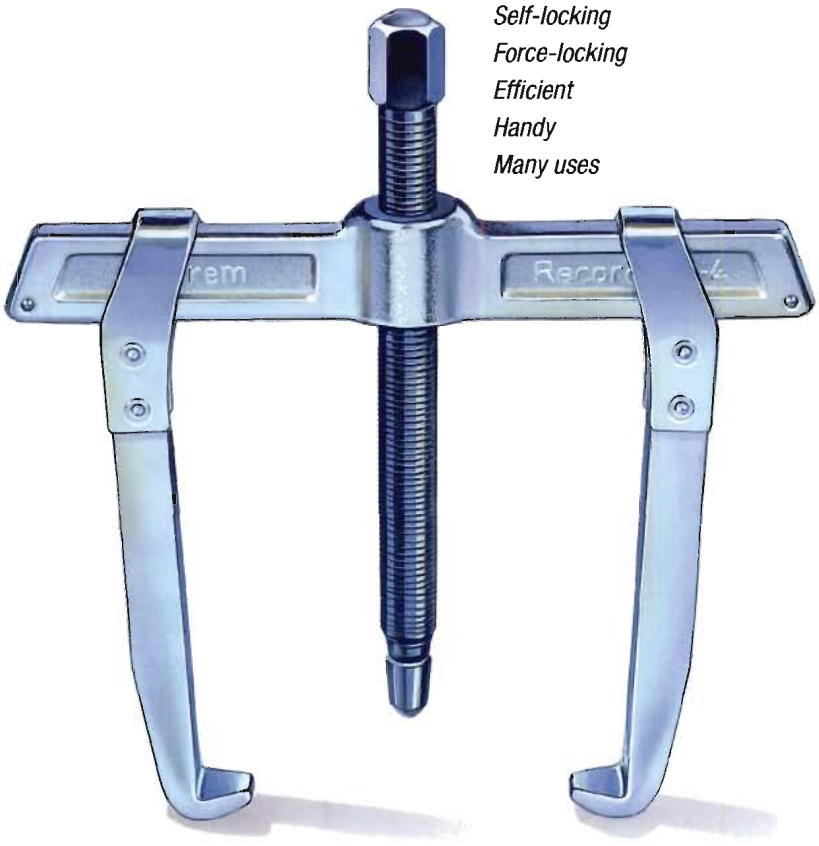
ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Two-Arm Puller "RECORD" No. 54

Various patents

Self-locking
Force-locking
Efficient
Handy
Many uses



With changeable arms.

For parts to be gripped from outside or from inside such as gear wheels, anti-friction bearings, etc.

The clamping width is adjusted by shifting the puller arms on the traverse.

Thanks to the special patented angular design the arms are self-locking thus excluding sliding away or withdrawal of the arms during work.

The angular design also produces a force-locking connection acting during the removing procedure via the spindle.

High spindle pressure - Increased force-locking connection - High automatic locking.

Traverse and arms made of heat-treated chrome alloy steel which is also a reason why the slim as well as space and weight-saving shape is possible.

After detailed testing automobile manufacturers recommend the puller as a special tool.

The mechanical spindles can be supplemented by pivoted, exchangeable spindle adapters (see page 1.23), which, despite of the above, are fixed during work.

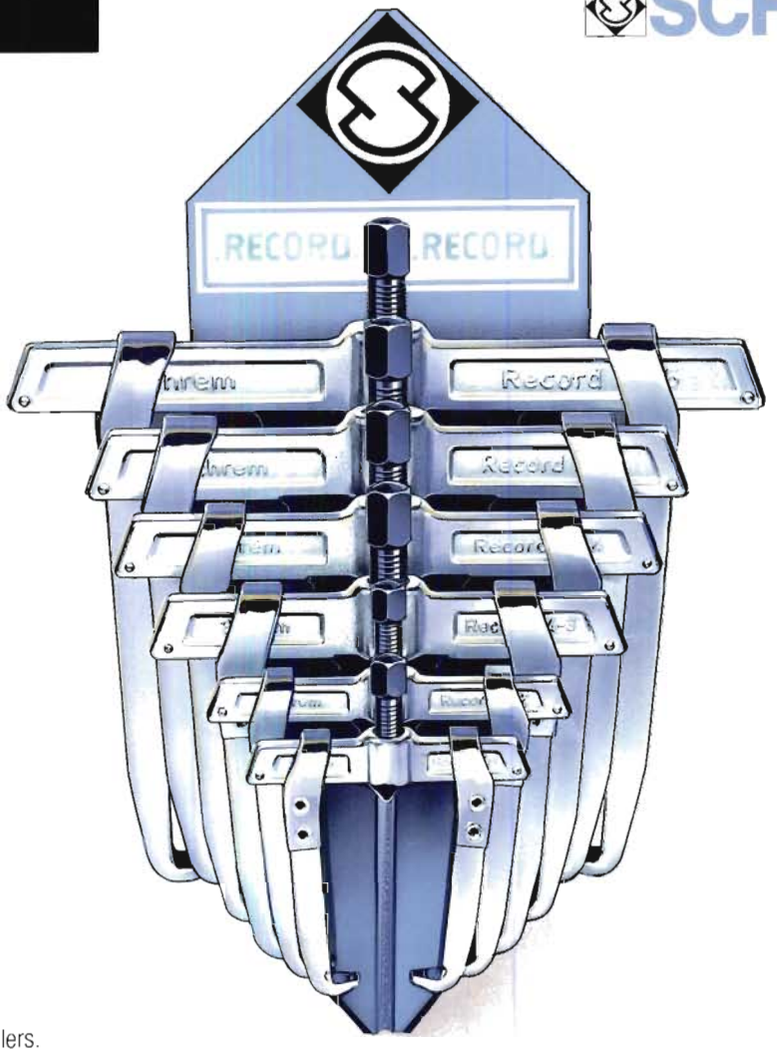
Puller galvanized.
Spindle burnished.

Two-Arm Puller "RECORD" No. 54

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Various patents



For store or tool crib:
Holder complete with all 6 pullers.

Holder dimensions when assembled:
(W x D x H) 215 x 235 x 475 mm
Blue-coated.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
54-100	80	3.12	100	4.00	0,75
54-200	120	4.75	125	5.00	0,90
54-300	160	6.37	150	6.00	2,30
54-400	200	7.87	175	7.00	2,50
54-500	250	9.87	200	8.00	3,45
54-600	350	13.75	250	10.00	4,40
54-009	Holder with 6 pullers				15,50

Standard length arms

Purchase Order No.	For Puller No. 54-	↕ mm	↕ inch	⚖ kg
54-101	-100, -200	100	4.00	0,18
54-201	-100, -200	125	5.00	0,22
54-301	-300, -400	150	6.00	0,50
54-401	-300, -400	175	7.00	0,56
54-501	-500, -600	200	8.00	0,78
54-601	-500, -600	250	10.00	0,93

Special length arms

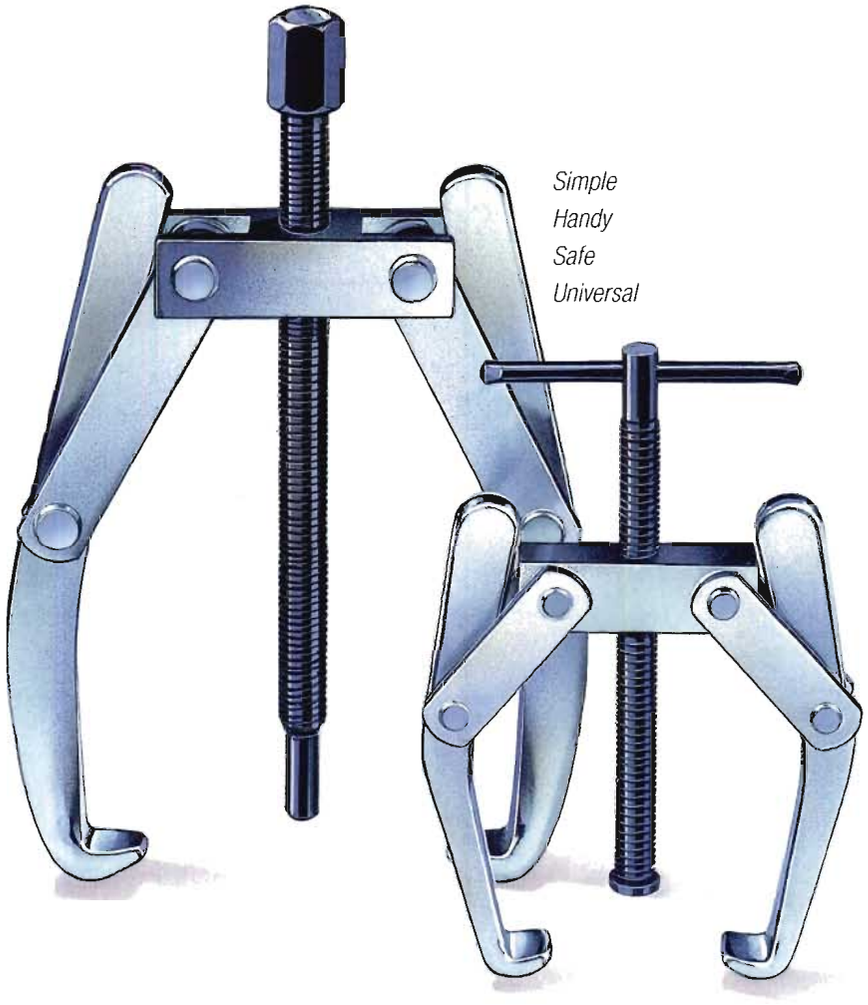
Purchase Order No.	For Puller No. 54-	↕ mm	↕ inch	⚖ kg
54-102	-100, -200	200	8.00	0,30
54-202	-100, -200	250	10.00	0,38
54-302	-300, -400	250	10.00	0,73
54-402	-300, -400	300	12.00	0,85
54-502	-500, -600	300	12.00	1,05
54-602	-500, -600	400	16.00	1,30

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

Two-Arm Puller
No. 46-0

SCHREM



Simple
Handy
Safe
Universal

Simple, handy two-arm puller for parts to be gripped from outside such as belt pulleys, bearings, rings, pole terminals or other parts.

The arms are prevented from withdrawing or sliding off as they are constantly supported at the traverse.

The greater the required removing force the tighter the arms are pressed against the traverse via the part to be removed.

The slim, space-saving arms are made of chrome alloy steel and heat-treated.

The mechanical spindles can be supplemented by pivoted, exchangeable spindle adapters for 46-020 (see page 1.23), which, despite of the above, are fixed during work.

Puller galvanized.
Spindle burnished.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
46-000	75	3.00	60	2.37	0,23
46-010	110	4.50	100	4.00	0,55
46-020	220	8.75	200	8.00	1,60

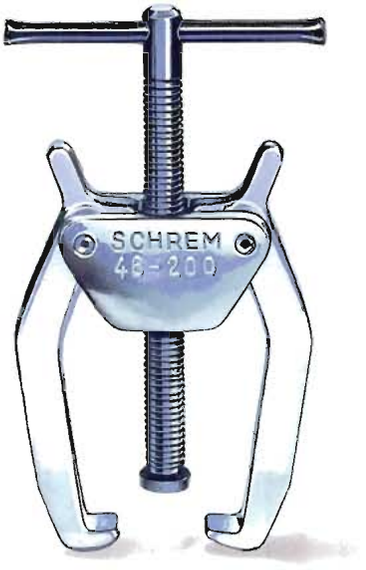
Battery Terminal Puller
No. 46-200

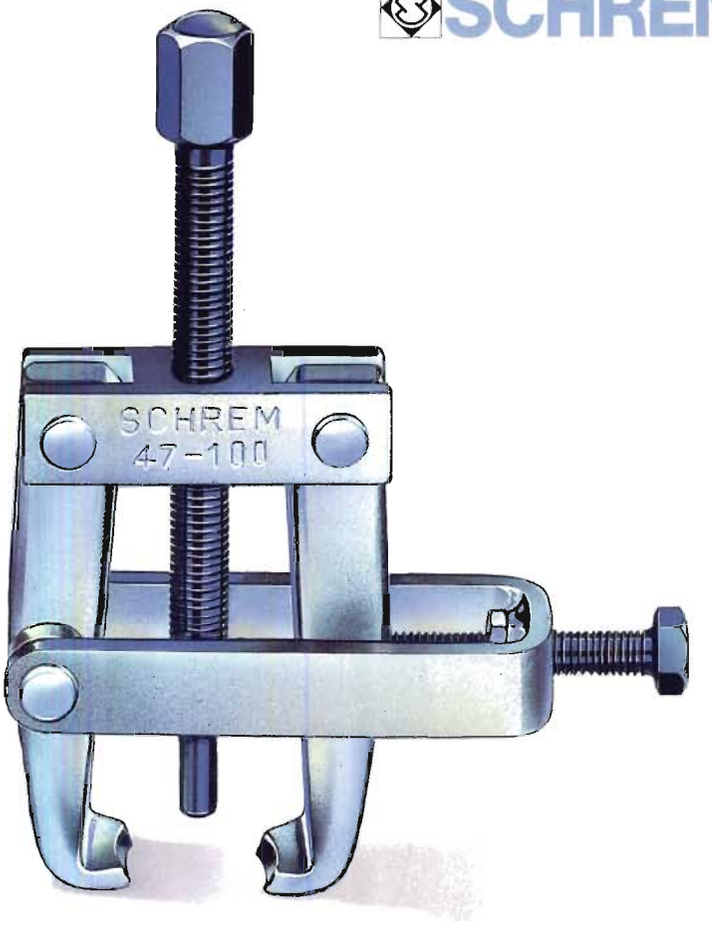
Two-Arm Bearing Puller
"CORA" No. 47

Various patents

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM





Battery Terminal Puller No. 46-200

For removal of truck wiper arms, pole terminals, etc.

