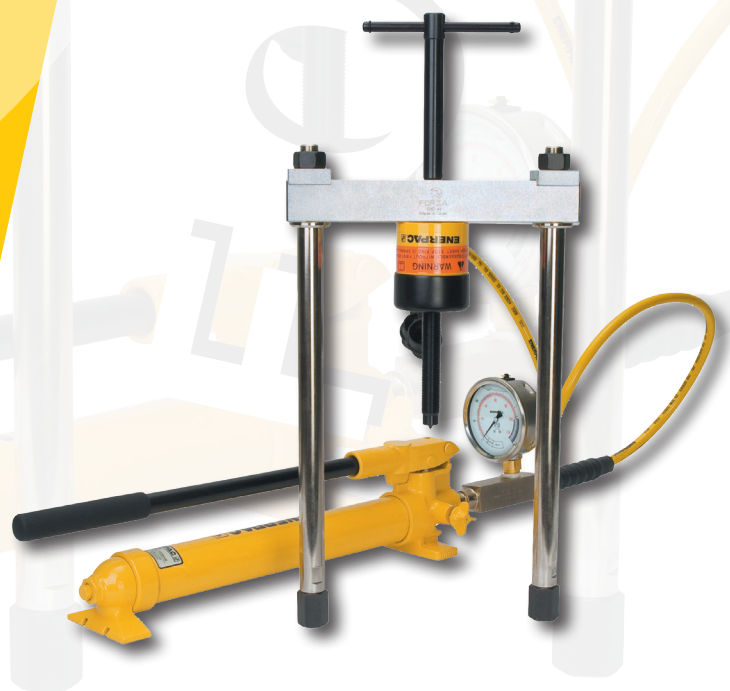




Hydraulic External Puller 3100H and 1100H series

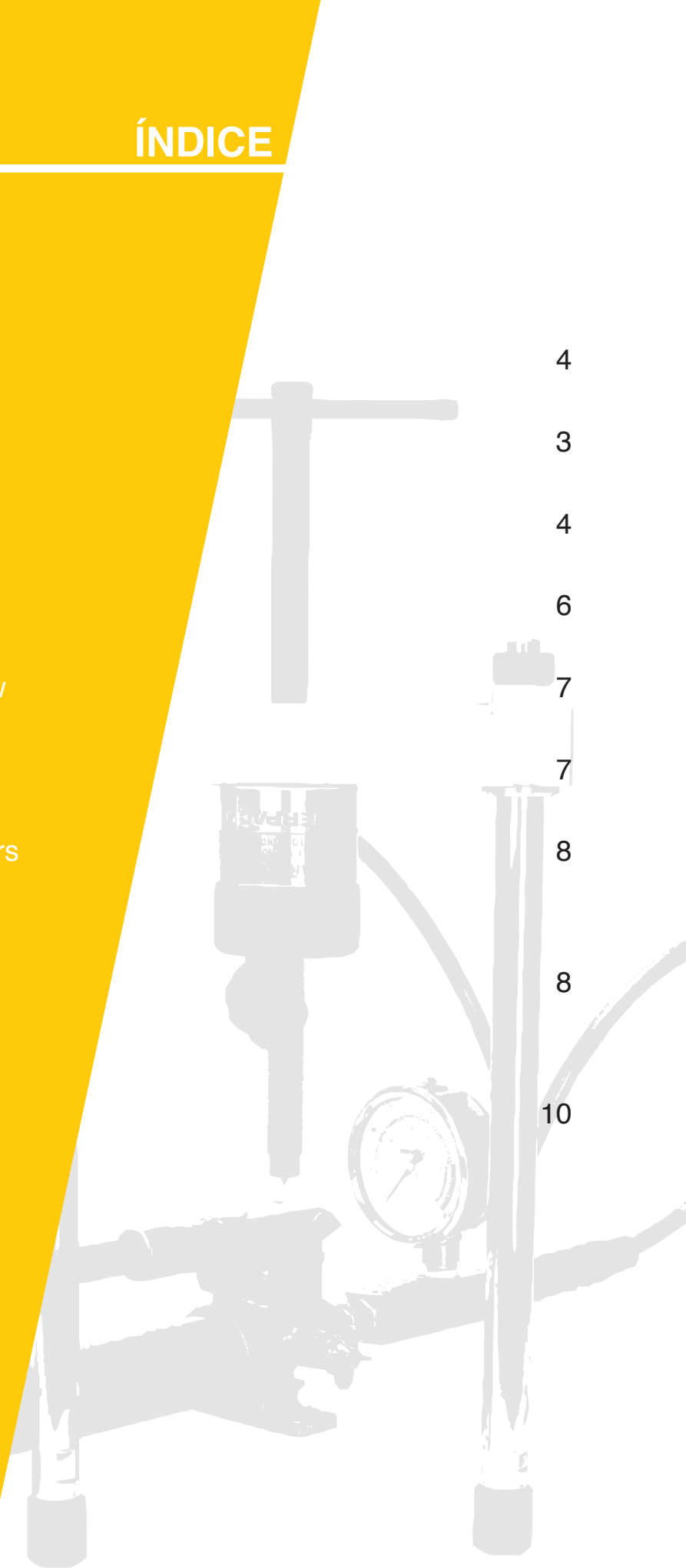
Manual



3100H Y 1100H

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1. HYDRAULIC PART

Hydraulic part:

The hydraulic part of the extractor consists of:

Hydraulic cylinder, is the part that exerts the force in the extractor. It is a hollow cylinder of simple effect and which returns by spring.

Pump, is the part that introduces the oil under pressure in the cylinder. Forza supplies it with the manometer and the 1.8m hose.

The pumps can work up to 700 Bar, when working with pullers DO NOT exceed the red pressure zone of the manometer, as an additional safety measure.

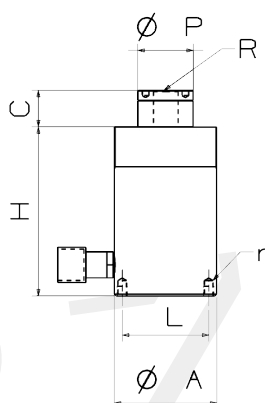
When the pullers are mounted, if they are not well centred, this can produces load asymmetry in the legs.

Complete hydraulic equipment



Reference	TON	Weight
00910	10	11
00918	20	16
00930	30	19
00952	60	43
00995	100	76

Hydraulic cylinders



Reference	ØA	Stroke	H	Ton	Weight	L	r	Spindle	R
09101	70	25	81	10	2,5	50,8	5/16"UNC	111083	3/4"UNF 16h
09181	99	48	160	20	7,5	82,6	3/8"UNC	111883	1"UNC 8h
09301	114	63	178	30	10,5	92,1	3/8"UNC	113083	1 1/4"UNC 7h
09521	159	75	235	60	31	130,2	1/2"UNC	115283	1 5/8UNS 5,5h
09951	212	76	254	100	65	177,8	5/8"UNC	119583	2 1/2"UN 8h

Hydraulic pumps



Reference	Weight	Bar. Máx	Pumping Force Kg.	TON equipment
009542	3,7	700	35	4
09102	8,5	700	49	10
09182	8,5	700	49	20-30
09522	12	700	46	60
09952	12	700	46	100

