by up to 70%, depending on the application. In many cases this surface coating with its outstanding lubricating and anti-friction properties is the ideal complement to our PVD carbide coatings.

Areas of application …

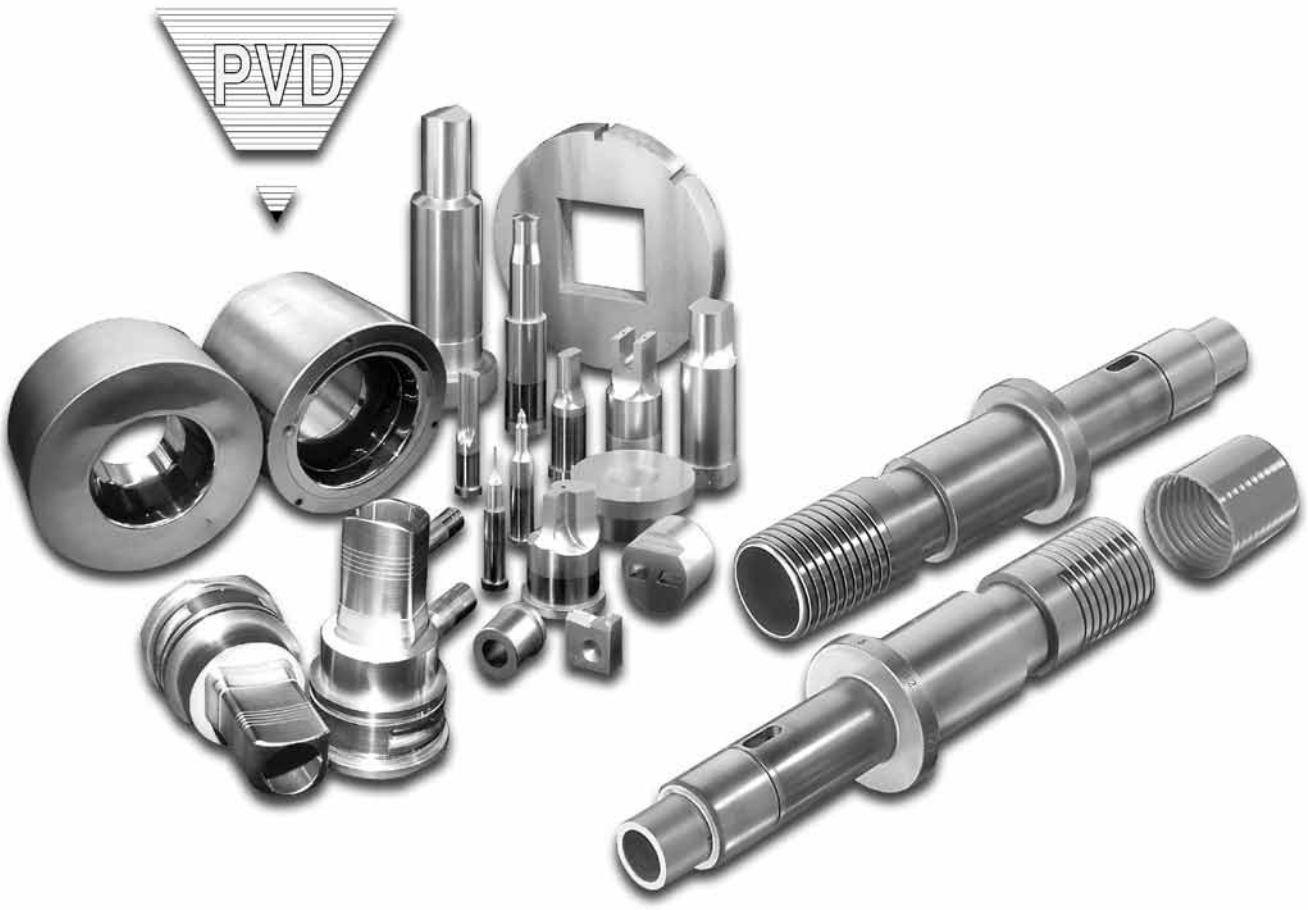
… with mechano-dynamic components:
Forming technology: drawing, stamping and forming tools for processing NF metal and chromium-nickel steels.

