



PULL STUDS
TIRANTES
ANZUGSBOLZEN

PULL STUDS

COLLETS

R-8 STRAIGHT
DIN 63 27/1835

FINE
MACHINING

MODULAR

MORSE
QUICK CHANGE

DIN 2080

POLYGONAL
TAPER LC6

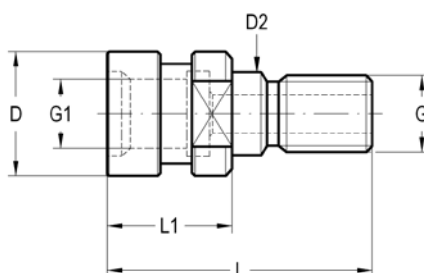
BT_DUAL
CONTACT

BT

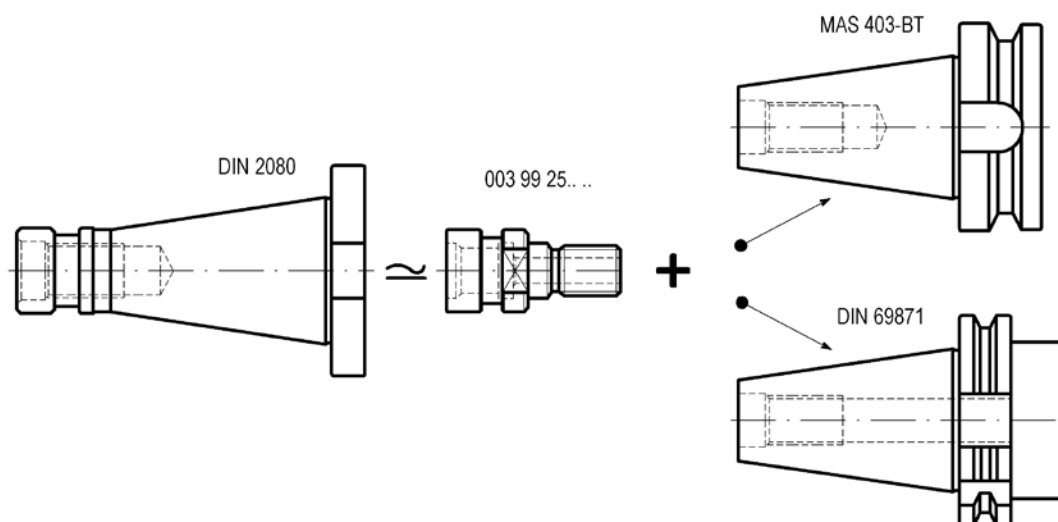
DIN
69871

HSK

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G	G1	L	L1	D	D1	COD.	Availability Disponibilidad Verfügbarkeit
M-16	M-16	52	25,15	25	17	003 99 25 02 00	☐
M-16	M-16	117	25,15	25	17	003 99 25 02 50	☐
M-24	M-24	65	25.2	39.3	25	003 99 25 04 00	☐

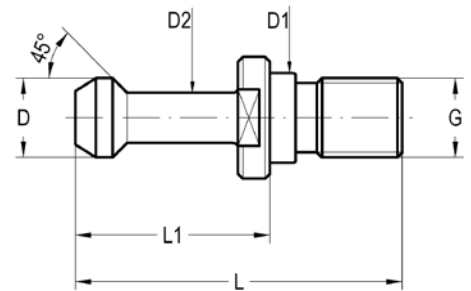


MAS 403 BT PULL STUDS (45°)
TIRANTES MAS 403 BT (45°)
ANZUGSBOLZEN MAS 403 BT (45°)

003 99 14/94 ...



