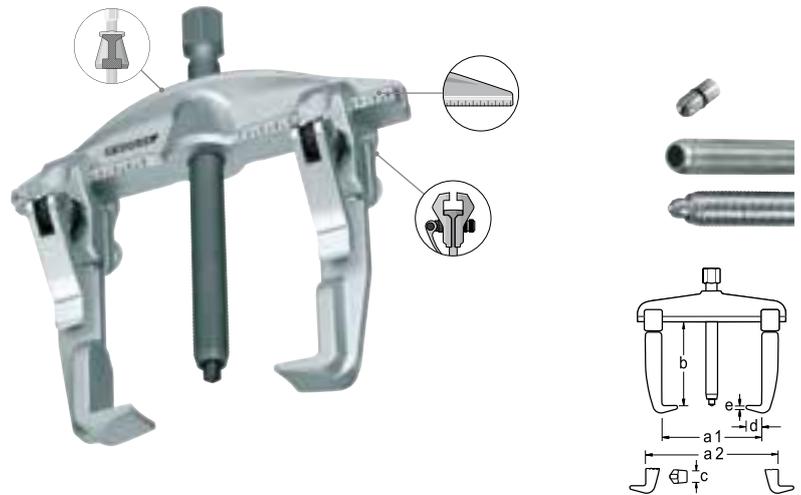


1.04 UNIVERSAL PULLER

2-arm pattern

- > For the safe and quick removal of pulleys, wheels, ball bearings, etc.
- > Strong drop forged pattern
- > Due to the bending-moment reinforcement on its back face, the energy-saving design of the cross-beam means even stronger and safer pulling work
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > The quick-action adjustment feature supports the energy-saving and fast operation
- > Spindle with replaceable ball and tip point
- > Upgradeable with hydraulic spindle (see table)

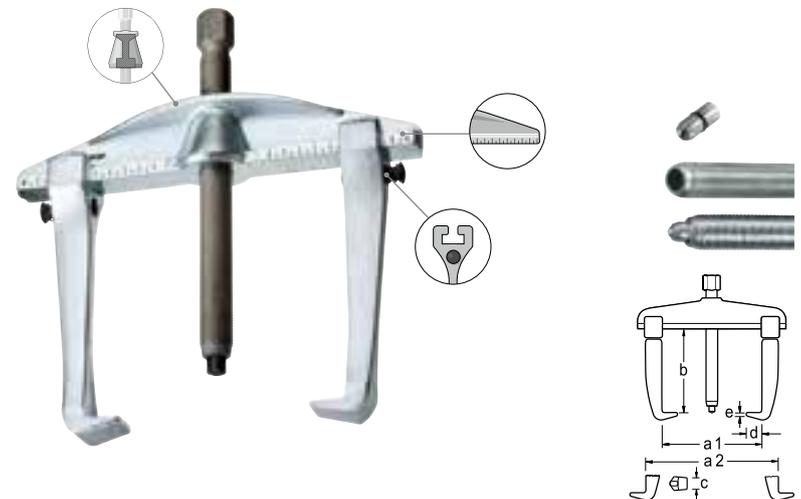


a ₁	a _{2 min}	a _{2 max}	b	max. t		optional 	c	d	e			Code	No.	
130	70	170	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.2	1307703	1.04/1A
200	110	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.4	1307827	1.04/2A
350	150	420	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	7.7	1307940	1.04/3A

1.04/B UNIVERSAL PULLER

2-arm pattern, rigid legs with leg brake

- > Due to the bending-moment reinforcement on its back face, the energy-saving design of the cross-beam means even stronger and safer pulling work
- > Strong drop forged pattern
- > Rigid legs forged from one piece
- > The legs clamp automatically when under tension
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > Spindle with replaceable ball and tip
- > Spindle thermo-chemically hardened
- > Upgradeable with hydraulic spindle (see table)



a ₁	a _{2 min}	a _{2 max}	b	max. t		 optional 	c	d	e			Code	No.	
130	70	170	100	3.0	M 14x1,5 x 140	17	–	22	15	3.0	x	1.2	1981110	1.04/1A-B
200	110	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	x	3.4	1981129	1.04/2A-B
350	150	420	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	33	5.0	x	7.7	1981137	1.04/3A-B

SUMMARY OF PULLER LEGS



>448

SUMMARY OF PULLER LEGS

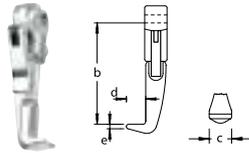
for 2-arm puller	1.04/1A...	1.04/HP1A...
	1.06/1...	1.06/1A...
for 3-arm puller	1.07/1...	1.07/1A...
Mechanical replacement spindle	M14x1,5	
Hydraulic replacement spindle		



106/XX-YY-ZZ xx = Leg size (A-C) yy = Leg length (in mm) zz = Leg type

TE = THE PROVEN LEG

> Quick-release pulling leg for 1.04

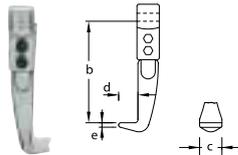


104/TE

b	c	d	e		Code	No.
100	22	12	3.0	0.3	1499351	104/A-100-TE

N = THE PROVEN LEG

> 1 leg incl. clamping parts with the reliable screw connection in various lengths

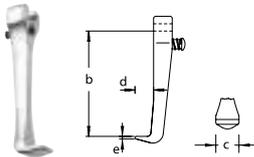


106/N

b	c	d	e		Code	No.
100	22	12	3.0	0.260	1120514	106/A-100-N
200	22	12	3.0	0.440	1120522	106/A-200-N

B = THE STURDY LEG

> 1 leg with leg brake, secured against unintentional slipping, movement of the leg on the cross-beam at the touch of a button, forged from one piece

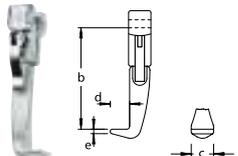


106/B

b	c	d	e		Code	No.
100	22	15	3.0	0.240	1970534	106/A-100-B

E = THE QUICK USE LEG

> leg incl. clamping parts with quick-release adjustment, for fast and uncomplicated setting and adjustment

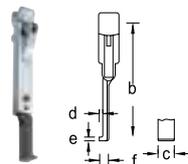


106/E

b	c	d	e		Code	No.
100	22	12	3.0	0.280	1178199	106/A-100-E

SE = THE SLENDER LEG

> 1 slim leg incl. clamping parts with quick-release adjustment, for fast and uncomplicated setting and adjustment

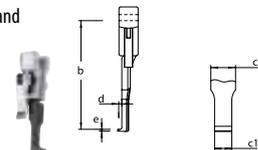


106/SE

b	c	d	e	f		Code	No.
100	27	7.5	3.7	13.5	0.280	1438514	106/A-100-SE
200	27	7.5	3.7	13.5	0.440	2015757	106/A-200-SE
250	27	7.5	3.7	13.5	0.580	2015773	106/A-250-SE
100	27	7.5	2.0	13.5	0.280	2015781	106/A-100-SSE
200	27	7.5	2.0	13.5	0.460	2015811	106/A-200-SSE
250	27	7.5	2.0	13.5	0.580	2015846	106/A-250-SSE

