



www.newmantools.com tel 1-800-465-1384 fax 1-800-605-2442

RATCHET TECHNOLOGY

UTILITIES CONSTRUCTION OEM DESIGN PLANT MAINTENANCE



MAKING TOUGH JOBS EASIER SINCE 1869

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This catalog supersedes all previously published literature. Products not shown herein have been discontinued. Contact factory for possible availability of any product not shown.

All details of manufacture are given without obligation. Tolerances are in accordance with ANSI/ASME.

We reserve the right to amend or approve the products for technical reasons.

Weights given are average, and we are not bound by the weights quoted.

Design Principles

A ratchet is a device that makes adjusting easier or clutching more efficient.

In hand tools, a ratchet facilitates tightening or loosening. As a machinery component, a ratchet can be used in a variety of operations, often re-placing less effective knobs and hand wheels, and is especially useful for controls that are hard to reach.

In clutching applications under 1,000 rpm, ratchets develop little overrunning or frictional torque and consume minimal power. Ratchets make a good choice for both automated and manual operations.

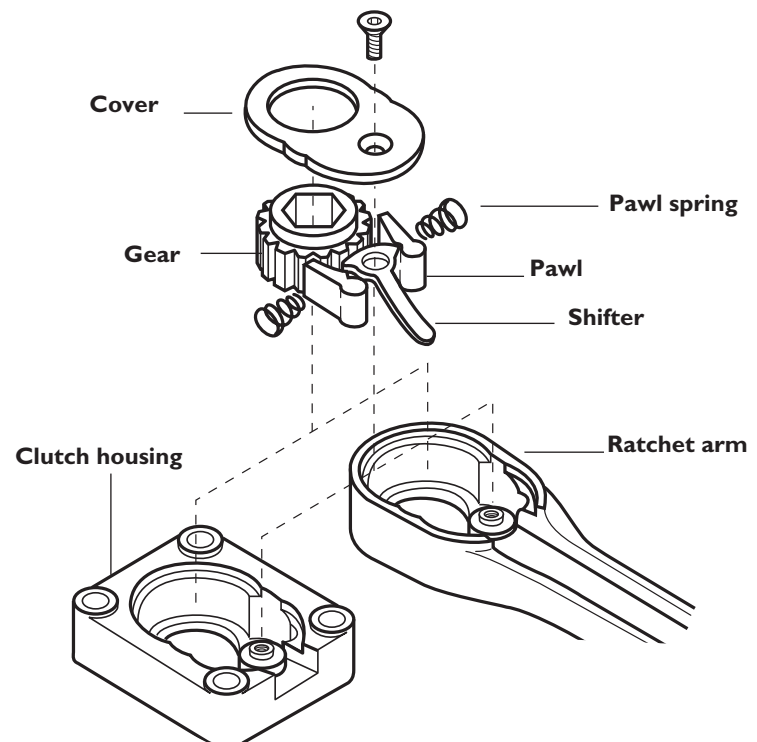
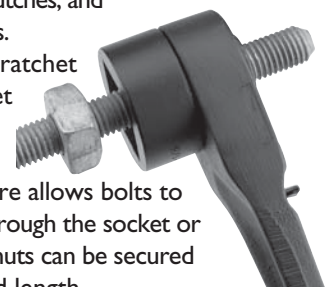
The key elements in all ratchet designs are the toothed wheel and pawl. Together, they control intermittent motion in one direction of rotation. Ratchets have one or more pawls that are usually spring-loaded to ensure positive contact with the wheel teeth.

A ratchet's rotation direction can be reversed with a cam-type shifter positioned between the pawls. When using dual shifters and pawls, both pawls can be engaged simultaneously to lock the wheel in place, or both can be disengaged to allow free-running in either direction.

All of the above components are enclosed in Lowell ratchet arms, ratchet clutches, and socket wrenches.

On all our ratchet arms and socket wrenches, Lowell's unique Bolt-Thru feature allows bolts to pass entirely through the socket or ratchet so that nuts can be secured on any threaded length.

Although Lowell offers many stock ratchet designs, we can easily custom-configure a ratchet to meet special needs. Our design team will be happy to show you how well Lowell ratchet technology can work in your application.



IF YOUR SON OR DAUGHTER HAD TO WORK ON A TRANSMISSION LINE 40 FEET IN THE AIR, IN THE MIDDLE OF A BLIZZARD, WITH THE TEMPERATURE TEN BELOW ZERO, WOULDN'T YOU WANT THE BEST TOOLS IN THEIR HANDS?

Of course you would. And that's the way we feel about our customers.

Since 1869, we've made a variety of hand tools, most based on our reliable ratchet technology, that have made the job easier for workers in a number of industries: water, gas, and electric utilities, construction, plant maintenance. We've made tools to maintain machinery and we've made tools to make machinery perform better and more reliably.