D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
11	M-12	43	23	12,5	7	003 99 14 01 00	■
15	M-16	60	35	17	10	003 99 14 02 00	■
23	M-24	85	45	25	17	003 99 14 04 00	■
* 15	M-16	57	32,15	17	10	003 99 94 02 00	■
15	M-16	124	35	17	10	003 99 14 02 50	□



* These pull studs are not according to MAS 403-BT. Use with DIN 69871-40

* Estos tirantes no cumplen la norma MAS 403-BT. Para utilizar en DIN 69871-40

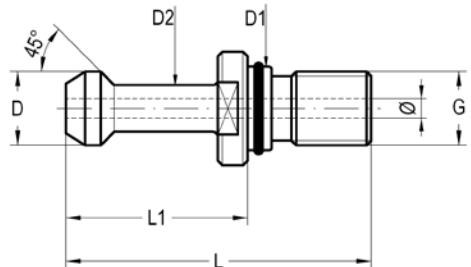
* Diese Positionen entsprechen nicht der MAS 403-BT. Für DIN 69871-40

MAS 403 BT PULL STUDS (45°)
TIRANTES MAS 403 BT (45°)
ANZUGSBOLZEN MAS 403 BT (45°)

003 99 44/84 ...



D	G	L	L1	D1	D2	Ø	COD.	Availability Disponibilidad Verfügbarkeit
15	M-16	60	35	17	10	4	003 99 44 02 00	■
* 15	M-16	57	32,15	17	10	4	003 99 84 02 00	■
23	M-24	85	45	25	17	6	003 99 44 04 00	■



MAS 403 BT PULL STUDS (45°)
TIRANTES MAS 403 BT (45°)
ANZUGSBOLZEN MAS 403 BT (45°)

003 99 34 ...

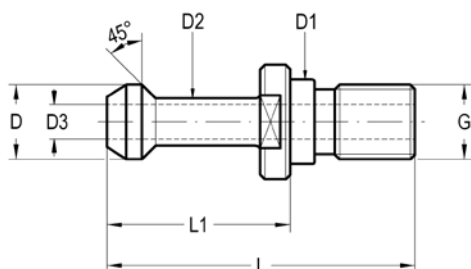


With through coolant channel.

Con paso refrigerante.

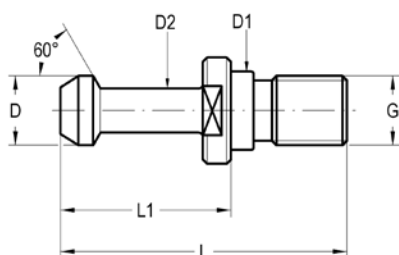
Mit innerer Kühlmittelzufuhr.

D	G	L	L1	D1	D2	D3	COD.	Availability Disponibilidad Verfügbarkeit
11	M-12	43	23	12,5	7	2,5	003 99 34 01 00	□
15	M-16	60	35	17	10	4	003 99 34 02 00	□
23	M-24	85	45	25	17	8	003 99 34 04 00	□



MAS 403 BT PULL STUDS (60°)
TIRANTES MAS 403 BT (60°)
ANZUGSBOLZEN MAS 403 BT (60°)

003 99 15/95 ...



* These pull studs are not according to MAS 403-BT.

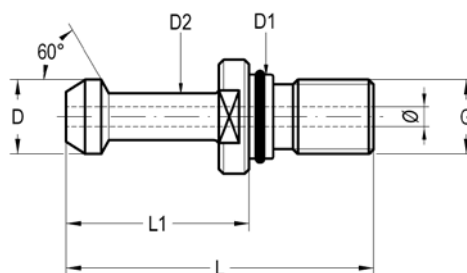
* Estos tirantes no cumplen la norma MAS 403-BT.

* Diese Positionen entsprechen nicht der MAS 403-BT.

D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
11	M-12	43	23	12,5	7	003 99 15 01 00	■
11	M-12	143	23	12,5	7	003 99 15 01 41	■
15	M-12	100	35	17	10	003 99 15 02 01	■
15	M-12	118	35	17	10	003 99 15 02 40	■
15	M-12	178	35	17	10	003 99 15 02 41	■
* 15	M-16	57	32,15	17	10	003 99 95 02 00	■
15	M-16	60	35	17	10	003 99 15 02 00	■
15	M-16	124	35	17	10	003 99 15 02 50	■
15	M-16	100	35	17	10	003 99 15 02 02	■
15	M-16	194	35	17	10	003 99 15 02 51	■
19	M-20	70	40	21	14	003 99 15 03 00	□
23	M-20	165	45	25	17	003 99 15 04 60	□
23	M-24	85	45	25	17	003 99 15 04 00	■

MAS 403 BT PULL STUDS (60°)
TIRANTES MAS 403 BT (60°)
ANZUGSBOLZEN MAS 403 BT (60°)

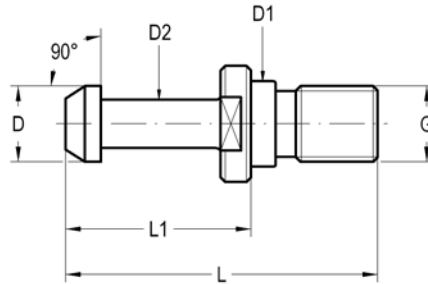
003 99 45/85 ...