XSE = THE SOPHISTICATED LEG

> 1 extra slim leg incl. clamping parts with quick-release adjustment, for fast and uncomplicated setting and adjustment
 > Particularly suitable for barely accessible places, e.g. gear maintenance



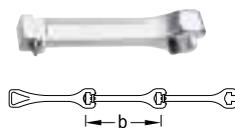
106/XSE

b	c ₁	c ₂	d	e	f		Code	No.
100	16.0	25	5.0	3.7	9.6	0.240	2018748	106/A-100-XSE

VB = THE FLEXI LEG

with leg brake

> Using the extension between cross-beam and leg the clamping reach can be extended indefinitely
 > Forged from one piece
 > Leg brake for more safety



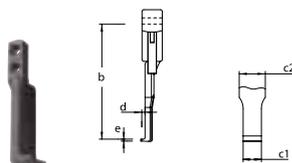
106/VB

b		Code	No.
100	0.236	2329034	106/A-100-VB

THE SLIM FIT LEG

106/S - 108/XS

> The small black
 > 1 slim leg foot for use in confined spaces
 > *S = Spare foot for THE SLIM
 > **XS = Spare foot for THE FILIGREE



c	d	e	f		Code	No.
27	7.5	3.7	14.5	0.100	1076957	106/S101
27	7.5	2.0	14.5	0.110	1495607	106/S101-S

c ₁	c ₂	d	e	f		Code	No.
16.0	25	5.0	3.7	9.6	0.102	2013681	106/XS101

1.04/2A... 1.04/HP2A...
1.06/2... 1.06/2A...
1.07/2... 1.07/2A...
G1/2"
1.06/HSP1



1.04/3A... 1.04/HP3A...
1.06/3... 1.06/3A...
1.07/3...
G3/4"
1.06/HSP2

1.06/4...
1.07/4... 1.07/4A...
G1" & M55x2
1.06/HSP3



b	c	d	e		Code	No.
150	30	18	3.5	0.7	1499378	104/B-150-TE

b	c	d	e		Code	No.
200	36	28	6.5	2.9	1499386	104/C-200-TE

b	c	d	e		Code	No.
150	30	18	3.5	0.700	1120530	106/B-150-N
300	30	18	3.5	1.250	1123947	106/B-300-N

b	c	d	e		Code	No.
200	36	28	6.5	1.560	1120549	106/C-200-N
300	36	28	6.5	2.360	1120557	106/C-300-N
400	36	28	6.5	2.940	1120565	106/C-400-N
500	36	28	6.5	3.500	1120573	106/C-500-N

b	c	d	e		Code	No.
150	30	24	3.5	0.580	1970542	106/B-150-B

b	c	d	e		Code	No.
200	36	32	5.0	1.160	1970550	106/C-200-B

b	c	d	e		Code	No.
150	30	18	3.5	0.720	1178253	106/B-150-E

b	c	d	e		Code	No.
200	36	28	6.5	1.520	1178350	106/C-200-E

b	c	d	e	f		Code	No.
150	40	7.0	5.0	15.0	0.700	1671499	106/B-150-SE
220	40	7.0	5.0	15.0	0.980	2015862	106/B-220-SE
300	40	7.0	5.0	15.0	1.230	2015870	106/B-300-SE

b	c ₁	c ₂	d	e	f		Code	No.
150	17.5	32	5.5	3.5	11.0	0.620	2018756	106/B-150-XSE

b		Code	No.
150	0.560	2329042	106/B-150-VB

b		Code	No.
200	1.320	2329050	106/C-200-VB

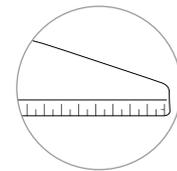
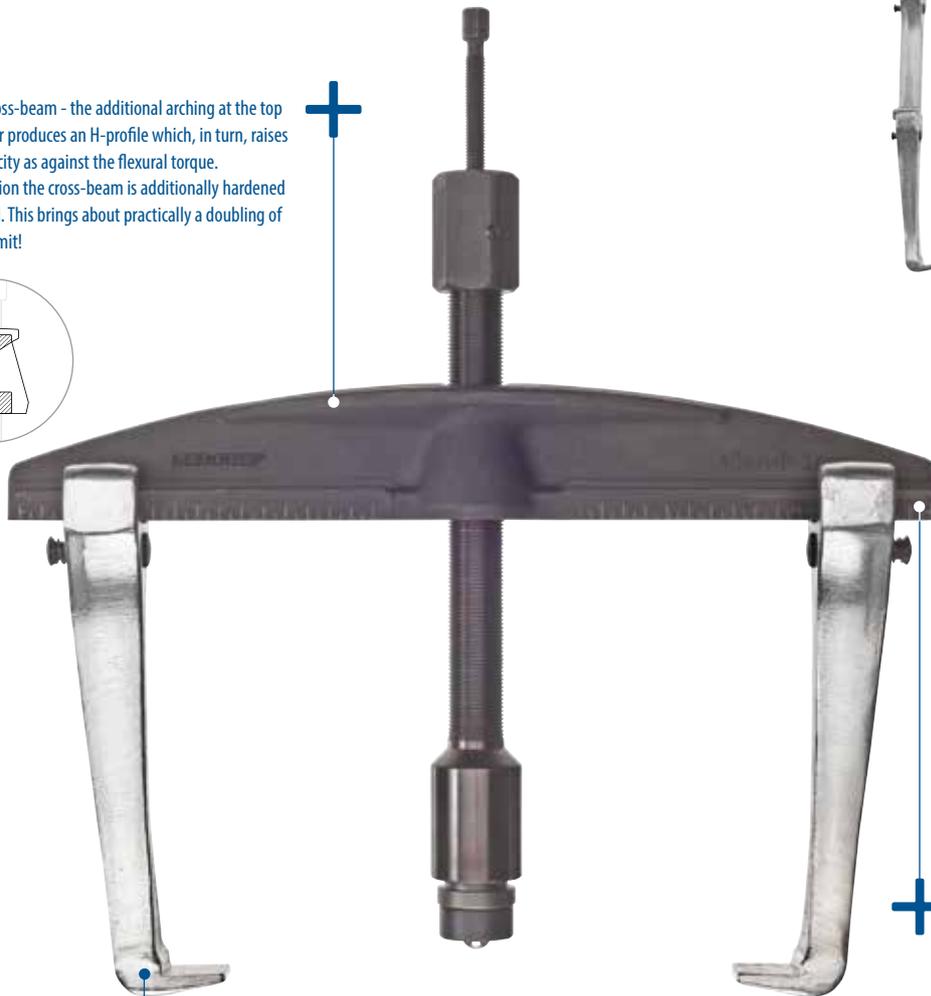
c	d	e	f		Code	No.
40	7.0	5.0	15.5	0.330	1671898	108/S201

c ₁	c ₂	d	e	f		Code	No.
17.5	32	5.5	3.5	11.0	0.230	2013711	108/XS201

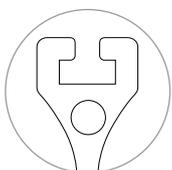


1.04 HIGH POWER - THE POWER PACK

- > Reinforced cross-beam - the additional arching at the top of the crossbar produces an H-profile which, in turn, raises the load capacity as against the flexural torque.
- > In the HP version the cross-beam is additionally hardened and tempered. This brings about practically a doubling of the loading limit!



