

CORE & EJECTOR PINS

	Página
1010 CORE PIN	X-10
1005 FLAT EJECTOR PIN HARDENED TYPE "LA"	X-05
1006 FLAT EJECTOR PIN NITRIDED TYPE "LAN"	X-06
1001 STEPPED EJECTOR PIN DIN 1530 TYPE "C" NITRIDED	X-01
1002 STEPPED EJECTOR PIN DIN 1530 TYPE "CH" HARDENED	X-02
1003 EJECTOR SLEEVE TYPE "ET" HARDENED	X-03
1004 EJECTOR SLEEVE TYPE "ETN" NITRIDED	X-04
1007 STEPPED EJECTOR SLEEVE TYPE "ETC" HARDENED	X-07
1008 STEPPED EJECTOR SLEEVE TYPE "ETC" NITRIDED	X-08
1009 HEADLESS EJECTOR SLEEVE TYPE "ETSC" NITRIDED	X-09

PINS & BUSHINGS

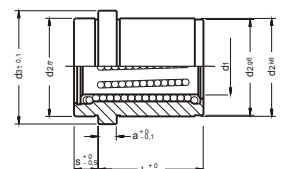
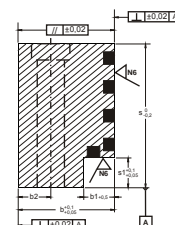
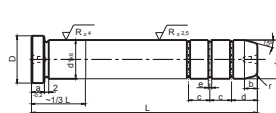
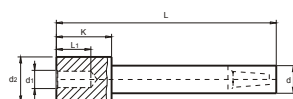
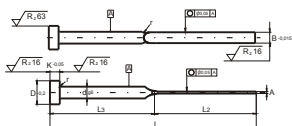
1013 ANGLE PIN "GB-100" (G-2)	X-13
1014 LEADER PIN "GB-110" (G)	X-14
1011 SHOULDER LEADER PIN	X-11
1012 TAILED SHOULDER LEADER PIN	X-12
1015 HEADED LEADER PIN BUSHING	X-15
1016 TAILED LEADER PIN BUSHING	X-16

OILLESS PARTS

1021 OILLESS WEAR PLATE	X-21
1019 L-SHAPE OILLESS PLATE "ESBG"	X-19
1020 L-SHAPE OILLESS PLATE "ESL"	X-20
1017 HEADED OILLESS BUSH	X-17
1018 TAILED OILLESS BUSH	X-18

STEPPED PUNCHES

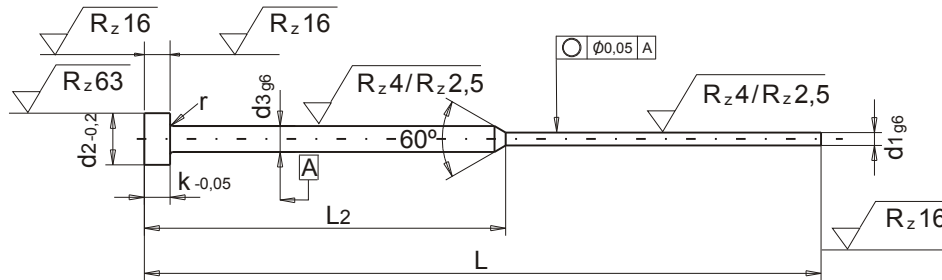
1022 STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "B" ISO 8020-8021	X-22
1023 STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "F" WITH SPRING LOADED EJECTOR PIN, ISO 8020	X-23
1024 STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "CAO" ISO 8020-8021	X-24
1025 STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "CAR" ISO 8020-8021	X-25
1026 STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "CAS" ISO 8020-8021	X-26
1027 STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "GO" WITH SPRING LOADED EJECTOR PIN, ISO 8020	X-27
1028 STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "GR", WITH SPRING LOADED EJECTOR PIN, ISO 8020	X-28
1029 STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "GS", WITH SPRING LOADED EJECTOR PIN, ISO 8020	X-29





EXPULSOR NITRURADO TIPO "C" ESPECIAL DIN 1530-ISO 8694

STEPPED NITRIDED EJECTOR PIN DIN 1530-ISO 8694 TYPE "C"

**EJECUCION VERSION :**

Cabeza estampada en caliente y rectificada. Caña (d1) templada y rectificada.
Cylindrical head hot folded. Shaft fine ground finished and nitrided (g6)

MATERIAL:

Nº 1.2344. Designación DIN X40CrMoV51.
Nº 1.2344. DIN X40CrMoV51.

TRATAMIENTO TREATMENT :

Nitruración por el procedimiento TENIFER.
Dip Nitrided.

DUREZA CAÑA SHAFT HARDNESS:

Superficie : 70 HRc. Surface : 70 HRc.
Núcleo : 40-45 HRc. Core: 40 - 45 HRc.
45±5 HRc.

DUREZA CABEZA HEAD HARDNESS :

150 Kp/mm2.

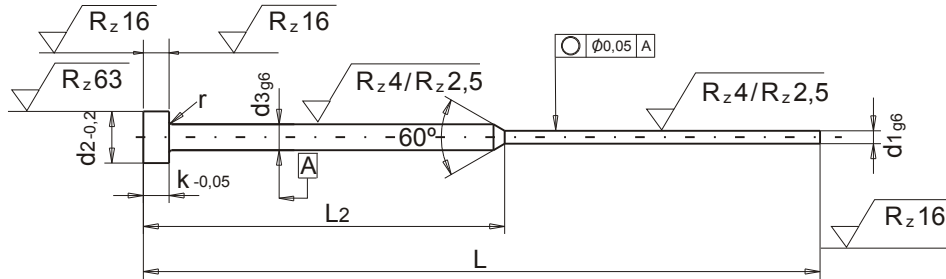
RESISTENCIA DEL NUCLEO A LA TRACCION :**CORE RIGIDITY:**

TEMPERATURA DE TRABAJO TEMPER RESISTANCE : Hasta 650º C. At least 650º C.

d1	d3	d2	K	r	L2	L
Cantidad / Quantity:						
Molde Nº / Mould Nº:						
Plano Nº / Draw Nº:						
Pedido Nº / Order Nº:						



EXPULSOR TEMPLADO TIPO " CH" ESPECIAL DIN 1530-ISO 8694
STEPPED THROUG HARDENED EJECTOR PIN DIN 1530-ISO 8694 TYPE "CH"

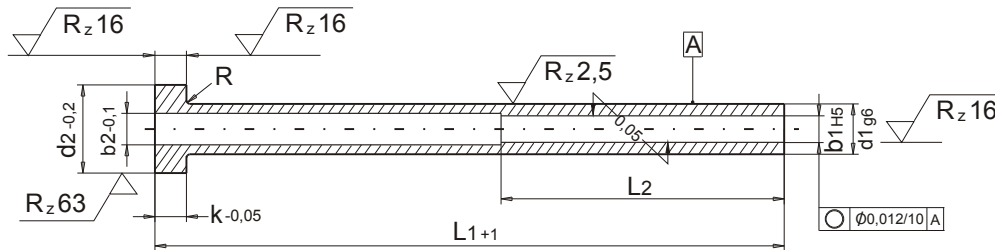


- EJECUCION / VERSION :** Diametro d1 : templado y rectificado.
d1 : Hardened through. Shaft fine ground finished. (g6)
Cabeza : recalcada en caliente. Head: Annealed.
- MATERIAL / MATERIAL :** Nº 1.2510 (F 522)
- DUREZAS / HARDNESS :** Caña (d1) Shaft (d1) : 60±2 HRc.
Cabeza Head : 45±5 Hrc.
- TEMPERATURA DE TRABAJO:** Hasta 220º C. / At least 220º C.
- TEMPER RESISTANCE:**

d1	d3	d2	K	r	L2	L
Cantidad / Quantity:						
Molde Nº / Mould Nº:						
Plano Nº / Draw Nº:						
Pedido Nº / Order Nº:						



EXPULSOR TUBULAR TEMPLADO TIPO " ET " ESPECIAL SPECIAL HARDENED EJECTOR SLEEVE TYPE "ET"



EJECUCION / VERSION : Diámetros $d1, d2, b1$: templados y rectificados.
Diameters $d1, d2, b1$: hardened and fine ground finished.
Cabeza: recalcada en caliente. Head hot folded.

MATERIAL / MATERIAL : Nº 1.2510 (F 522).

DUREZAS / HARDNESS: Caña ($d1$) : Shaft ($d1$): 60 ± 2 HRc.
Cabeza : Head : 45 ± 5 HRc.

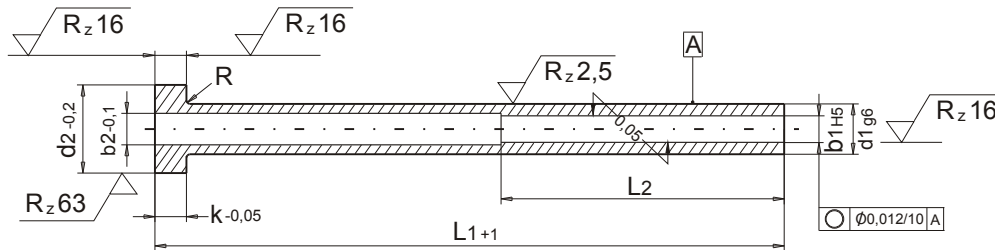
TEMPERATURA DE TRABAJO: Hasta 220° C.

