



Hydraulik-Werkzeuge

Hydraulic tools



Hydraulische Werkzeuge

Einsatzgebiete:

- Kraftwerke
- Chemische Industrie
- Bergbau / Ölindustrie
- Maschinenbau
- Schiffbau
- Anlagenbau
- Stahlbau
- Kunststoffindustrie
- Lebensmittelindustrie

Vorteile:

- höchste Drehmomente (-100.000 Nm)
- hohe Genauigkeit ($\pm 3\%$ - BOLTMAX compact)
- Arbeitssicherheit (Schlagschlüssel sind überflüssig)
- Flexibilität
(wechselbare Kassetten, Sonderanfertigungen*)
- kompakte Bauform
(extrem kleine Kopfradien RK - BOLTMAX compact)
- geringes Gewicht (bis zu 1450 Nm/KG - RSL30SDS)
- hohe Arbeitsgeschwindigkeit (BOLTMAXxt)

Hydraulic tools

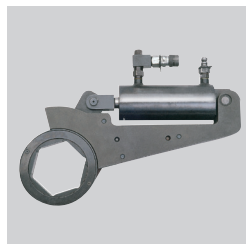
Fields of application:

- power generating industry
- chemical industry
- mining/oil exploration
- mechanical engineering
- ship yards
- construction/ship building industry
- steel construction
- plastic industry
- food industry

Advantages:

- highest torques (-100.000 Nm)
- high accuracy ($\pm 3\%$ - BOLTMAX compact)
- working safety (replaces slugging spanners)
- flexibility
(changeable cassettes, specially designed accessory*)
- compact construction (extremely small head radius RK - BOLTMAX compact)
- low weight (up to 1450 Nm/KG - RSL30SDS)
- quick mounting (BOLTMAXxt)

| Typen Types available | |
|----------------------------------|---|
| BOLTMAX <i>compact</i> | Kompaktschrauber für Wechselkassetten compact hydraulic wrench with changeable cassettes |
| BOLTMAX <i>classic</i> | Vierkantschrauber in bewährter Qualität hydraulic wrench with fix square drive in approved quality |
| BOLTMAX <i>custom</i> | Spezialfertigung nach Kundenwunsch* specially designed parts* |
| BOLTMAX <i>tension</i> | Hydraulische Bolzenlängung hydraulic bolt tensioners |
| BOLTMAX <i>xt</i> | Montagesystem für Plattenwärmetauscher mounting system for heat exchangers |



* Bitte sprechen Sie unser Beraterteam an

* please, ask our customer consultants

BOLTMAX

compact

Der Kompakt-Hydraulikschrauber aus der BOLTMAX Familie

Boltmax ist:

sicher

- genügt höchsten Sicherheitsanforderungen
- alle beweglichen Teile im Gehäuse, somit keine Verletzungsgefahr

schnell

- schnelles Arbeiten durch langen Arbeitshub ohne Abstriche in der Genauigkeit zu machen
- hohe Produktivität und geringe Ausfallzeiten durch ein optimiertes und klemmfreies Ratschensystem

leicht

- wurde konstruiert und berechnet mit modernsten Methoden (CAD/ FEM)
- optimiertes Verhältnis von Gewicht und Drehmoment

präzise

- Genauigkeit $\pm 3\%$

flexibel

- umfassendes Zubehörprogramm
- sowohl Vierkantkassetten als auch Ringschlüsselkassetten
- Einsätze mit direkter Kerbverzahnung und spezielle Abstützungen im System integriert
- kundenspezifische Sonderfertigungen auf Anfrage

dauerhaft

- nur wenig sorgfältig konzeptionierte Einzelkomponenten = hohe Qualität

kompakt

- extrem kompaktes Design – speziell für beengte Verhältnisse
- minimierte Kopfradien (R/K)

The compact hydraulic torque wrench from the BOLTMAX family

Boltmax shows the following characteristics:

safe

- complies with highest security requirements
- all movable parts are into the casing, thus no risk of injury

quick

- quick and safe work on account of the long working stroke without compromise on the accuracy
- optimized and jamming ratcheting system minimizes the downtime of torque wrench and thus increases productivity

low weight

- has been designed and calculated by the latest Methods (CAD/FEM)
- an optimized ratio between weight and torque value

precise

- tolerance of $\pm 3\%$ only

flexible

- a wide range of accessory tools
- can be fitted with a square drive cassette as well as A ring cassette
- Sockets with direct tothing and special support Arms are deliverable as well
- Special versions on request

solid and long lasting

- only a few carefully designed components = high quality

compact

- minimised dimensions - specifically for tight spaces
- minimized head radius (R/K)

BOLTMAX 200 - 38500 Nm

compact

RSLSDS


Werkzeugsatz bestehend aus:

- Grundwerkzeug BOLTMAX compact RS
- Vierkantkassette BOLTMAX compact S
- Abstützung BOLTMAX compact RSLA
- Lieferung ohne Swivel Kupplung

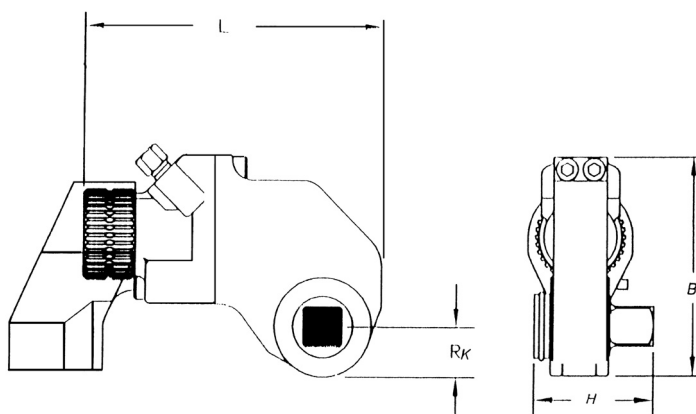
RSLSDS

Tool set consisting of:

- Basic tool BOLTMAX compact RS
- square cassette BOLTMAX compact S
- reaction anchor BOLTMAX compact RSLA
- delivery without swivel connector

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Nm _{max} | P _{max} [bar] | Ausgang Output | L | B | H | R _K |  |
|--------------------------|------------------------|----------|-------------------|---------------------------|-------------------|-----|-----|-----|----------------|---|
| RSL2SDS | 74000 | 11600,00 | 1937 | 700 | 20 (3/4") | 160 | 114 | 65 | 23,9 | 3000 |
| RSL4SDS | 74020 | 17000,00 | 4237 | 700 | 25 (1") | 196 | 142 | 80 | 31,8 | 4900 |
| RSL6SDS | 77430 | 26000,00 | 7325 | 700 | 40 (1 1/2") | 235 | 164 | 100 | 38,6 | 8000 |
| RSL8SDS | 74040 | 27000,00 | 10813 | 700 | 40 (1 1/2") | 279 | 169 | 115 | 38,6 | 9900 |
| RSL14SDS | 74060 | 30300,00 | 15342 | 700 | 40 (1 1/2") | 286 | 202 | 125 | 47,8 | 13300 |
| RSL20SDS | 74065 | 36200,00 | 26821 | 700 | 63 (2 1/2") | 336 | 241 | 160 | 63,5 | 22100 |
| RSL30SDS | 74080 | 46500,00 | 38516 | 700 | 63 (2 1/2") | 385 | 263 | 165 | 63,5 | 26400 |

RSL2SDS - RSL30SDS



Einsätze mit direkter Kerbverzahnung für BOLTMAX compact RSLSDS

Diese Steckschlüsseinsätze werden, anstelle des Abtriebsvierkantes, direkt in die Verzahnung des Schraubwerkzeuges eingesetzt.