- + The permanently lasered scale makes it easier to symmetrically align the legs. This effectively stops any tilting when extracting caused by incorrectly positioned legs. A final marking specifies the maximum clamping spread.



- + > The all-in steel legs are hot forged in one piece from 31CrV3 steel and hardened/tempered. They provide a positive-locking connection to the cross-beam.
- > The leg brake secures the hooks from unintentional motions.
- > Pressing the release button unlatches the locking - the leg can be moved on the cross-beam. Releasing the button causes the leg to jam tight on the cross-beam with slipping ruled out.

Hydraulic spindles

- > Hydraulic spindles simplify the work - less force and time needed for a pulling operation
- > The hydraulic spindle principle is both straightforward and ingenious at the same time. The effect of screwing in the clamping bolt is to compress the grease inside the hydraulic piston - the extending piston acts on the part to be extracted with a force many times greater than that manually applied at the top.
- > This controlled operation provides for working safely with the hydraulic spindle and is recommended, in particular, for high levels of force.
- > In the 1.04 series a hydraulic spindle can be used upwards of puller size 2A. The pressure piece can be replaced by a tip and lengthened by 35, 85 or 135 mm. The small pressure spindle is secured with an unscrewing lock to stop any accidental withdrawal.



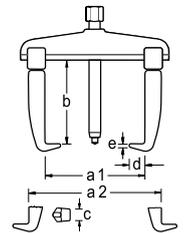
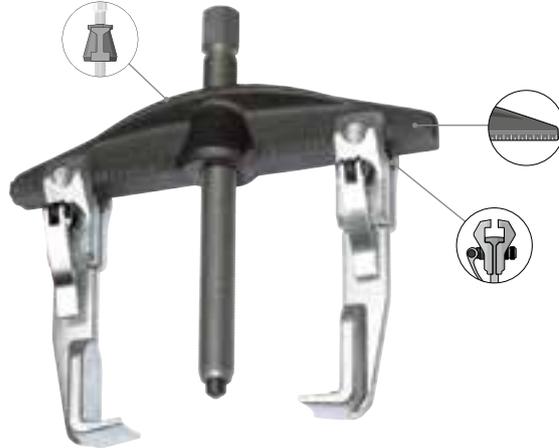
Safety-relevant

Forces amounting to several tons in weight act on the puller during the extracting operation! Drop-forged components "announce" possible overloading by bending. This is due to the fibre course of the material during forging permitting a certain flexibility of the components ahead of fracturing - an extremely "healthy" property, in fact!

1.04/HP UNIVERSAL PULLER HIGH POWER

2-arm pattern

- > Cross-beam especially hardened and tempered allows safe application of extremely high pulling forces and doubles the tensile force capability
- > Strong drop forged pattern
- > By reversing the legs, this tool can be used as an internal or external puller
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > Integral legs, with quick-release
- > Spindle with replaceable ball and tip
- > Spindle thermo-chemically hardened
- > Upgradeable with hydraulic spindle (see table)

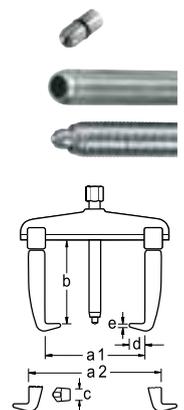


a_1	$a_{2\min}$	$a_{2\max}$	b	max. t		 mm optional 	c	d	e			Code	No.	
130	70	170	100	5.0	M 14x1,5 x 140	17	—	22	12	3.0	x	1.2	1868152	1.04/HP1A
200	110	260	150	10.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.4	1868160	1.04/HP2A
350	150	420	200	15.0	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	7.7	1868179	1.04/HP3A

1.04/HP-B UNIVERSAL PULLER HIGH POWER

2-arm pattern, rigid legs with leg brake

- > Cross-beam especially hardened and tempered allows safe application of extremely high pulling forces and doubles the tensile force capability
- > Strong drop forged pattern
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > Upgradeable with hydraulic spindle (see table)



a_1	$a_{2\min}$	$a_{2\max}$	b	max. t		 mm optional 	c	d	e			Code	No.	
130	70	170	100	5.0	M 14x1,5 x 140	17	—	22	15	3.0	x	1.2	1981145	1.04/HP1A-B
200	110	260	150	10.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	x	3.4	1981153	1.04/HP2A-B
350	150	420	200	15.0	G 3/4 x 280	27	1.06/HSP2	36	32	5.0	x	7.7	1981161	1.04/HP3A-B



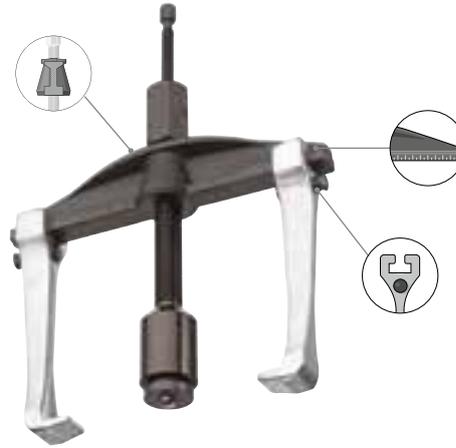
1.04/HP-B-HSP UNIVERSAL PULLER HIGH POWER

hydraulic, 2-arm pattern, solid steel legs with leg brake

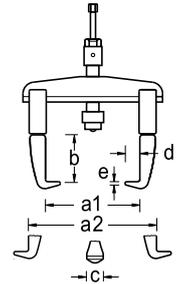
- > Cross-beam especially hardened and tempered allows safe application of extremely high pulling forces and doubles the tensile force capability
- > Strong drop forged pattern
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > With the hydraulic spindle, a controlled and safe pulling action is possible at all times
- > Also available with standard spindle - Model 1.04/HP-B