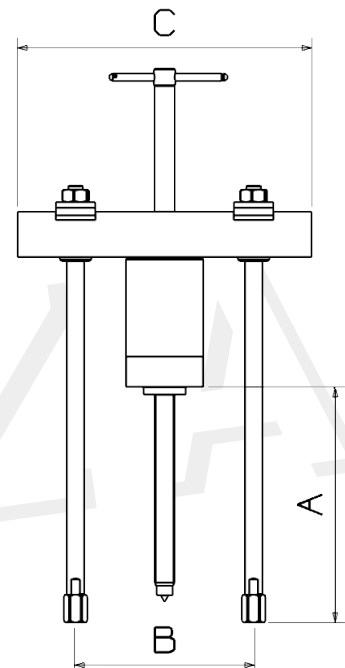
2. TECHNICAL FEATURES

Push Puller

Combines with 1200 splitters

Combines with 1500 and 4700 internal series

3. PULLER DIMENSIONS



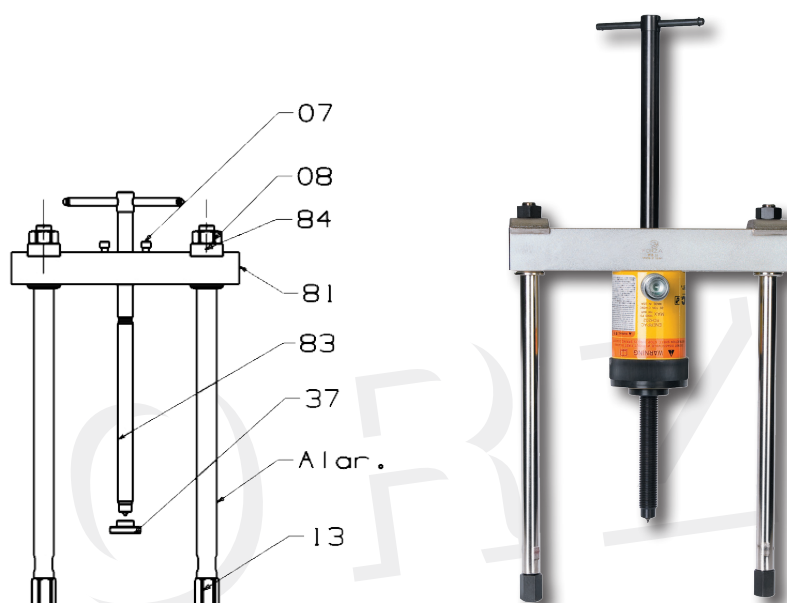
Reference	A	B	C	Weight (kg)
1110H	300	260	280	7,5
1118H	265	345	370	18,5
1130H	284	440	480	37
1152H	447	580	615	70,5
1195H	600	700	760	134

■ 4. USER INSTRUCTIONS

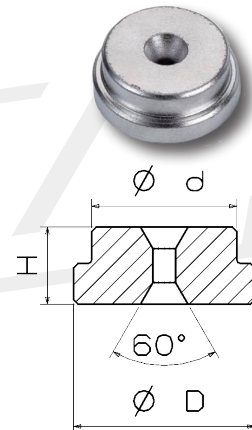
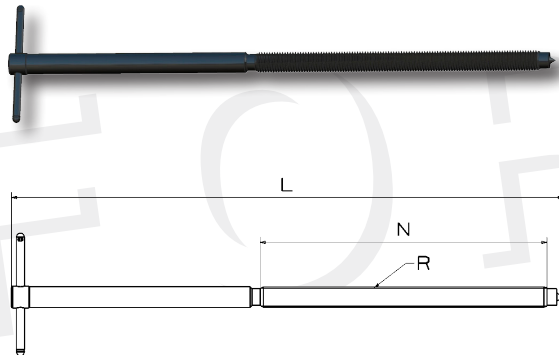


1. Make sure that the spindle is perfectly cleaned and greased
2. Check that the spindle is dotted. If it is not, place a point protector.
3. Make sure that the extender are well centered.
4. Use all the necessary personal protective equipment (PPE).
5. Tense the equipment by hand tightening the spindle.
6. Apply the pressure with the hydraulic pump, always monitoring the pressure and deformation of the extractor.

■ 5. MECHANICAL PART EXPLODED VIEW

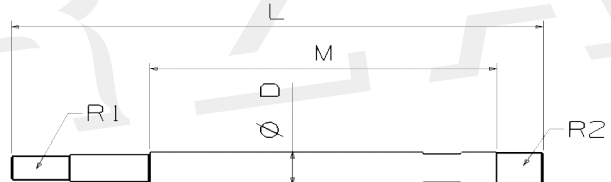


Spindle and point protector



Reference	Spindle	L	N	R	Protector	Ød	ØD	H
1100H	111083	400	225	3/4"UNF 16h	111037	16,5	38	21
1118H	111883	670	348	1"UNC 8h	111837	32	40	17
1130H	113083	790	450	1 1/4"UNC 7h	113037	38	44	18
1152H	115283	975	550	1 5/8"UNS 5,5h	113037	38	44	18
1195H	119583	993	558	2 1/2"UN 8h	119537	45	55	30

Extenders

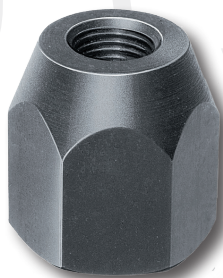
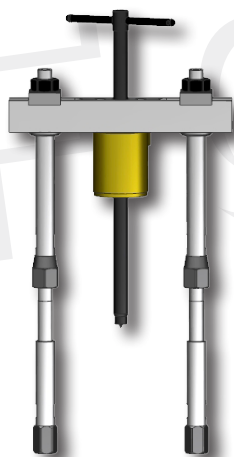