- geringe Bauhöhe
- Verringerung des Biegemoments

Sockets with direct tootinging for BOLTMAX compact RSLSDS

These sockets are directly inserted into the tootinging of hydraulic tools (instead of the square drive)

- smaller dimensions
- reduction of bending load

RSL2

RSL2

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | ↕ mm | ∅ |
|--------------------------|------------------------|--------|------|------|
| RSL2/22 | 76988 | 745,00 | 22 | 36,5 |
| RSL2/24 | 76989 | 745,00 | 24 | 39,0 |
| RSL2/25 | 76990 | 745,00 | 27 | 43,0 |
| RSL2/30 | 76991 | 745,00 | 30 | 47,0 |
| RSL2/32 | 76992 | 745,00 | 32 | 50,0 |
| RSL2/36 | 76993 | 745,00 | 36 | 57,0 |
| RSL2/41 | 76994 | 745,00 | 41 | 64,0 |
| RSL2/46 | 76995 | 745,00 | 46 | 71,0 |

RSL2

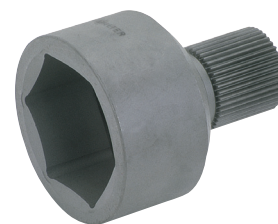


RSL4

RSL4

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | ↕ mm | ∅ |
|--------------------------|------------------------|--------|------|------|
| RSL4/27 | 76996 | 795,00 | 27 | 43,0 |
| RSL4/30 | 76997 | 795,00 | 30 | 47,5 |
| RSL4/32 | 76998 | 795,00 | 32 | 50,0 |
| RSL4/36 | 76999 | 795,00 | 36 | 56,0 |
| RSL4/41 | 77000 | 795,00 | 41 | 64,0 |
| RSL4/46 | 77001 | 795,00 | 46 | 71,0 |
| RSL4/50 | 77002 | 795,00 | 50 | 76,0 |
| RSL4/55 | 77003 | 795,00 | 55 | 80,0 |

RSL4

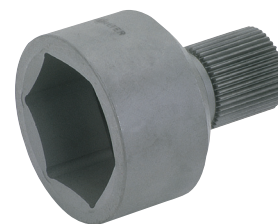


RSL6

RSL6

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | ↕ mm | ∅ |
|--------------------------|------------------------|--------|------|-----|
| RSL6/46 | 77050 | 975,00 | 46 | 71 |
| RSL6/50 | 77051 | 975,00 | 50 | 76 |
| RSL6/55 | 77052 | 975,00 | 55 | 82 |
| RSL6/60 | 77053 | 975,00 | 60 | 89 |
| RSL6/65 | 77055 | 975,00 | 65 | 95 |
| RSL6/70 | 77056 | 975,00 | 70 | 100 |
| RSL6/75 | 77057 | 975,00 | 75 | 106 |
| RSL6/80 | 77058 | 975,00 | 80 | 114 |

RSL6



RSL8

RSL8

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | ↕ mm | ∅ |
|--------------------------|------------------------|---------|------|-------|
| RSL8/55 | 77009 | 1450,00 | 55 | 82,0 |
| RSL8/60 | 77010 | 1450,00 | 60 | 89,0 |
| RSL8/65 | 77011 | 1450,00 | 65 | 95,0 |
| RSL8/70 | 77012 | 1800,00 | 70 | 100,0 |
| RSL8/75 | 77013 | 1800,00 | 75 | 106,0 |
| RSL8/80 | 77015 | 1800,00 | 80 | 114,0 |
| RSL8/85 | 77016 | 1980,00 | 85 | 120,0 |
| RSL8/90 | 77017 | 1980,00 | 90 | 126,0 |
| RSL8/95 | 77018 | 1980,00 | 95 | 132,0 |

RSL8



RSLI4



RSLI4

RSLI4

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | ↕ mm | ø |
|--------------------------|------------------------|---------|------|-----|
| RSLI4/65 | 77019 | 2150,00 | 65 | 95 |
| RSLI4/70 | 77020 | 2200,00 | 70 | 100 |
| RSLI4/75 | 77021 | 2200,00 | 75 | 111 |
| RSLI4/80 | 77022 | 2200,00 | 80 | 117 |
| RSLI4/85 | 77023 | 2200,00 | 85 | 124 |
| RSLI4/90 | 77025 | 3050,00 | 90 | 130 |
| RSLI4/95 | 77026 | 3050,00 | 95 | 139 |
| RSLI4/100 | 77030 | 3050,00 | 100 | 147 |
| RSLI4/105 | 77031 | 3050,00 | 105 | 152 |
| RSLI4/110 | 77032 | 3050,00 | 110 | 159 |
| RSLI4/115 | 77033 | 3050,00 | 115 | 166 |

RSL20



RSL20

RSL20

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | ↕ mm | ø |
|--------------------------|------------------------|---------|------|-----|
| RSL20/80 | 77080 | 3395,00 | 80 | 117 |
| RSL20/85 | 77081 | 3395,00 | 85 | 124 |
| RSL20/90 | 77082 | 3395,00 | 90 | 130 |
| RSL20/95 | 77083 | 3395,00 | 95 | 139 |
| RSL20/100 | 77085 | 3395,00 | 100 | 147 |
| RSL20/105 | 77087 | 3995,00 | 105 | 152 |
| RSL20/110 | 77088 | 3995,00 | 110 | 159 |
| RSL20/115 | 77089 | 3995,00 | 115 | 166 |
| RSL20/120 | 77090 | 3995,00 | 120 | 172 |
| RSL20/125 | 77091 | 3995,00 | 125 | 178 |
| RSL20/130 | 77092 | 4100,00 | 130 | 185 |

RSL30



RSL30

RSL30

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | ↕ mm | ø |
|--------------------------|------------------------|---------|------|-----|
| RSL30/80 | 77035 | 3395,00 | 80 | 117 |
| RSL30/85 | 77036 | 3395,00 | 85 | 124 |
| RSL30/90 | 77039 | 3395,00 | 90 | 130 |
| RSL30/95 | 77040 | 3395,00 | 95 | 139 |
| RSL30/100 | 77041 | 3395,00 | 100 | 147 |
| RSL30/105 | 77042 | 3995,00 | 105 | 152 |
| RSL30/110 | 77043 | 3995,00 | 110 | 159 |
| RSL30/115 | 77045 | 3995,00 | 115 | 166 |
| RSL30/120 | 77046 | 3995,00 | 120 | 172 |
| RSL30/125 | 77047 | 3995,00 | 125 | 178 |
| RSL30/130 | 77048 | 4100,00 | 130 | 185 |

RSL HEX



Alle Einsätze sind auch für Innensechskant-Schrauben
lieferbar

All inserts are also available for hexagon sockets
screws

auf Anfrage

on request


BOLTMAX

compact

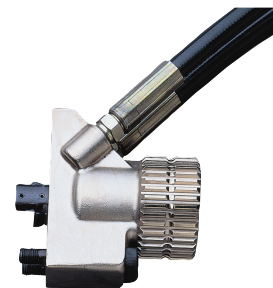
200 - 38500 Nm

Basisgerät
incl. HD-Anschlüssen

basic tool
with HD-connectors


| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Nm _{max} | P _{max} [bar] |  |
|--------------------------|------------------------|----------|-------------------|------------------------|---|
| RSL2 | 74001 | 6300,00 | 1960 | 700 | 1800 |
| RSL4 | 74021 | 8100,00 | 4195 | 700 | 2800 |
| RSL6 | 74031 | 12200,00 | 7325 | 700 | 3900 |
| RSL8 | 74041 | 12960,00 | 10825 | 700 | 5400 |
| RSL14 | 74061 | 14580,00 | 15360 | 700 | 5800 |
| RSL20 | 77470 | 18300,00 | 26821 | 700 | 8300 |
| RSL30 | 74081 | 19450,00 | 38560 | 700 | 9700 |