1.04/HP3A-B-HSP2



1.04/HP2A-B-HSP1

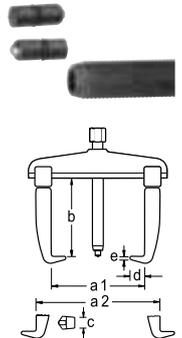
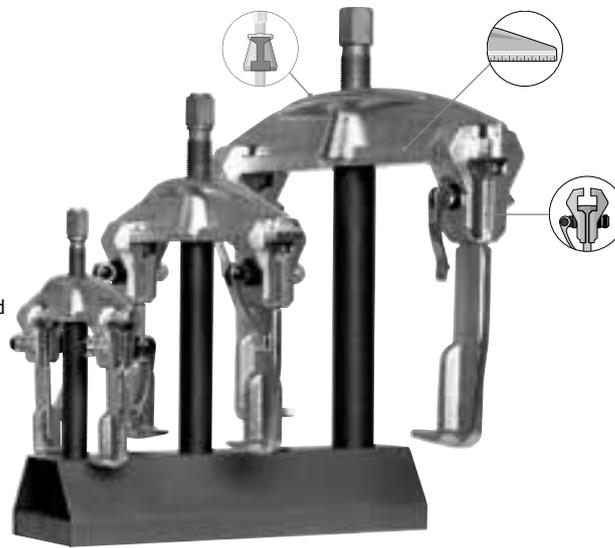


a_1	$a_{2\min}$	$a_{2\max}$	b	max. t	max. N·m		c	d	e			Code	No.
200	110	260	70	10.0	17	1.06/HSP1	30	24	3.5	x	3.8	2016206	1.04/HP2A-B-HSP1
350	150	420	120	12.0	19	1.06/HSP2	36	32	5.0	x	7.8	2300036	1.04/HP3A-B-HSP2

1.04/ST PULLER SET

with stand

- > Consisting of 3 pullers each in different sizes
- > Strong drop forged pattern
- > Due to the bending-moment reinforcement on its back face, the energy-saving design of the cross-beam means even stronger and safer pulling work
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > The quick-action adjustment feature supports the energy-saving and fast operation
- > Spindle with replaceable ball and tip point
- > Upgradeable with hydraulic spindle (see table)



CONTENTS

		Code	No.
1.04/1A	15.2	1675982	1.04/ST
1.04/2A			
1.04/3A			

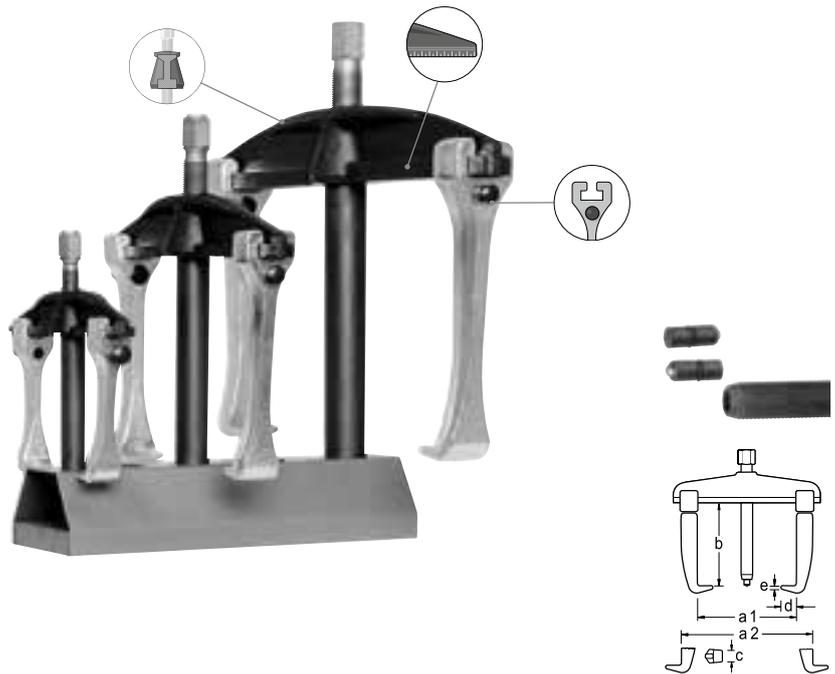
SPECIFICATIONS

No.	Code	a_1	$a_{2\min}$	$a_{2\max}$	b	max. t			optional	c	d	e		
1.04/1A	1307703	130	70	170	100	3.0	M 14x1,5 x 140	17	-	22	12	3.0	x	1.2
1.04/2A	1307827	200	110	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.4
1.04/3A	1307940	350	150	420	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	7.7

1.04/ST-HP-B PULLER SET

with stand

- > Consisting of 3 pullers in different sizes and stand
- > Cross-beam especially hardened and tempered allows safe application of extremely high pulling forces and doubles the tensile force capability
- > Strong drop forged pattern
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > Upgradeable with hydraulic spindle (see table)



CONTENTS

		Code	No.
1.04/HP1A-B	15.2	2300044	1.04/ST-HP-B
1.04/HP2A-B			
1.04/HP3A-B			

SPECIFICATIONS

No.	Code	a ₁	a _{2 min}	a _{2 max}	b	max. t			optional	c	d	e		
1.04/HP1A-B	1981145	130	70	170	100	5.0	M 14x1,5 x 140	17	-	22	15	3.0	x	1.2
1.04/HP2A-B	1981153	200	110	260	150	10.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	x	3.4
1.04/HP3A-B	1981161	350	150	420	200	15.0	G 3/4 x 280	27	1.06/HSP2	36	32	5.0	x	7.7

1100-1.04 UNIVERSAL PULLER SET

in L-BOXX® 136

- > Max. capacity up to 5 t
- > 2- and 3-arm cross-beam
- > With rigid and slim legs and extensions
- > Extra-slim pulling legs for cramped spaces are attached for self-mounting
- > The forged leg feet are very slim particularly suitable for barely accessible places
- > 12 different pullers can be combined
- > External Ø up to 130 mm, internal Ø up to 170 mm with a 200 mm clamping reach
- > 1100 CT2-1.04 to retrofit existing L-BOXX®es 136
- > With Check-Tool insert for quick check of completeness
- > As tools are fully sunk in the foam, the equipped insert can be stacked
- > Insert for use in drawers with min. dimensions 400 x 310 x 60 mm



1100-1.04



1100 CT2-1.04

	Code	No.
6.3	2838362	1100-1.04
4.1	2836068	1100 CT2-1.04

Description		Code	No.
Foam insert 2/2 L-BOXX 136, empty	0.200	2836076	EI-1100 CT2-1.04



1100-1.04/12A PULLER SET INTERNAL/EXTERNAL

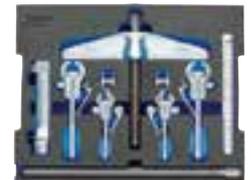


in L-BOXX® 136

- › Max. capacity 3 and 5 t
- › For clamping depths up to Ø 200 mm external, Ø 70-260 mm internal, and clamping reach up to 300 mm
- › In 3 of 4 spindles the spindle tip (ball/tip) can be rotated
- › Quick-release pulling legs with integral T-profile for a better transmission of force
- › The forged leg feet are very slim particularly suitable for barely accessible places
- › 2 rigid extensions each 100 and 150 mm with leg brake for quick adjustment of the legs
- › 1100 CT2-1.04/12A to retrofit existing L-BOXX®es 136
- › With Check-Tool insert for quick check of completeness
- › As tools are fully sunk in the foam, the equipped insert can be stacked
- › Insert for use in drawers with min. dimensions 400 x 310 x 90 mm