One-hand application for easy work even under unfavorable circumstances. A spring which is installed inside makes the drop-forged, heat-treated arms close permanently.

Puller galvanized.
Spindle burnished.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
46-200	60	2.37	40	1.62	0,16

Two-Arm Bearing Puller „CORA" No. 47

For removal of ball bearings, internal bearing rings, etc. which sit close to a face.

The part to be removed can be loosened before removal by means of the clamp and the specially designed arms. Such loosening is just as important for careful removal as centering on the shaft bearing the part to be removed.

Arms made of heat-treated chrome vanadium steel making possible the wedge-shaped design of the arms.

The spindle end contour allows to use pivoted, exchangeable spindle adapter for No. 47-200 (see page 1.23).

Puller galvanized.
Spindles burnished.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
47-100	45	1.75	65	2.62	0,55
47-200	90	3.50	100	4.00	1,45

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Three-Arm Puller "MOMENT"

No. 52

Various patents

SCHREM

Self-locking
Force-locking
Simple
Fast
Safe
Robust

With simultaneously and symmetrically to the spindle moveable arms.

All sizes can be operated by one person. Suitable for pulling off parts such as gears, bearings, shavers, etc. The clamping width is set simply by moving the lever system on the cylinder. All 3 arms move simultaneously and symmetrically to the spindle.

During the pulling off operation, the system of levers ensures that the arms are self-locking and provides force-closure during the job. This means the arms cannot be deflected and are prevented from sliding off because the more firmly a part is seated, the greater is the force with which it is gripped by the arms. Consequently the level of force acting on the cylinder via the lever system is also proportionately higher.

The puller can even be used in unfavourable conditions because the arms always move symmetrically. One person is sufficient for operating all sizes of the puller. The shape of the mechanical spindle makes it possible to be supplemented by a pivoted, exchangeable spindle adapter from size M14x1,5 onwards, depending on the task for which the puller is being used. (See sheet 1.23 for standard dimensions).

The puller arms are made from heat-treated chrome vanadium steel which permits the slim as well as space and weight-saving shape.

Puller galvanized.
Spindle burnished.

A hydraulic system can be used to facilitate the job of freeing or pulling off seized parts.

Three-Arm Puller "MOMENT"
No. 52

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

Various patents

Advantage of the hydraulic system:
It offers the advantage to make work easier and to protect the spindle thread as during work the removing forces only act on the static thread flanks.
The hydraulic spindle and hydraulic pressure tool have a closed system for pressure multiplication. As a result, a small torque is able to generate a much more powerful pulling force which acts purely axially.

Pullers No. 52-390 and 52-640 can also be supplied with hydraulic spindles.

For smaller pullers, we recommend a hydraulic pressure tool (For more details: See catalogue sheet 1.14 Hydraulic Spindles and Hydraulic Pressure Tool).

With mechanical spindle

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
52-085	85	3.37	65	2.62	0,36
52-130	130	5.12	105	4.12	2,36
52-230	230	9.12	150	6.00	5,36
52-295	295	11.75	235	9.25	6,18
52-390	390	15.37	270	10.75	12,30
52-640	640	25.25	300	12.00	15,80

With hydraulic spindle

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
52-394	390	15.37	270	10.75	13,60
52-644	640	25.25	300	12.00	17,15

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Three-Arm Puller "DREMO"

No. 53

Various patents

Self-locking
Force-locking
Simple
Fast
Safe
Robust

Centrally adjustable arms with infinitely variable thread positioning.

For pulling off parts such as gears, bearings sheavers and similar machinery components which can be gripped symmetrically.

The clamping width is set centrally by turning the knurled disc located above the top star.
This disc is connected to a displacement cylinder with two threads running in opposite directions. This arrangement means that the 2 stars move in unison and so the entire spreading range can be covered with only a few turns.

Furthermore, we have ensured that the arms remain fixed during the pulling off procedure. The arms always move in symmetry with the spindle, which means the puller can even be used in unfavorable conditions. All sizes can be operated by one person.

The shape of the mechanical spindle makes it possible to be supplemented by a pivoted, exchangeable spindle adapter, depending on the task for which the puller is being used. (See sheet 1.23 for standard dimensions).

The puller arms are made from heat-treated chrome vanadium steel which permits the slim as well as space and weight-saving shape.

Puller galvanized.
Spindle burnished.

A hydraulic system can be used to facilitate the job of freeing or pulling off seized parts.

Three-Arm Puller "DREMO"
No. 53

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

Various patents

Advantage of the hydraulic system:
It offers the advantage to make work easier and to protect the spindle thread as during work the removing forces only act on the static thread flanks.
The hydraulic spindle and hydraulic pressure tool have a closed system for pressure multiplication. As a result, a small torque is able to generate a much more powerful pulling force which acts purely axially.

Pullers No. 53-390 and 53-640 can also be supplied with hydraulic spindles.

For smaller pullers, we recommend a hydraulic pressure tool (For more details: See catalogue sheet 1.14 Hydraulic Spindles and Hydraulic Pressure Tool).

With mechanical spindle

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
53-130	130	5.12	105	4.12	1,90
53-230	230	9.12	150	6.00	4,00
53-295	295	11.75	235	9.25	5,10
53-390	390	15.37	270	10.75	10,00
53-640	640	25.25	300	12.00	13,75

With hydraulic spindle

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
53-394	390	15.37	270	10.75	10,20
53-644	640	25.25	300	12.00	14,50

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ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

Hydraulic Spindle
No. 44

SCHREM

Most times hydraulic spindles are used to make work easier, to loosen parts which are stuck.
Thanks to the enclosed hydraulic system and via pressure transmission great forces are built up by only a low mechanical torque which makes work a lot easier.

The hydraulic spindle is turned into the puller instead of the mechanical spindle. Work is done with only one device. Compared with the "mechanical puller plus hydraulic pressure tool" solution this makes the work much easier.
As it is the case with any hydraulic support the spindle is protected as during work the removing forces only act on the static thread flanks.

Spindle made of heat-treated chrome vanadium steel.
Burnished surface.

Function:
Turn the hydraulic spindle with the big thread just like a mechanical spindle until it reaches the shaft of the part to be removed.
The enclosed hydraulic system is actuated by turning the hexagon spindle building up an internal pressure. The axial force produced in this way loosens the part so that actual removal can now be easily completed by means of the big spindle thread.

For safety reasons we recommend to use a torque wrench.

Purchase Order No.	Pressure kN	Stroke mm	Stroke inch	⚖ kg	Thread	Torque max. Nm
44-830	120	10	0.394	2,05	M30x2	50
44-200	120	15	0.590	4,15	M42x2	105
44-700	200	10	0.394	3,25	M50x2	70

Hydraulic Pressure Tool
No. 44

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

Makes work easier
Handy
Universal
Flat
Hydraulic reset

Most times the hydraulic pressure tool is used together with mechanical pullers to loosen parts which are stuck.

Depending on the size the integrated hydraulic pressure transmission supplies an axial force of 80 kN resp. 150 kN which makes work a lot easier. The pressure tool 44-150 is equipped with hydraulic reset so that, when turning the hydraulic setscrew back, the hydraulic system is automatically reset to zero/starting position.
The hydraulic pressure tool protects the spindle thread of the mechanical puller as the main loosening force is acting on static thread flanks.

Pressing tool drop-forged and heat-treated.
Burnished surface.

Function:
Position the hydraulic pressure tool between the shaft end and the puller spindle joining it.
The enclosed hydraulic system is actuated by turning the setscrew building up an internal pressure. The axial force produced in this way loosens the part which can now be removed with the mechanical spindle as usual.

Prevention of Accidents:
Pay attention to minimum spindle size and torque as indicated on the table.
We recommend to use a torque wrench.

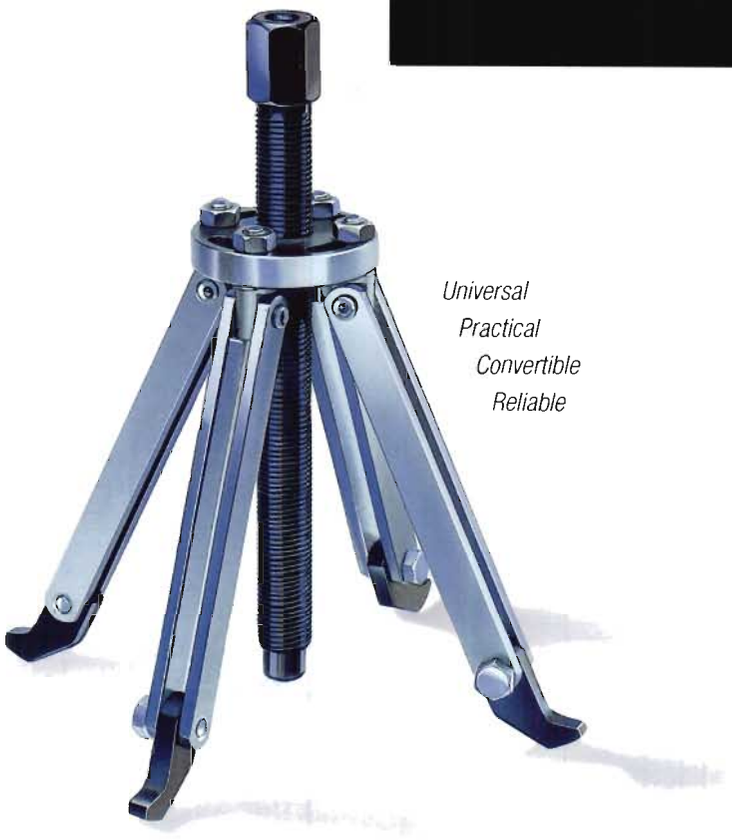
Purchase Order No.	Pressure kN	Stroke mm	Stroke inch	Overall height mm	Overall height inch	⚖ kg	Spindle Ø min.	Torque max. Nm
44-080	80	7	0.276	35	1.38	0,60	M22	25
44-150	150	10	0.394	85	3.35	1,74	M30	50

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

Ball Bearing Puller "BÄRENKLAUE"
No. 56

SCHREM



Universal
Practical
Convertible
Reliable

The puller described first in the following is appropriate especially for removing of radial ball bearings which are in a housing and cannot be gripped neither from outside nor from inside.

The puller jaws grip the bearing between the balls at the external bearing ring while the puller is supported at the internal bearing ring.

3 puller sets/sizes with 13 different jaws in total are offered. The 3 sets cover 66 radial ball bearing types (further details see next page/table).

From the table on the next page you can see the recommended puller-jaw No. assignment according to the bearing number.

In this connection please consider that only the bearing diameters but not the ball number and ball diameter are standardized. The values indicated on the table are just for orientation. If a jaw is not fitting the jaw with the next / previous number shall be applied. The number and position of the arms is to be determined.
(Example:
Bearing No. 6211 with 10 balls = jaw No. 4 and 4 arms.
The jaws are to be mounted in such a way that they can still be moved; position the arms so that 2 resp. 3 bearing balls at a time are opposed between the arms.)

There is the possibility to use the jaws No. 1 to No. 5 together with the extractor No. 56-200 for bearings which are positioned deeper than 90 mm on a shaft.

To allow our customers to compose their universal ball bearing puller by themselves according to their requirements all parts can be purchased separately.

By inserting grips instead of jaws the puller can be converted to the Multi-arm puller „COMBI" No. 57 (further details see last page).

Ball Bearing Puller "BÄRENKLAUE" No. 56

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

Jaws made of chrome vanadium steel, heat-treated and burnished.

Puller and key galvanized.
Spindle burnished.

Detailed operating instructions are attached.

The puller basic tool and the recommended jaw number are assigned to the respective DIN bearing number.