D	G	L	L1	D1	D2	Ø	COD.	Availability Disponibilidad Verfügbarkeit
15	M-16	60	35	17	10	4	003 99 45 02 00	■
* 15	M-16	57	32,15	17	10	4	003 99 85 02 00	■
23	M-24	85	45	25	17	6	003 99 45 04 00	■

MAS 403 BT PULL STUDS (90°)
TIRANTES MAS 403 BT (90°)
ANZUGSBOLZEN MAS 403 BT (90°)

003 99 11/18/23 ...



D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
15	M-16	50	25	17	10	003 99 18 02 00	■
*24	M-24	71	31	25	18	003 99 18 04 00	■
15	M-16	60	35	17	10	003 99 23 02 00	■
23	M-24	85	45	25	17	003 99 23 04 00	■
15	M-16	116	26,75	17	10	003 99 11 02 50	□
15	M-12	118	35	17	10	003 99 23 02 40	□
15	M-16	124	35	17	10	003 99 23 02 50	□
23	M-20	165	45	25	17	003 99 23 04 60	□

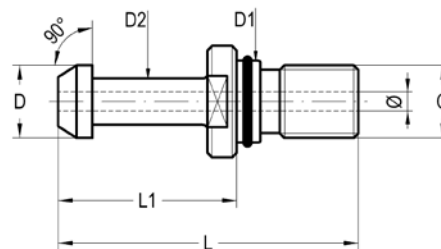
* Pull stud with through coolant hole.

* Tirante con orificio de paso refrigerante.

* Mit Kühlmittelzufuhr.

MAS 403 BT PULL STUDS (90°)
TIRANTES MAS 403 BT (90°)
ANZUGSBOLZEN MAS 403 BT (90°)

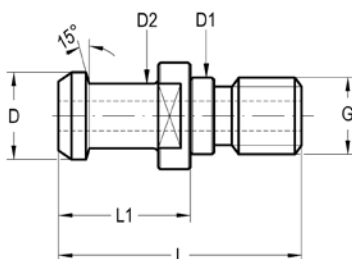
003 99 43 ...



D	G	L	L1	D1	D2	Ø	COD.	Availability Disponibilidad Verfügbarkeit
15	M-16	60	35	17	10	4	003 99 43 02 00	■
23	M-24	85	45	25	17	6	003 99 43 04 00	■

JIS B 6339 PULL STUDS (15°)
TIRANTES JIS B 6339 (15°)
ANZUGSBOLZEN JIS B 6339 (15°)

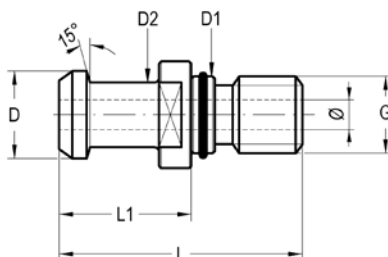
003 99 31... ..



D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
12	M-12	43	23,4	12,5	8	003 99 31 01 00	■
12	M-10	90	23,4	12,5	8	003 99 31 01 30	□
12	M-12	94	23,4	12,5	8	003 99 31 01 40	□
19	M-16	54	29	17	14	003 99 31 02 00	■
19	M-16	94	29	17	14	003 99 31 02 02	□
19	M-16	118	29	17	14	003 99 31 02 50	□
19	M-16	188	29	17	14	003 99 31 02 51	□
28	M-20	154	34	25	21	003 99 31 04 60	□
28	M-24	74	34	25	21	003 99 31 04 00	■

JIS B 6339 PULL STUDS (15°)
TIRANTES JIS B 6339 (15°)
ANZUGSBOLZEN JIS B 6339 (15°)

003 99 41... ..