TEMPER RESISTANCE : At least 220° C.

b1	d1	b2	d2	k	L2	R	L1
Cantidad / Quantity:							
Molde Nº / Mould Nº:							
Plano Nº / Draw Nº:							
Pedido Nº / Order Nº:							



EXPULSOR TUBULAR NITRURADO TIPO “ ETN “ ESPECIAL SPECIAL NITRIDED EJECTOR SLEEVE TYPE “ETN”



EJECUCION VERSION :

MATERIAL:

TRATAMIENTO TREATMENT :

DUREZA CAÑA SHAFT HARDNESS:

DUREZA CABEZA HEAD HARDNESS :

**RESISTENCIA DEL NUCLEO A LA TRACCION :
CORE RIGIDITY:**

**TEMPERATURA DE TRABAJO
TEMPER RESISTANCE :**

Cabeza estampada en caliente.

Caña (d1) templada y rectificada.

Cylindrical head hot folded. Shaft hardened and fine ground finished.

Nº 1.2344. DIN X40CrMoV51.

Nº 1.2344. DIN X40CrMoV51.

Nitruración por el procedimiento TENIFER.

Dip Nitrided.

Superficie / Surface : 70 Hrc. (950 Kg/mm² - 0,3 Kp).

Núcleo / Core: 40-45 Hrc. (400-450Kg/mm²).

50 Hrc.

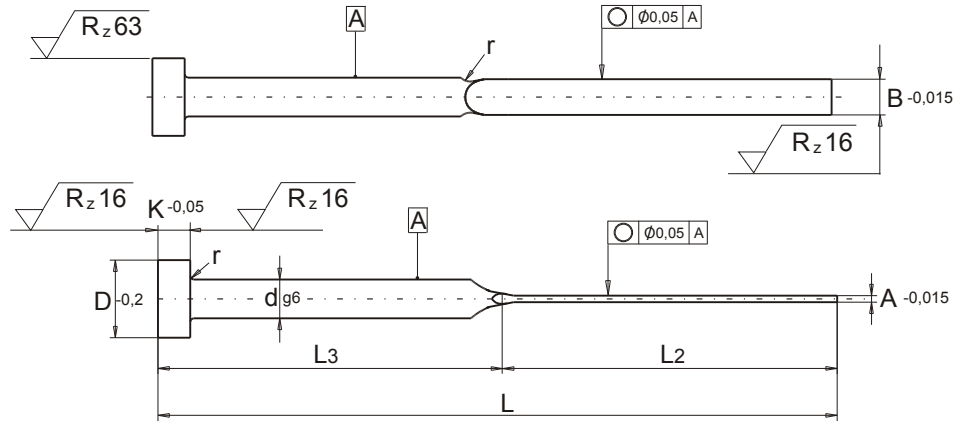
150 Kp/mm².

Hasta 650° C. At least 650° C.

b1	d1	b2	d2	k	L2	R	L1
Cantidad / Quantity:							
Molde Nº / Mould Nº:							
Plano Nº / Draw Nº:							
Pedido Nº / Order Nº:							



EXPULSOR LAMINAR TEMPLADO TIPO " LA " ESPECIAL SPECIAL FLAT EJECTOR PIN HARDENED TYPE " LA "

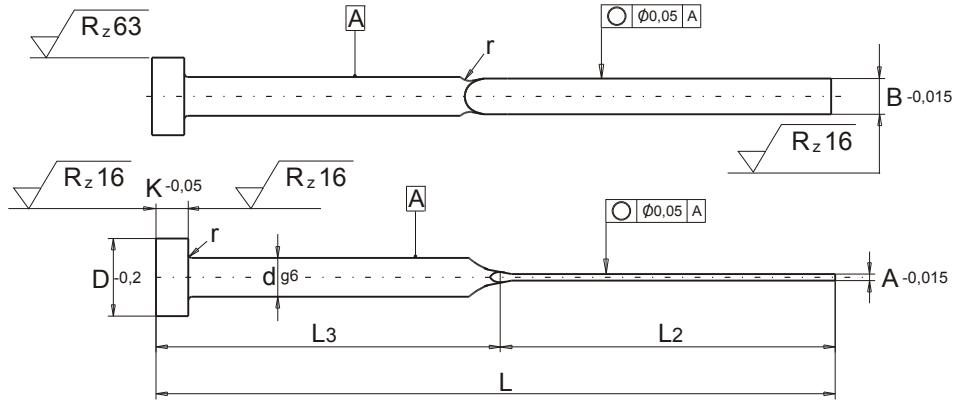


- EJECUCION / VERSION :** Diámetro y lámina : templados y rectificados.
Diameter and flat: Hardened through and fine ground finished.
Cabeza : recalcada en caliente. Cylindrical Head: Hot folded.
- MATERIAL / MATERIAL :** Nº 1.2510 (F 522)
- DUREZAS / HARDNESS :** Diámetro y lámina / Diameter and flat : 60 ± 2 Hrc.
Cabeza Head : 45 ± 5 HRC.
- TEMPERATURA DE TRABAJO / TEMPER RESISTANCE** Hasta 220° C. / At least 220° C.

A	B	d	L2	L3	L
Cantidad / Quantity:					
Molde Nº / Mould Nº:					
Plano Nº / Draw Nº:					
Pedido Nº / Order Nº:					



EXPULSOR LAMINAR NITRURADO TIPO "LAN" ESPECIAL SPECIAL FLAT EJECTOR PIN NITRIDED TYPE "LAN"



EJECUCION / VERSION : Cabeza estampada en caliente y rectificada.
Cylindrical head folded and fine ground finished
Caña y lámina templada y rectificada.
Shaft and flat hardened and fine ground finished.

MATERIAL / MATERIAL : Nº 1.2344 DIN X40CrMoV51.

DUREZA CABEZA / HEAD HARDNESS: 45±5HRc.

RESISTENCIA DEL

NUCLEO A LA TRACCION / CORE RIGIDITY: 150 Kp/mm².

TEMPERATURA DE TRABAJO / TEMPER RESISTANCE : Hasta 650° C. / At least 650° C.

DUREZA CAÑA / SHAFT HARDNESS: Superficie / Surface : 70 HRc

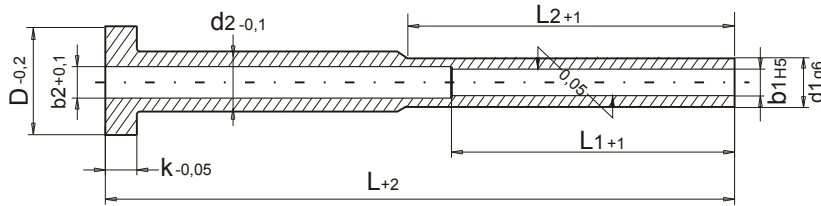
Núcleo / Core : 40-45 HRc

TRATAMIENTO / TREATMENT : Nitruración por el procedimiento TENIFER / Dip Nitrided

A	B	d	L2	L3	L
Cantidad / Quantity:					
Molde Nº / Mould Nº:					
Plano Nº / Draw Nº:					
Pedido Nº / Order Nº:					



EXPULSOR TUBULAR TEMPLADO TIPO “ETC” ESPECIAL REFORZADO
SPECIAL STEPPED EJECTOR SLEEVE TYPE “ETC” HARDENED



EJECUCION / VERSION: Templado / Hardened : Material 1.2510 .

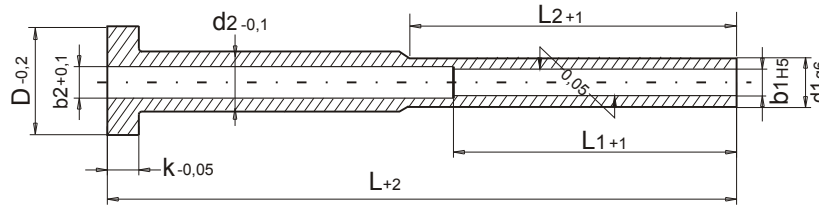
CARACTERISTICAS: Identica a la referencia 108.

CHARACTERISTICS: Same as reference 108.

d1 (g6)	d2 (-0,1)	b1 (H5)	b2 (+0,1)	D (-0,2)	K (-0,05)	l1 (+1)	l2 (+1)	L (+2)
Cantidad / Quantity:								
Molde Nº / Mould Nº:								
Plano Nº / Draw Nº:								
Pedido Nº / Order Nº:								



EXPULSOR TUBULAR NITRURADO TIPO "ETC" ESPECIAL REFORZADO SPECIAL STEPPED EJECTOR SLEEVE TYPE "ETC" NITRIDED



EJECUCION / VERSION: Nitrurado / Nitrided : Material 1.2344

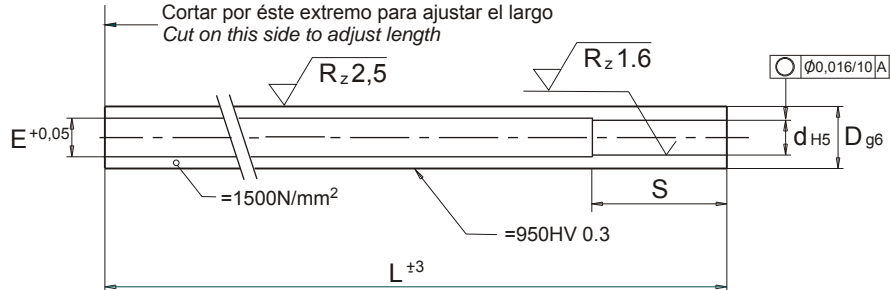
CARACTERISTICAS: Identica a la referencia 109.