Puller No.	Bearing series	Jaw No.	Bearing series	Jaw No.	Bearing series	Jaw No.	Bearing series	Jaw No.
56-000	6004	01	6200	02	6300	01		
	6005	02	6201	02	6301	03		
	6006	01	6202	01	6302	03		
			6203	03				
			6204	03				
			6205	03				
56-100	6007	1	6206	2	6303	2	6403	4
	6008	1	6207	3	6304	2	6404	5
	6009	1	6208	3	6305	3	6405	5
	6010	1	6209	4	6306	4		
	6011	2	6210	4	6307	4		
	6012	2	6211	4	6308	5		
	6013	2	6212	5				
	6014	3						
	6015	3						
	6016	4						
	6017	4						
	6018	5						
	6019	5						
	6020	5						
56-200	6021	16	6213	16	6309	16	6406	16
			6214	16	6310	16	6408	7
			6215	16	6311	11	6409	17
			6216	16	6312	17	6410	17
			6217	7	6313	17	6412	23
			6218	17	6314	17		
			6219	17	6315	23		
					6316	23		
					6317	23		
					6318	23		
					6319	23		

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Ball Bearing Puller "BÄRENKLAUE"
No. 56

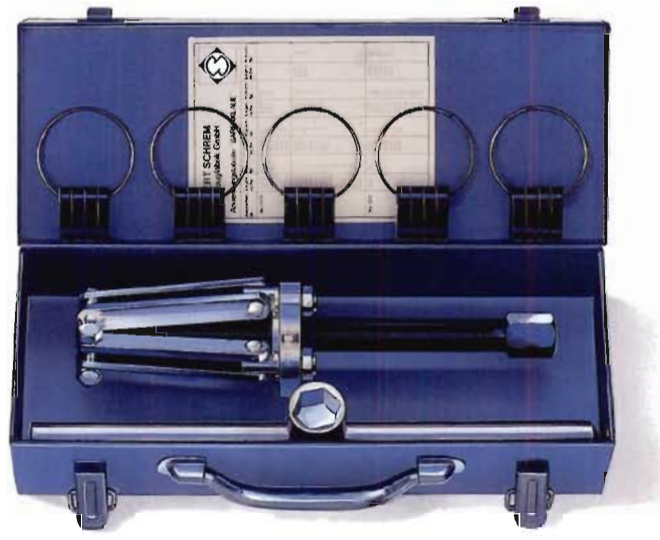
Multi-Arm Puller "COMBI"
No. 57

1 complete set of ball bearing puller No. 56 in a box:
Ball bearing puller consisting of:

Purchase Order No. 56-020: 1 extractor No. 56-000
4 arms, clamping depth 65 mm / 2.56"
1 set of jaws No. 56-001-01, 56-001-02 and 56-001-03
1 SW 14 T-handle key

Purchase Order No. 56-120: 1 extractor No. 56-100
4 arms, clamping depth 90 mm / 3.54"
1 set of jaws No. 56-101-1, 56-101-2, 56-101-3, 56-101-4 and 56-101-5
1 SW 22 T-handle key

Purchase Order No. 56-220: 1 extractor No. 56-200
4 arms, clamping depth 150 mm / 5.90"
1 set of jaws No. 56-201-7, 56-201-11, 56-201-16, 56-201-17 and 56-201-23
1 SW 22 T-handle key



With special arms the ball bearing puller can be converted to a multi-arm puller.

Complete assortments in a box consisting of:
Ball bearing puller "BÄRENKLAUE" No. 56 and Multi-arm puller "COMBI" No. 57.

Purchase Order No. 56-520: 1 extractor No. 56-000
4 arms, clamping depth 65 mm / 2.56"
1 set of jaws No. 56-001-01, 56-001-02 and 56-001-03
1 set of arms No. 57-008
1 SW 14 T-handle key

Purchase Order No. 56-620: 1 extractor No. 56-100
4 arms, clamping depth 90 mm / 3.54"
1 set of jaws No. 56-101-1, 56-101-2, 56-101-3, 56-101-4 and 56-101-5
1 set of arms No. 57-108
1 spindle adapter No.23-52207022.
1 SW 22 T-handle key

Purchase Order No. 56-720: 1 extractor No. 56-200
4 arms, clamping depth 150 mm / 5.90"
1 set of jaws No. 56-201-7, 56-201-11, 56-201-16, 56-201-17 and 56-201-23
1 set of arm
1 spindle ada
1 SW 22 T-h

Multi-Arm Puller "COMBI"
No. 57

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

Many uses
Simple
Reliable
Convertible

Number and position of the arms can vary as you like according to requirements.

This feature is a prerequisite if, for example, the part to be removed can be taken only by gripping into existing asymmetrical openings.

In such cases it is necessary to have the possibility of choosing any arm position required. Withdrawal of the arms during removal is excluded as the grips have a hold at the arms.

The greater the force of the spindle applied on the grips via the part to be removed the tighter they are pressed against the arms providing a force locking connection via the part disk.

The mechanical spindles can be supplemented by pivoted, exchangeable spindle adapters (see page 1.23), which, despite of the above, are fixed during work.

Arms made of chrome vanadium steel, heat-treated and galvanized.
Galvanized puller, burnished spindle and spindle adapter.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	Number of arms	⚖ kg
57-040	120	4.72	120	4.72	4	1,05
57-030	120	4.72	120	4.72	3	0,85
57-020	120	4.72	120	4.72	2	0,65
57-140	210	8.27	200	7.87	4	2,70
57-130	210	8.27	200	7.87	3	2,25
57-120	210	8.27	200	7.87	2	1,80
57-240	280	11.02	280	11.02	4	3,00
57-230	280	11.02	280	11.02	3	2,50
57-220	280	11.02	280	11.02	2	2,00

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Special Bearing Puller Basic Tool
No. 63

SCHREM

Various patents

Variable
Reliable
Many uses
Simple

This puller basic tool consists of spindle, top part and clamping sleeve. The respective collets are selected depending on the part to be removed (see page 1.18).

For removal the collets and the top part are screwed together. Position the puller and close the collets by turning the clamping sleeve until the collet embraces the bearing to be removed free from play.

If a bearing is installed deeply on a shaft the clamping depth of the remover can be increased by applying as many extensions as you like.

There is no problem with pocket bore-holes for this puller as its external Ø is smaller than the external bearing Ø in most cases.

The mechanical spindles can be supplemented by pivoted, exchangeable spindle adapters (see page 1.23), which, despite of the above, are fixed during work.

Now, the basic tools No. 63-700 and 63-800 can be delivered with hydraulic spindle No. 44-830 (Details see page 1.14).

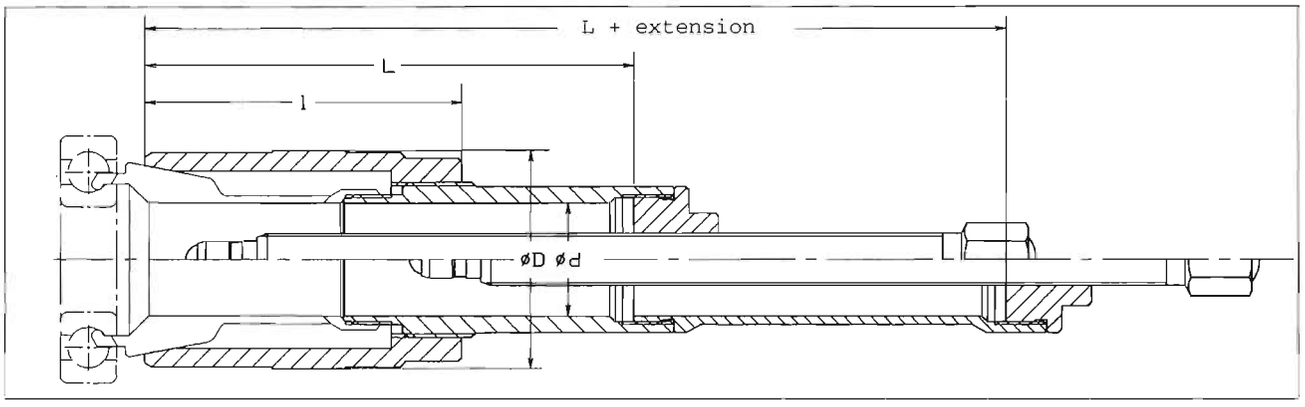
Puller and spindle burnished.

Special Bearing Puller Basic Tool
No. 63

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

Various patents



Dimensions:

Basic tool No.	Ø d		Ø D		l		L		Extension		L + Extension	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
63-100	10,5	0.41	26,0	1.02	62,0	2.44	95,0	3.74	70,0	2.76	165,0	6.50
63-200	18,0	0.71	35,0	1.38	64,0	2.52	100,0	3.94	80,0	3.15	180,0	7.09
63-400	30,5	1.20	60,0	2.36	84,0	3.31	135,0	5.31	100,0	3.94	235,0	9.25
63-500	46,0	1.81	75,0	2.95	90,0	3.54	150,0	5.90	100,0	3.94	250,0	9.48
63-600	66,0	2.60	100,0	3.94	102,0	4.01	170,0	6.69	100,0	3.94	270,0	10.63
63-700	77,0	3.03	125,0	4.92	120,0	4.72	200,0	7.87	100,0	3.94	300,0	11.81
63-800	100,0	3.94	140,0	5.51	150,0	5.90	240,0	9.45	150,0	5.90	390,0	15.35

Ordering specifications for

Basic tool

Purchase Order No.	⚖ kg
63-100	0,20
63-200	0,44
63-400	1,10
63-500	2,15
63-600	3,90
63-700	7,70
63-800	8,00

Collets

Purchase Order No.
see page 1.18
When ordering collets pay attention to indicate:
– Bearing No. – Pulling principle

Extension

Purchase Order No.	⚖ kg
63-105	0,06
63-205	0,11
63-405	0,26
63-505	0,42
63-605	0,58
63-705	0,68
63-805	1,90

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

Special Bearing Puller Basic Tool
No. 64

Various patents

Hydraulic
Variable
Simple
Reliable
Versatile

The basic tool No. 64 is an outgrowth of the model No. 63 used up to now. The requirements to be fulfilled were: Improve closing and make it easier. The collets used up to now (see page 1.18) can be applied further on.

The collets are screwed onto the top part by hand (do not fix). The collets gripping the bearing are closed via the left-hand thread of the clamping nut, which is pivoted and connected with the clamping sleeve thus drawing the collets into the clamping sleeve in axial direction only. This makes it a lot easier to fix the collet free from play on the bearing to be removed.

2 sizes No. 64-804 and 64-904 for bearings with a bore-hole Ø of 100 mm / 4 inch resp. 120 mm / 4.75 inch were added.

As per standard these two devices are equipped with hydraulic spindle No. 44-700 (200 kN). To minimize the weight of these basic devices the assembly was redesigned.

If a bearing is installed deeply on a shaft the clamping depth can be increased by placing extensions in steps of 100 mm / 4 inch between.

Just as for basic tool No. 63 there is no problem with pocket bore-holes also for this puller as its external Ø is smaller than the external bearing Ø in most cases. The mechanical spindles can be supplemented by pivoted, exchangeable spindle adapters (see page 1.23), which, despite of the above, are fixed during work.

Galvanized basic tool No. 64-400 up to 64-700, extension burnished. Basic tool No. 64-804 and 64-904 as well as set of extensions burnished.
Spindles burnished.

Special Bearing Puller Basic Tool
No. 64

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

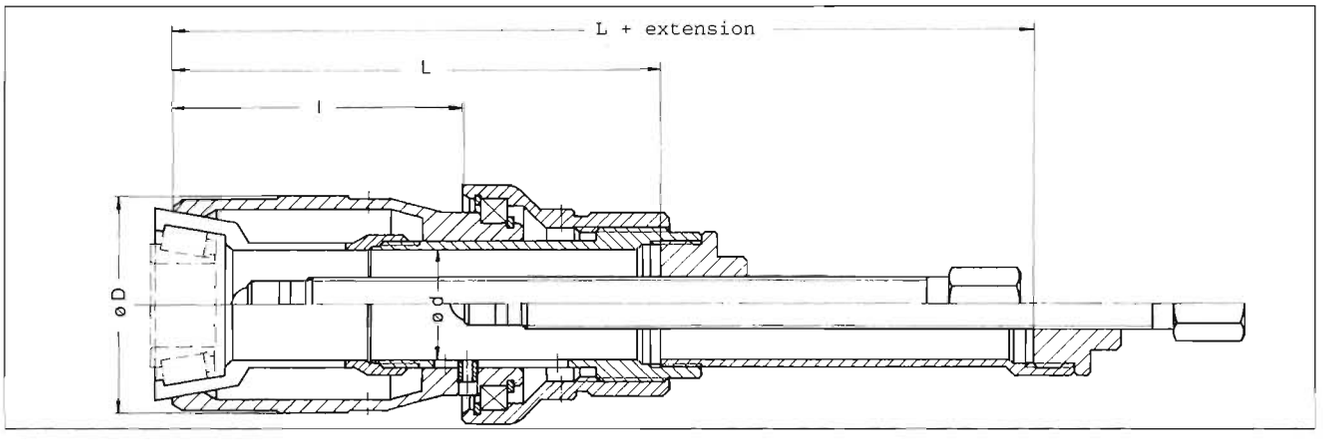
Various patents

Since for bearings with a bore-hole diameter of 100 mm/4 inch resp. 120 mm/4.75 inch the external bearing diameters can vary a lot the clamping sleeve must be adapted to the pulling collet to guarantee optimum function. This is the reason why in this case no clamping sleeve is included in the scope of delivery of the basic tool No. 64-804 and No. 64-904 as it is usually standard but has to be determined in accordance with the collets No.