1100-1.04/12A



1100 CT2-1.04/12A

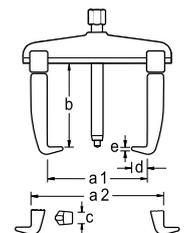
	Code	No.
9.6	2927241	1100-1.04/12A
7.4	2927268	1100 CT2-1.04/12A

Description	W	D	H		Code	No.
Foam insert 2/2 L-BOXX 136, empty	400	310	90	0.200	2927276	EI-1100 CT2-1.04/12A

1.06 UNIVERSAL PULLER

2-arm pattern

- › The tried and tested model for the safe and quick removal of pulleys, wheels, ball bearings, etc.
- › Strong drop forged design
- › Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- › By reversing the legs, this tool can be used as an internal or external puller
- › Extra or replacement legs increase versatility
- › Upgradeable with hydraulic spindle (see table)

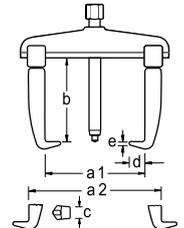


a ₁	a _{2 min}	a _{2 max}	b	max. t			optional	c	d	e			Code	No.
90	60	140	100	3.0	M 14x1,5 x 140	17	-	22	12	3.0	x	1.1	8000230	1.06/1
130	70	180	100	3.0	M 14x1,5 x 140	17	-	22	12	3.0	x	1.3	8000310	1.06/1A
160	80	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.0	8000580	1.06/2
200	90	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.5	8000660	1.06/2A
250	125	330	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	7.2	8000740	1.06/3
350	125	420	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	8.2	8000820	1.06/3A
520	185	600	200	10.0	G 1 x 310	36	1.06/HSP3	36	28	6.5	-	13.7	8000900	1.06/4

1.06 UNIVERSAL PULLER

2-arm pattern, with extended legs

- > Strong drop forged design
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > Extended legs
- > By reversing the legs, this tool can be used as an internal or external puller
- > Extra or replacement legs increase versatility
- > Upgradeable with hydraulic spindle (see table)

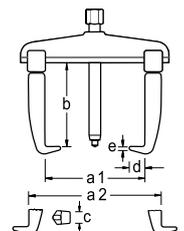


a_1	a_{2min}	a_{2max}	b	max. t		 mm	optional 	c	d	e			Code	No.
90	60	140	200	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.5	8108350	1.06/1-2
130	70	180	200	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.6	8108430	1.06/1A-2
160	80	220	300	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	4.1	8108510	1.06/2-3
200	90	260	300	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	4.5	8108780	1.06/2A-3
250	125	330	300	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	9.1	8001200	1.06/3-3
350	125	420	300	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	9.8	8108860	1.06/3A-3
520	185	600	300	10.0	G 1 x 310	36	1.06/HSP3	36	28	6.5	x	15.2	8108940	1.06/4-3
250	125	330	400	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	10.0	8109080	1.06/3-4
350	125	420	400	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	11.1	8109160	1.06/3A-4
520	185	600	400	10.0	G 1 x 310	36	1.06/HSP3	36	28	6.5	-	16.4	8109240	1.06/4-4
250	125	330	500	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	11.3	8109320	1.06/3-5
350	125	420	500	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	12.2	8112380	1.06/3A-5
520	185	600	500	10.0	G 1 x 310	36	1.06/HSP3	36	28	6.5	-	19.0	8112460	1.06/4-5

1.06/B UNIVERSAL PULLER

2-arm pattern, rigid legs with leg brake

- > Strong drop forged design
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > By reversing the legs, this tool can be used as an internal or external puller
- > Extra or replacement legs increase versatility
- > Upgradeable with hydraulic spindle (see table)



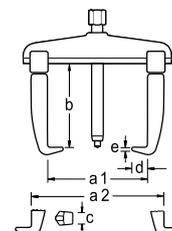
a_1	a_{2min}	a_{2max}	b	max. t		 mm	optional 	c	d	e			Code	No.
100	50	140	100	3.0	M 14x1,5 x 140	17	–	22	15	3.0	x	0.9	1956337	1.06/11-B
140	60	180	100	3.0	M 14x1,5 x 140	17	–	22	15	3.0	x	1.3	1956345	1.06/1A1-B
170	80	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	x	2.8	1956353	1.06/21-B
210	90	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	x	3.3	1956361	1.06/2A1-B
250	125	340	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	32	5.0	x	6.7	1956388	1.06/31-B
340	125	430	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	32	5.0	x	7.5	1956396	1.06/3A1-B
520	185	610	200	10.0	G 1 x 310	36	1.06/HSP3	36	32	5.0	-	14.0	1958399	1.06/41-B



1.06/E QUICK-RELEASE PULLER

2-arm pattern

- > The tried and tested model for the safe and quick removal of pulleys, wheels, ball bearings, etc.
- > Strong drop forged pattern
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > By reversing the legs, this tool can be used as an internal or external puller
- > Exchangeable legs for several clamping reaches available as accessories
- > Quick release legs for fast, easy set-up and adjustment
- > Upgradeable with hydraulic spindle (see table)

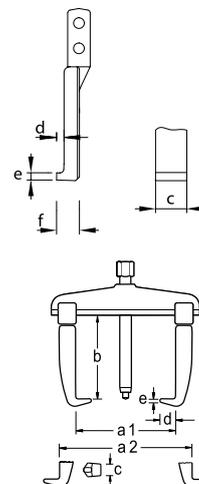


a ₁	a _{2 min}	a _{2 max}	b	max. t		mm	optional 	c	d	e			Code	No.
90	60	140	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.1	1213830	1.06/1-E
130	70	180	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.3	1215140	1.06/1A-E
160	80	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.0	1216570	1.06/2-E
200	90	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.5	1217720	1.06/2A-E
250	125	330	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	7.1	1218980	1.06/3-E
350	125	420	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	8.2	1220160	1.06/3A-E

1.06/S-E QUICK-RELEASE PULLER

2-arm pattern, with slim legs

- > The forged leg feet are very slim
- > Particularly suitable for barely accessible places
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > Quick release legs for fast, easy set-up and adjustment



a	b	max. t		mm	optional 	c	d	e	f			Code	No.
100	100	2.0	M 14x1,5 x 140	17	–	29.8	7.5	3.7	13.5	x	1.0	2015706	1.06/S1-E
140	100	2.5	M 14x1,5 x 140	17	–	29.8	7.5	3.7	13.5	x	1.1	2015714	1.06/S1A-E
160	150	5.0	G 1/2 x 210	22	1.06/HSP1	40.0	7.0	5.0	15.0	x	2.9	2015722	1.06/S2-E
200	150	5.0	G 1/2 x 210	22	1.06/HSP1	40.0	7.0	5.0	15.0	x	3.2	2015730	1.06/S2A-E

5.10

>453



Remember the safety cover!