D	G	L	L1	D1	D2	Ø	COD.	Availability Disponibilidad Verfügbarkeit
19	M-16	54	29	17	14	4	003 99 41 02 00	■
19	M-16	54	29	17	14	7	003 99 41 02 10	■
28	M-24	74	34	25	21	10	003 99 41 04 00	■

DIN 69872 - ISO 7388/2 PULL STUDS (15°)
TIRANTES DIN 69872 - ISO 7388/2 (15°)
ANZUGSBOLZEN DIN 69872-ISO 7388/2 (15°)

003 99 16 ...



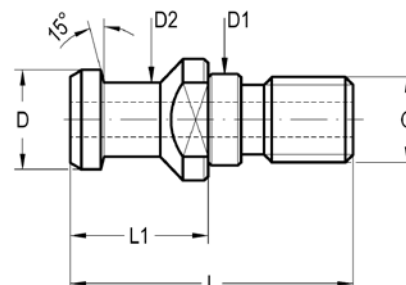
FORM A

D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
*13	M-12	44	24	13	9	003 99 16 01 00	■
19	M-16	54	26	17	14	003 99 16 02 00	■
19	M-16	118	26	17	14	003 99 16 02 50	□
19	M-16	183	26	17	14	003 99 16 02 51	□
23	M-16	100	30	21	17	003 99 16 03 02	□
23	M-16	135	30	21	17	003 99 16 03 50	□
28	M-24	74	34	25	21	003 99 16 04 00	■

* Without through hole.

* Sin orificio de paso refrigerante.

* Ohne Kühlmittelzufuhr.

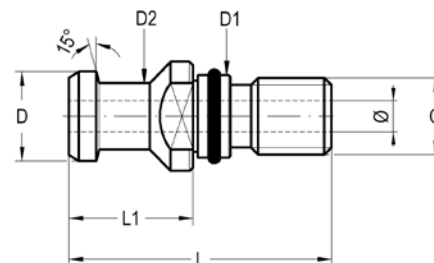


DIN 69872 - ISO 7388/2 PULL STUDS (15°)
TIRANTES DIN 69872 - ISO 7388/2 (15°)
ANZUGSBOLZEN DIN 69872-ISO 7388/2 (15°)

003 99 36 ...



D	G	L	L1	D1	D2	Ø	COD.	Availability Disponibilidad Verfügbarkeit
19	M-16	54	26	17	14	7	003 99 36 02 00	■
28	M-24	74	34	25	21	11,5	003 99 36 04 00	■

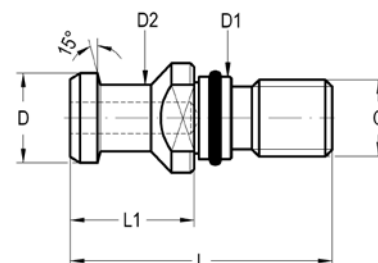


DIN 69872 FORM B PULL STUDS (15°)
TIRANTES DIN 69872 FORMA B (15°)
ANZUGSBOLZEN DIN 69872 FORM B (15°)

003 99 26 ...



D	G	L	L1	D1	D2	COD.		Availability Disponibilidad Verfügbarkeit
13	M-12	44	24	13	9	003 99 26 01 00	305 04 01 11 00	■
19	M-12	112	26	17	14	003 99 26 02 40	305 04 01 41 50	■
19	M-16	54	26	17	14	003 99 26 02 00	305 04 01 41 50	■
28	M-24	74	34	25	21	003 99 26 04 00	305 04 02 02 50	■

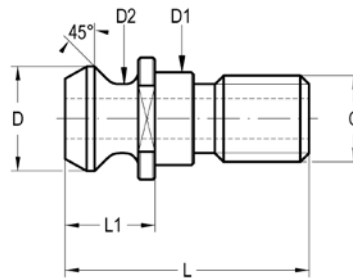


ISO 7388/2 PULL STUDS (45°)
TIRANTES ISO 7388/2 (45°)
ANZUGSBOLZEN ISO 7388/2 (45°)

003 99 17/32 ...



With through coolant channel.
 Con paso refrigerante.
 Mit Kühlmittelzufuhr.