List of clamping sleeves:

Purchase Order No.	External Ø mm	inch	For collets No.
64-8061	120	4.72	64-8106, 64-8107
			64-8108, 64-8114
64-8062	140	5.51	64-8101, 64-8109
			64-8110
64-8063	160	6.30	64-8102
64-8064	180	7.08	64-8103, 64-8104
			64-8113, 64-8115

Purchase Order No.	External Ø mm	inch	For collets No.
64-8065	200	7.87	64-8105
64-8067	220	8.66	64-8111, 64-8112
64-9061	140	5.51	64-9103, 64-9104
			64-9105, 64-9108
			64-9110, 64-9111
64-9062	160	6.30	64-9112
64-9063	180	7.08	64-9102



Dimensions:

Basic device No.	Ø d mm	inch	Ø D mm	inch	l mm	inch	L mm	inch	Extension mm	inch	L + Extension mm	inch
64-400	30.5	1.20	60	2.36	78	3.07	135	5.31	100	3.94	235	9.25
64-500	46.0	1.81	75	2.95	80	3.15	150	5.90	100	3.94	250	9.84
64-600	66.0	2.60	100	3.94	92	3.62	170	6.69	100	3.94	270	10.63
64-700	77.0	3.03	126	4.92	120	4.72	205	8.07	100	3.94	305	12.00
64-804	102.0	3.94	130	5.11	100	3.94	100	3.94	100	3.94	200	7.88
64-904	122.0	4.80	180	7.09	100	3.94	100	3.94	100	3.94	200	7.88

Ordering specifications for

Basic tool

Purchase Order No.	⚖ kg
64-400	1,25
64-500	2,50
64-600	3,80
64-700	7,80
64-804	7,50
64-904	8,90

Collets

Purchase Order No.
see page 1.18
When ordering collets pay attention to indicate:
– Bearing No. – Pulling principle

Extension

Purchase Order No.	⚖ kg
64-405	0,26
64-505	0,42
64-605	0,58
64-705	0,68
64-805	2,40
64-905	2,75

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Collets for Special Bearing Puller

To be used with:
– Basic Tool No. 63
– Basic Tool No. 64

SCHREM

Collets (gripping unit) for gripping grooved, detachable, self-aligning and inclined ball bearings as well as self-aligning roller bearings, internal bearing rings, ABS disks, gear wheels, etc.

To guarantee perfect function this bearing puller always requires adaptation of the collet to the dimensions of the part to be removed in regard with their gripping contour.

Since the collet grip the part symmetrically on the maximum possible peripheral area careful removal is guaranteed. The number of damages caused during dismounting is minimized.

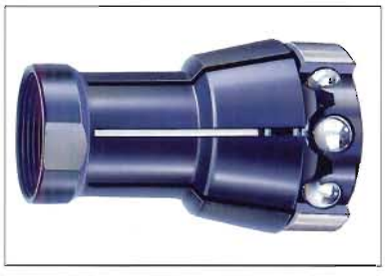
Pulling principle assignment depends on the assembly conditions and the part to be removed.

As standardization of the bearings only applies to the external dimensions the design of the collets is made in a way to normally compensate dimensional differences which are due to provision from various bearing manufacturers.

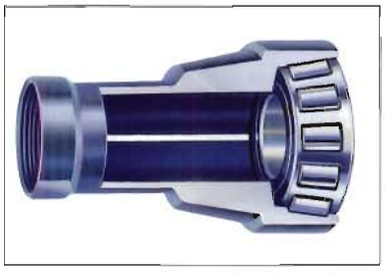
Special motor-vehicle bearings cannot be purchased at normal trade conditions and often have other numbers.

It is not always possible to adhere to our identification principle - Collets No. = Bearing No. as we do our best to assign as many bearings as possible to one collet.

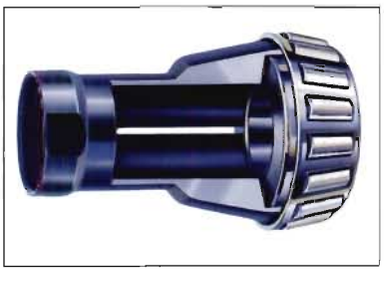
Perfect gripping of the collets always requires application of collets which are suitable for the respective bearing. The pulling principle is to be considered as well.



Pulling principle 1: Gripping of the internal ring. The bearing may be housed so that it cannot be gripped neither from outside nor from inside. Mostly required for: Grooved, inclined, self-aligning ball bearings, four-point contact bearings, ball bearings with a divided internal ring as well as roller bearings. Even bearings installed deep in housings can be gripped if the external bearing ring Ø is bigger than the external Ø of the basic device.



Pulling principle 2: Gripping of tapered-roller bearings at the rollers independent of their number.
The internal collets contour is adapted to the rollers and their angle.
For certain bearing dimensions removal of deeply installed roller bearings is possible.



Pulling principle 3: Gripping of a tapered-roller bearing at the internal ring, e. g. for „O" installation. In this case there are mostly just a few possibilities for gripping behind, and such possibilities are determined by the bearing specifications. Therefore high precision is required for manufacture of such collets.

Pulling principle 4: Gripping by loosening via the bearing ring chamfer.
Examples: Internal ring of cylinder roller bearings, inclined and detachable ball bearings, 2nd half of the internal ring of grooved ball bearings (four-point contact bearings) as well as external ring of grooved ball bearings, self-aligning roller bearing and needle bearings, ABS rings, gear wheels, cleanbearings, etc.

If you need our advise kindly inform us about assembly conditions and bearing number.

In case a bearing is not yet indicated on the table the size of the collets depends on the internal bearing Ø. For classification of the standard basic tool please refer to catalogue sheet 1.16 and 1.17. For bigger bearings we recommend special collets and basic tool manufacture coming up to requirements.

All collets are made of chrome vanadium steel, they are heat-treated and burnished.

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic tool size 1		
①	63-110	6000
	63-111	6200/7
		RIV 12123
	63-112	6200/8
	63-113	607 (EL7)
	63-114	608 (EL8)
	63-115	609 (EL9)
	63-116	625 (EL5)
		634 (R4)
	63-117	626 (EL6)
		635 (R5)
	63-118	627 (R7)
	63-119	629 (R9)
④	63-131	623
	63-132	624
	63-133	625 (EL5)
		634 (R4)
	63-122	626 (EL6)
	63-123	E 3
	63-124	E 4
	63-125	E 5
	63-126	E 6
	63-127	E 7
	63-128	E 8
	63-129	E 9
	63-130	E 10

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic tool size 2		
①	63-242	6000
	63-210	6001
	63-211	6002
	63-240	6003
	63-212	6201
	63-213	6202
	63-214	6203
	63-215	6300
	63-216	6301
	63-217	6302
	63-219	16003
①	63-235	3201
	63-218	3202 A
	63-220	1202
	63-221	2200
	63-222	2201
	63-223	2203
	63-244	9203
②	63-236	30203
		32203
	63-239	XC 1682
		L 21549
④	63-224	625 (EL5)
	63-225	626 (EL6)
		607 (EL7)
		61800
	63-226	608 (EL8)
	63-227	609 (EL9)
	63-228	624 (EL4)
	63-229	6001
		6200
	63-230	6002
	63-237	4201
	63-231	E 10
	63-232	E 12
	63-233	E 13
		L 13
	63-234	BO 15
	63-238	NA 4903
	63-245	JR 172020
	63-246	JR 121522

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic tool size 4		
①	63-427	6005
	63-410	6006
	63-466	6202
	63-467	6205
	63-411	6206 E
		6206/8
		SKF 361 781
		SKF 309 277
		FAG 526 419
	63-412	6206/9
		FAG 518 220
		FAG 309 277
		SKF 305 882
		SKF 305 862
	63-4145	6303 SNR
	63-414	6304/7
		FAG 527 140
		FAG 539 634
		SKF 361 895 A
		SKF 331 819
	63-415	6305/7
		FAG 515 828
		FAG 528 904
		SKF 361 101
		SKF 362 387
		SKF 442 596
	63-488	6305/8
		311 351
		FAG 563 466 A
	63-416	6306/7
		6306 C3
		306 K
		FAG 531 054 A
		SKF 240 463
	63-417	6306/8
	63-418	6307
	63-419	6404
	63-420	6405
	63-4131	63/22 X
	63-4140	INA 16006
	63-484	11206
	63-423	RIV 615 327
	63-424	AB 10337-1
	63-425	FAG 533 365
		SKF 362 379
		6403
	63-489	FAG 533 370
	63-4102	FAG 533 449
	63-491	FAG 528 850
	63-428	FAG 528 904
		SKF 332 286 B
	63-465	361 037
	63-492	FAG 540 705
		SKF 362 693/7
	63-496	FAG 362 693/9
	63-4134	SKF 362 699
	63-472	615 327
	63-486	FAG 532 109
		SKF 362 429
		FAG 524 737 D
	63-4133	FAG 578 469
		577 395
	63-498	Tim 2475
	63-499	Tim 15117
	63-4107	2306
	63-429	3205
	63-430	3206
	63-431	3305
	63-4136	NTN B 307/28
	63-473	4203
	63-421	4306

Removing principle	Purchase Order No. of collets	For Bearing No.
②	63-494	Tim 14124
	63-4135	KOYO ST2857-N
	63-4141	KOYO 30204
	63-4137	30204
		LM 11949
		LM 12749
	63-432	30205
		32205
		FAG 518 772
		SKF 331 274
		Tim 1380
	63-4144	30210
	63-493	SKF 32205
	63-433	30206
		32206
	63-444	30207
		32207
	63-434	30305
		32305
	63-435	30306
		32306
	63-436	32005
		LM 12649
		FAGK 12580
		Tim 12580
	63-495	32006 X
		320/28 X
	63-4111	33205 F51
	63-4113	Tim 21075
	63-497	L 21549
	63-4115	M 84249
	63-437	M 86649
	63-4114	HM 81649
	63-438	HM 88649
	63-441	LM 67048
		M 84548
	63-4101	KLM 562 495
	63-442	AKL 44649
	63-4127	SKF 328 001
	63-4120	SKF 328 625
		SKF 329 025
	63-487	FAG 524 347
		SKF 331 299
	63-468	SKF 331 924
	63-445	FAG 511 687
	63-469	SKF 331 054
		FAG 511 688
	63-4119	SKF 328 626
		SKF 329 050
		SKF 328 627
	63-470	31306
	63-4138	FAG 572 657
	63-4130	FAG 574 963
	63-4139	FAG 580 704
	63-478	86610
		331 139
	63-4123	SKF 332 541
	63-498	TIM 2470
	63-4124	SKFB 332 821
	63-489	533 370

In case a bearing is not indicated the puller size depends on the internal bearing Ø.
Collets for further bearings upon inquiry. The table is permanently supplemented.