SPINDLE / LEGS

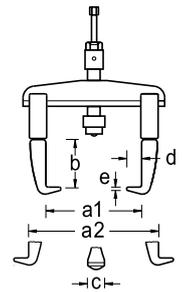
>450



1.06/HSP-B UNIVERSAL PULLER

hydraulic, 2-arm pattern, rigid legs with leg brake

- > Strong drop forged pattern
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > With the hydraulic spindle, a controlled and safe pulling action is possible at all times
- > The pressure piece can be replaced by a tip and lengthened, as required.
- > The small pressure spindle is secured with an unscrewing lock to stop any accidental withdrawal.
- > Also available with standard spindle - Model 1.06/B

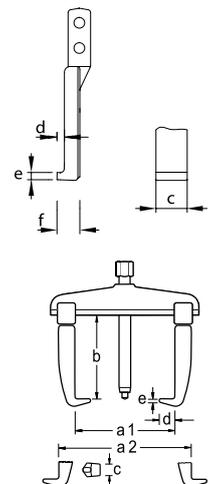


a ₁	a ₂	b	max. t	max. N·m		c	d	e			Code	No.
170	220	70	5.0	9	1.06/HSP1	30	24	3.5	x	3.3	1957899	1.06/21-B-HSP1
210	260	70	5.0	9	1.06/HSP1	30	24	3.5	x	3.4	1957902	1.06/2A1-B-HSP1
250	340	120	7.5	13	1.06/HSP2	36	32	5.0	x	7.2	1957910	1.06/31-B-HSP2
340	430	120	7.5	13	1.06/HSP2	36	32	5.0	x	8.3	1957929	1.06/3A1-B-HSP2
520	610	75	10.0	25	1.06/HSP3	36	32	5.0	-	14.0	1957937	1.06/41-B-HSP3

1.06/AS PULLER SET

with 6 legs

- > 2-arm puller, with 6 slim legs in 3 lengths
- > Particularly suitable for barely accessible places



a	b	max. t		 mm	optional 	c	d	e	f			Code	No.
130	100 / 200 / 250	2.5	M 14x1,5 x 140	17	-	29.5	7.5	3.7	13.5	x	3.4	8001710	1.06/AS
260	150 / 220 / 300	5.0	G 1/2 x 210	22	1.06/HSP1	40.0	7.0	5.0	15.0	x	8.1	1675974	1.06/AS-2

For longer spindles see spindle summary on page 450

1.06/ST PULLER SET

with stand

- > Consisting of 5 pullers each in different sizes with standard or quick-release pulling legs
- > Scale for uniform adjustment of the puller legs. Allows centred pulling, with optimised application of force, even when extremely high pulling forces are required
- > For clamping depths up to Ø 250 mm external, Ø 330 mm internal, and clamping reach up to 200 mm



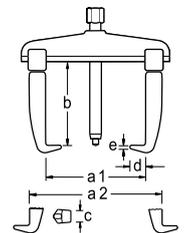
1.06/ST



1.06/ST-E



1.06/ST1-B



CONTENTS

		Code	No.
1.06/1 1.06/1A 1.06/2 1.06/2A 1.06/3	19.0	8111570	1.06/ST
1.06/1-E 1.06/1A-E 1.06/2-E 1.06/2A-E 1.06/3-E	19.2	1322745	1.06/ST-E
1.06/11-B 1.06/1A1-B 1.06/21-B 1.06/2A1-B 1.06/31-B	17.2	2004569	1.06/ST1-B

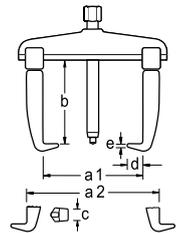
SPECIFICATIONS

No.	Code	a ₁	a _{2 min}	a _{2 max}	b	max. t		mm	optional	c	d	e		
1.06/1	8000230	90	60	140	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.1
1.06/1A	8000310	130	70	180	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.3
1.06/2	8000580	160	80	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.0
1.06/2A	8000660	200	90	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.5
1.06/3	8000740	250	125	330	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	7.2
1.06/1-E	1213830	90	60	140	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.1
1.06/1A-E	1215140	130	70	180	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	x	1.3
1.06/2-E	1216570	160	80	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.0
1.06/2A-E	1217720	200	90	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	x	3.5
1.06/3-E	1218980	250	125	330	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	x	7.1
1.06/11-B	1956337	100	50	140	100	3.0	M 14x1,5 x 140	17	–	22	15	3.0	x	0.9
1.06/1A1-B	1956345	140	60	180	100	3.0	M 14x1,5 x 140	17	–	22	15	3.0	x	1.3
1.06/21-B	1956353	170	80	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	x	2.8
1.06/2A1-B	1956361	210	90	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	x	3.3
1.06/31-B	1956388	250	125	340	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	32	5.0	x	6.7

1.07 UNIVERSAL PULLER

3-arm pattern

- > Even load distribution over 3 legs ensures secure grip and balanced pull
- > By reversing the legs, this tool can be used as an internal or external puller
- > Extra or replacement legs increase versatility
- > Upgradeable with hydraulic spindle (see table)

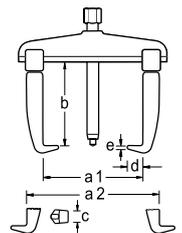


a_1	$a_{2\min}$	$a_{2\max}$	b	max. t		 mm	optional 	c	d	e		Code	No.
90	70	140	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	1.4	8113940	1.07/1
130	80	180	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	1.6	8114080	1.07/1A
160	100	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	3.6	8114160	1.07/2
200	100	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	4.2	8114240	1.07/2A
250	100	400	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	9.3	1541757	1.07/3

1.07/B UNIVERSAL PULLER

3-arm pattern, rigid legs with leg brake

- > Even load distribution over 3 legs ensures secure grip and balanced pull
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Extra or replacement legs increase versatility
- > Upgradeable with hydraulic spindle (see table)



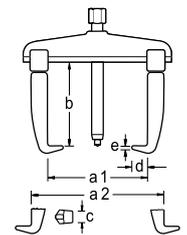
a_1	$a_{2\min}$	$a_{2\max}$	b	max. t		 mm	optional 	c	d	e		Code	No.
90	70	140	100	3.0	M 14x1,5 x 140	17	–	22	15	3.0	1.2	1957945	1.07/11-B
130	80	180	100	3.0	M 14x1,5 x 140	17	–	22	15	3.0	1.4	1957953	1.07/1A1-B
160	100	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	3.5	1957961	1.07/21-B
200	100	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	24	3.5	3.7	1957988	1.07/2A1-B
250	100	400	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	8.0	1957996	1.07/31-B



1.07/E QUICK-RELEASE PULLER

3-arm pattern

- > Quick release legs for fast, easy set-up and adjustment
- > By reversing the legs, this tool can be used as an internal or external puller
- > Upgradeable with hydraulic spindle (see table)