- International motor sports: effective improvement in performance by 10% by coating transmissions

- Bearings for large-scale presses: reduction in internal temperature by approx. 20% by cutting friction
- Ball-bearings for high-vacuum and ultra-high-vacuum applications and special ball-bearings: enhanced operation
- Pump elements: increased cost-effectiveness by reducing friction

… with injection moulds:
- Faster filling of cavities
- Lower mould-release forces with most plastics
- Reduction in tool temperature
- Reduction in cycle time
- Lower consumption of releasing agents
- Increase in production reliability
- No change in component geometry during mould release
- Less wastage

… with forming tools:
- Reduction in lubricant consumption
- Extended service lives



Brinell Hardness

Brinell hardness can be defined as the amount of force applied by a hard object, such as a steel ball, divided by the area of the indentation that the ball makes in the material. The output is read as a pressure (N/mm2, Kgf/m2, PSI).

Rockwell Hardness

The Rockwell hardness test is based on the differential in the depth of indentation produced on a sample's surface by a primary ("minor") and secondary ("major") load and a specific sized indentor or "penetrator." The difference in penetration depth between the two loads provides the measure of the hardness. The output would be read as a distance (mm, inch). There are several Rockwell scales for different ranges of hardness. The B scale (HRB) is used for soft metals and utilizes a steel ball as the penetrator, while the C scale (HRC) is used for hard metals and utilizes a cone-shaped diamond as the penetrator. Rockwell hardness numbers are not proportional to Brinell hardness readings.

Vickers Hardness

The Vickers hardness test method differs from the Rockwell (HRC) test method by using a square-based diamond pyramid penetrator, and the hardness number is equal to the load divided by the product of the lengths of the diagonals of the square impression. Vickers hardness is the most accurate test method for very hard materials and can be used on thin sheets of material. The output would not be a pressure value since the load is not divided by the area of the indentation.

Tensile Strength

Tensile strength can be defined as the quantity of stress required to overcome a material's resistance to structural failure. Tensile strength is read as a stress or pressure value (N/mm2, Kgf/m2, PSI).

Kilogram-force

The deprecated unit kilogram-force (kgf, often just kg) or kilopond (kp) is defined as the force exerted by one kilogram of mass in standard Earth gravity. Although the gravitational pull of the Earth varies as a function of position on earth, it is here defined as exactly 9.80665 m/s^2. So one kilogram-force is by definition equal to 9.80665 newtons.[1] The kilogram-force has never been a part of the International System of Units (SI), which was introduced in 1960. The SI unit of force is the newton.

Conversion Table *DME* Standard Ejector Pins (inches to mm)

Inches	Nominal	mm
3/64	0.046	1,190
1/16	0.062	1,587
5/64	0.078	1,984
3/32	0.093	2,381
7/64	0.109	2,778
1/8	0.125	3,175
9/64	0.140	3,571
5/32	0.156	3,968
11/64	0.171	4,365
3/16	0.187	4,762
13/64	0.203	5,159
7/32	0.218	5,556
15/64	0.234	5,953
1/4	0.250	6,350
17/64	0.265	6,746
9/32	0.281	7,143
19/64	0.296	7,540
5/16	0.312	7,937
21/64	0.328	8,334

Inches	Nominal	mm
11/32	0.343	8,731
23/64	0.359	9,128
3/8	0.375	9,525
25/64	0.390	9,921
13/32	0.406	10,318
27/64	0.420	10,715
7/16	0.437	11,112
29/64	0.450	11,509
15/32	0.468	11,906
31/64	0.480	12,303
1/2	0.500	12,700
17/32	0.530	13,493
9/16	0.562	14,287
5/8	0.625	15,875
11/16	0.687	17,462
3/4	0.750	19,050
7/8	0.875	22,225
1	1	25,400