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic tool size 4		
③	63-481	30205
		32205
	63-446	32205 B
		SKF 333 729
	63-479	30206
		32206
	63-482	30207
		32207
	63-4132	30304
	63-450	30306
		32306
		RIV 02474
		FAG 506 577
	63-456	32307
	63-477	M 86649
	63-448	KM 88010
		FAG 511 688
		SKF 331 054
	63-4129	M 84548
	63-449	RIV 10/5015
	63-451	322 053
	63-452	30204
		LM 11949
	63-453	331 699
		114 403 78
	63-454	88043
	63-455	331 139
	63-447	SKF 332 286
	63-474	857 615 3
	63-485	FAG 518 771
	63-4125	SKFB 332 541
④	63-457	6202
	63-458	6206
		6305
	63-4112	6304
	63-4128	6303
	63-462	NJ 2205
		NU 305
	63-4116	NJ 2206
	63-4149	NJ 2305
		NJ 305
	63-4108	NU 2205
	63-459	NU 205
	63-460	NU 206
	63-461	NU 207
	63-471	NU 2207
	63-483	NU 2305
	63-4121	NU 306
	63-4100	FAG 538 367
	63-475	L 25
	63-463	17305
		SKF 305 862
		SKF 309 277
		FAG 518 220
		FAG 526 419
	63-480	FAG 563 466
	63-476	FAG 515 828
	63-4122	SKF 328 227
	63-464	SKF 633 095
	63-440	FAG 577 941

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic tool size 5		
①	63-5101	1208 TV
	63-510	6007
	63-511	6008
	63-512	6207
		SKF 360 908
		FAG 523 681
		FAG 529 824
	63-513	6208
	63-514	6209
	63-515	6210
	63-567	6305
	63-568	6306/8
	63-517	6307
	63-518	6308
	63-519	6309
	63-520	6310
	63-521	6312
	63-522	6407
	63-523	6408
	63-558	A 810 337-1
	63-571	11208
	63-524	16008
	63-5120	SKF 445 535
	63-5112	FAG 546 016
	63-563	SKF 361 580
	63-525	RL 10
	63-526	2208
	63-5109	2307
	63-577	3207
	63-574	3208
	63-5133	3308
②	63-5145	Tim 420
	63-584	30205
	63-527	30206 AS
		32206 A
	63-528	30207
		32207
		FAG 511 687
		SKF 330 757
	63-529	30208
		32208
	63-530	30209
		32209
	63-5144	30210
	63-535	30211
		32211
	63-595	31307
	63-536	31308
	63-5124	31590
	63-537	32008
		201 521
		LM 300 849
		FAG 568 381
	63-538	32010
	63-539	32011
	63-586	32012
	63-5129	32208
	63-583	30305
	63-531	30306
		32306
	63-532	30307
		32307
		Tim 26577
		Tim 26877
	63-5137	32307
		33208
	63-533	30308
		32308
		803 145
		Tim 367
	63-534	30309
		32309
	63-5110	33009
		LM 102 901
		Tim 102 949
	63-5117	33109
	63-5118	33205
		320/28 X
	63-578	33207
	63-596	33209
		TIM 3872
		FAG 574 512
		SKF 328 707
	63-540	33885
		33889
		3039 A
	63-580	L 45449

Removing principle	Purchase Order No. of collets	For Bearing No.
②	63-5119	L 610 549
	63-541	LM 48548
		LM 69349
	63-542	LM 67048
		SKF 332 541
	63-543	LM 503 349
		SKF 33145
		FAG K26 882
		SKF CK24 780
	63-5116	M 88046
	63-5106	HM 88542
		568 331
		562 672
	63-572	88649
		SKF 330 865
	63-594	801 310
	63-5108	M 38549
	63-544	M 802 048
	63-545	HM 89449
		89446
		561 464
	63-547	SKF 331 140
		HM 88648
	63-587	SKF 331 274
		LM 67048
	63-588	Tim 14124
		K 19150
	63-590	Tim 342 S
	63-5111	25572
	63-569	LM 25590
	63-548	LM 27881
		LM 27880
	63-576	LM 29749
	63-546	Tim 794 730
	63-556	LM 501 349
	63-562	LM 25877
		LM 25880
	63-5135	KHM 803 149
	63-5136	HM 804 848
	63-5105	FAG 518 772
	63-575	521 425
		330 757 L
	63-5104	FAG 562 495
	63-5138	FAG 572 648
		SKF 328 469
	63-5134	FAG 578 973
	63-5102	SKF 328 178
	63-589	SKF 332 613
		FAG 561 485
	63-5107	NSK JL 69349
		SKF 332 821
	63-5132	JLM 104 948
③	63-557	30207
		32207
	63-559	30307
		32307
	63-560	30308
		32308
	63-561	30309
		32309
	63-5146	Tim 420
	63-5143	31308
	63-582	Tim 367
	63-5139	KOYO57594
	63-585	SKF 319 452
	63-564	330 865
	63-565	331 054
	63-5125	SKF 332 541
	63-5126	SKF 332 821
	63-597	801 346
④	63-550	6007
	63-5131	6008
		FAG 564 255
	63-551	6204
	63-552	6205
	63-553	6207
		20207
	63-554	6208
		7208
	63-555	6305
	63-593	320 272
	63-592	320 275
	63-570	532 066
	63-581	JMA 31175
		FAG 512 533
	63-566	360 507
	63-598	11206
	63-5100	11207
	63-599	11208

Removing principle	Purchase Order No. of collets	For Bearing No.
④	63-5121	NJ 2208
		FAG 561 388
	63-5122	NJ 2209
	63-5103	NJ 309
	63-5127	NJ 407
	63-5128	NU 211
	63-5141	NU 307
	63-5140	NU 408
	63-591	NU 2207
	63-5142	NKJ 35/20 A
Basic tool size 6		
①	63-610	6010
	63-611	6011
	63-612	6210
	63-613	6211
	63-614	6212
	63-615	6213
	63-616	6310
	63-617	6311
	63-618	6312
	63-621	SKF 329 081
	63-674	JM 205 149
	63-673	L 507 949
	63-675	16010 C3
	63-652	16012
	63-682	61912
	63-680	SKF 5411
	63-684	NTN 22311
	63-666	FAG 2211
	63-676	2213
	63-677	2311
	63-657	2312
	63-689	FAG 2313
	63-619	3310
	63-620	3312
②	63-622	30210
		32210
		Tim 32011
	63-624	30211
		32211
	63-625	30212
		32212
	63-626	30213
		32213
	63-647	30309
		32309
		FAG 579 248
	63-627	30310
		32310
	63-628	30311
		32311
	63-629	30312
		32312
	63-623	31311
	63-648	31312
	63-639	32009
	63-654	32010
		Tim 39977
		FAG 533 060
	63-653	Tim 32012
		FAG 33111
		Tim 35663
		SKF 331 111
	63-631	32211 A-JA
		FAG 522 380
		FAG 521 740
		SKF 331 305
		TIM 28985
	63-661	KOYO33011 J
	63-667	FAG 33013
	63-638	33109
	63-621	SKF 329 081
	63-663	SKF 33113 R
	63-662	FAG 33210
	63-664	FAG 33212
		Tim 395
		JM 511 946

In case a bearing is not indicated the puller size depends on the internal bearing Ø. Collets for further bearings upon inquiry. The table is permanently supplemented.

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic device size 6		
②	63-632	K 33822
	63-678	39236
	63-686	Tim 39573
		SKF 39590
	63-633	CK 6379
		CK 6386
	63-669	JM 207 049
	63-660	Tim 342 S
	63-640	Tim 367
	63-683	Tim 529 X
	63-668	Tim 610 549
	63-670	LM 806 649
	63-685	HM 807 048/10
		HM 807 040
	63-673	L 507 949
③	63-656	22314
	63-672	30211 A
	63-636	32211
		30310
		32310
		Tim 905 843
	63-637	30311
		31310
		32311
	63-645	31312
	63-659	32012
		32310
	63-646	32212
	63-643	32213
	63-641	FAG 33210
		SKF 362 376 A
		FAG 533 317
		FAG 30210
	63-642	714 149
	63-665	HM 803 149
	63-687	31311
		39590
	63-681	JM 511 946
		Tim 367
④	63-644	STEYR 595 0910
	63-658	2312
	63-651	6309
	63-634	22310 C
	63-635	NU 313

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic device size 7		
①	63-710	6014
	63-726	6210
	63-711	6214
	63-712	6215
	63-713	6216
	63-727	6313
	63-714	6314/8
	63-731	6315
	63-715	6316
	63-718	22316 HKL
	63-745	3315
②	63-743	6379/6320
	63-719	30214
		32214
	63-720	30215
		32215
	63-746	32016
	63-721	30310
		32310
	63-742	30310 A
	63-722	30313
		32313
	63-723	30314
		32314
	63-747	31314
		TIM 913 849
	63-724	30315
		32315
	63-725	33019
	63-728	33213
		JM 714 249
	63-740	33281
	63-717	FAG 528 983 B
		SKF 331 933
		NA 673
③	63-737	22315
	63-748	31314
	63-733	32215
	63-738	KOYO 33281
	63-741	TIM 643
	63-730	331 933
	63-739	JM 716 649
④	63-729	3210
	63-732	NU 315
	63-749	E 275

Removing principle	Purchase Order No. of collets	For Bearing No.
Basic device size 8		
①	63-845	6220
	63-850	6316/8
	63-832	6317/7
	63-836	6317/8
	63-848	6318/9
	63-831	6320
	63-838	6322
	63-852	61818
②	63-810	30216
		32216
	63-811	30217
		32217
	63-812	30218
		32218
	63-813	30219
		32219
	63-814	30220
		32220
	63-815	30311
		32311
	63-816	30313
		32313
	63-817	30314
		32314
	63-818	30315
		32315
	63-819	30316
		32316
	63-820	30317
		32317
	63-821	30318
		32318
	63-822	30319
		32319
	63-823	30320
		32320
	63-846	FAG 31314
	63-830	32011
	63-835	32019
	63-833	33214
		27687
	63-824	33215
	63-825	33217
	63-844	Tim 37431
	63-826	330 931
	63-827	330 933
	63-828	330 934
	63-829	222/2215
③	63-847	30218
	63-834	32017
	63-841	37625
	63-851	Tim JM 515 649
	63-849	FAG K 27620
④	63-842	NJ 219
	63-843	NJ 2216
	63-839	NU 2322

Removing principle	Purchase Order No. of collets	For Bearing No.
Only suitable for Basic Device No. 64		
Basic device size 64 – 8...		
②	64-8115	33022
④	64-8101	6213
	64-8102	6215
	64-8103	6217
	64-8104	6218
	64-8105	6219
	64-8113	6313
	64-8111	6318
	64-8112	6319
	64-8106	NU 213
	64-8107	NU 215
	64-8108	NU 217
	64-8114	NU 313
	64-8109	NU 318
	64-8110	Nu 319
Basic device size 64 – 9...		
①	64-9112	6322
②	64-9103	33115
	64-9104	33117
③	64-9111	32021
④	64-9102	6218 N
	64-9108	NU 1021 N
	64-9110	NJ 1021 N
	64-9105	NJ 2215

In case a bearing is not indicated the puller size depends on the internal bearing Ø.
Collets for further bearings upon inquiry. The table is permanently supplemented.

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Counterstay
No. 62

Internal Puller
No. 62-0

Striking Puller
No. 59

SCHREM

Purchase Order No. 62-320
Complete set in a box consisting of:
Internal puller No. 62-005 to
No. 62-060, Counterstay No. 62-100
and No. 62-200

Internal Puller
used for anti-friction bearings, internal bearing rings, needle bearings, bushes and similar.

In a way design and shape are made so as to loosen the part to be extracted before the actual pull-out procedure. The part is taken evenly by turning in the spreading spindle. Bipartition, quadripartition or hexapartition has been selected depending on the diameter. In this way it is guaranteed that the puller is positioned at the maximum possible range. Internal puller made of heat-treated chrome vanadium steel, burnished.

To draw the part off the bore-hole a counterstay or striking puller is required additionally to the internal puller.

The counterstay is designed in such a way that the cranked arms can be moved in any direction by hand without using the clamping nut.
Because of the crank the arms are always supported all over their face and, at the same time, may be arranged completely asymmetrically to one another in order to adapt to the supporting face in this way.

Counterstay made of galvanized heat-treatable steel.
Spindle burnished.

Counterstay
No. 62

Internal Puller
No. 62-0

Striking Puller
No. 59

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Internal Puller

Purchase Order No.	for Internal Ø mm	inch	↕ mm	inch	⚖ kg
62-005	5 – 6,5	0.20 – 0.26	35	1.38	0,09
62-007	7 – 9,5	0.28 – 0.37	35	1.38	0,09
62-010	10 – 13,5	0.40 – 0.53	35	1.38	0,10
62-014	14 – 19,5	0.56 – 0.77	45	1.77	0,13
62-020	20 – 29,5	0.81 – 1.16	50	1.97	0,18
62-030	30 – 39,5	1.18 – 1.56	90	3.54	0,25
62-040	40 – 49,5	1.57 – 1.95	95	3.74	0,48
63-050	50 – 59,5	1.97 – 2.34	95	3.74	0,56
62-060	60 – 69,5	2.36 – 2.74	95	3.74	0,62

Further sizes and fractional dimensions upon request.

Counterstay

Purchase Order No.	Supporting Ø mm	inch	⚖ kg	For Internal extractor
62-100	30 -95	1.18- 3.74	0,60	62-005 bis 62-030
62-200	55 -135	2.16- 5.31	1,45	62-040 bis 62-060

Striking Puller

suitable for internal puller with threaded connection M10 resp. M14x1.5.

The advantage of the striking puller is that it can be used independent of the supporting face. It is screwed to the internal puller. Moving the impact weights along the sliding bar extracts the part.