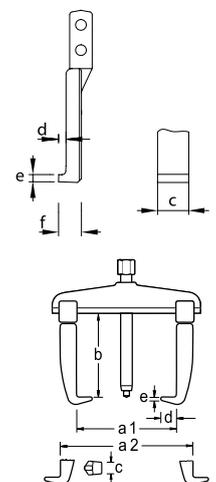


a_1	$a_{2\min}$	$a_{2\max}$	b	max. t		\bullet mm	optional 	c	d	e		Code	No.
90	70	140	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	1.4	1222902	1.07/1-E
130	80	180	100	3.0	M 14x1,5 x 140	17	–	22	12	3.0	1.6	1225901	1.07/1A-E
160	100	220	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	3.8	1227335	1.07/2-E
200	100	260	150	5.0	G 1/2 x 210	22	1.06/HSP1	30	18	3.5	4.0	1227459	1.07/2A-E
250	100	400	200	7.5	G 3/4 x 280	27	1.06/HSP2	36	28	6.5	9.2	1554751	1.07/3-E

1.07/S-E QUICK-RELEASE PULLER

3-arm pattern, with slim legs

- > The forged leg feet are very slim
- > Particularly suitable for barely accessible places
- > Quick release legs for fast, easy set-up and adjustment

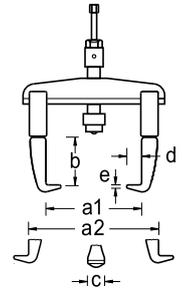


a	b	max. t		\bullet mm	optional 	c	d	e	f		Code	No.
90	100	2.5	M 14x1,5 x 140	17	–	29.5	7.5	3.7	13.5	1.3	2016036	1.07/S1-E
130	100	2.5	M 14x1,5 x 140	17	–	29.5	7.5	3.7	13.5	1.4	2016044	1.07/S1A-E
160	150	5.0	G 1/2 x 210	22	1.06/HSP1	40.0	7.0	5.0	15.0	3.6	2016052	1.07/S2-E
200	150	5.0	G 1/2 x 210	22	1.06/HSP1	40.0	7.0	5.0	15.0	3.9	2016060	1.07/S2A-E

1.07/HSP-B UNIVERSAL PULLER

hydraulic, 3-arm pattern, rigid legs with leg brake

- > Even load distribution over 3 legs ensures secure grip and balanced pull
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Extra or replacement legs increase versatility
- > The pressure piece can be replaced by a tip and lengthened, as required.
- > The small pressure spindle is secured with an unscrewing lock to stop any accidental withdrawal.
- > Also available with standard spindle - Model 1.07/B

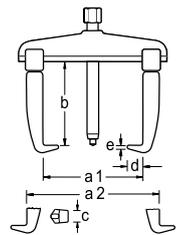


$a_{1\max}$	$a_{1\min}$	$a_{2\max}$	$a_{2\min}$	b	max. t	max. N·m		c	d	e		Code	No.
160	20	220	140	70	5.0	9	1.06/HSP1	30	24	3.5	4.1	2546566	1.07/21-B-HSP1
200	20	260	140	70	5.0	9	1.06/HSP1	30	24	3.5	4.2	2079984	1.07/2A1-B-HSP1
250	25	340	220	120	7.5	13	1.06/HSP2	36	28	6.5	8.6	2545128	1.07/31-B-HSP2

1.07/4 UNIVERSAL PULLER

2-/3-arm pattern

- > Just like our standard model no. 1.06, this puller is designed for all branches of industry, but particularly for the construction of electric motors
- > It is also suitable for removing heavy, multistage V-belt pulley wheels, flywheels, gear wheels, etc.
- > Pins are used to lock the arms at 120 degrees to each other on the hub
- > Upgradeable with hydraulic spindle (see table)
- > This puller may also be used with the hydraulic aid no. 1.50 without requiring any reduction bushing
- > On request, this puller is also available with further legs and extendable up to 6 arms



$a_{1\max}$	$a_{1\min}$	$a_{2\max}$	$a_{2\min}$	b	max. t		mm optional	c	d	e		Code	No.
450	150	530	270	200	10	G 1 x 360	36 1.06/HSP3	36	28	6.5	18.8	8002440	1.07/4
580	150	640	270	200	10	G 1 x 360	36 1.06/HSP3	36	28	6.5	22.0	1958003	1.07/4A
450	150	530	270	300	10	G 1 x 360	36 1.06/HSP3	36	28	6.5	21.0	1305085	1.07/4-3
450	150	530	270	500	10	G 1 x 360	36 1.06/HSP3	36	28	6.5	25.2	1305425	1.07/4-5
580	150	640	270	400	10	G 1 x 360	36 1.06/HSP3	36	28	6.5	25.8	2302802	1.07/4A-4
580	150	640	270	500	10	G 1 x 360	36 1.06/HSP3	36	28	6.5	28.4	2302810	1.07/4A-5

1.50

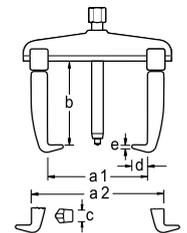
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1.07/4-B UNIVERSAL PULLER

2-/3-arm pattern, rigid legs with leg brake

- > Just like our standard model no. 1.06, this puller is designed for all branches of industry, but particularly for the construction of electric motors
- > It is also suitable for removing heavy, multistage V-belt pulley wheels, flywheels, gear wheels, etc.
- > Pins are used to lock the arms at 120 degrees to each other on the hub
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Upgradeable with hydraulic spindle (see table)
- > This puller may also be used with the hydraulic aid no. 1.50 without requiring any reduction bushing
- > On request, this puller is also available with further legs and extendable up to 6 arms

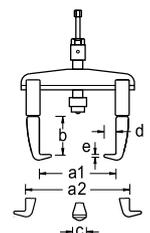


a _{1 max}	a _{1 min}	a _{2 max}	a _{2 min}	b	max. t		 mm optional 	c	d	e		Code	No.
450	150	530	270	200	10	G 1" x 360	36 1.06/HSP3	36	28	6.5	18.8	2546531	1.07/41-B
580	150	640	270	200	10	G 1" x 360	36 1.06/HSP3	36	28	6.5	22.0	2546558	1.07/4A1-B

1.07/4-HSP-B UNIVERSAL PULLER

hydraulic, 2-/3-arm pattern, rigid legs with leg brake

- > Just like our standard model no. 1.06, this puller is designed for all branches of industry, but particularly for the construction of electric motors
- > It is also suitable for removing heavy, multistage V-belt pulley wheels, flywheels, gear wheels, etc.
- > Pins are used to lock the arms at 120 degrees to each other on the hub
- > Rigid legs forged from one piece
- > Leg brake - prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > This puller may also be used with the hydraulic aid no. 1.50 without requiring any reduction bushing
- > On request, this puller is also available with further legs and extendable up to 6 arms
- > The pressure piece can be replaced by a tip and lengthened, as required.
- > The small pressure spindle is secured with an unscrewing lock to stop any accidental withdrawal.
- > Also available with standard spindle - Model 1.07/4-B