RSL



Abstützungen
360° drehbar, extrem leicht

Reaction bars
1360° rotatable, light weight


| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € |  |
|--------------------------|------------------------|---------|---|
| RSLA2 | 74004 | 1200,00 | 200 |
| RSLA4 | 74024 | 1400,00 | 600 |
| RSLA6 | 74034 | 1750,00 | 1400 |
| RSLA8 | 74044 | 1950,00 | 1600 |
| RSLA14 | 74064 | 2000,00 | 1700 |
| RSLA20 | 77481 | 2750,00 | 3800 |
| RSLA30 | 77482 | 3100,00 | 5700 |

RSLA

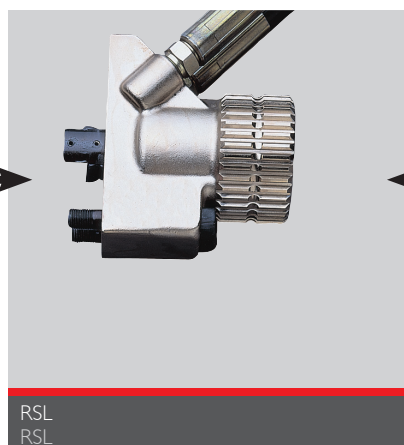
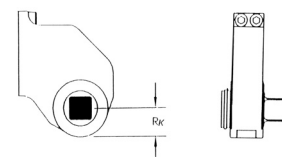


Vierkant-Kassetten

Square cassettes for

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Ausgang Output | R _K |  |
|--------------------------|------------------------|----------|-------------------|----------------|---|
| RSL S2 | 74003 | 5650,00 | 20 (3/4") | 23,9 | 1200 |
| RSL S4 | 74023 | 8650,00 | 25 (1") | 31,8 | 2200 |
| RSL S6 | 74033 | 13350,00 | 40 (1/2") | 38,6 | 4100 |
| RSL S8 | 74043 | 13950,00 | 40 (1 1/2") | 38,6 | 5100 |
| RSL S14 | 74063 | 15800,00 | 40 (1 1/2") | 47,8 | 7500 |
| RSL S20 | 77483 | 19500,00 | 63 (2 1/2") | 63,5 | 14200 |
| RSL S30 | 74083 | 25000,00 | 63 (2 1/2") | 63,5 | 16700 |

RSL S



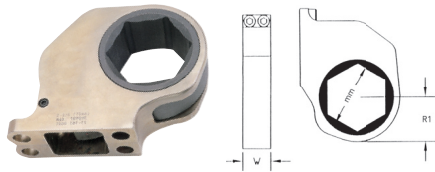
BOLTMAX 200 - 38500 Nm

compact

Ringschlüsselkassetten für BOLTMAX compact

Hexagon heads to be used with BOLTMAX compact

RSL2H

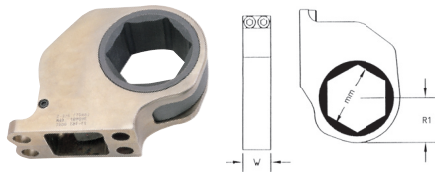


RSL2H

RSL2H

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | mm | RI | W |
|--------------------------|------------------------|---------|----|------|----|
| RSL2H22 | 74501 | 5400,00 | 22 | 22,4 | 32 |
| RSL2H24 | 74005 | 5400,00 | 24 | 23,4 | 32 |
| RSL2H27 | 74006 | 5400,00 | 27 | 24,1 | 32 |
| RSL2H30 | 74007 | 5400,00 | 30 | 26,1 | 32 |
| RSL2H32 | 74008 | 5400,00 | 32 | 27,0 | 32 |
| RSL2H36 | 74009 | 5400,00 | 36 | 29,1 | 32 |
| RSL2H41 | 74010 | 5400,00 | 41 | 33,4 | 32 |
| RSL2H46 | 74011 | 5400,00 | 46 | 35,5 | 32 |
| RSL2H50 | 74012 | 5400,00 | 50 | 37,7 | 32 |
| RSL2H55 | 74013 | 5400,00 | 55 | 40,2 | 32 |
| RSL2H60 | 74014 | 5400,00 | 60 | 43,1 | 32 |

RSL4H

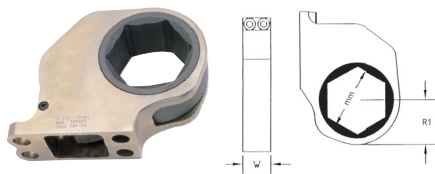


RSL4H

RSL4H

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | mm | RI | W |
|--------------------------|------------------------|---------|----|------|----|
| RSL4H36 | 74502 | 7100,00 | 36 | 28,7 | 35 |
| RSL4H41 | 74503 | 7100,00 | 41 | 32,6 | 35 |
| RSL4H46 | 74025 | 7100,00 | 46 | 36,6 | 35 |
| RSL4H50 | 74026 | 7100,00 | 50 | 39,8 | 35 |
| RSL4H55 | 74027 | 7100,00 | 55 | 43,8 | 35 |
| RSL4H60 | 74028 | 7100,00 | 60 | 47,8 | 35 |
| RSL4H65 | 74029 | 7100,00 | 65 | 51,8 | 35 |
| RSL4H70 | 74030 | 7100,00 | 70 | 55,7 | 35 |

RSL6H

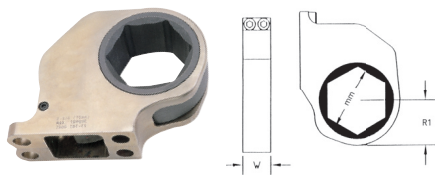


RSL6H

RSL6H

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | mm | RI | W |
|--------------------------|------------------------|---------|----|------|----|
| RSL6H50 | 77059 | 9100,00 | 50 | 40,9 | 45 |
| RSL6H55 | 77060 | 9100,00 | 55 | 43,4 | 45 |
| RSL6H60 | 77061 | 9100,00 | 60 | 47,5 | 45 |
| RSL6H65 | 77062 | 9100,00 | 65 | 51,0 | 45 |
| RSL6H70 | 77063 | 9100,00 | 70 | 54,9 | 45 |
| RSL6H75 | 77065 | 9100,00 | 75 | 56,9 | 45 |
| RSL6H80 | 77066 | 9100,00 | 80 | 57,4 | 45 |

RSL8H



RSL8H

RSL8H

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | mm | RI | W |
|--------------------------|------------------------|---------|----|------|----|
| RSL8H55 | 74505 | 9300,00 | 55 | 43,4 | 58 |
| RSL8H60 | 74045 | 9300,00 | 60 | 47,5 | 58 |
| RSL8H65 | 74046 | 9300,00 | 65 | 51,1 | 58 |
| RSL8H70 | 74047 | 9300,00 | 70 | 54,9 | 58 |
| RSL8H75 | 74048 | 9300,00 | 75 | 56,9 | 58 |
| RSL8H80 | 74049 | 9300,00 | 80 | 57,4 | 58 |

BOLTMAX

compact

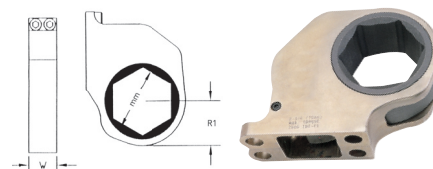
200 - 38500 Nm

RSL14H

RSL14H

RSL14H

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | mm | RI | W |
|--------------------------|------------------------|----------|-----|------|----|
| RSL14H70 | 74062 | 13200,00 | 70 | 55,7 | 64 |
| RSL14H75 | 74506 | 13200,00 | 75 | 56,5 | 64 |
| RSL14H80 | 74507 | 13200,00 | 80 | 60,2 | 64 |
| RSL14H85 | 74066 | 13200,00 | 85 | 64,0 | 64 |
| RSL14H90 | 74067 | 13200,00 | 90 | 67,8 | 64 |
| RSL14H95 | 74068 | 13200,00 | 95 | 71,5 | 64 |
| RSL14H100 | 74069 | 13200,00 | 100 | 75,3 | 64 |
| RSL14H105 | 74070 | 13200,00 | 105 | 79,1 | 64 |
| RSL14H110 | 74071 | 13200,00 | 110 | 82,8 | 64 |
| RSL14H115 | 74072 | 13200,00 | 115 | 86,6 | 64 |