The puller size depends on the requirements. We recommend the following combination:
Up to a bore-hole Ø 39 mm No. 59-062
Up to a bore-hole Ø 69 mm No. 59-362

Purchase Order No.	Striking path mm	inch	Impact weight kg	⚖ kg
59-062	90	3.54	0,9	1,20
59-362	300	11.81	0,9	1,40

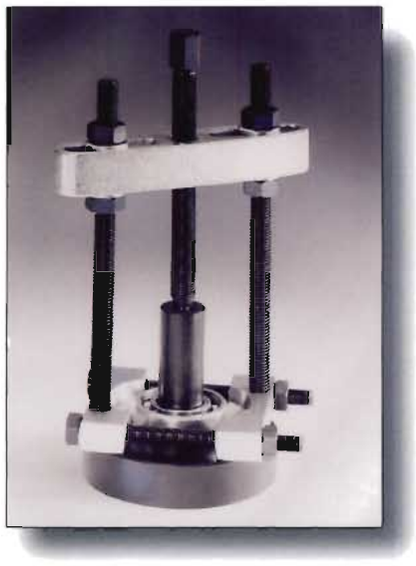
Technical data subject to change 9.99

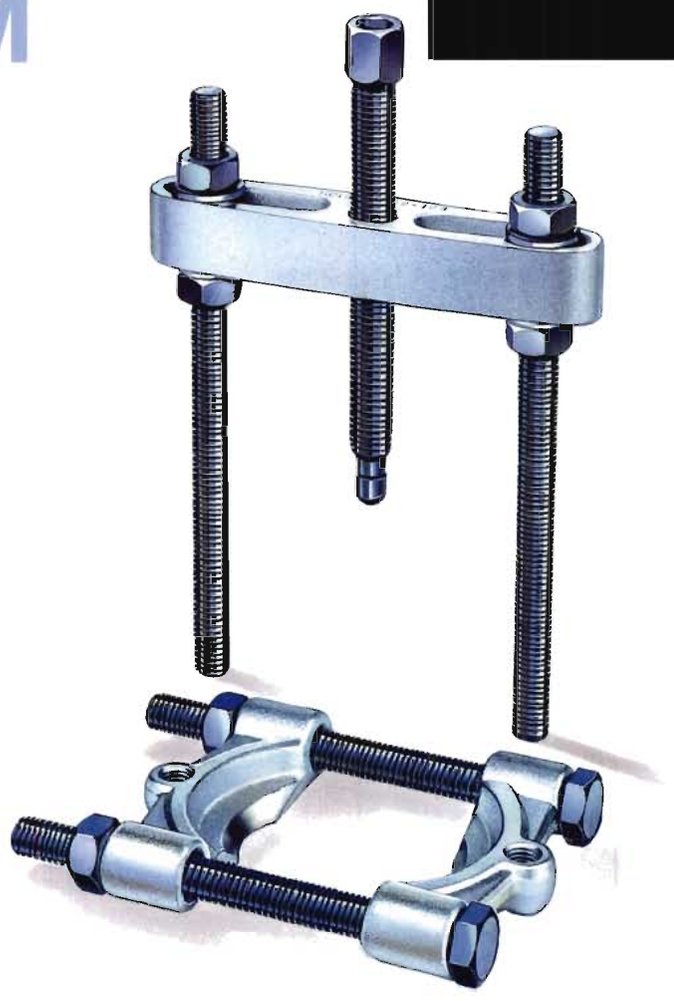
ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Bearing Splitter
No. 48

Puller
No. 49

SCHREM





Universal use for all parts which can be gripped from outside and be flush with the tool such as ball bearings, roller bearings, bearing rings, etc.

By alternate turning of the nuts the two wedge-shaped halves of the bearing splitter are moved behind the part to be removed.

To guarantee a safe connection between the bearing splitter and the puller the two devices are screwed together by means of the pull rods.

After that the pull rods are fixed on the traverse of the removing device.

Removal is effected by turning the spindle in opposite to the shaft of the part to be removed.

If a part has a very long shaft the pull rods can be extended whenever requested.

All parts are made of chrome alloy steel, drop-forged.

The separating and removing device is galvanized, the spindles are burnished.

The mechanical spindles can be supplemented by pivoted, exchangeable spindle adapters (see page 1.23), which, despite of the above, are fixed during work.

Bearing Splitter
No. 48

Puller
No. 49

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Separating Device

Purchase Order No.	Clamping range mm	Clamping range inch	Puller No.	⚖ kg
48-060	60	2.36	49-100	0,57
48-075	75	2.95	49-100	0,70
48-115	115	4.53	49-200	1,75
48-150	150	5.90	49-300	4,00
48-210	210	8.27	49-400	10,00

Puller

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	For Bearing splitter No.	⚖ kg
49-100	45-130	1.77 - 5.11	150	5.90	48-060/48-075	0,97
49-200	85-210	3.35 - 8.26	200	7.87	48-115	3,35
49-300	100-300	3.94 - 11.81	300	11.81	48-150	6,20
49-400	150-360	5.90 - 14.17	300	11.81	48-210	8,81

Extension

Purchase Order No.	Length mm	Length inch	⚖ kg
49-105	100	3.94	0,20
49-205	100	3.94	0,35
49-305	100	3.94	0,65
49-405	100	3.94	0,65

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Universal Hub Puller "EFA"

No. 51

SCHREM

Well tested
Reliable
Strong
Robust

To remove hubs and brake drums from vehicles which have wheel lugs or studs.

The arm length is designed for a maximum bolt circle of 14.6" (370 mm). The standard puller can be used for cars and trucks with maximum 5/8" (16 mm) stud diameters.
For lager bolts up to a maximum stud diameter of 1" (26 mm) a set of additional truck sleeves is required. The truck sleeves are delivered only on request.

For easy removal of often very tight sitting hubs the puller is supplied with a hydraulic spindle. The hydraulic system is actuated by turning the hexagon spindle building up an internal pressure of approximately 43000 lbs (200 kN).

As it is the case with any hydraulic support work is made easier and the spindle is protected as during work the removing forces only act on the static thread flanks.

Any number and position of the gripping arms may be used.

Hydraulic spindle made of heat-treated chrome vanadium steel.

Puller and spindle burnished.

Purchase Order No.	Description	⚖ kg
51-100	Puller with 6 arms, car sleeves, and pin spanner	12,00
51-006	6 truck sleeves	5,10

Universal Hub Puller
No. 58

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Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

For hubs, break drums and similar parts with a pitch circle diameter between 115 mm / 4.53" and 240 mm / 9.45".

The design of the disk permits the arms to be kept in each position and yet being changed easily in number and position.

The arms are equipped with a bore diameter of 16,5 mm to pick up the wheel bolts.

Puller made of chrome alloy steel, drop-forged, heat-treated, and galvanized.

Spindle burnished.

Purchase Order No.	Number of arms	⚖ kg
58-230	3	3,10
58-240	4	3,65
58-250	5	4,15

Technical data subject to change 9.99

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Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Pin Puller
No. 59

SCHREM

For extraction of parts with an internal thread such as tapered or cylindrical pins from M4 to M12.

Two puller sizes are offered. Extraction is effected simply by moving the impact weight along the sliding bar. Puller size depending on the application.

The system allows to use longer screws with a DIN912 head thus making possible extraction of pins which are positioned deeply without any problems.

Standard scope of supply:
Screws M4/M5/M6/M8/M10/ M12 with a thread length of 30 mm and 5 washers.

Other sizes upon request

Purchase Order No.	Impact path mm	inch	Impact weight kg	⚖ kg
59-090	90	3.54	0,9	1,18
59-300	300	11.81	0,9	1,38

Puller, screws and disks are burnished.

Nut Splitter
No. 39

Screw Extractor
No. 38

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Nut Splitter

To break sticking nuts up to quality DIN6.

The nut is destroyed by means of the screw which is used as a chisel without damaging the thread.

Purchase Order No.	Opening Ø mm	inch	For nuts up to	⚖ kg
39-119	19	0.15	SW17/M10	0,23
39-130	30	1.18	SW27/M18	0,30

Screw Extractor

For extraction of broken screws and similar.

Bore a hole into the part. Turn the extractor into the hole and screw off the part.

Extractor made of chrome vanadium steel, supplied as a set in a plastic box.

Purchase Order No.	Set consisting of	For screws	⚖ kg
38-150	5	M3-M18	0,12
38-160	6	M3-M24	0,22

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Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Spindle
No. 23-1...

Spindle Adapter
No. 23-5...

Spindle Adapter
No. 23-6...

SCHREM

Spindle Adapter (flat) No. 23-5... suitable for

Purchase Order No.	Length mm	Length inch	Diameter mm	Diameter inch
Thread M14x1,5				
23-51402518	25	0.98	18	0.71
Thread M20x2 und M22x2				
23-52207022	70	2.75	22	0.866
23-52212022	120	4.72	22	0.866
Thread M30x2				
23-53014030	140	5.51	30	1.18
23-53026030	260	10.23	30	1.18

Spindle Adapter (90°) No. 23-6... suitable for

Purchase Order No.	Length mm	Length inch	Diameter mm	Diameter inch
Thread M14x1,5				
23-61402514	25	0.98	14	0.55
23-61402520	25	0.98	20	0.79
23-61402530	25	0.98	30	1.18
Thread M20x2 und M22x2				
23-62203520	35	1.37	20	0.79
23-62203530	35	1.37	30	1.18
23-62203540	35	1.37	40	1.57
Thread M30x2				
23-63016050	160	6.30	50	1.97
23-63028050	280	11.02	50	1.97

Spindle Nr. 23-1...

Purchase Order No.	Overall length
Thread M10	
23-11015140	140 mm / 5.51"
23-11015170	170 mm / 6.69"
Thread M14x1,5	
23-11415160	160 mm / 6.30"
23-11415180	180 mm / 7.08"
23-11415225	225 mm / 8.85"
Thread M20x2	
23-12020250	250 mm / 9.84"
Thread M22x2	
23-12220300	300 mm / 11.81"
23-12220350	350 mm / 13.78"
Thread M30x2	
23-13020400	400 mm / 15.75"

Ball Joint Ejector
No. 43-100
Studs Puller
No. 60-000
Ball Joint Ejector
No. 43-200

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Ball Joint Ejector

For quick and easy dismounting of ball joints. Many uses are possible thanks to the conical fork opening and the infinitely adjustable clamping range. Ejector is drop-forged and galvanized, the spindles are burnished.

Purchase Order No.	Fork opening mm	Fork opening inch	Clamping range max. mm	Clamping range max. inch	⚖ kg
43-100	18-22	0.71-0.87	50	1.87	0,75

Studs Puller

For stay-bolt turning in and out and similar uses.
Wide clamping range despite the small size. Because of the knurled clamping disk which is arranged at the bottom even short bolts can be gripped. The clamping disk is turned via 22 mm hexagon.
Made of heat-treated and galvanized chrome vanadium steel.
Clamping disk burnished.

Purchase Order No.	Clamping Range mm	Clamping Range inch	⚖ kg
60-000	5-20	0.2-0.87	0,36

Ball Joint Ejector

For dismounting of special ball joints. The distance between the swivel point and the pressure spindle makes work easier. The conical fork opening protects the sealing sleeve. Puller is drop-forged and galvanized, the spindle is burnished.

Purchase Order No.	Fork opening mm	Fork opening inch	Clamping range mm	Clamping range inch	⚖ kg
43-200	20	0.87	50	1.97	1,00

Technical data subject to change 9.99

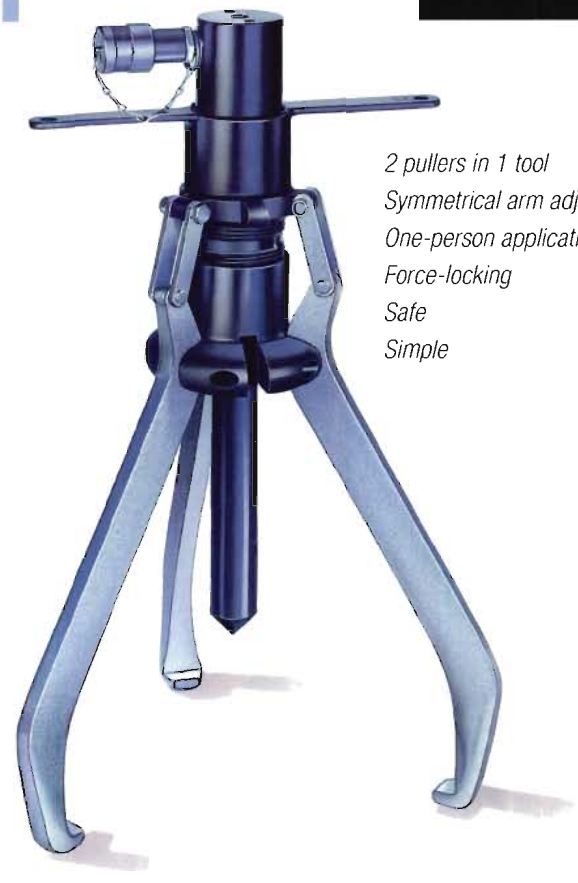
ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Two-Arm and Three-Arm Puller

No. 68

In connection with single-acting multipurpose hydraulic cylinder and hydraulic pump
Working pressure: 700 bar max.

SCHREM



2 pullers in 1 tool
Symmetrical arm adjustment
One-person application
Force-locking
Safe
Simple

One of the 3 arms is fixed by the manufacturer. The other arms are screwed and can be moved as required in individual cases making possible quick and easy adaptation to such requirements.