D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
13,20	M-12	34	11,65	13	9,15	003 99 17 01 00	■
13,20	M-12	80	11,65	13	9,15	003 99 17 01 30	□
18,80	M-12	161	16,25	17	12,45	003 99 17 02 41	□
18,80	M-16	44,5	16,25	17	12,45	003 99 17 02 00	■
*18,80	M-16	44,5	19,10	17	12,45	003 99 32 02 00	■
18,80	M-16	108	16,25	17	12,45	003 99 32 02 50	□
23,90	M-16	90	20,80	21	16,15	003 99 17 03 02	□
23,90	M-16	125	20,80	21	16,15	003 99 17 03 50	□
*29	M-24	65,5	25,20	25	19,45	003 99 32 04 00	■
29	M-24	65,5	25,40	25	19,45	003 99 17 04 00	■

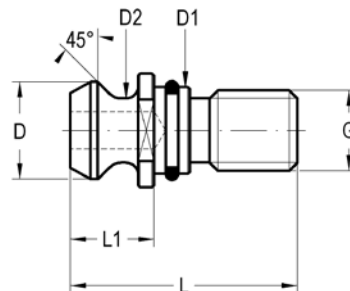
* These pull studs are not according to ISO 7388/2 Form B.
 * Estos tirantes no cumplen la norma ISO 7388/2 Forma B.
 * Diese Positionen entsprechen nicht der ISO 7388/ Form B.

ISO 7388/2 PULL STUDS (45°)
TIRANTES ISO 7388/2 (45°)
ANZUGSBOLZEN ISO 7388/2 (45°)

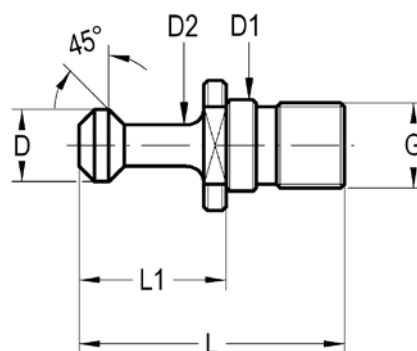
003 99 27 ...



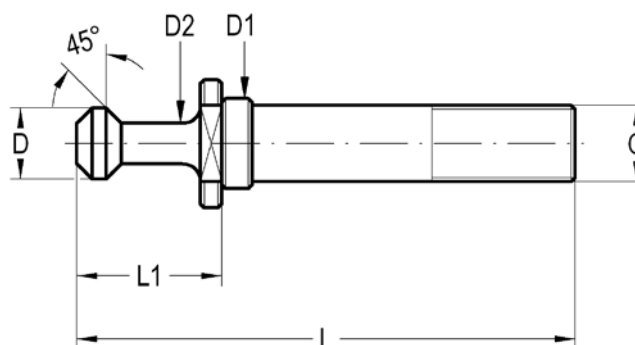
With through coolant channel.
 Sin paso refrigerante.
 Ohne Kühlmittelzufuhr.



D	G	L	L1	D1	D2	COD.		Availability Disponibilidad Verfügbarkeit
18,8	M-16	44,5	16,25	17	12,80	003 99 27 02 00	305 04 01 41 50	■
29	M-24	65,5	25,4	25	19,45	003 99 27 04 00	305 04 02 02 50	■

SHORT CHIRON ISO 30 PULL STUDS (45°)*TIRANTES CORTOS PARA REDUCTORES CHIRON A MORSE ISO 30 (45°)**ANZUGSBOLZEN FÜR CHIRON ISO 30 (45°)***003 99 30 01 00**

D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
10	M-12	36	20	13	6	003 99 30 01 00	☐

LONG CHIRON ISO 30 PULL STUDS FOR REDUCERS ADAPTADERS (45°)*TIRANTES LARGOS PARA REDUCTORES CHIRON A MORSE ISO 30 (45°)**LANGE ANZUGSBOLZEN FÜR CHIRON ISO 30° (45°)***003 99 30 ...**

D	G	L	L1	D1	D2	COD.	Availability Disponibilidad Verfügbarkeit
10	M-6	74	20	13	6	003 99 30 01 20	☐
10	M-12	89	20	13	6	003 99 30 01 40	☐