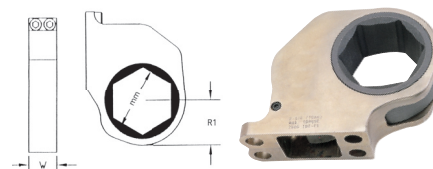


RSL20H

RSL20H

RSL20H

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | mm | RI | W |
|--------------------------|------------------------|----------|-----|------|----|
| RSL20H80 | 77471 | 15800,00 | 80 | 62,2 | 70 |
| RSL20H85 | 77472 | 15800,00 | 85 | 70,4 | 70 |
| RSL20H90 | 77473 | 15800,00 | 90 | 74,9 | 70 |
| RSL20H95 | 77475 | 15800,00 | 95 | 74,9 | 70 |
| RSL20H100 | 77476 | 15800,00 | 100 | 83,8 | 70 |
| RSL20H105 | 77477 | 15800,00 | 105 | 83,8 | 70 |
| RSL20H110 | 77478 | 15800,00 | 110 | 87,4 | 70 |
| RSL20H115 | 77479 | 15800,00 | 115 | 87,4 | 70 |

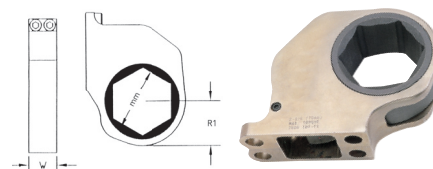


RSL30H

RSL30H

RSL30H

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | mm | RI | W |
|--------------------------|------------------------|----------|-----|-------|------|
| RSL30H80 | 74508 | 18900,00 | 80 | 65,0 | 76,0 |
| RSL30H85 | 74084 | 18900,00 | 85 | 65,0 | 76,0 |
| RSL30H90 | 74085 | 18900,00 | 90 | 74,2 | 76,0 |
| RSL30H95 | 74086 | 18900,00 | 95 | 74,2 | 76,0 |
| RSL30H100 | 74087 | 18900,00 | 100 | 83,6 | 76,0 |
| RSL30H105 | 74088 | 18900,00 | 105 | 83,6 | 76,0 |
| RSL30H110 | 74089 | 18900,00 | 110 | 87,1 | 76,0 |
| RSL30H115 | 74090 | 18900,00 | 115 | 87,1 | 76,0 |
| RSL30H120 | 74091 | 18900,00 | 120 | 92,7 | 76,0 |
| RSL30H130 | 74093 | 18900,00 | 130 | 96,3 | 76,0 |
| RSL30H135 | 74094 | 18900,00 | 135 | 96,3 | 76,0 |
| RSL30H140 | 74095 | 18900,00 | 140 | 102,9 | 76,0 |
| RSL30H145 | 74096 | 18900,00 | 145 | 102,9 | 76,0 |
| RSL30H150 | 74097 | 18900,00 | 150 | 107,2 | 76,0 |
| RSL30H155 | 74098 | 18900,00 | 155 | 107,2 | 76,0 |



Ringschlüsselskassette im Einsatz
Hexagonhead in use



Kassette und Basisgerät
Cassettes and basic tool

BOLTMAX

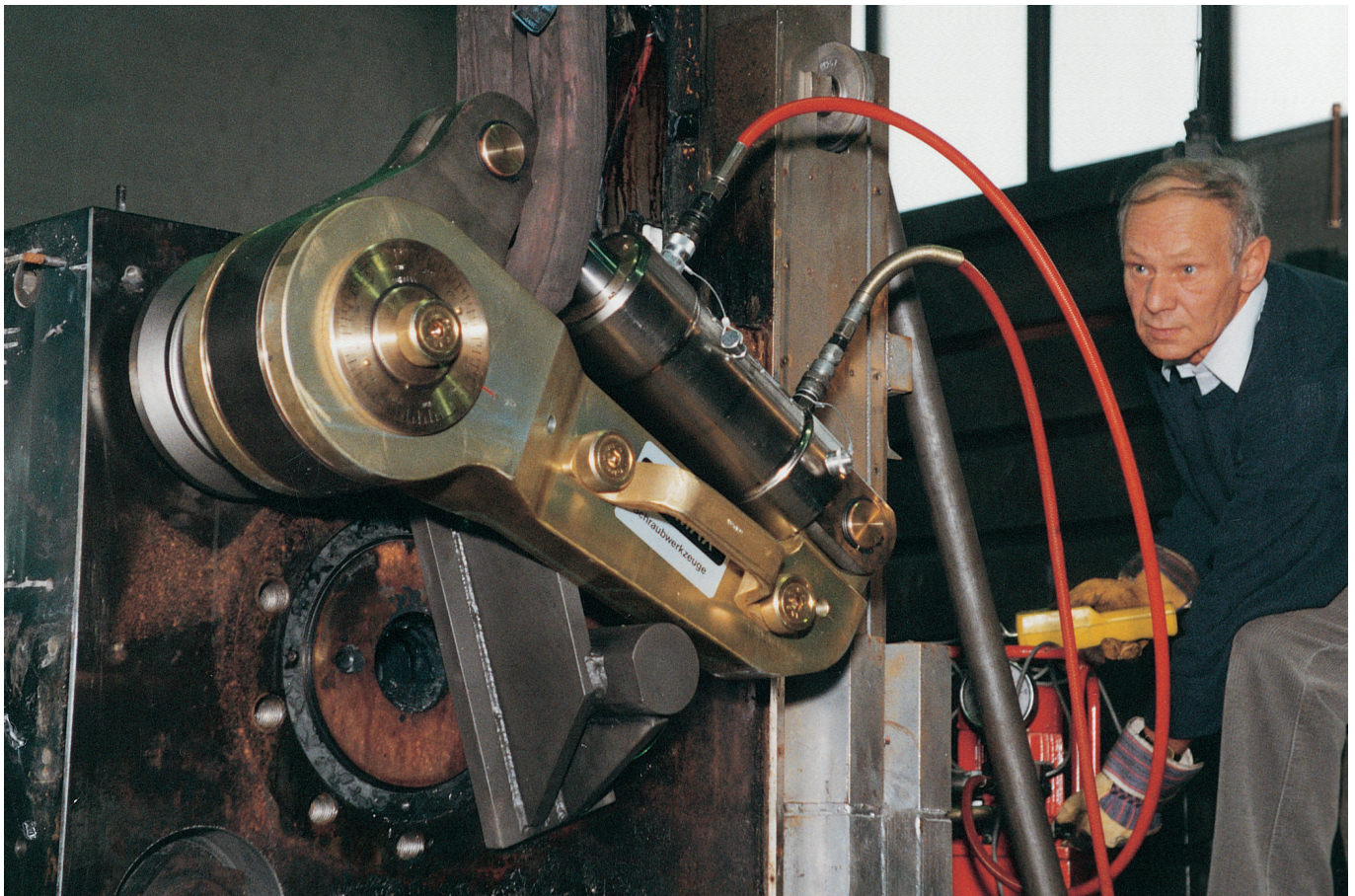
classic

Der bewährte Hydraulikschrauber aus der Boltmax Familie

- Der Ursprung des gesamten Boltmax Systems
- Zuverlässigkeit und Präzision seit über 20 Jahren
- Verschraubungen in einem großen Drehmomentbereich (300 - 100.000 Nm)
- Der Schrauber mit modularem Aufbau
- Ein System mit vielen Möglichkeiten

Well approved hydraulic torque wrench out of the BOLTMAX family

- original tools of the whole BOLTMAX system
- reliability and precision for more than 20 years
- tightening/loosening in a huge variety of torques (300 - 100.00 Nm)
- a torque tool with modular construction
- a system with many possibilities