The clamping width is adjusted by simply turning the symmetrically arranged handles at the adjusting nut. The arm movement is taken over by the two oppositely directed threads so that the complete spreading range is covered with just a few turns.

Such design generally allows mounting of the removing device without a hydraulic cylinder as the puller is safely fixed on the part to be removed by means of the adjusting nut. Also we took care that the arms are fixed during the removing procedure and do not open inadvertently during work.

To make work easier a suspension aid is arranged on the fixed arm.

The next step may be to separately screw in the cylinder required for removal which actively helps to make work easier as the weights to be moved are kept as low as possible.

Removing arms made of heat-treated chrome alloy steel, which is also a reason why this slim as well as space and weight saving arm design is possible.

Galvanized removing arms.
Other parts are burnished.

Two-Arm and Three-Arm Puller

No. 68

In connection with single-acting multipurpose hydraulic cylinder and hydraulic pump
Working pressure: 700 bar max.

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

As per standard the pullers are equipped with an inch thread connection for the hydraulic cylinder.
However, upon request, types with metric thread connections can be supplied as well.

For extension of the hydraulic cylinder piston rod with a small stroke thrust pieces No. 70-1 with 90° point can be delivered.
(Details see page 1.26)

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	Thread of hydraulic cylinder	Draw-off force kN	Draw-off force lbs
68-0300	300	11.81	300	11.81	2¼"-14 UN	100	21 500
68-0450	450	17.71	450	17.71	3 ⅝"-12 UN	250	53 750
68-0600	600	23.62	600	23.62	5"-12 UN	500	107 500

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

Special Bearing Puller

Nr. 64

In connection with single-acting multipurpose hydraulic cylinder and hydraulic pump
Working pressure: 700 bar max.

SCHREM

Many uses
Easy handling
Reliable
Solid

For removal of grooved ball bearings, detachable ball journal bearings, self-aligning ball bearings, tapered-roller bearings via the rollers at the wide or sometimes narrow internal bearing collar as well as of other round parts.

The basic tools No. 64-801 and 64-901 are a new development. Their threaded cylinder connection is 3 5/16" - 12 UN, and they are mostly used with a 250 kN hydraulic cylinder. Connections for other cylinder types or threads upon request.

To minimize the dead weight of the basic tools great importance has been attached to a short structure to make sure the weights to be moved are as low as possible, which makes work a lot easier. Another advantage making work easier is that this design generally allows mounting of the removing device without a hydraulic cylinder.

The remover is fixed safely on the bearing to be removed by means of the adjusting nut.

The next step is to screw in the cylinder required for removal.

The collets (see page 1.18) are screwed onto the top part.
The collets are closed by means of the knurled adjusting nut, which is pivoted and connected with the clamping sleeve thus drawing the collet into the clamping sleeve in axial direction only. This makes it a lot easier to fix the puller free from play on the bearing to be removed.

Special Bearing Puller

Nr. 64

In connection with single-acting multipurpose hydraulic cylinder and hydraulic pump
Working pressure: 700 bar max.

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

Basic tool specifications

Purchase Order No.	Bore-hole Ø mm	Bore-hole Ø inch	External Ø mm	External Ø inch	Overall length mm	Overall length inch	⚖ kg
64-801	102	3.94	130	5.11	102	3.94	4,2
64-901	122	4.80	150	7.09	102	3.94	5,6

Since for bearings with a bore-hole diameter of more than 100 mm the external bearing diameters can vary a lot the clamping sleeve must be adapted to the removing collets to guarantee optimum function. This is the reason why in this case no clamping sleeve is included in the scope of delivery of the basic tool as it is usually standard. The accessory clamping sleeve of the collets is indicated in the following table.

Basic tool No. 64-801 and No. 64-901, burnished.
Collets see catalogue sheet 1.18.

List of clamping sleeves:

Purchase Order No.	External Ø mm	External Ø inch	For collets No.
64-8061	120	4.72	64-8106, 64-8107
			64-8108, 64-8114
64-8062	140	5.51	64-8101, 64-8109
			64-8110
64-8063	160	6.30	64-8102
64-8064	180	7.08	64-8103, 64-8104
			64-8113, 64-8115
64-8065	200	7.87	64-8105
64-8067	220	8.66	64-8111, 64-8112
64-9061	140	5.51	64-9103, 64-9104
			64-9105, 64-9108
			64-9110, 64-9111
64-9062	160	6.30	64-9112
64-9063	180	7.08	64-9102

For inserts the bearing of which is deeply set on a shaft the clamping depth can be increased by means of extensions in steps of 100 mm / 3.94" for collets and clamping sleeve.

Extension set:
100 mm / 3.94", for collets and clamping sleeve

Purchase Order No.	Suitable for basic device	⚖ kg
64-805	64-801	2,4
64-905	64-901	2,7

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

External and Internal Puller

No. 53-231
MAN

SCHREM

The extractor can be converted to a puller.

It has been developed in co-operation with MAN for extraction of sealing rings of external planetary axes. The arm design was specified on the basis of these requirements. The clamping width is adjusted by turning the knurled disk which is arranged on top of the upper star. This disk is part of the adjusting cylinder with two counter-directed threads. The two stars are moved thanks to this arrangement thus covering the complete spreading range with just a few turns.

To make possible many uses of this extractor the arms can be exchanged.

Depending on the requirements stronger forces than for extraction of a sealing ring are mostly necessary for removing. Therefore the arms No. 52-23008 should always be used for this work.

The spindle is equipped with an attachable spindle adapter.

Puller arms made of heat-treated chrome vanadium alloy steel, which is also a reason why this slim shape is possible.

Puller galvanized.
Spindle burnished.

Purchase Order No.	External puller ↔		External puller ↕		Internal puller ↔		Internal puller ↕		⚖
	mm	inch	mm	inch	mm	inch	mm	inch	kg
53-231	20-230	0.078-9.055	150	5.90	135-280	5.31-11.02	145	5.71	4,60

Hydraulic King-Pin Puller

No. 87-G40

DAIMLERCHRYSLER
LKW

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

The hydraulic king pin puller has been developed in co-operation with Daimler-Chrysler. It is used for example for extraction of the king pins of the AL7 front axles.

The extractor with the enclosed hydraulic system can be used at whatever location without requiring a separate hydraulic unit. Handling is very easy. The king pin puller is positioned via the feed rod (M24 x 1.5 thread). The feed rod is screwed into the king pin up to the stop.

Alternate turning of the setscrews by means of a change-over ratchet actuates the hydraulic system and the king pin is extracted. After completion of the extraction procedure the setscrews must be turned back to starting position to automatically reset the hydraulic system to zero position via a spring.

The puller is made of heat-treated chrome vanadium steel.
All parts are burnished.

The complete tool consists of:
Hydraulic base body
Feed rod with M24 x 1.5 thread
Removing sleeve
Safety belt

Specifications of hydraulic system:
Force: 120 kN
Stroke: 55 mm / 2.165"

Purchase Order No.: 87-G40
Weight: 9.2 kg

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

Hydraulic Ball Joint Ejector
No. 43-046

SCHREM

It was necessary to revise this ejector because of modified track rods and steering gears.

The hydraulic system has been supplemented by automatic reset so that, when slackening back the setscrew, the hydraulic system is automatically reset to zero/starting position.

The ball joint ejector consists of a hydraulic base body and various forks which are selected according to the size of the joint head.
It is suitable for a great number of applications in the heavy goods vehicle branch.

Function:
Handling is very easy. Loosen the mechanical nut at the joint head up to approx. 3 thread courses but do not screw off.
Position the ejector with the fork matching the joint head and manually tighten the knurled nut. Turning the spindle actuates the enclosed hydraulic system, which is installed in the ejector. In this way an axial force is built up which is used to press out the conical part of the joint head.

The axial force of 150 kN / 32250 lbs makes dismounting a lot easier.

Ejector and fork made of heat-treatable steel, heat-treated and burnished.

Indicate the fork you desire when placing an order.

Purchase Order No.	Part name / Fork opening	⚖ kg
43-046	Ejector without fork	4,45
43-146	25 mm / 0,98" fork	0,54
43-246	47 mm / 1,85" fork	0,62
43-346	32 mm / 1,25" fork	0,62

Two-Arm Puller "RECORD"

No. 54-606
IVECO

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

SCHREM

This puller has been designed in co-operation with IVECO.

Thanks to the cranked arm shape and greater clamping depth this two-arm puller can be used to draw off the wheel hubs of various truck types.

The clamping width is simply adjusted by shifting the arms on the traverse. The special, self-locking design prevents the arms from withdrawing during work.

Puller made of heat-treated chrome alloy steel, which is also a reason why this weight-saving shape is possible.

Puller galvanized.

Spindle burnished.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
54-606	380	14.96	300	11.81	5,00

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Two-Arm Puller "RECORD"

NO. 54-212
DAIMLERCHRYSLER
PKW

SCHREM

This two-arm puller has been designed for removal of the eccentric DaimlerChrysler intermediate bearing of the drive shaft.

The shape of the arms of this puller, which is per standard in all other respects, has been fully adapted to the bearing to be removed thus making possible perfect removal.

It can be transformed to a universal two-arm puller for external and internal removing by adding the respective arms.

Thanks to the angular design self-locking of the arms, is guaranteed for both applications. In this way withdrawal of the arms during work is excluded

Puller made of heat-treated chrome alloy steel, which is also a reason why this slim as well as space- and weight-saving shape is possible.

Puller galvanized.
Spindle burnished.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
54-212	130	5.11	125	4.92	0,90

Special Bearing Puller

No. 64

DaimlerChrysler

Various patents

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM

The puller sets are based on the bearings used by DaimlerChrysler at present.

The design of the special bearing puller is based on the modular system which guarantees its permanent and cost-saving adaptation according to the technical development of models and units.

Depending on the bearing size the basic tool can be No. 64-400 or No. 64-500. (Details see catalogue page 1.17.)
There are various possibilities to grip the bearing which depend on the bearing type and the location where it is installed.
Principle 1 = The ball bearing is gripped at the internal ring between the balls.
Principle 2 = The tapered roller bearing is gripped at the rollers.
Principle 3 = The tapered roller bearing is gripped at the wide internal ring collar.
Principle 4 = Gripping at the external bearing ring or at a bearing ring.

For each bearing the matching collet is to be used; the bearing No. is indicated on the collet. The collet which is screwed into the basic tool is closed via the left-hand thread of the clamping sleeve thus gripping the part to be removed.

To guarantee perfect function it is important that the puller takes the bearing free from play.

Basic tool
No. 64-400 and No. 64-500: galvanized, spindle burnished.

Extension
No. 64-405 and No. 64-505: burnished.

For basic tool No. 64-400

Purchase Order No.	Bearing No.	Removing Principle
63-432	30205	2
63-434	30305	2
63-440	FAG577941	4
63-494	TIM14124	2
63-497	L21549	2
63-4133	FAG578469	1
63-4156	INA28/67	1

For basic tool No. 64-500

Purchase Order No.	Bearing No.	Removing Principle
63-528	30207/32207	2
63-537	LM300849	2
63-539	32011	2
63-541	LM48548	2
63-542	LM67048	2
63-543	LM503349	2
63-544	M802048	2
63-545	HM89449	2
63-560	FAG546770	3
63-561	FAG319339	3
63-572	HM88649	2
63-579	IR547204	4
63-586	32012	2
63-587	LM67048	2
63-5107	JL69349	2
63-5110	TIM102949	2
63-5117	33109	2
63-5118	33205	2
63-5119	L610549	2
63-5130	INTERNAL RING	4
63-5131	6008	4
63-5135	KHM803149	2
63-5137	33208/32307	2
63-5138	FAG572648	2
63-5147	INA6206/9	1
63-5154	BT1-0042 A	3

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Special Bearing Puller
FORD

SCHREM

The composition is settled amongst FORD and ourselves.

The design of the special bearing puller is based on the modular system which guarantees its permanent and cost-saving adaptation according to the technical development of models and units.

Depending on the bearing size the basic tool can be No. 63-400 resp. No. 64-400 or 63-500 resp. 64-500. (Differences in the basic tools see catalogue page 1.16 and 1.17.)
There are various possibilities to grip the bearing which depend on the bearing type and the location where it is installed.
Principle 2 = The tapered roller bearing is gripped at the rollers.
Principle 3 = The tapered roller bearing is gripped at the wide internal ring collar.
Principle 4 = Gripping at the external bearing ring or at a bearing ring.

For each bearing the matching collet is to be used; the bearing No. is indicated on the collets. The collet which is scewed into the basic tool is closed via the left-hand thread of the clamping sleeve thus gripping the part to be removed.

To guarantee perfect function it is important that the puller takes the bearing free from play. (Manual closing is easier with basic tool No. 64.)
Basic tools No. 63-400 and No. 63-500 are burnished. Spindle burnished.
Basic tools No. 64-400 and No. 64-500 are galvanized. Spindle burnished.

Collets made of heat-treated and chrome vanadium steel, burnished.