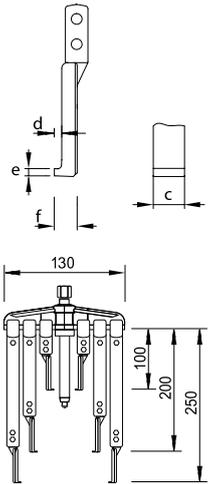


a _{1 max}	a _{1 min}	a _{2 max}	a _{2 min}	b	max. t	max. N·m		c	d	e		Code	No.
450	150	530	270	140	10	25	1.06/HSP3	36	28	6.5	19.9	2546574	1.07/41-B-HSP3
580	150	640	270	140	10	25	1.06/HSP3	36	28	6.5	23.1	2546582	1.07/4A1-B-HSP3

1.07/AS PULLER SET

with 9 legs

- > 3-arm puller, with 9 slim legs in 3 lengths
- > Particularly suitable for barely accessible places



a	b	max. t		 mm	optional 	c	d	e	f	 kg	Code	No.
130	100 / 200 / 250	2.5	M 14x1,5 x 140	17	–	29.5	7.5	3.7	13.5	4.8	8117260	1.07/AS
200	150 / 220 / 300	5.0	G 1/2 x 210	22	1.06/HSP1	40.0	7.0	5.0	15.0	11.5	1675990	1.07/AS-2

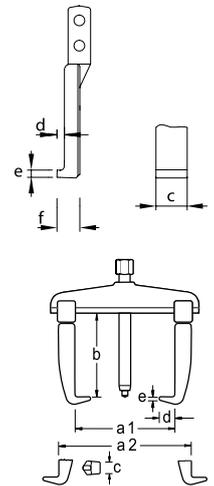
1.07/K PULLER SET

with 9 legs

- > In plastic case
- > Contents: 1 spindle, 1 cross-beam each 2- and 3-arm pattern and 9 slim pulling legs in 3 lengths
- > Second spindle in the set 1.07/K saves working time
- > 1.07/K-2 insert with nubs on both sides



1.07/K

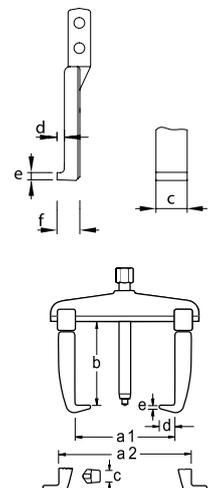


a	b	max. t		 mm	optional 	c	d	e	 kg	Code	No.
130	100 / 200 / 250	2.5	M 14x1,5 x 140	17	–	27	7.5	3.7	5.8	8117340	1.07/K
200	150 / 220 / 300	5.0	G 1/2 x 210	22	1.06/HSP1	40	7.0	5.0	13.5	1676008	1.07/K-2

1.07/K-SE PULLER SET

with 3 legs

- > In plastic case
- > Contents: 1 spindle, 1 cross-beam each 2- and 3-arm pattern and 3 quick-release pulling legs
- > Second spindle in the set 1.07/K-1-SE saves working time



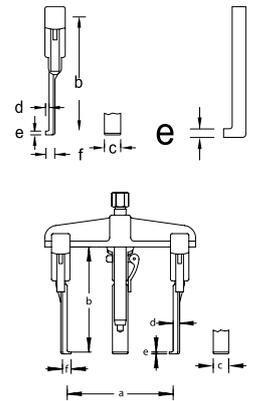
a ₁	b	max. t		 mm	optional 	c	d	e	 kg	Code	No.
90	100	2.5	M 14x1,5 x 140	17	–	27	7.5	3.7	2.2	1438484	1.07/K-1-SE
160	150	5.0	G 1/2 x 210	22	1.06/HSP1	40	7.0	5.0	5.5	1645455	1.07/K-2-SE



1.07/K-SE 5 PULLER SET

with 6 legs

- > In plastic case
- > The forged leg feet are very slim particularly suitable for barely accessible places
- > Quick release legs for fast, easy set-up and adjustment
- > Contents: 2 spindles, 1 cross-beam each 2- and 3-arm pattern, and 6 slim quick-release pulling legs in 2 lengths
- > Clamping reach 100 mm = thickness of hooked foot at tip (e) 3.7 mm, max. 2.5 t
- > Clamping reach 200 mm = thickness of hooked foot at tip (e) 2.0 mm, max. 2.0 t

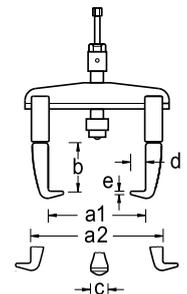


a	b		 mm	c	d		Code	No.
90	100 / 200	M 14x1,5 x 140	17	27	7.5	4.2	1745158	1.07/K-1-SE 200 S

1.07/K-HSP PULLER SET

with 3 legs

- > For internal and external use, for hard, everyday use, for industrial use, or on cars and trucks
- > In plastic case
- > Contents: 1 hydraulic spindle, 1 cross-beam each 2- and 3-arm pattern and 3 quick-release pulling legs
- > The pressure piece can be replaced by a tip and lengthened, as required.
- > The small pressure spindle is secured with an unscrewing lock to stop any accidental withdrawal.

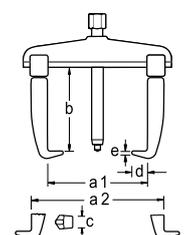


a ₁	a ₂	b	max. t	max. N-m		 mm	c	d	e		Code	No.
160	220	70	5.0	9	1.06/HSP1	32	30	18	3.5	7.2	1438492	1.07/K-2-E-HSP1

1.07/K-B PULLER SET

with 3 legs, with leg brake

- > In plastic case
- > Contents: 2 spindles, 1 cross-beam each 2- and 3-arm pattern and 3 rigid legs with leg brake
- > Prevents unintentional leg slipping. The leg can be slid along the cross-beam at the push of a button
- > By reversing the legs, this tool can be used as an internal or external puller
- > Extra spindle supplied for convenience

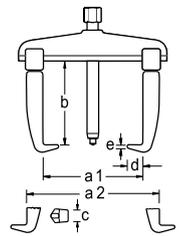


a	b	max. t		 mm	c	d	e		Code	No.
140	100	3.0	M 14x1,5 x 140	17	22	15	3.0	2.9	2224097	1.07/K-1A-B

1.08 UNIVERSAL PULLER

2-arm pattern, with fast spindle adjustment

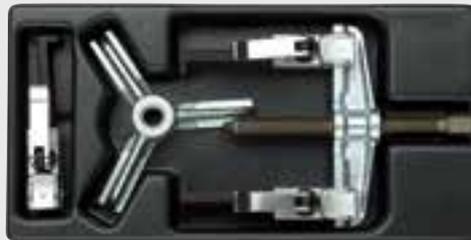
- > Twice as fast and twice as simple
- > With the fast spindle adjustment feature, the spindle can be set the desired range in a moment. When the clamping yoke is released, the 4-part internal thread closes, and takes the full working pressure



a_1	$a_{2\min}$	$a_{2\max}$	b	max. t		 mm	c	d	e		Code	No.
200	110	260	150	5.0	G 1/2 x 210	22	30	18	3.5	4.1	8000070	1.08/2A

1500 ES-1.07

>103



1100-1.04

>56



1100-1.30

>57