Boltmax classic BM 100.000 im Einsatz
Boltmax classic BM 100.000 in use

BOLTMAX

100-100000 Nm


classic

Modular aufgebautes, hydraulisches Verschraubungswerkzeug

- spezialverzahnte Ratsche
- wechselbarer Vierkant
- incl. Drehwinkelskala

modular built-up hydraulic tightening tool

- specially toothed ratchet
- changeable square drive
- incl. torque angle measuring scale

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Nm _{max} | P _{max} [bar] | Ausgang Output | L | B | H | R _K |  |
|--------------------------|------------------------|----------|-------------------|------------------------|-------------------|-----|-----|-----|----------------|---|
| BM3000 | 76908 | 10850,00 | 3000 | 700 | 25 (1") | 289 | 156 | 88 | 37 | 6900 |
| BM5000 | 77137 | 11900,00 | 5000 | 700 | 40 (1 1/2") | 291 | 158 | 99 | 39 | 7000 |
| BM6250 | 77157 | 13500,00 | 6500 | 700 | 40 (1 1/2") | 291 | 158 | 99 | 39 | 7200 |
| BM10000 | 78037 | 15200,00 | 10000 | 700 | 40 (1 1/2") | 342 | 203 | 108 | 57 | 12900 |
| BM12500 | 78039 | 17300,00 | 12500 | 700 | 40 (1 1/2") | 347 | 208 | 108 | 57 | 13200 |
| BM20000 | 78937 | 21600,00 | 20000 | 700 | 63 (2 1/2") | 382 | 238 | 150 | 63 | 22900 |
| BM25000 | 78957 | 23800,00 | 25000 | 700 | 63 (2 1/2") | 402 | 243 | 150 | 68 | 24500 |
| BM32000 | 78997 | 30800,00 | 32000 | 700 | 63 (2 1/2") | 402 | 243 | 152 | 68 | 26000 |
| BM50000 | 79538 | 64800,00 | 50000 | 700 | 90 (3 1/2") | 546 | 303 | 212 | 85 | 60000 |
| BM100000 | 79650 | 97500,00 | 100000 | 700 | 90 (3 1/2") | 715 | 380 | 237 | 120 | 120000 |

Abstützstücke

Ermöglichen das Abstützen auf einer „Nachbarschraube“ (z.B. am Blindflansch)

BM3000

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Ausgang Output | L |
|--------------------------|------------------------|--------|-------------------|-----|
| BMA3 / 1 | 77044 | 850,00 | 25 (1") | 110 |
| BMA3 / 2 | 77064 | 880,00 | 25 (1") | 140 |

BM5000-6250

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Ausgang Output | L |
|--------------------------|------------------------|--------|-------------------|-----|
| BMA5 / 1 | 77594 | 950,00 | 40 (1 1/2") | 110 |
| BMA5 / 2 | 77604 | 975,00 | 40 (1 1/2") | 140 |

BM10000-12500

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Ausgang Output | L |
|--------------------------|------------------------|---------|-------------------|-----|
| BMA10 / 1 | 78484 | 1500,00 | 40 (1 1/2") | 110 |
| BMA10 / 2 | 78494 | 1600,00 | 40 (1 1/2") | 140 |
| BMA10 / 3 | 78504 | 1700,00 | 40 (1 1/2") | 170 |
| BMA10 / 4 | 78514 | 1800,00 | 40 (1 1/2") | 250 |

BM20000-25000

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Ausgang Output | L |
|--------------------------|------------------------|---------|-------------------|-----|
| BMA20 / 1 | 79404 | 2500,00 | 63 (2 1/2") | 170 |

Reaction bars

facilitates to use a „neighbour bolt“ as counterstay (e.g. at blind flange)

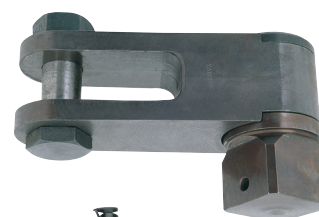
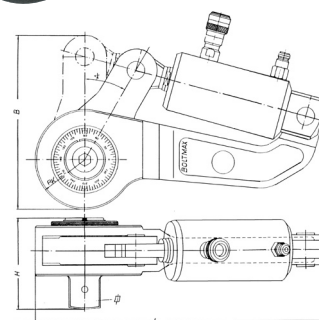
BM3000

BM5000-6250

BM10000-12500

BM20000-25000

BM



700 bar

HD-Hydraulikschlauch

- ölgefüllt und entlüftet
- incl. HD-Kupplungen
- mit Knickschutz

HD-hydraulic hose

- oil filled and free from air
- incl. HD couplings
- with bending protector

HD



| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | L |  |
|--------------------------|------------------------|--------|-------|---|
| HD2 | 77897 | 430,00 | 2000 | 1000 |
| HD3 | 77777 | 480,00 | 3000 | 1400 |
| HD5 | 77987 | 480,00 | 5000 | 1800 |
| HD10 | 77997 | 650,00 | 10000 | 3100 |
| HD20 | 78007 | 980,00 | 20000 | 5800 |

700 bar

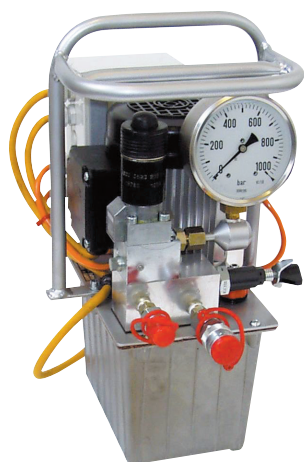
Elektro-Hydraulikpumpe / Pumpen für Hydraulikschraubler


- dreistufige Axialkolbenpumpe
- E-motor
- 2800 min-1
- regelbares Druckbegrenzungsventil
- Manometer Ø 100 mm
- incl. Kupplungen, Ölfüllung und Fernsteuerung (5m)

Electro hydraulic pump / Pumps for hydraulic tightening tools

- three step axial reciprocating pump
- electro motor
- 2800 min-1
- adjustable pressure relief valve
- manometer diam. Ø 100 mm
- incl. couplings, oil filling and remote control (5m)

HE



| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Förderleistung Volume | Tank [L] Tank [L] | L | B | H | V |  |
|--------------------------|------------------------|----------|--|----------------------|-----|-----|-----|-----|---|
| HE025 | 77903 | 8640,00 | 1) 75 bar: 3,2 l 2) 200 bar: 0,9 l 3) 700 bar: 0,4 l | 2,5 | 360 | 230 | 400 | 230 | 15000 |
| HE055 | 77902 | 10530,00 | 1) 75 bar: 6,5 l 2) 200 bar: 1,8 l 3) 700 bar: 0,7 l | 4,0 | 400 | 280 | 400 | 230 | 25000 |
| HE110 | 77901 | 10530,00 | 1) 75 bar: 8,5 l 2) 200 bar: 3,4 l 3) 700 bar: 1,3 l | 4,0 | 460 | 300 | 440 | 400 | 30000 |


700 bar

Hand-Hydraulikpumpe für Hydraulikschrauber

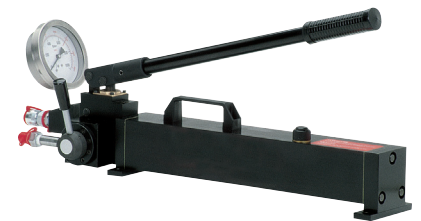
- zweistufige Handpumpe
- Manometer 100 mm
- incl. Kupplungen und Ölfüllung

Manual hydraulic pump

- two step manual pump
- manometer diam. 100 mm
- incl. couplings and oil filling

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Förderleistung [ccm] Volume [ccm] | Tank [L] Tank [L] | L | B | H |  |
|--------------------------|------------------------|---------|--------------------------------------|----------------------|-----|-----|-----|---|
| BMPH262 | 77928 | 3500,00 | 1) 70 bar: 32 2) 700 bar: 3,0 | 1,9 | 575 | 120 | 170 | 8000 |