And always—always—we've kept worker comfort and safety in mind. Because American workers are one of our greatest natural resources. And we're proud to be able to help and protect them with the very best tools we can make.

We've been making tough jobs easier since 1869.

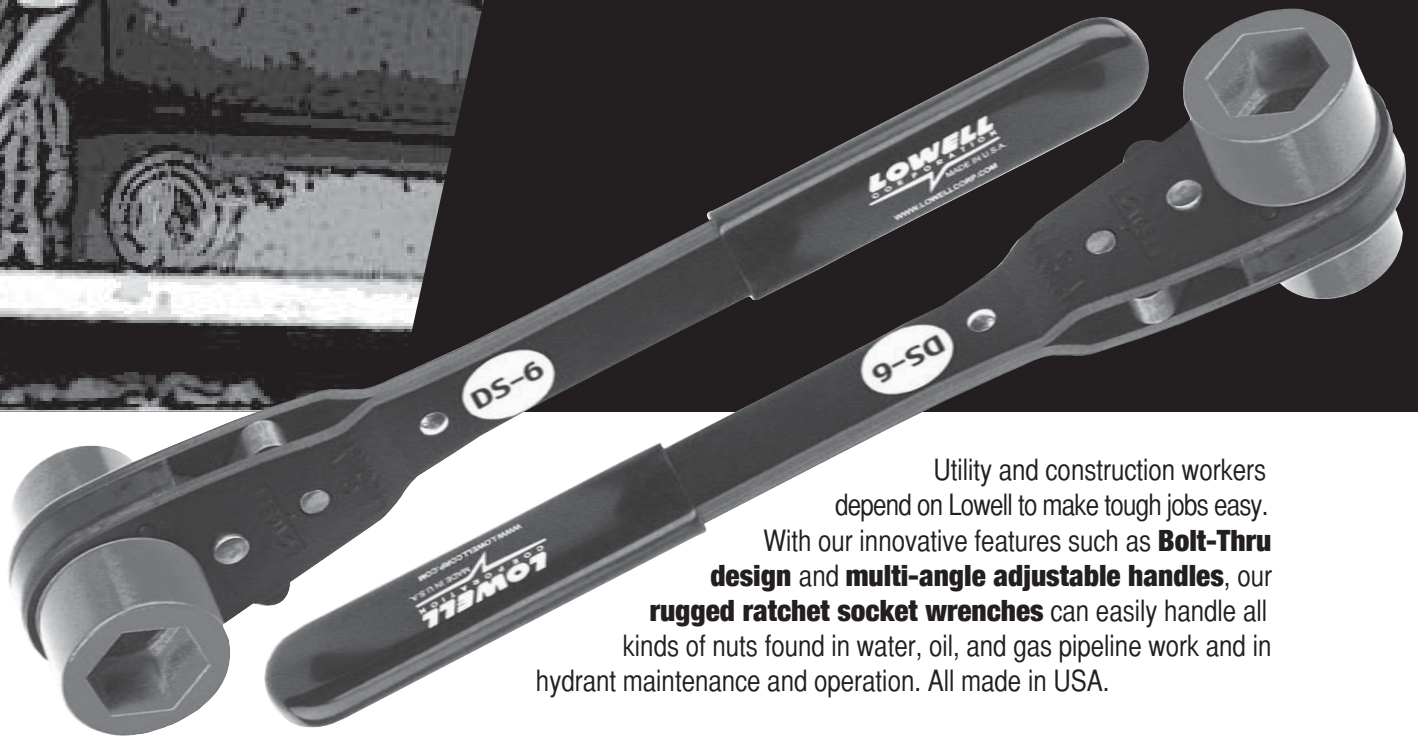


Applications

Water Utility and Construction



**A muddy ditch
is a good place to
take it easy.**



Utility and construction workers depend on Lowell to make tough jobs easy. With our innovative features such as **Bolt-Thru design** and **multi-angle adjustable handles**, our **rugged ratchet socket wrenches** can easily handle all kinds of nuts found in water, oil, and gas pipeline work and in hydrant maintenance and operation. All made in USA.