Brinell Hardness	Tensile Strength	Vickers Hardness	Rockwell Hardness		Shore Hardness
BHN 10 mm steel ball. 3000 kg load	N/mm2 (MPa)	HV Diamond pyramid 30 kg load	HRC Diamond cone. 150 kg load	HRB 1/16 inch steel ball. 100 kg load	SH
96	343	96	–	55	–
103	363	103	–	61	–
111	402	111	–	66	–
121	432	121	–	70	–
131	471	131	–	74	–
143	510	143	–	78	–
149	530	149	–	80	–
156	540	156	–	82	–
163	559	163	–	85	–
170	579	170	–	88	–
179	598	179	–	89	–
183	608	183	–	90	30
187	628	187	–	91	31
192	638	192	–	92	–
197	657	197	–	93	32
201	667	201	–	94	33
207	687	207	16	95	34
212	697	212	17	96	34
217	716	217	18	97	35
223	736	223	19	98	36
229	765	229	20	99	37
235	775	235	22	100	38
241	795	245	23	100	39
248	814	256	24	101	40
255	834	266	25	102	41
262	853	276	26	103	42
269	883	285	27	104	43
277	903	292	28	105	44
285	932	302	29	107	45
293	952	310	30	108	46
302	981	319	32	109	47
311	1020	327	33	109	48
321	1050	338	34	110	49
331	1079	346	36	110	50
341	1118	359	37	111	52
352	1158	370	38	112	53
363	1197	382	39	112	54
375	1236	394	40	113	55
388	1285	407	41	114	57
401	1334	421	42	114	58
415	1383	437	44	115	60
430	1442	453	45	–	62
444	1491	471	46	–	63
461	1570	491	48	–	66
478	1628	510	49	–	67
495	1717	534	51	–	70
514	1815	566	52	–	73
533		586	53	–	75
546	–	608	54	–	76
559	–	625	55	–	78
571	–	645	56	–	80
583	–	664	57	–	81
594	–	682	58	–	83
606	–	706	59	–	84
616	–	726	60	–	86
627	–	749	61	–	87
636	–	770	62	–	89
649	–	800	63	–	91
660	–	830	64	–	92
670	–	862	65	–	94
680	–	898	66	–	95
689	–	934	67	–	97
700	–	980	68	–	98

All values shown in this chart are approximate and intended only as a reference guide.

Corrections to be added to Rockwell "C" readings obtained on cylindricals surfaces

Reading obtained (What we can read in the machine when measuring the hardness)									Actual HRC value
ø 2 mm	ø 3 mm	ø 4 mm	ø 5 mm	ø 6 mm	ø 7 mm	ø 8 mm	ø 9 mm	ø 10 mm	
15,0	18,5	22,0	24,0	25,0	26,0	26,5	27,0	27,5	30
16,5	20,0	23,0	25,0	26,0	27,0	27,5	28,0	28,5	31
18,0	21,0	24,0	26,0	27,5	28,0	29,0	29,5	29,5	32
19,0	22,5	25,5	27,5	28,5	29,0	30,0	30,5	30,5	33
20,5	23,5	26,5	28,5	29,5	30,5	31,0	31,5	32,5	34
21,5	25,0	27,5	29,5	30,5	31,5	32,0	32,5	33,0	35
23,0	26,0	29,0	30,5	31,5	32,5	33,0	33,5	34,0	36
24,5	27,5	30,0	31,5	33,0	33,5	34,0	34,5	35,0	37
25,5	28,5	31,0	33,0	34,0	34,5	35,0	35,5	36,0	38
27,0	30,0	32,5	34,0	35,0	35,5	36,5	36,5	37,0	39
28,5	31,0	33,5	35,0	36,0	37,0	37,5	37,5	38,0	40
29,5	32,5	34,5	36,0	37,0	38,0	38,5	39,0	39,0	41
31,0	33,5	36,0	37,5	38,0	39,0	39,5	40,0	40,0	42
32,0	35,0	37,0	38,5	39,5	40,0	40,5	41,0	41,5	43
33,5	36,0	38,0	39,5	40,5	41,0	41,5	42,0	42,5	44
35,0	37,5	39,5	40,5	41,5	42,0	42,5	43,0	43,5	45
36,0	38,5	40,5	42,0	42,5	43,5	43,5	44,0	44,5	46
37,5	40,0	41,5	43,0	43,5	44,5	45,0	45,0	45,5	47
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46,5	48,5	50,0	51,0	51,5	52,0	52,5	52,5	53,0	54
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53,5	54,3	55,5	56,5	57,0	57,5	57,5	58,0	58,0	59
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62,5	63,5	64,0	64,0	64,5	65,0	65,0	65,5	65,5	66
64,0	64,5	65,0	65,5	65,5	66,0	66,0	66,5	66,5	67
65,0	66,0	66,0	66,5	66,5	67,0	67,5	67,5	67,2	68

Cross-Reference Steel Standards

Mat. group	W.NR.	EN	AFNOR	AISI
WS	**1.2067**	**100 Cr 6**	**100 C6**	**~L3**
	1.2510	100 MnCrW 4	90MCWV 5	O1
	1.2210	115 CrV 3	115 CV 3	L2
WAS	**1.2343**	**X 38 CrMoV 5**	**Z 38 CDV 5**	**H11**
	1.2344	**X 40 CrMoV 5 1**	**Z 40 CDV 5**	**H13**

Steel Standards currently used by ***DME*** are marked in bold

DME

EVERY STEP OF THE WAY

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