BMPH 262




700 bar

Luft-Hydraulikpumpe

- zweistufige Axialkolbenpumpe
- Luftmotor, 1,1 kW
(Betriebsdruck 5 - 10 bar - 16 l/sec)
- P3000 min-1
- regelbares Druckbegrenzungsventil
- Manometer Ø 100 mm
- incl. Wartungseinheit, Kupplungen, Ölfüllung und Fernsteuerung (5m)

Air hydraulic pump

- two step axial reciprocating pump
- air motor, 1,1 kW
(working pressure 5 - 10 bar - 16 l/sec)
- 3000 min-1
- adjustable pressure relief valve
- manometer diam. 100 mm
- incl. service unit, couplings, oil filling and remote control (5m)

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Förderleistung [l/min] Volume [l/min] | Tank [L] Tank [L] | L | B | H |  |
|--------------------------|------------------------|---------|--|----------------------|-----|-----|-----|---|
| BMPL32 | 77907 | 8640,00 | 1) 70 bar: 5,5 2) 700 bar: 0,5 | 6,5 | 360 | 410 | 450 | 22000 |

BMPL 32



1600 bar

Pumpe für BOLTMAX tension

Hand-Hydraulikpumpe

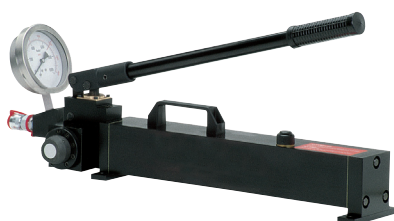
- zweistufige Handpumpe
- Manometer 100 mm
- incl. Kupplungen und Ölfüllung


Pumps for BOLTMAX tension

Manual hydraulic pump

- two step manual pump
- manometer diam. 100 mm
- incl. couplings and oil filling

BMPML 16216



| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | Förderleistung [ccm] Volume [ccm] | Tank [L] Tank [L] | L | B | H |  |
|--------------------------|------------------------|---------|--------------------------------------|----------------------|-----|-----|-----|---|
| BMPML 16216 | 77431 | 3200,00 | 1) 20 bar: 32 2) 1600 bar: 1,6 | 1,9 | 575 | 120 | 170 | 8000 |

1600 bar

HD-Hydraulikschläuche


- ölgefüllt und entlüftet
- incl. HD-Kupplungen
- mit Knickschutz

HD-hydraulic hoses

- oil filled and free from air
- incl. HD couplings
- with bending protector

HDH



| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | L |  |
|--------------------------|------------------------|--------|------|---|
| HDH2 | 77485 | 650,00 | 2000 | 1100 |
| HDH3 | 77486 | 720,00 | 3000 | 1600 |
| HDH4 | 77487 | 740,00 | 4000 | 2100 |

andere Längen auf Anfrage

other lengths on request

BOLTMAX

xt

Montage- und Demontagesystem für Plattenwärmetauscher

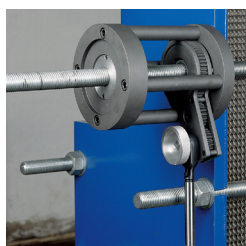
Die Vorteile:

- effizientes Arbeiten (nur ein Bediener erforderlich)
- hohe Arbeitsgeschwindigkeit (ca. 10 Min zur Demontage eines Kühlers mit M39 Spindeln)
- hohe Präzision durch genaue Kraftkontrolle (Manometer/Druckbegrenzungsventil)
- große Flexibilität durch wechselbare Komponenten
- sicheres Arbeiten in explosionsgefährdeten Bereichen (mit Lufthydraulikpumpe)
- sicheres Arbeiten (kein ausdrücken der Gewindestangen)
- keine Drucklager erforderlich
- kompakte Bauweise
- wartungsarm (keine hochbelasteten Zahnräder)

Assembly and torque tool for plate-Heat exchanger

Advantages:

- efficient working (only 1 operator necessary)
- high working speed (about 10 min. for dismantling of a cooler with M39 spindle)
- high precision by exact power control (manometer/power limiting valve)
- high flexibility by changeable components
- safe working in explosion hazardous areas (with air hydraulic pump)
- safe working (no extracting of spindle bolts)
- no thrust bearing required
- compact construction
- with only little wear and tear (no highly loaded gears)



BOLTMAX

xt

Die Einsatzgebiete

- Schiff- und Motorenbau
- Lebensmittelindustrie
- Zuckerindustrie
- Extraktionsanlagen
- chemische Industrie
- Off shore
- Stahlindustrie
- Kraftwerke
- Maschinenbau
- Kolben- und Turbomaschinen
- Pharmaindustrie
- Papierindustrie
- Textilindustrie

Fields of application:

- ship industry
- food industry
- sugar industry
- extracting plants
- chemical industry
- off-shore
- steel industry
- power generating plants
- machine industry
- piston and turbo machines
- pharmaceutical industry
- paper industry
- textile industry

BOLTMAX

300 kN

xt

BMXTBS
Basis-System 77429
bestehend aus je 2 Stück

BMXTBS
basic system 77429
consisting of 2 pcs. each

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | F |
|--------------------------|------------------------|----------|-------|
| BMXTBS | 77429 | 12450,00 | 300KN |

BMXTBS



79655
BMXT300
Zylinder

79655
BMXT300
cylinder



242445593000
BMXTGI
Gehäuse

242445593000
BMXTGI
housing



77987
HD5
5m Schlauch

77987
HD5
5m hose



242440710000
BMXTS
Spuleinrichtung

242440710000
BMXTS
nut support



24244
2070-14
Ratsche

24244
2070-14
ratchet


BOLTMAX M22 - M48

xt

BMXTB
Buchse

BMXTB
bushing

BMXTB

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € |  |
|--------------------------|------------------------|--------|---|
| BMXTB22 | 242445592122 | 135,00 | M 22 |
| BMXTB24 | 242445592124 | 135,00 | M 24 |
| BMXTB27 | 242445592127 | 135,00 | M 27 |
| BMXTB30 | 242445592130 | 135,00 | M 30 |
| BMXTB33 | 242445592133 | 135,00 | M 33 |
| BMXTB36 | 242445592136 | 135,00 | M 36 |
| BMXTB39 | 242445592139 | 135,00 | M 39 |
| BMXTB42 | 242445592142 | 135,00 | M 42 |
| BMXTB45 | 242445592145 | 135,00 | M 45 |
| BMXTB48 | 242445592148 | 135,00 | M 48 |




BOLTMAX M22 - M48

xt

BMXTM
Geteilte Mutter

BMXTM
Split nut

BMXTM

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € |  |
|--------------------------|------------------------|--------|---|
| BMXTM22 | 242445593122 | 495,00 | M 22 |
| BMXTM24 | 242445593124 | 495,00 | M 24 |
| BMXTM27 | 242445593127 | 495,00 | M 27 |
| BMXTM30 | 242445593130 | 495,00 | M 30 |
| BMXTM33 | 242445593133 | 495,00 | M 33 |
| BMXTM36 | 242445593136 | 495,00 | M 36 |
| BMXTM39 | 242445593139 | 495,00 | M 39 |
| BMXTM42 | 242445593142 | 495,00 | M 42 |
| BMXTM45 | 242445593145 | 495,00 | M 45 |
| BMXTM48 | 242445593148 | 495,00 | M 48 |