CHARACTERISTICS: Same as reference 109.

d1 (g6)	d2 (-0,1)	b1 (H5)	b2 (+0,1)	D (-0,2)	K (-0,05)	l1 (+1)	l2 (+1)	L (+2)
Cantidad / Quantity:								
Molde Nº / Mould Nº:								
Plano Nº / Draw Nº:								
Pedido Nº / Order Nº:								



EXPULSOR TUBULAR NITRURADO TIPO "ETSC" SIN CABEZA ESPECIAL SPECIAL HEADLESS EJECTOR SLEEVE NITRIDED TYPE "ETSC"



EJECUCION VERSION :

Templado y rectificado.
Hardened and fine ground finished.

MATERIAL:

Nº 1.2344. DIN X40CrMoV51.
Nº 1.2344. DIN X40CrMoV51.

TRATAMIENTO TREATMENT :

Nitruración por el procedimiento TENIFER.
Dip Nitrided.

DUREZA CAÑA SHAFT HARDNESS:

Superficie : 70 Hrc. Surface : 70 Hrc.
Núcleo : 40-45 HRc. Core: 40 - 45 HRc.

TEMPERATURA DE TRABAJO

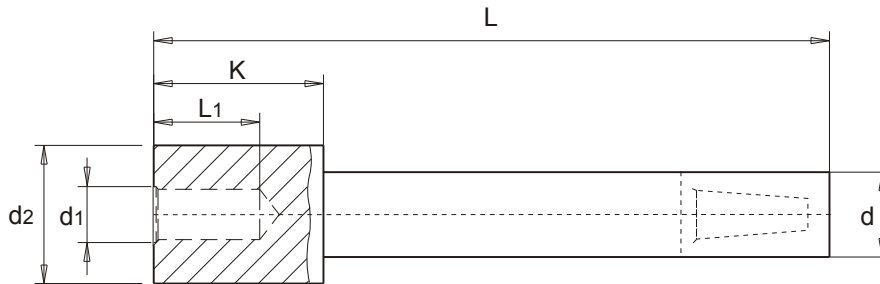
Hasta 650° C. At least 650° C.

TEMPER RESISTANCE :

d	D	E	S	L
Cantidad / Quantity:				
Molde Nº / Mould Nº:				
Plano Nº / Draw Nº:				
Pedido Nº / Order Nº:				



NOYO ESPECIAL SPECIAL CORE PIN



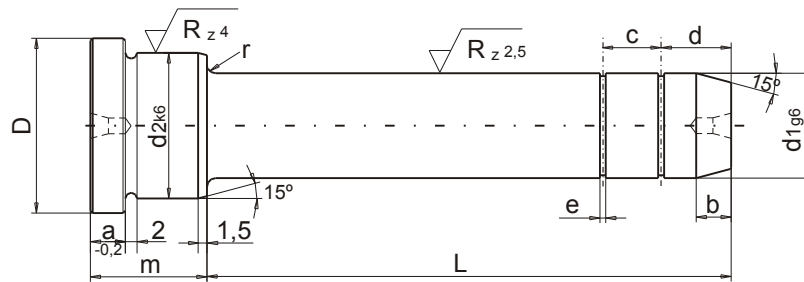
MATERIAL : 1.2344
DUREZA : 46 - 48 HRC.
HARDNESS: 46 - 48 Hrc.

d	d1	D2	L1	K	L
Cantidad / Quantity:					
Molde Nº / Mould Nº:					
Plano Nº / Draw Nº:					
Pedido Nº / Order Nº:					



GUIA ESPECIAL DOBLE DIAMETRO

SPECIAL SHOULDER LEADER PIN



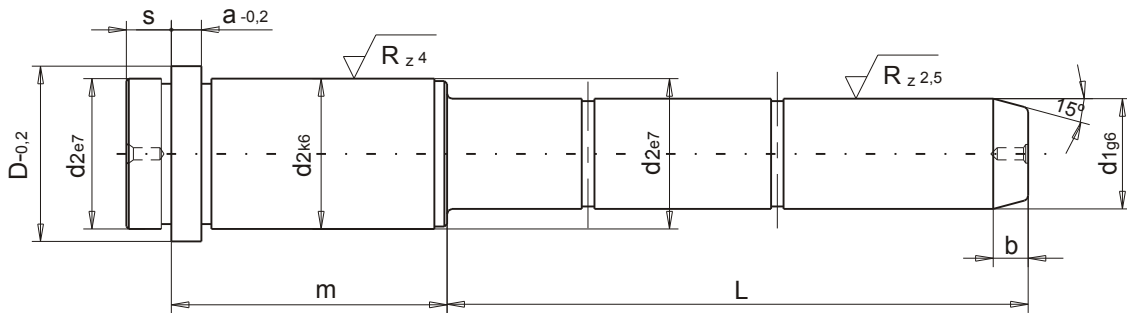
MATERIAL : Acero al Cromo Molibdeno. 1.7264. / Steel 1.7264.
TRATAMIENTO : Cementada (profund. 0,8 mm.).
TREATMENT : Case hardened (depth 0,8 mm).
DUREZA HARDNESS: 60 - 62 HRc.

d1	d2	D	a	m	L
Cantidad / Quantity:					
Molde Nº / Mould Nº:					
Plano Nº / Draw Nº:					
Pedido Nº / Order Nº:					



GUIA ESPECIAL CON COLA

SPECIAL SHOULDER LEADER PIN

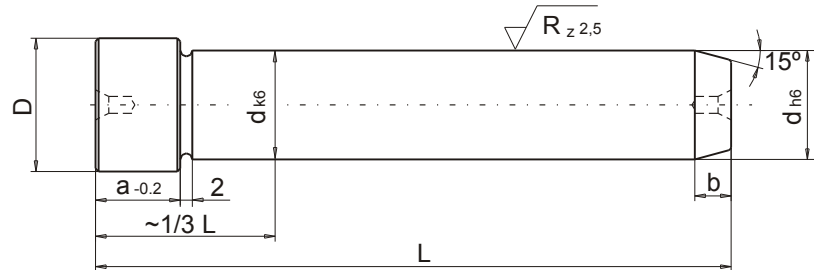


MATERIAL : Acero al Cromo 1.7264. / Steel 1.7264.
TRATAMIENTO : Cementada (profund. 0,8 mm.).
TREATMENT : Case hardened (depth 0,8 mm).
DUREZA HARDNESS: 60 - 62 HRc.

d1	d2	D	a	s	m	L
Cantidad / Quantity:						
Molde Nº / Mould Nº:						
Plano Nº / Draw Nº:						
Pedido Nº / Order Nº:						



GUIA ESPECIAL TIPO "GB - 100" (G2) SPECIAL ANGLE PIN "GB - 100" (G2)



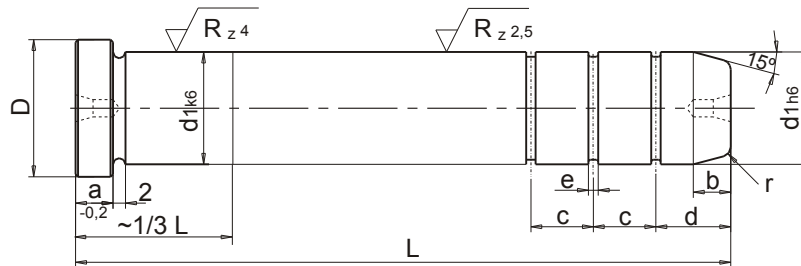
MATERIAL : Acero 1.7264. / Steel 1.7264.
TRATAMIENTO : Cementada (profund. 0,8 mm.).
TREATMENT : Case hardened (depth 0,8 mm).
DUREZA HARDNESS: 60 - 62 HRC.

d	D	a	L
Cantidad / Quantity:			
Molde Nº / Mould Nº:			
Plano Nº / Draw Nº:			
Pedido Nº / Order Nº:			



GUIA ESPECIAL TIPO "GB-110" (G)

SPECIAL LEADER PIN "GB-110" (G)



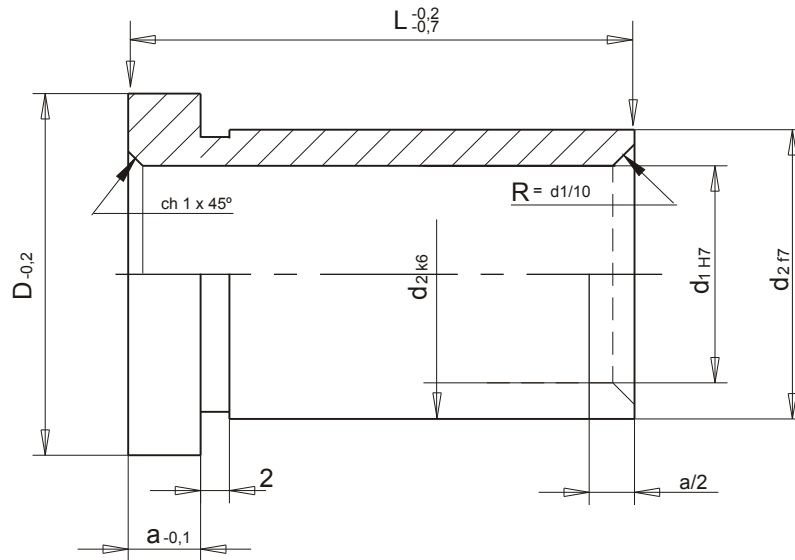
MATERIAL : Acero 1.7264. / Steel 1.7264.
TRATAMIENTO : Cementada (profund. 0,8 mm.).
TREATMENT : Case hardened (depth 0,8 mm).
DUREZA HARDNESS: 60 - 62 HRC.

d1	D	a	c	L
Cantidad / Quantity:				
Molde Nº / Mould Nº:				
Plano Nº / Draw Nº:				
Pedido Nº / Order Nº:				