Reference	L	R1 Thread	R2 Thread	M	ØD	Puller
1110-209H	209	3/4" - 16h	5/8" - 18h	106	25	1110H
1110-460H*	460	3/4" - 16h	5/8" - 18h	357	25	
1110-540H	540	3/4" - 16h	5/8" - 18h	437	25	
1120-209	209	3/4" - 16h	5/8" - 18h	89	25	1120H
1120-336	336	3/4" - 16h	5/8" - 18h	216	25	
1120-515*	515	3/4" - 16h	5/8" - 18h	395	25	
1120-665	665	3/4" - 16h	5/8" - 18h	545	25	
1120-855	855	3/4" - 16h	5/8" - 18h	735	25	
1130-328	328	1" - 14h	1" - 14h	158	32	1130H
1130-582*	582	1" - 14h	1" - 14h	412	32	
1130-836	836	1" - 14h	1" - 14h	667	32	
1152-504	504	1 1/4" - 12h	1 1/4" - 12h	292	42	1152H
1152-820*	820	1 1/4" - 12h	1 1/4" - 12h	608,5	42	
1152-1076	1075,5	1 1/4" - 12h	1 1/4" - 12h	864	42	
1195-660	660	1 3/4" - 12h	1 3/4" - 12h	400	50	1195H
1195-1060*	1060	1 3/4" - 12h	1 3/4" - 12h	800	50	

The extenders marked with * are delivered assembled with the puller

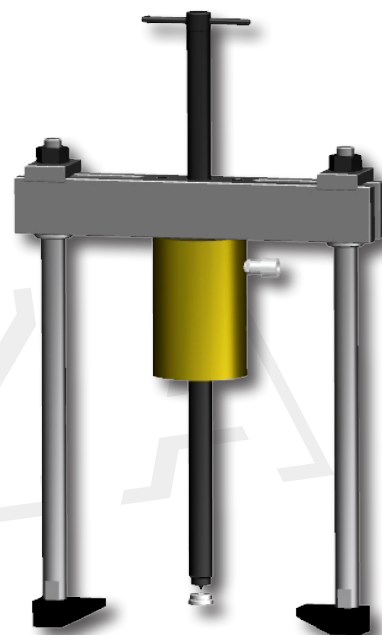
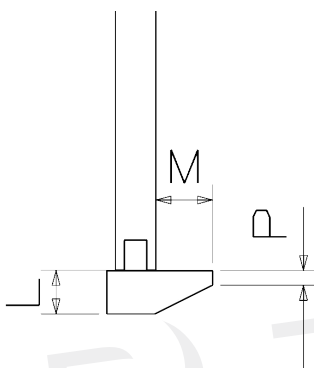
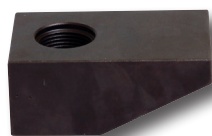
Joint nut for the 1100

Available Joint nuts to join the extensions and get more length.



Reference	Join nut
1110	112017
1120	112017
1135	113517
1152	115017
1195	119517

■ 6. JAWS OF THE PULLERS

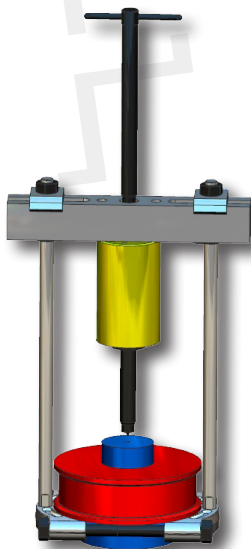


Reference	L	M	P	Weight	Puller
112005	10	10	5	0,8	1110H y 1118H
113005	35	52	10	1,2	1130H
115005	45	62	15	1,9	1152H

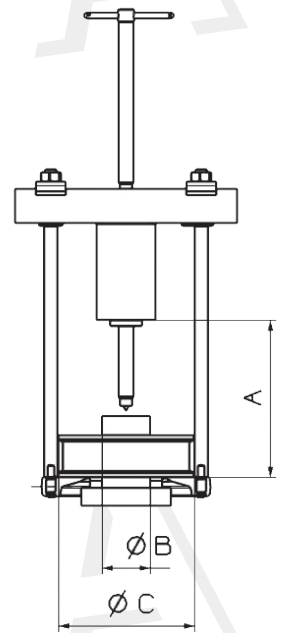
7. COMBINATIONS WITH 1200 SPLITTERS

1100H pullers combine with 1200 series:

As a measure of the pulley to be extracted, do not take the splitter minimum dimension B, but the height C, which is the distance between the extenders.