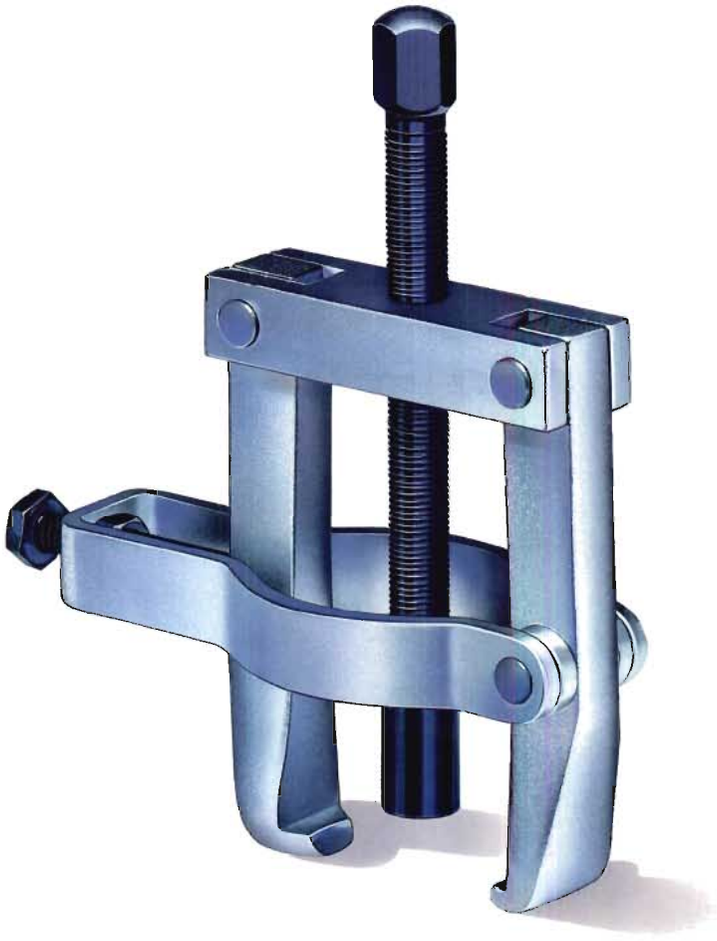
Purchase Order No.	Bearing No.	Removing Principle
64-453	331699	3
	11440378	
63-454	M88043	3
63-455	331139	3
63-493	SKF32205	2
63-495	32006	2
63-4108	NU2205	4
63-4109	BEARING RING	4
63-4119	SKF328696	2
63-4120	SKF328625	2
	SKF329025	
63-4122	SKF328227	4
63-4148	SKF328612	2
63-547	HM88648	2
	SKF331140	

Two-Arm Bearing Puller "CORA"

NO. 47-205
FORD

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM



For the internal ring of MTX75 gears.

The arms for gripping into the pockets the standard part is equipped with were adapted in co-operation with the FORD service department. With the specially designed arms and the clamp it is possible to loosen the ring prior to the actual removal. With this the bearing bush of the 3rd gear wheel can be removed from the main shaft without any problems.

The puller spindle is equipped with a pivoted thrust piece to avoid damages of the main shaft center during removal.

Puller arms made of heat-treated chrome vanadium alloy steel, which is also a reason why the slim design is possible.

The OTC No. of the two-arm bearing puller is 16-056.

Puller galvanized.
Spindle burnished.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
47-205	90	3.54	100	3.94	1,50

Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

Special Bearing Puller
VAG

SCHREM

The composition is depending on the bearings used by AUDI and VOLKSWAGEN.

The design of the special bearing puller is based on the modular system which guarantees its permanent and cost-saving adaptation according to the technical development of models and units.

Depending on the bearing size the basic tool can be No. 63-400 resp. No. 64-400 or 63-500 resp. 64-500. (Differences in the basic tool see catalogue page 1.16 and 1.17.) There are various possibilities to grip the bearing which depend on the bearing type and the location where it is installed.
Principle 1 = The ball bearing is gripped at the internal ring between the balls.
Principle 2 = The tapered roller bearing is gripped at the rollers.
For four-point contact bearings:
Grip according to principle 1 first. 2nd half of internal ring according to principle 4.

For each bearing the matching collet is to be used; the bearing No. is indicated on the collet. The collet which is screwed into the basic tool is closed via the left-hand thread of the clamping sleeve thus gripping the part to be removed.

To guarantee perfect function it is important that the puller takes the bearing free from play. (Manual closing is easier with device No. 64.)

Basic tool No. 63-400 and No. 63-500 are burnished. Spindle burnished.
Basic tool No. 64-400 and No. 64-500 are galvanized. Spindle burnished.
Extensions No. 63-405 and No. 64-405 are burnished.

Collets made of heat-treated chrome vanadium steel.

Purchase Order No.	Bearing No.	Removing Principle
63-538	32010	2
63-543	LM503349	2
63-575	TIM78349	2
	SKF330757	
63-576	LM29749	2
63-5107	NP622187	2
63-5155	SKF344/332	2

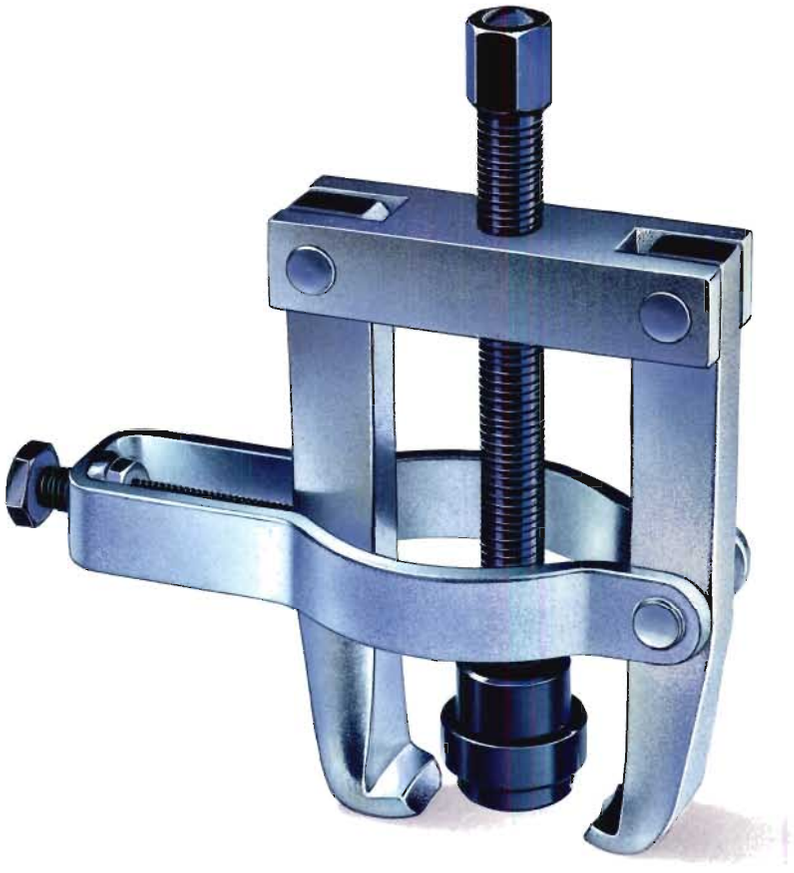
Purchase Order No.	Bearing No.	Removing Principle
63-412	6206/9	1
	FAG518220	
63-414	6304	1
63-415	6305/7	1
63-417	6306/8	1
63-425	FAG533365	1
	SKF362379	
63-432	25747	2
	45449	
63-433	30206	2
	SKF328236	
	NP282175	
63-434	30305	2
63-436	32005	2
63-463	FAG518220	4
63-488	6305/8	1
	FAG563466	
	SKF311351	
63-489	FAG633370	1
63-495	32006X	
	NP765903	
	NP946363	
63-4119	SKF328626	2
	SKF328627	
	SKF329050	
63-4148	SKF328612	2
63-4159	TIM06536	2
63-4100	TIM10240	2

Two-Arm Bearing Puller "CORA"

Nr. 47-201
VAG

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 1504
D-89530 Giengen
Phone 07322/6006
Fax 07322/6008

SCHREM



For removal of the internal bearing ring when changing the front wheel bearing of VAG vehicles.

With the specially designed arms and the clamp it is possible to loosen the bearing or bearing ring to be drawn off prior to the actual removal. The bearing is removed only when taken by the maximum face of the arms.

The spindle is equipped with a pivoted thrust piece to facilitate centering and to avoid damages of the wheel hub center.

Puller arms made of heat-treated chrome vanadium alloy steel, which is also a reason why the slim design is possible.

Puller galvanized.
Spindle burnished

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
47-201	90	3.54	100	3.94	1,60

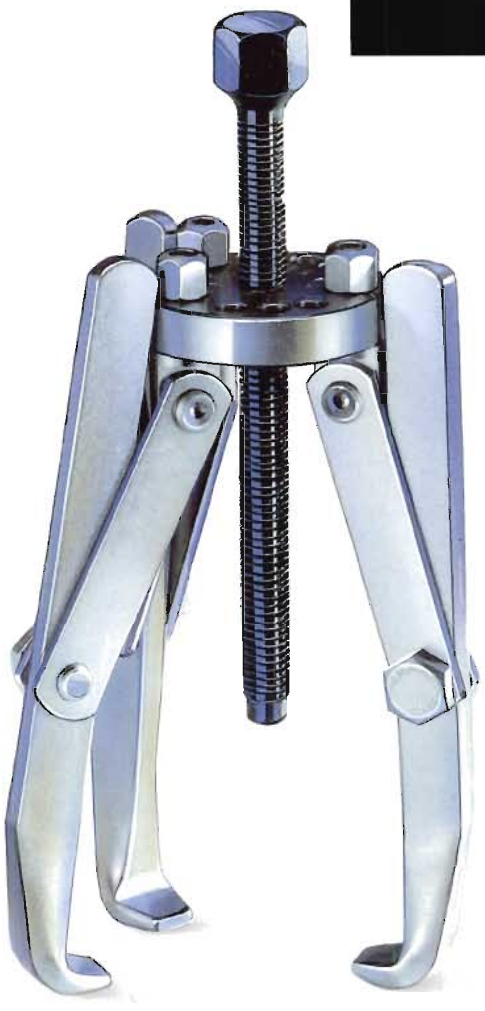
Technical data subject to change 9.99

ALBERT SCHREM
Werkzeugfabrik GmbH
P.B. 15 04
D-89530 Giengen
Phone 0 73 22 / 60 06
Fax 0 73 22 / 60 08

Multi Arm Puller "COMBI"

No. 57-036
VW/BOSCH

SCHREM



We have designed this 3-arm puller in co-operation with VW.

It is recommended by VW and BOSCH for the repair of the BOSCH 45 A and 65 A three phase generators.

For dismounting of the generator rotor the holding plate of the bearing must be removed first.

However, the puller can take the holding plate only at the five openings. Therefore an asymmetrical arrangement of the puller arms is required.

The COMBI multi-arm puller comes up to such requirements. Since it is important that the grips of the arms bite the holding plate of the bearing properly we have adapted them to the part diameter unlike the standard ones.

Grips made of heat-treated chrome alloy steel.

Puller galvanized.
Spindle burnished.

Purchase Order No.	↔ mm	↔ inch	↕ mm	↕ inch	⚖ kg
57-036	60	2.36	70	2.76	0,78

JRM International, Inc.
5701 Industrial Avenue Rockford, IL 61111
(815) 282-9330 FAX: (815) 282-9150
E-Mail: jrmsales@jrminternational.com
www.jrminternational.com

Schrem Pullers

SCHREM

Universal & Specialized Pullers

Schrem Puller Brochure #	Number of pages	Product Description
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1.11	1	Battery Terminal Puller No. 46-200 Two-Arm Bearing Puller “CORA” No.47
1.12	2	Three-Arm Puller “MOMENT” No. 52
1.13	2	Three-Arm Puller “DREMO” No.53
1.14	1	Hydraulic Spindle No.44
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1.19	2	Counterstay No. 62
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1.23	1	Spindle Adapter No. 23-5...
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1.23	1	Ball Joint Ejector No. 43-100
1.23	1	Stads Puller No. 60-000
1.23	1	Ball Joint Ejector No. 43-200
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2.10	1	Hydraulic King-Pin Puller No. 87-640 DaimlerChrysler LKW
2.11	1	Hydraulic Ball Joint Ejector No. 43-046
2.11	1	Two-Arm Puller “RECORD” No. 54-606 IVECO
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2.12	1	Special Bearing Puller No.64 DaimlerChrysler
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2.13	1	Two-Arm Bearing Puller “CORA” No. 47-205 FORD
2.14	1	Special Bearing Puller VAG
2.14	1	Two-Arm Bearing Puller “CORA” Nr. 47-201 VAG
2.15	1	Multi Arm Puller “COMBI” No. 57-036 VW/BOSCH