CASQUILLO GUIA ESPECIAL CON VALONA

SPECIAL HEADED LEADER PIN BUSHING

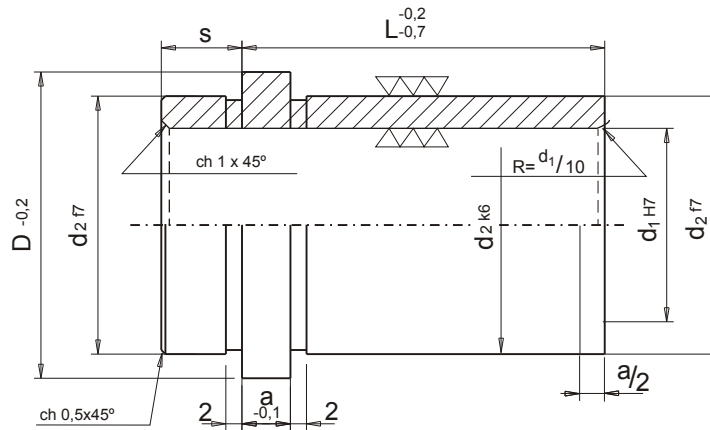


MATERIAL : Acero 1.7264. / Steel 1.7264.
DUREZA HARDNESS: 60 - 62 HRc.

d1	d2	D	a	L
Cantidad / Quantity:				
Molde Nº / Mould Nº:				
Plano Nº / Draw Nº:				
Pedido Nº / Order Nº:				



CASQUILLO GUIA ESPECIAL CON VALONA INTERMEDIA SPECIAL TAILED LEADER PIN BUSHING

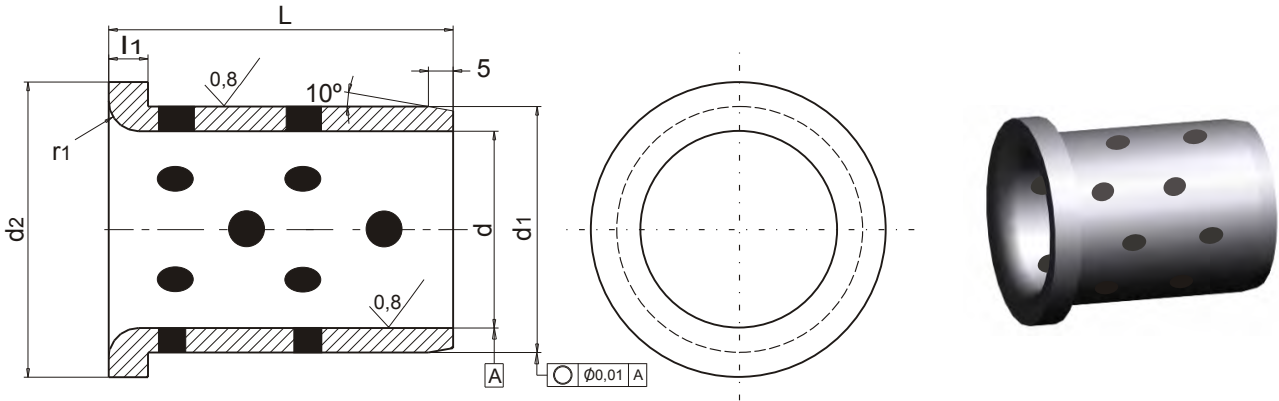


MATERIAL : Acero 1.7264. / Steel 1.7264.
DUREZA HARDNESS: 60 - 62 HRc.

d1	d2	D	a	S	L
Cantidad / Quantity:					
Molde Nº / Mould Nº:					
Plano Nº / Draw Nº:					
Pedido Nº / Order Nº:					



CASQUILLO AUTOLUBRICADO ESPECIAL CON CABEZA SPECIAL HEADED OILLESS BUSH

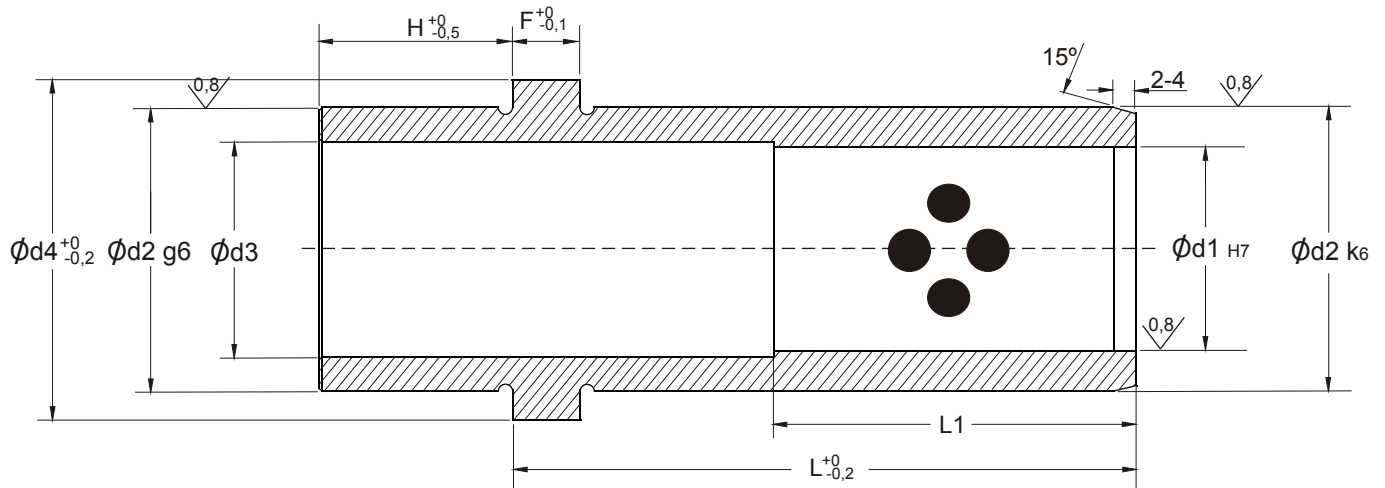


MATERIAL : Bronce al aluminio con insertos de lubricante
solido grafito.
*Strong cast bronze bored metal with special solid
lubricants embeded (graphite).*

d	d1	d2	L	l1
Cantidad / Quantity:				
Molde Nº / Mould Nº:				
Plano Nº / Draw Nº:				
Pedido Nº / Order Nº:				



**CASQUILLO AUTOLUBRICADO ESPECIAL
CON VALONA INTERMEDIA**
SPECIAL TAILED OILLESS BUSH

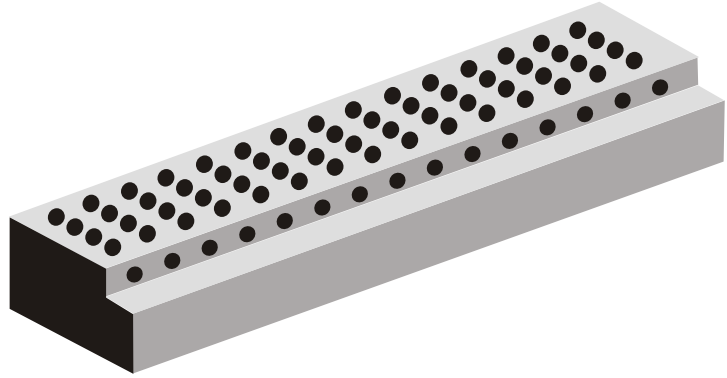
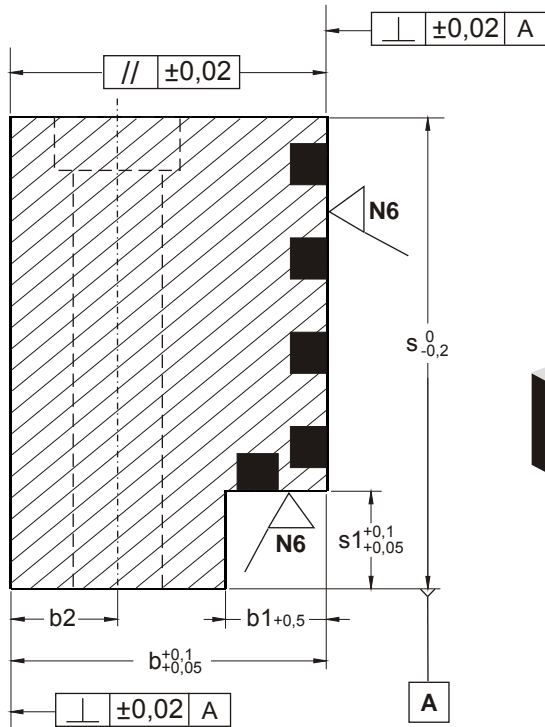


MATERIAL : Bronce al aluminio con insertos de lubricante sólido (grafito).
Strong cast bronze bored metal with special solid lubricants embeded (graphite).

d1	d2	d3	d4	F	H	L1	L
Cantidad / Quantity:							
Molde Nº / Mould Nº:							
Plano Nº / Draw Nº:							
Pedido Nº / Order Nº:							



ESCUADRA BRONCE CON GRAFITO ESPECIAL "ESBG" SPECIAL L-SHAPE OILLESS PLATE "ESBG"