Reference	A	B	C
1110 + 1204B	275	110	155
1110 + 1206B	275	125	222
1110 + 1206B	262	134	230
1110 + 1208B	425	213	300
1110 + 1208C	241	213	290
1110 + 1210C	241	250	372
1110 + 1210D	380	250	362
1110 + 1212D	380	300	435
1110 + 1213D	380	300	450
1110 + 1213E	565	315	535



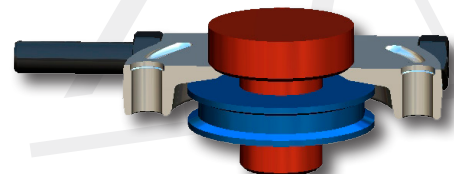
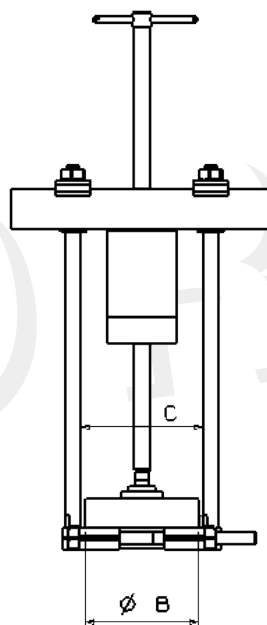
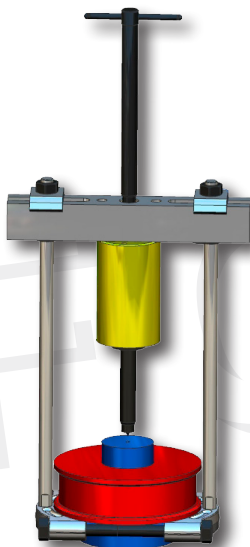
Correct assembly of splitters.

The 1200 puller must be supported on the flat side.

The extenders shall be as close as possible to the part to be extracted.

That is to say, the distance C has to be almost the same as the $\varnothing B$.

In these conditions the puller can work at maximum power.



Set on the flat face

Incorrect assembly of splitters.

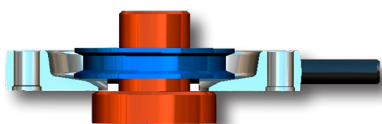
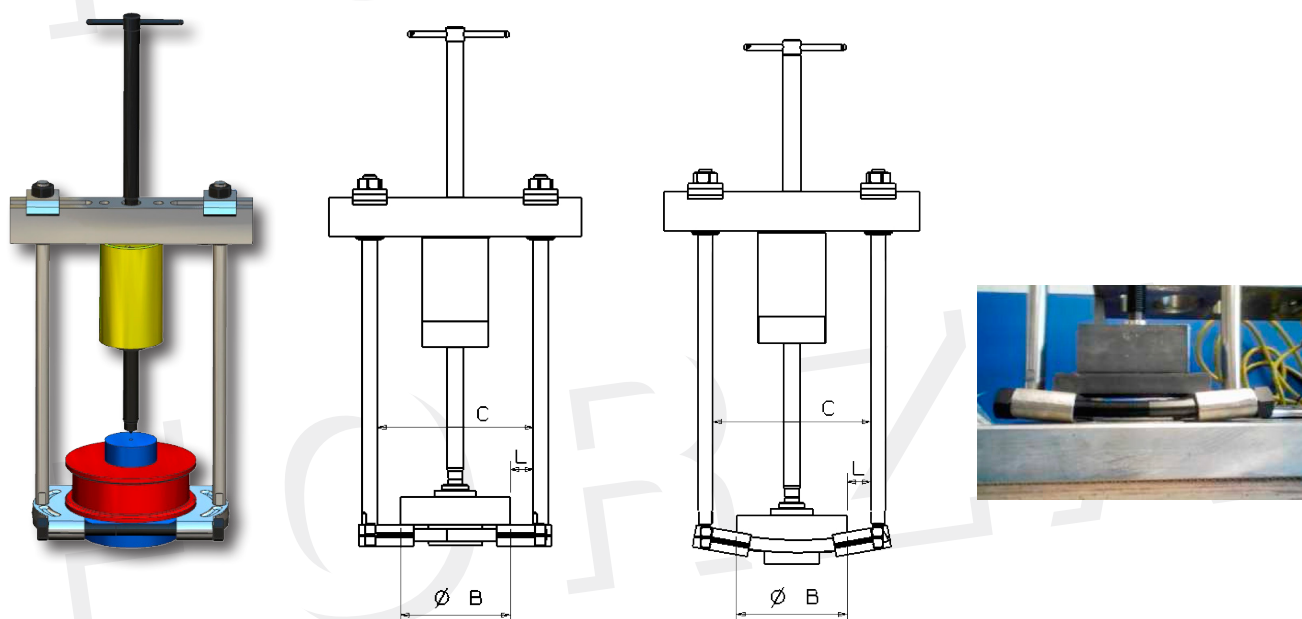
The 1200 puller is not supported on the flat side.