BOLTMAX SW 32 - 80

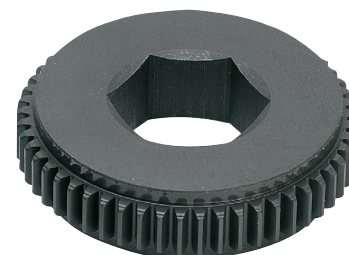
xt

BMXTSW
Sw-Adapter

BMXTSW
hex adapter

BMXTSW

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | [mm] |
|--------------------------|------------------------|--------|------|
| BMXTSW32 | 242445595632 | 319,00 | 32 |
| BMXTSW36 | 242445595636 | 319,00 | 36 |
| BMXTSW41 | 242445595641 | 319,00 | 41 |
| BMXTSW46 | 242445595646 | 319,00 | 46 |
| BMXTSW50 | 242445595650 | 319,00 | 50 |
| BMXTSW55 | 242445595655 | 319,00 | 55 |
| BMXTSW60 | 242445595660 | 319,00 | 60 |
| BMXTSW65 | 242445595665 | 319,00 | 65 |
| BMXTSW70 | 242445595670 | 319,00 | 70 |
| BMXTSW75 | 242445595675 | 319,00 | 75 |
| BMXTSW80 | 242445595680 | 319,00 | 80 |



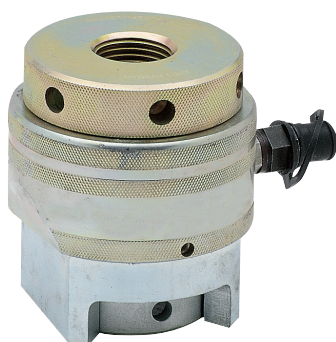
BOLTMAX

136-2.615 kN / 1000 bar

tension

Hydraulische-Schrauben-Vorspanner

- hohe Genauigkeit
- einfache Anwendung
- sicherer Einsatz
- Hohe Wirtschaftlichkeit und Flexibilität durch die Anwendung gemeinsamer Hydraulik-Zylinder mit:
 - wechselbaren Zugmuttern
 - wechselbaren Schlüsselweiten
 - wechselbaren Stützhülsen
- Der Gewindeüberstand muß mindestens dem Bolzendurchmesser entsprechen (Mutterhöhe = Bolzendurchmesser)



| Hub stroke | |
|------------|------------|
| 6 mm | 02BMT |
| 8 mm | 01BMT |
| 15 mm | 1BMT-10BMT |

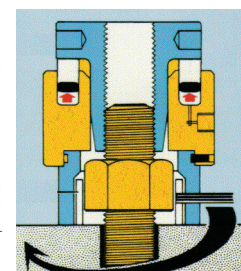
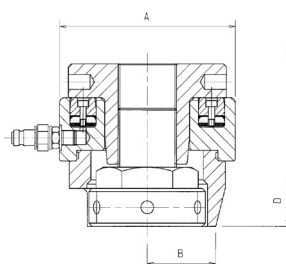
Komplettgeräte

complete tensioners

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | | Fp [kN] | AØ [mm] | B [mm] | D [mm] | |
|--------------------------|------------------------|---------|------|------------|------------|-----------|-----------|-------|
| 02BMT16 | 75000 | 2930,00 | M16 | 136 | 73,5 | 23,5 | 160 | 1450 |
| 02BMT18 | 75002 | 2930,00 | M18 | 136 | 73,5 | 23,5 | 160 | 1450 |
| 02BMT20 | 75004 | 2930,00 | M20 | 136 | 73,5 | 26,5 | 160 | 1480 |
| 02BMT22 | 75006 | 2930,00 | M22 | 136 | 73,5 | 26,5 | 160 | 1480 |
| 01BMT24 | 75008 | 3110,00 | M24 | 228 | 86,0 | 29,5 | 180 | 2310 |
| 01BMT27 | 75010 | 3110,00 | M27 | 228 | 86,0 | 32,0 | 185 | 2340 |
| 1BMT30 | 75012 | 3130,00 | M30 | 348 | 107,0 | 36,0 | 197 | 3460 |
| 1BMT33 | 75014 | 3130,00 | M33 | 348 | 107,0 | 36,0 | 197 | 3460 |
| 2BMT33 | 75016 | 3345,00 | M33 | 428 | 117,0 | 36,0 | 199 | 3930 |
| 2BMT36 | 75018 | 3345,00 | M36 | 428 | 117,0 | 39,0 | 202 | 3890 |
| 1BMT36 | 75020 | 3350,00 | M36 | 348 | 107,0 | 39,0 | 200 | 3420 |
| 2BMT39 | 75022 | 3350,00 | M39 | 428 | 117,0 | 42,0 | 213 | 4400 |
| 3BMT39 | 75024 | 3800,00 | M39 | 591 | 136,0 | 42,0 | 212 | 5360 |
| 3BMT42 | 75026 | 3800,00 | M42 | 591 | 136,0 | 45,0 | 214 | 5700 |
| 4BMT42 | 75028 | 3950,00 | M42 | 788 | 150,0 | 45,0 | 216 | 6900 |
| 3BMT45 | 75030 | 3800,00 | M45 | 591 | 136,0 | 49,0 | 217 | 5800 |
| 4BMT45 | 75032 | 3950,00 | M45 | 788 | 150,0 | 49,0 | 219 | 7000 |
| 4BMT48 | 75034 | 3950,00 | M48 | 788 | 150,0 | 51,0 | 222 | 7200 |
| 5BMT52 | 75036 | 4750,00 | M48 | 989 | 169,0 | 51,0 | 222 | 8050 |
| 4BMT52 | 75038 | 3950,00 | M52 | 788 | 150,0 | 54,0 | 225 | 7500 |
| 5BMT52 | 75040 | 4750,00 | M52 | 989 | 169,0 | 54,0 | 225 | 8350 |
| 5BMT56 | 75042 | 4750,00 | M56 | 989 | 169,0 | 59,0 | 231 | 9120 |
| 6BMT56 | 75044 | 5630,00 | M56 | 1274 | 190,0 | 59,0 | 241 | 10670 |
| 6BMT60 | 75046 | 5630,00 | M60 | 1274 | 190,0 | 65,0 | 248 | 11270 |
| 6BMT64 | 75048 | 5630,00 | M64 | 1274 | 190,0 | 65,0 | 248 | 11270 |
| 7BMT64 | 75050 | 5750,00 | M64 | 1594 | 208,0 | 65,0 | 252 | 12670 |
| 7BMT68 | 75052 | 5750,00 | M68 | 1594 | 208,0 | 71,0 | 258 | 14150 |
| 7BMT72 | 75054 | 5750,00 | M72 | 1594 | 208,0 | 71,0 | 258 | 14150 |
| 8BMT72 | 75056 | 5950,00 | M72 | 1832 | 222,0 | 71,0 | 258 | 15550 |
| 8BMT76 | 75058 | 5950,00 | M76 | 1832 | 222,0 | 77,0 | 265 | 17800 |
| 9BMT76 | 75060 | 6950,00 | M76 | 2178 | 239,0 | 77,0 | 267 | 20800 |
| 9BMT80 | 75062 | 6950,00 | M80 | 2178 | 239,0 | 77,0 | 274 | 20800 |
| 9BMT85 | 75064 | 6950,00 | M85 | 2178 | 239,0 | 87,0 | 274 | 22600 |
| 9BMT90 | 75066 | 6950,00 | M90 | 2178 | 239,0 | 93,0 | 281 | 22100 |
| 10BMT95 | 75068 | 8450,00 | M95 | 2615 | 276,0 | 99,0 | 296 | 50000 |
| 10BMT100 | 75070 | 8450,00 | M100 | 2615 | 276,0 | 100,0 | 302 | 54000 |

hydraulic bolt tensioners

- high accuracy
- simple usage
- safe working
- high versatility by using common hydraulic cylinders with:
 - interchangeable pullers
 - interchangeable nuts
 - interchangeable bridges
- Thread engagement required is minimum one x bolt diameter (nut height = bolt diameter)