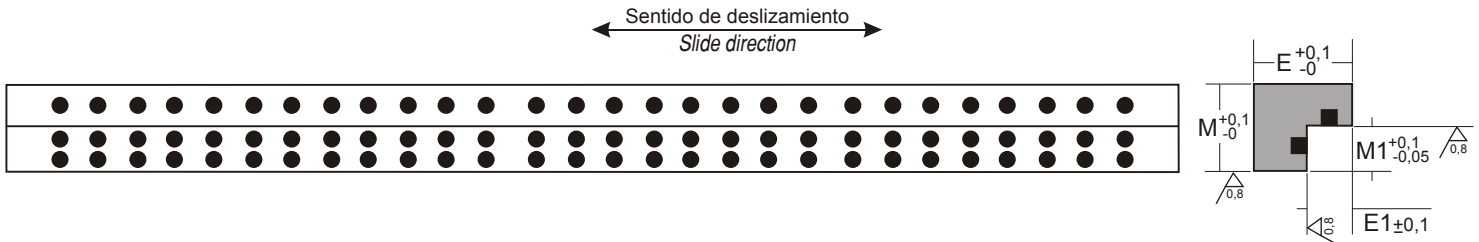
MATERIAL : Bronce al aluminio con insertos de lubricante
Sólido grafito.
*Strong cast bronze bored metal with special solid
lubricants embeded (graphite).*

b	s	L	b1	s1
Cantidad / Quantity:				
Molde Nº / Mould Nº:				
Plano Nº / Draw Nº:				
Pedido Nº / Order Nº:				



ESCUADRA BRONCE GRAFITO ESPECIAL " ESL "

SPECIAL L-SHAPE OILLESS PLATE " ESL "



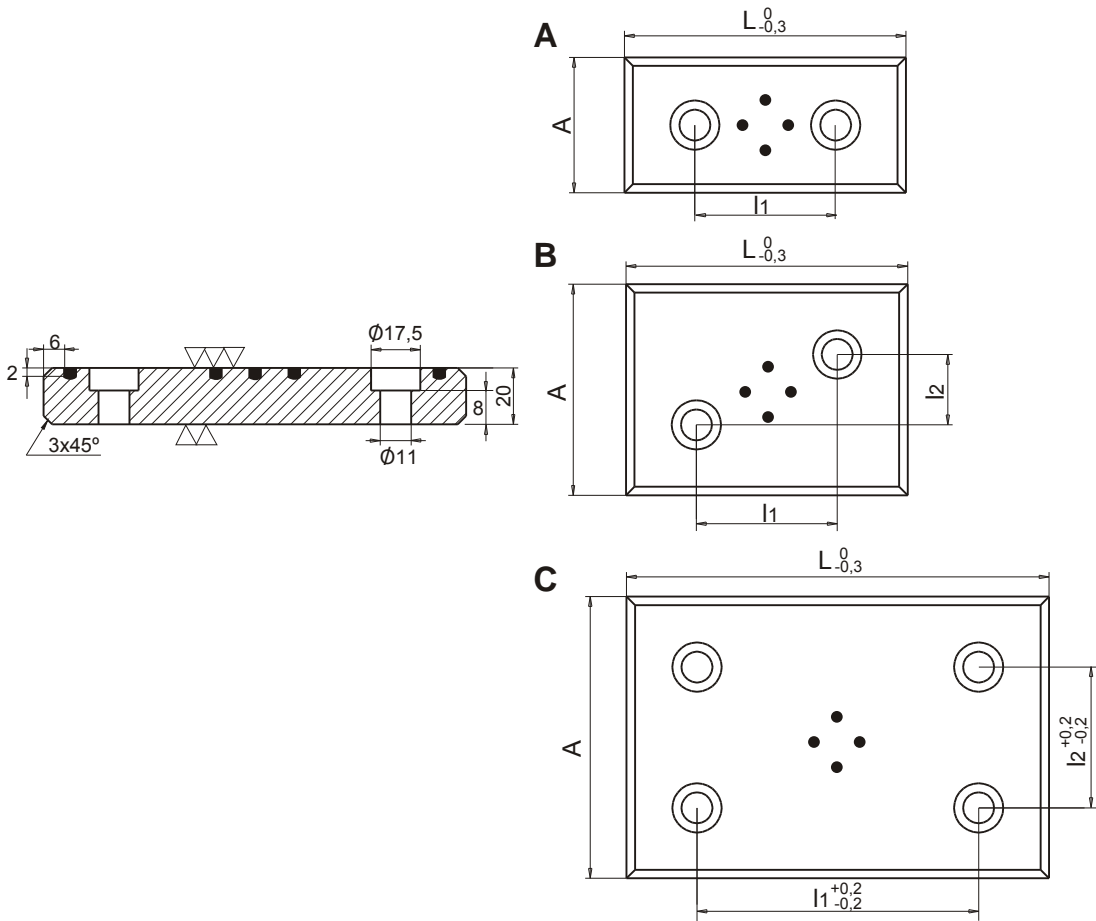
MATERIAL : Bronce al aluminio con insertos de lubricante sólido grafito.
Strong cast bronze bored metal with special solid lubricants embeded (graphite).

M	E	M1	E1	L
Cantidad / Quantity:				
Molde Nº / Mould Nº:				
Plano Nº / Draw Nº:				
Pedido Nº / Order Nº:				



PLACA BRONCE CON GRAFITO ESPECIAL

SPECIAL OILLESS WEAR PLATE



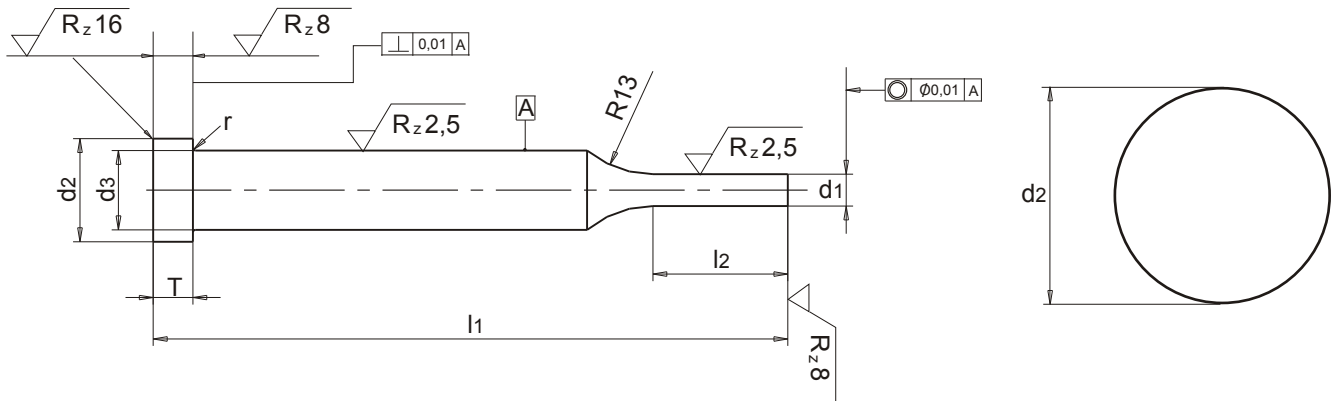
MATERIAL : Bronce al aluminio con insertos de lubricante sólido grafito.
 Strong cast bronze bored metal with special solid lubricants embeded (graphite).

A	L	l1	l2	Forma Type
Cantidad / Quantity:				
Molde Nº / Mould Nº:				
Plano Nº / Draw Nº:				
Pedido Nº / Order Nº:				



PUNZON CABEZA CILINDRICA MECHADO FORMA "B" ISO 8020-8021

STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "B" ISO 8020-8021



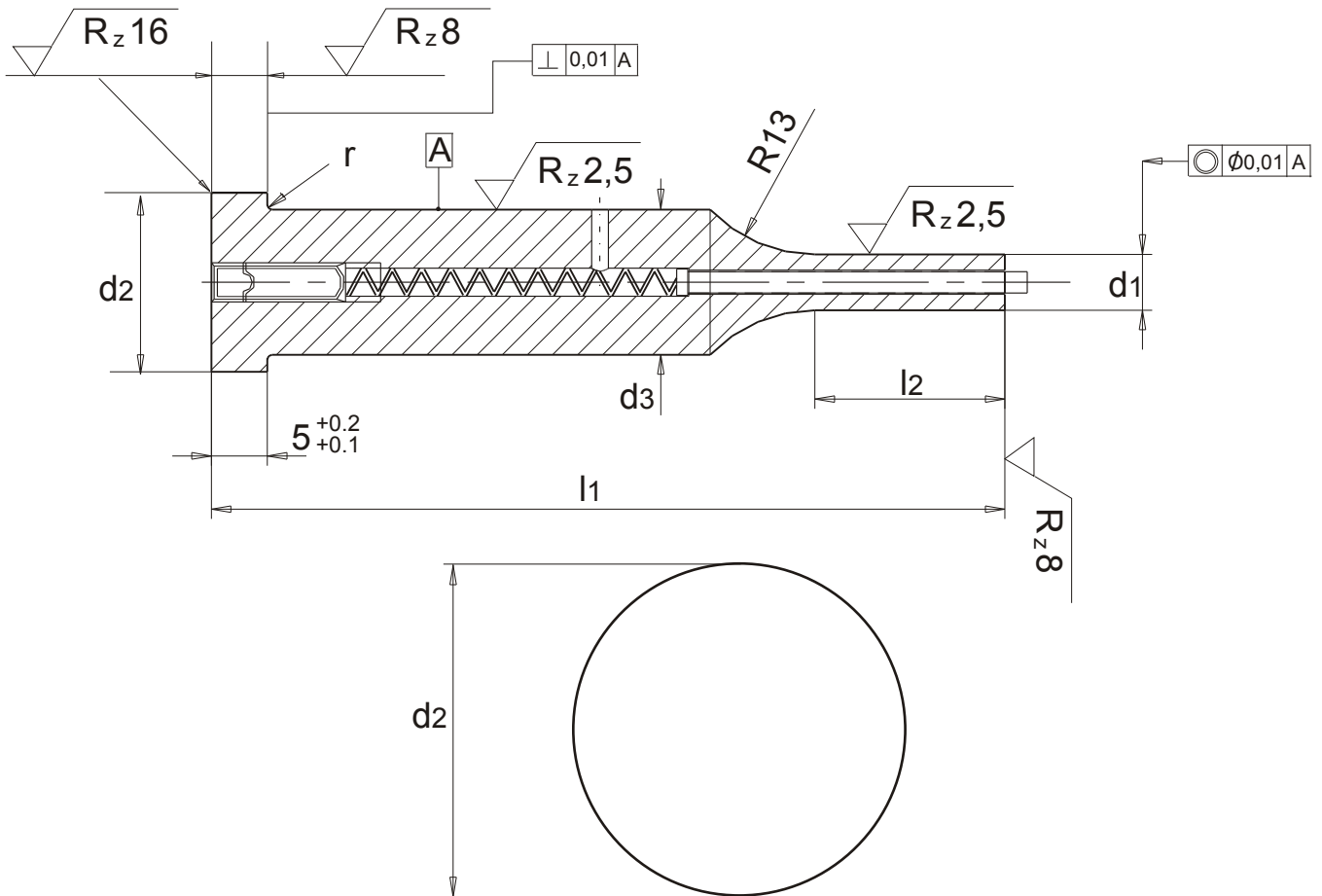
DUREZAS:
HARDNESS :