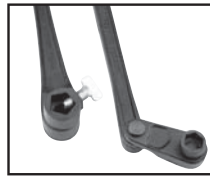
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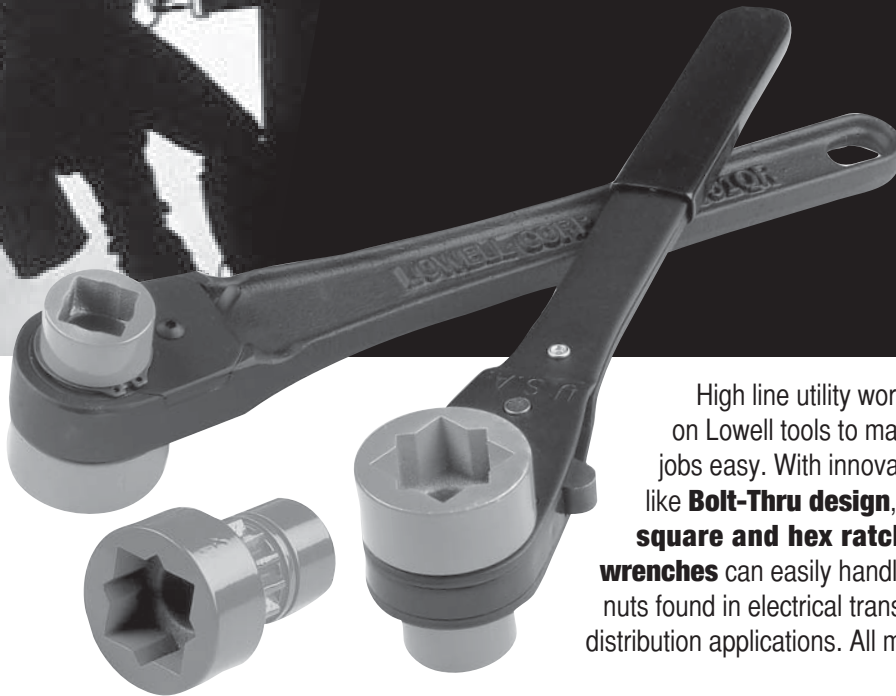
Torque Wrenches
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Applications

High Line Utility



**40 feet
up in the air is
a good place to
take it easy.**



High line utility workers depend on Lowell tools to make the tough jobs easy. With innovative features like **Bolt-Thru design**, our **rugged square and hex ratchet socket wrenches** can easily handle all kinds of nuts found in electrical transmission and distribution applications. All made in USA.



151T
Lineman's Wrench
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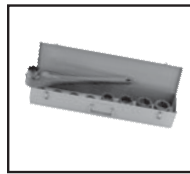
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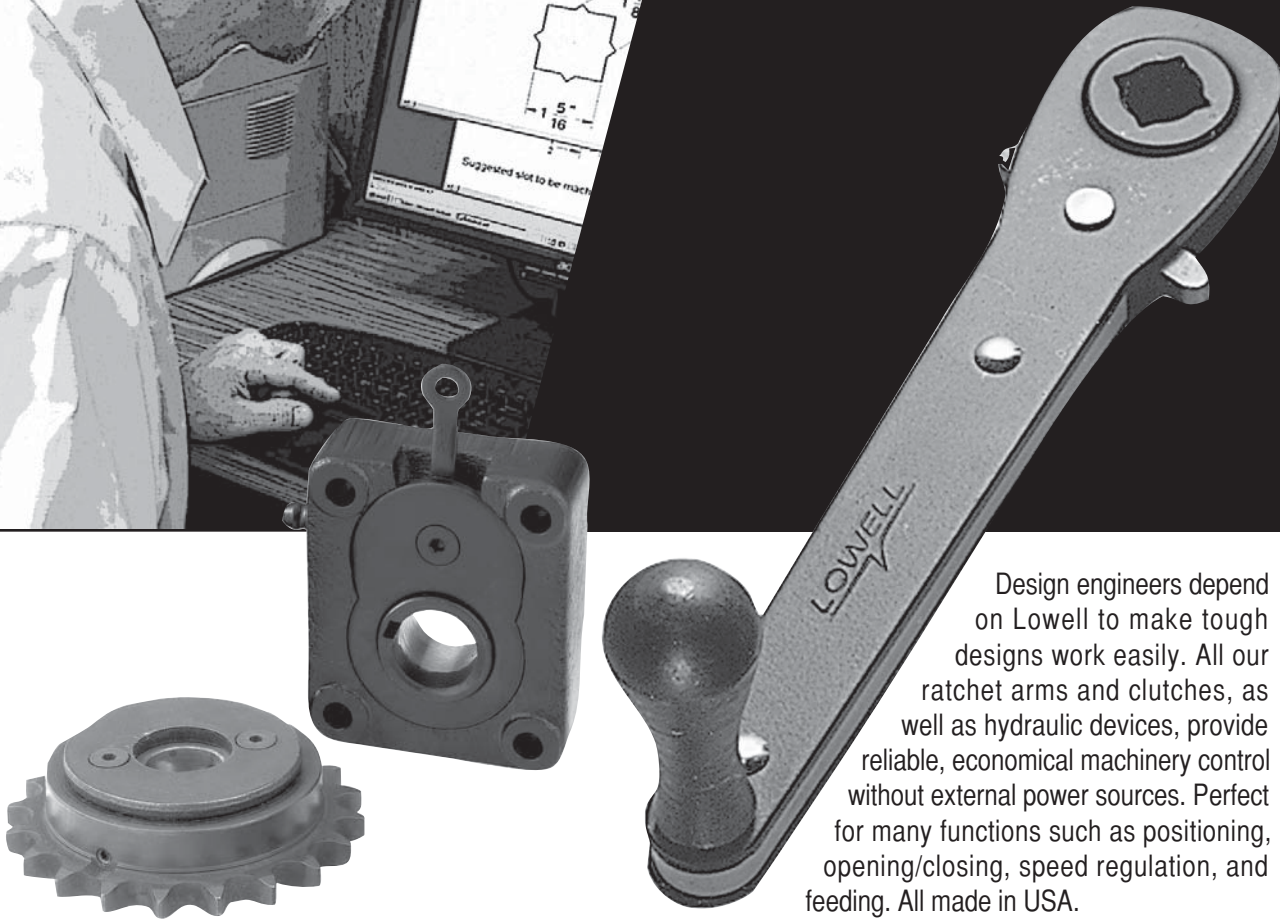
Socket Wrench Sets
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Applications