Adaptersätze *

adapter sets *

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € | | für for |
|--------------------------|------------------------|---------|------|------------|
| 02BMT16A | 75001 | 1950,00 | M16 | 02 |
| 02BMT18A | 75003 | 1950,00 | M18 | 02 |
| 02BMT20A | 75005 | 1950,00 | M20 | 02 |
| 02BMT22A | 75007 | 1950,00 | M22 | 02 |
| 01BMT24A | 75009 | 2050,00 | M24 | 01 |
| 01BMT27A | 75011 | 2050,00 | M27 | 01 |
| 1BMT30A | 75013 | 2100,00 | M30 | 1 |
| 1BMT33A | 75015 | 2100,00 | M33 | 1 |
| 2BMT33A | 75017 | 2200,00 | M33 | 2 |
| 2BMT36A | 75019 | 2200,00 | M36 | 2 |
| 1BMT36A | 75021 | 2100,00 | M36 | 1 |
| 2BMT39A | 75023 | 2200,00 | M39 | 2 |
| 3BMT39A | 75025 | 2500,00 | M39 | 3 |
| 3BMT42A | 75027 | 2500,00 | M42 | 3 |
| 4BMT42A | 75029 | 2590,00 | M42 | 4 |
| 3BMT45A | 75031 | 2500,00 | M45 | 3 |
| 4BMT45A | 75033 | 2590,00 | M45 | 4 |
| 4BMT48A | 75035 | 2590,00 | M48 | 4 |
| 5BMT52A | 75037 | 2900,00 | M48 | 5 |
| 4BMT52A | 75039 | 2590,00 | M52 | 4 |
| 5BMT52A | 75041 | 2900,00 | M52 | 5 |
| 5BMT56A | 75043 | 2850,00 | M56 | 5 |
| 6BMT56A | 75045 | 3280,00 | M56 | 6 |
| 6BMT60A | 75047 | 3280,00 | M60 | 6 |
| 6BMT64A | 75049 | 3280,00 | M64 | 6 |
| 7BMT64A | 75051 | 3500,00 | M64 | 7 |
| 7BMT68A | 75053 | 3500,00 | M68 | 7 |
| 7BMT72A | 75055 | 3500,00 | M72 | 7 |
| 8BMT72A | 75057 | 3600,00 | M72 | 8 |
| 8BMT76A | 75059 | 3600,00 | M76 | 8 |
| 9BMT76A | 75061 | 4200,00 | M76 | 9 |
| 9BMT80A | 75063 | 4200,00 | M80 | 9 |
| 9BMT85A | 75065 | 4200,00 | M85 | 9 |
| 9BMT90A | 75067 | 4200,00 | M90 | 9 |
| 10BMT95A | 75069 | 7200,00 | M95 | 10 |
| 10BMT100A | 75071 | 7200,00 | M100 | 10 |

* SW-Adapter; Stützhülse, Zugmutter * nuts, bridge, puller

BOLTMAX

217-2080 kN / 1400 bar

tension HN

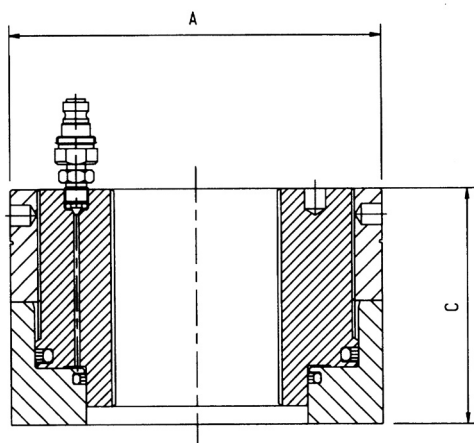
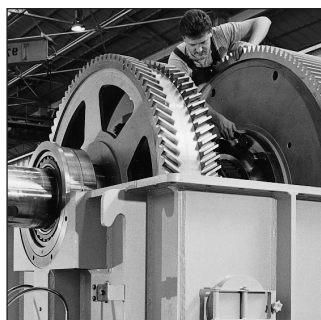
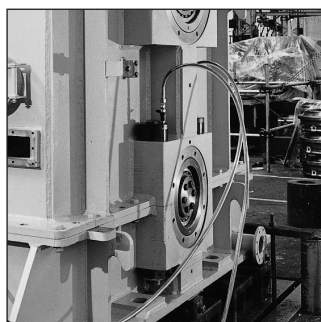
Hydraulikmuttern

- schnell, genau und zuverlässig
- problemloses Nachspannen
- einfache Anwendung
- Vorspannkraft wird durch Überwurfmutter gesichert
- seitliche Kupplungen sind möglich

Hydraulic nuts

- quick, accurate and reliable
- easy re-adjustment of tension
- simply use
- load is retained by threaded collar
- side entry is available (option)

| Artikel-Nr. Order-No. | Ident-Nr. Ident-No. | € |  | Fp [kN] | AØ[mm] | C [mm] | Hub max. [mm] |  |
|--------------------------|------------------------|---------|---|---------|--------|--------|---------------|---|
| BMHN1/16 | 77400 | 1950,00 | M16 | 217 | 74 | 66 | 4 | 2080 |
| BMHN1/18 | 77401 | 1950,00 | M18 | 217 | 74 | 66 | 4 | 2080 |
| BMHN1/20 | 77402 | 1950,00 | M20 | 217 | 74 | 66 | 4 | 2080 |
| BMHN1/22 | 77403 | 1950,00 | M22 | 217 | 74 | 66 | 4 | 2080 |
| BMHN1/24 | 77404 | 1950,00 | M24 | 217 | 74 | 66 | 4 | 2080 |
| BMHN1/27 | 77405 | 1950,00 | M27 | 217 | 74 | 66 | 4 | 2080 |
| BMHN1/30 | 77406 | 1950,00 | M30 | 217 | 74 | 66 | 4 | 2080 |
| BMHN2/30 | 77407 | 2150,00 | M30 | 350 | 95 | 66 | 4 | 3250 |
| BMHN2/33 | 77408 | 2150,00 | M33 | 350 | 95 | 66 | 4 | 3250 |
| BMHN2/36 | 77409 | 2150,00 | M36 | 350 | 95 | 66 | 4 | 3250 |
| BMHN2/39 | 77410 | 2150,00 | M39 | 350 | 95 | 66 | 4 | 3250 |
| BMHN3/42 | 77411 | 2380,00 | M42 | 440 | 108 | 74 | 4 | 4420 |
| BMHN3/45 | 77412 | 2380,00 | M45 | 440 | 108 | 74 | 4 | 4420 |
| BMHN3/48 | 77413 | 2380,00 | M48 | 440 | 108 | 74 | 4 | 4420 |
| BMHN3/52 | 77414 | 2380,00 | M52 | 440 | 108 | 74 | 4 | 4420 |
| BMHN4/56 | 77415 | 2700,00 | M56 | 552 | 118 | 78 | 4 | 5130 |
| BMHN5/60 | 77416 | 3100,00 | M60 | 617 | 128 | 84 | 5 | 6390 |
| BMHN5/64 | 77417 | 3100,00 | M64 | 617 | 128 | 84 | 5 | 6390 |
| BMHN6/68 | 77418 | 3700,00 | M68 | 777 | 140 | 88 | 6 | 7980 |
| BMHN7/72 | 77419 | 3700,00 | M72 | 1039 | 162 | 92 | 6 | 11580 |
| BMHN7/76 | 77420 | 3400,00 | M76 | 1039 | 162 | 92 | 6 | 11580 |
| BMHN7/80 | 77421 | 3700,00 | M80 | 1039 | 162 | 92 | 6 | 11580 |
| BMHN8/80 | 77422 | 3970,00 | M80 | 1462 | 185 | 112 | 8 | 18910 |
| BMHN8/90 | 77423 | 3970,00 | M90 | 1462 | 185 | 112 | 8 | 18910 |
| BMHN9/90 | 77424 | 4300,00 | M90 | 1625 | 202 | 122 | 8 | 23850 |
| BMHN9/100 | 77425 | 4300,00 | M100 | 1625 | 202 | 122 | 8 | 23850 |
| BMHN10/100 | 77426 | 4950,00 | M100 | 2080 | 218 | 137 | 10 | 31400 |



BMHN