HWS: Caña / Shaft = HRC 62±2
Cabeza / Head = HRC 50±5
HSS: Caña / Shaft = HRC 64±2
Cabeza / Head = HRC 50±5

d1 (j6)	Incr. d1	d2 (+0-0.15)	d3 (m5)	T (+0.2+0.1)	r (+0.1-0)	l2 (+0.5-0)	l1 (+0.5+0.2)



**PUNZON CABEZA CILINDRICA MECHADO FORMA "F"
CON EXPULSOR INTERIOR, ISO 8020**
**STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "F"
WITH SPRING LOADED EJECTOR PIN, ISO 8020**



DUREZAS:
HARDNESS:

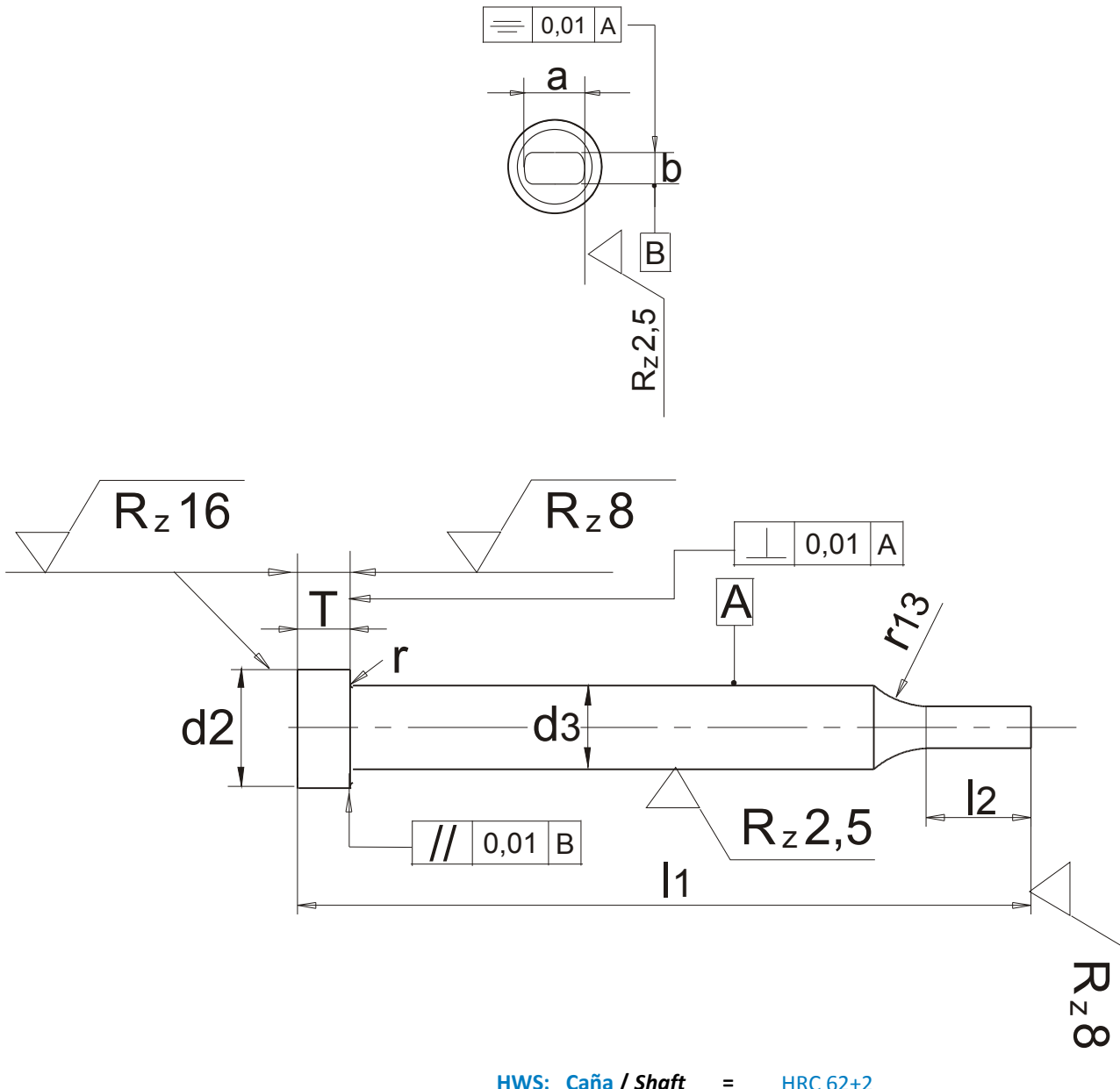
Caña / Shaft = HRC 64±2
Cabeza / Head = HRC 50±5

d1 (j6)	Incrementos de d1 d1 Increases	d2 (+0-0,15)	d3 (m5)	r (+0,1-0)	l2 (+0,5-0)	l1 (+0,5+0,2)



PUNZON DE CORTE CABEZA CILINDRICA MECHADO FORMA "CAO" ISO 8020-8021
STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "CAO" ISO 8020-8021

CAO



DUREZAS:
HARDNESS:

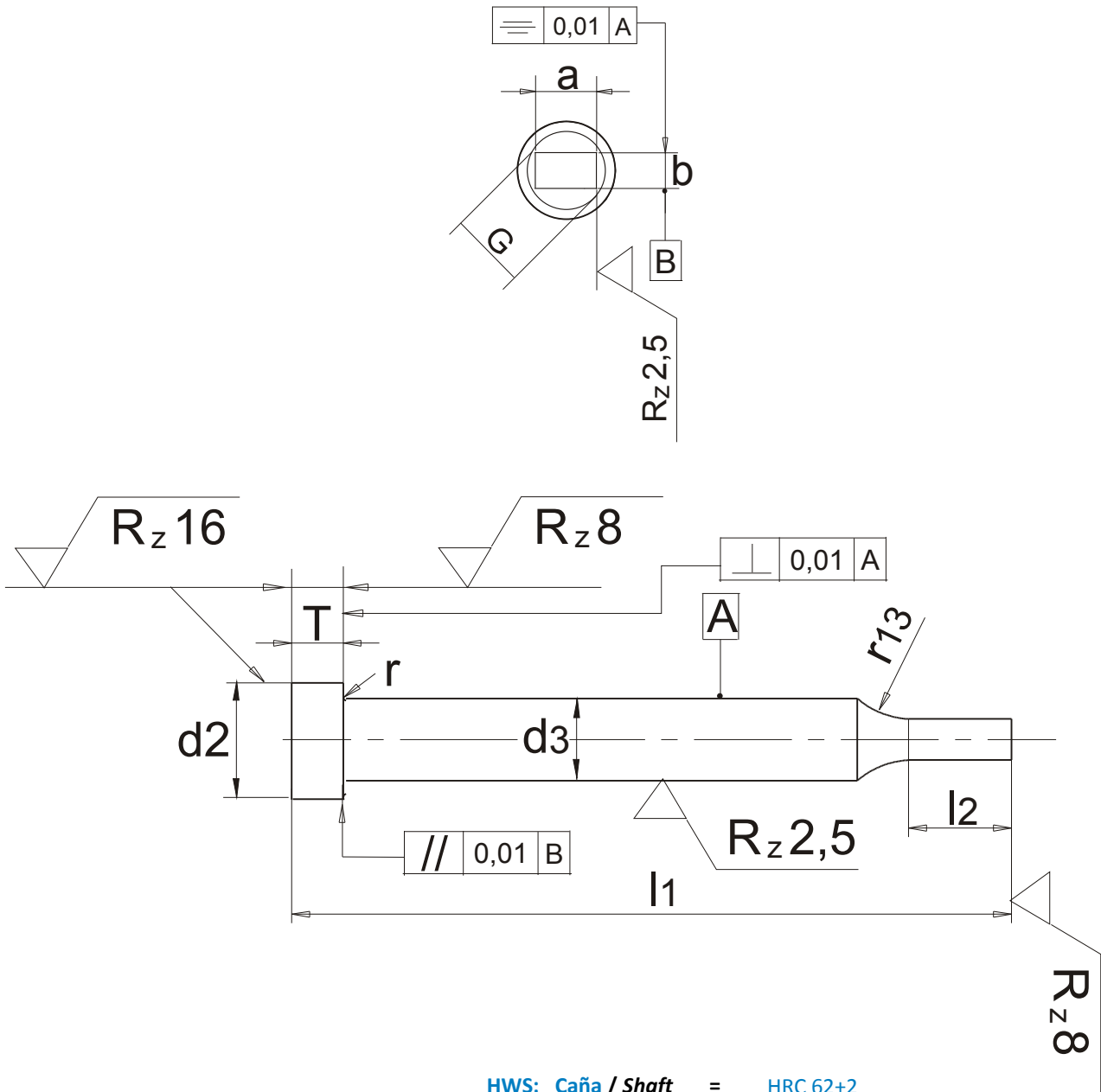
HWS: Caña / Shaft = HRC 62±2
 Cabeza / Head = HRC 50±5
HSS: Caña / Shaft = HRC 64±2
 Cabeza / Head = HRC 50±5

a (+0.01) b (+0.01)	d2 (+0-0.15)	d3 (m5)	T (+0.2+0.1)	r (+0,1-0)	l2 (+0.5-0)	l1 (+0.5+0.2)