The extenders are very far from the part to be extracted. That is to say, the distance C is much greater than the $\varnothing B$.

In this position the torque on the extender tip is multiplied by L .

In this position, the maximum tension CAN NOT be reached.

Watch the deflection of the splitter spindles and stop when you see it too big.

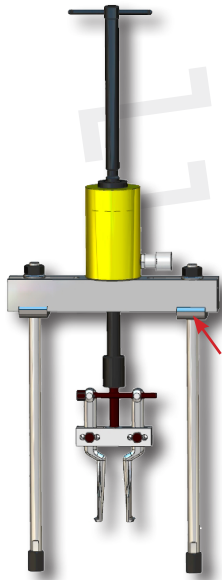


It is not in the flat side.

The 20Ton puller is the most delicate puller because the thread of the extender is of 5/8". For this reason, the extenders of 1118h Pullers has a removable threaded stud.

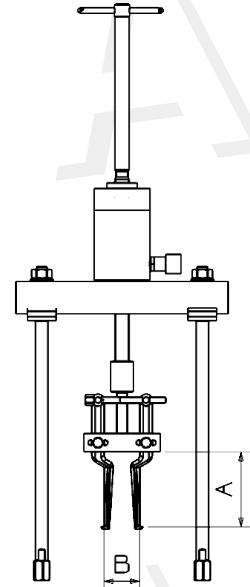


■ 8. COMBINATIONS WITH 1500H INTERNAL PULLERS



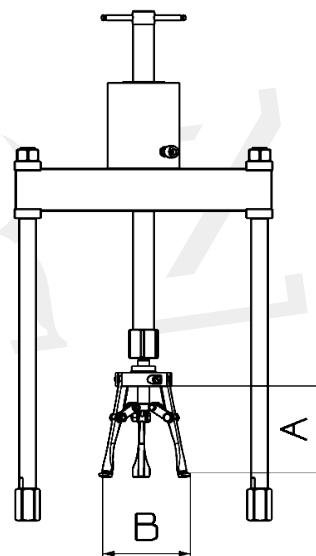
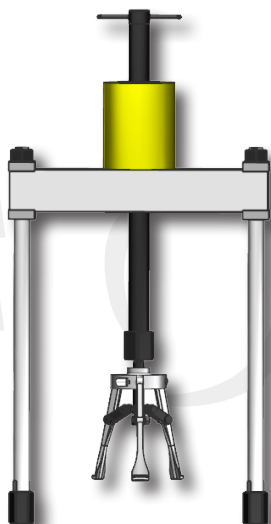
Reference	Combines with	A	B mín	B máx
1110H	1506H10	115	40	145
1110H	1507H10	140	32	160
1118H	1506H20	115	40	145
1118H	1507H20	140	32	160
1130H	1509H30	150	60	240
1152H	1509H50	150	60	240

Put the clamp down.



■ 9. COMBINATIONS WITH 4700H INTERNAL PULLERS

Reference	Combines with	A	B mín	B máx
1110H	4704H10	135	45	152
1118H	4704H20	135	45	152
1130H	4708H30	275	130	300
1152H	4708H50	275	130	300
1195H	4709H95	275	130	320





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