PUNZON DE CORTE CABEZA CILINDRICA MECHADO FORMA "CAR" ISO 8020-8021
STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "CAR" ISO 8020-8021

CAR



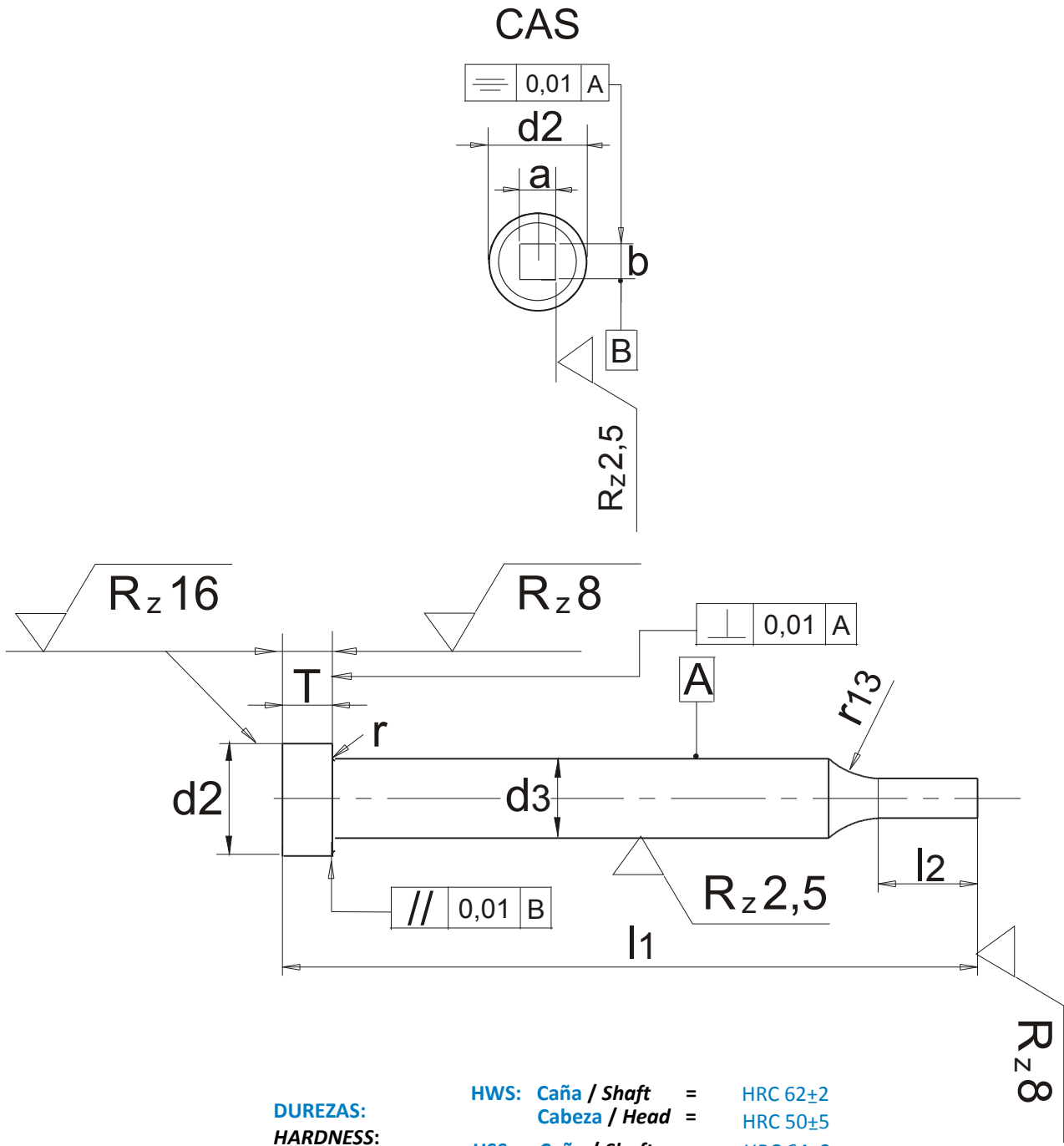
DUREZAS:
HARDNESS:

HWS: Caña / Shaft = HRC 62±2
 Cabeza / Head = HRC 50±5
HSS: Caña / Shaft = HRC 64±2
 Cabeza / Head = HRC 50±5

a (+-0.01) b (+-0.01)	d2 (+0-0.15)	d3 (m5)	T (+0.2+0.1)	r (+0,1-0)	l2 (+0.5-0)	l1 (+0.5+0.2)



PUNZON DE CORTE CABEZA CILINDRICA MECHADO FORMA "CAS" ISO 8020-8021
STEPPED PUNCH WITH CYLINDRICAL HEAD FORM "CAS" ISO 8020-8021



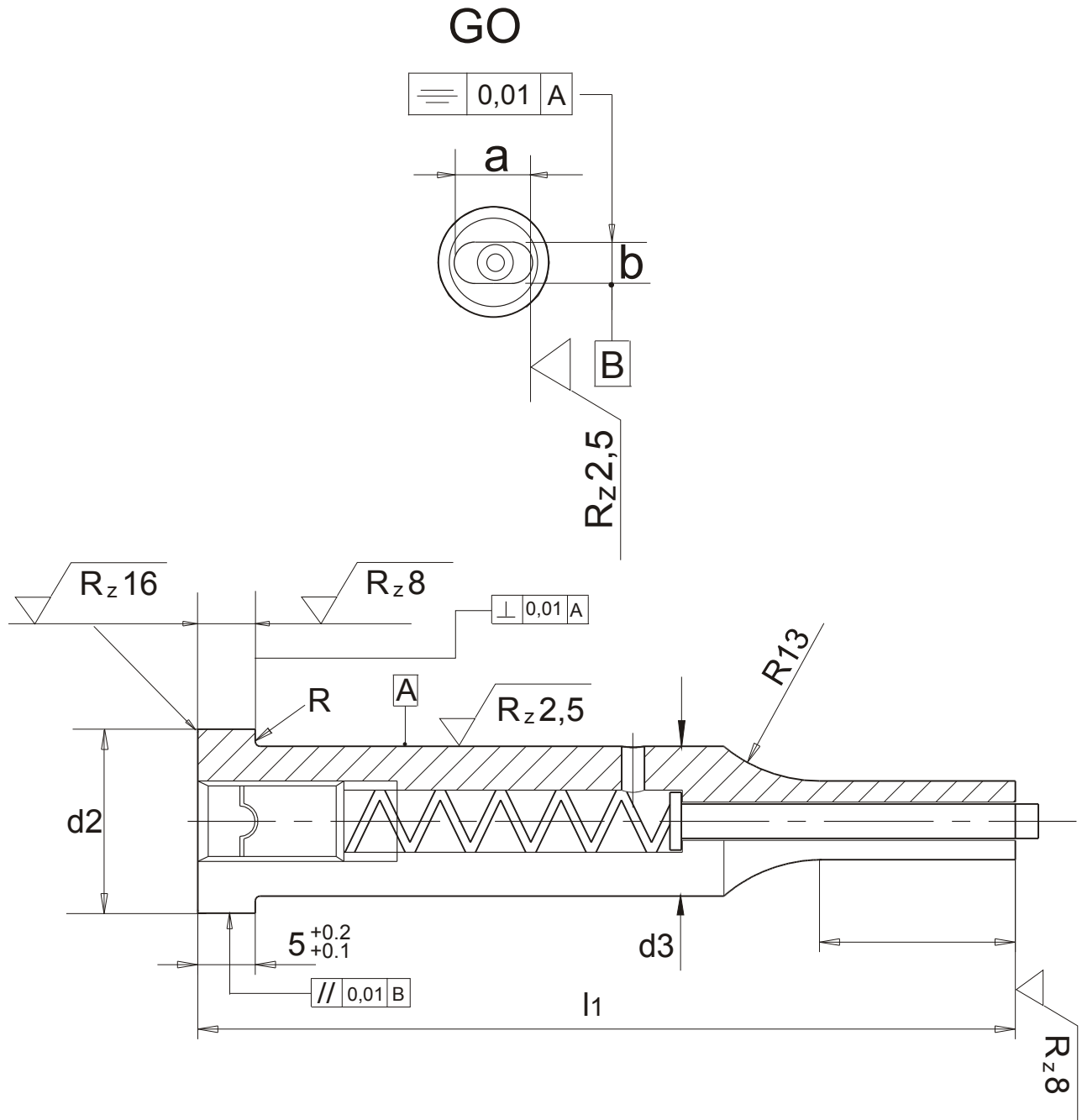
DUREZAS:
HARDNESS:

HWS: Caña / Shaft = HRC 62±2
 Cabeza / Head = HRC 50±5
HSS: Caña / Shaft = HRC 64±2
 Cabeza / Head = HRC 50±5

a (+0.01) b (+0.01)	d2 (+0-0.15)	d3 (m5)	T (+0.2+0.1)	r (+0,1-0)	l2 (+0.5-0)	l1 (+0.5+0.2)



PUNZON CABEZA CILINDRICA MECHADO FORMA "GO" CON EXPULSOR INTERIOR, ISO 8020
STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "GO" WITH SPRING LOADED EJECTOR PIN, ISO 8020



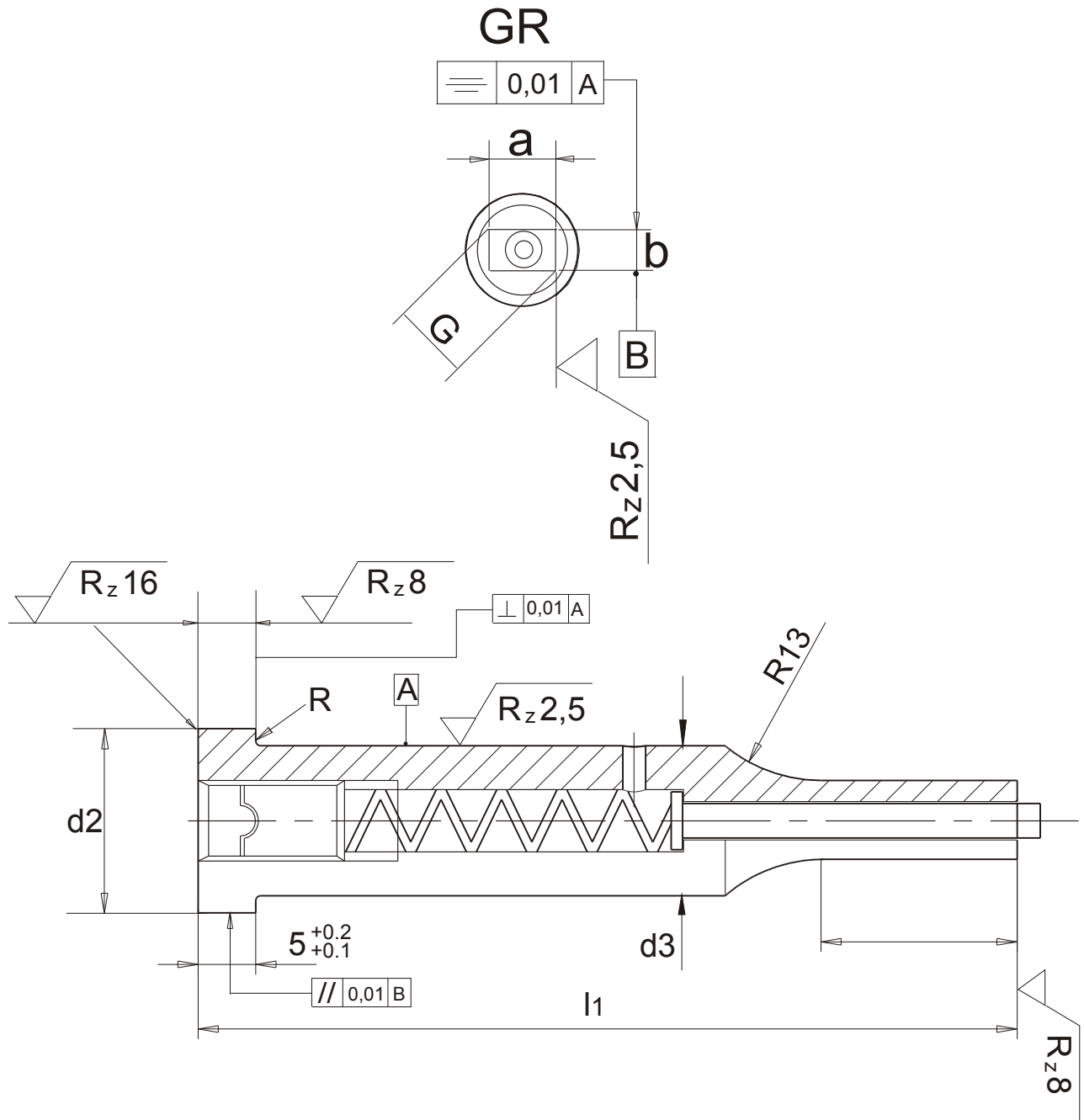
DUREZAS:
HARDNESS:

Caña / Shaft = HRC 64±2
Cabeza / Head = HRC 50±5

a (+-0.01) b (+-0.01)	d2 (+0-0.15)	d3 (m5)	r (+0,1-0)	l2 (+0.5-0)	l1 (+0.5+0.2)



PUNZON CABEZA CILINDRICA MECHADO FORMA "GR" CON EXPULSOR INTERIOR, ISO 8020
STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "GR" WITH SPRING LOADED EJECTOR PIN, ISO 8020



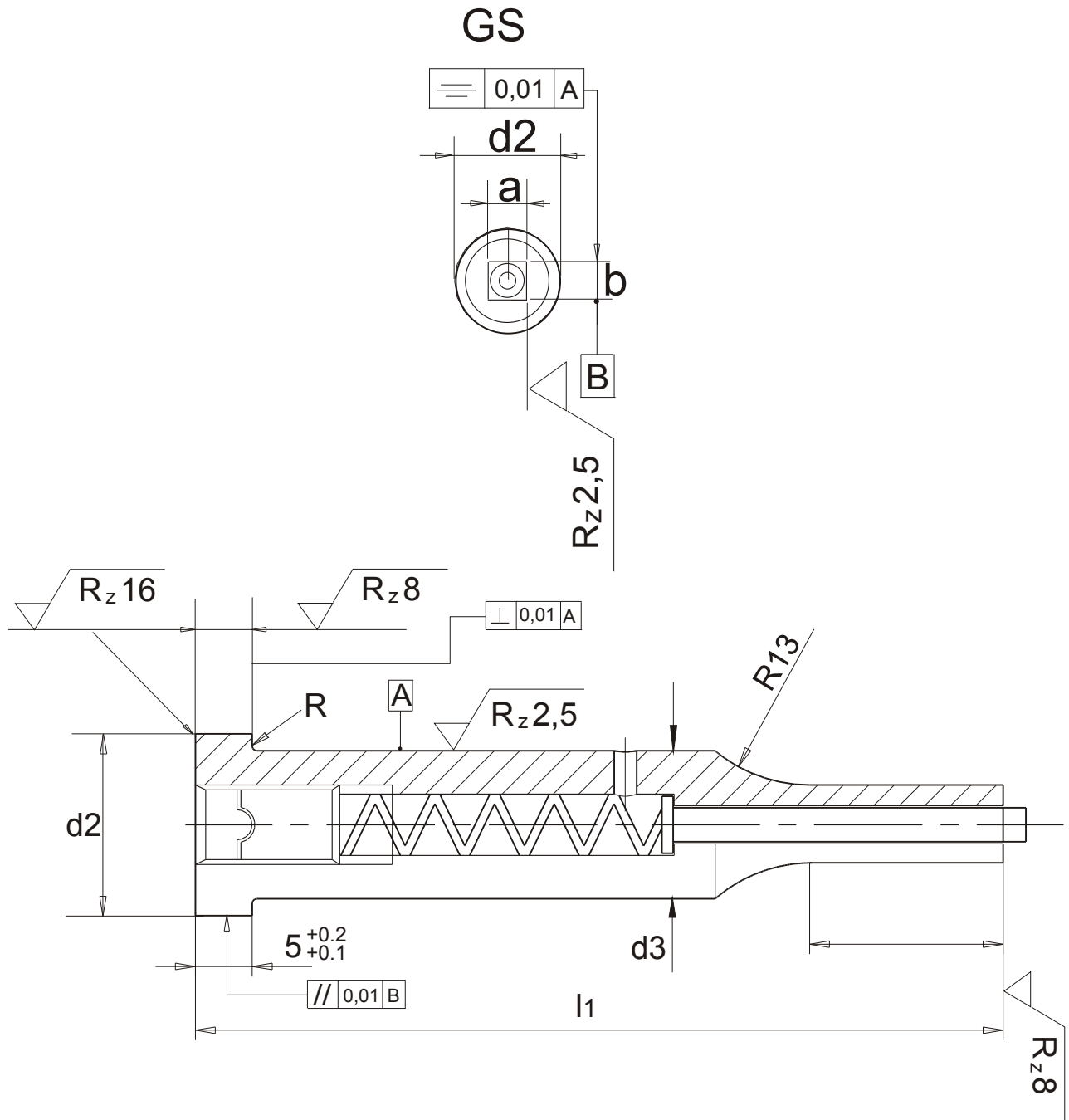
DUREZAS:
HARDNESS:

Caña / Shaft = HRC 64±2
Cabeza / Head = HRC 50±5

a (+0.01) b (+0.01)	d2 (+0-0.15)	d3 (m5)	r (+0,1-0)	l2 (+0.5-0)	l1 (+0.5+0.2)



PUNZON CABEZA CILINDRICA MECHADO FORMA "GS" CON EXPULSOR INTERIOR, ISO 8020
STEPPED PUNCH WITH CYLINDRICAL HEAD TYPE "GS" WITH SPRING LOADED EJECTOR PIN, ISO 8020



DUREZAS:
HARDNESS:

Caña / Shaft = HRC 64±2
Cabeza / Head = HRC 50±5

a (+0.01) b (+0.01)	d2 (+0-0.15)	d3 (m5)	r (+0,1-0)	l2 (+0.5-0)	l1 (+0.5+0.2)