OEM Machine Components



**A desktop is
a good place to
take it easy.**



Design engineers depend on Lowell to make tough designs work easily. All our ratchet arms and clutches, as well as hydraulic devices, provide reliable, economical machinery control without external power sources. Perfect for many functions such as positioning, opening/closing, speed regulation, and feeding. All made in USA.



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Ratchet Clutches
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Roller Clutches
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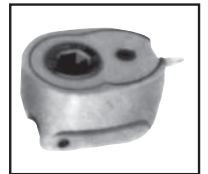
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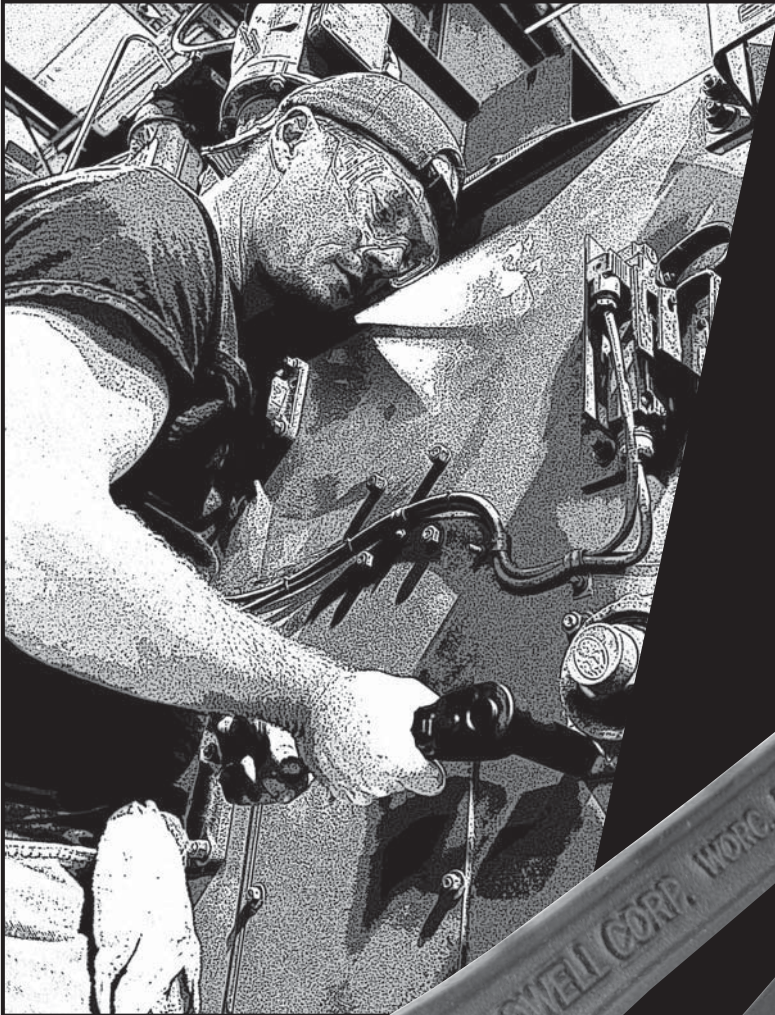


Custom Ratchets
page 23



Applications

Plant Maintenance and Operation



**A plant floor
is a good place to
take it easy.**



Many plant managers and supervisors depend on Lowell to make tough factory jobs easy. We make heavy duty ratchet and socket wrenches, ratchet clutches, and ratchet handles that enable machinery to work much more efficiently while holding down maintenance and repair costs. And rugged Lowell devices also enhance worker safety.

All made in USA.



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Socket Wrenches

50/150 SERIES



Heavy Duty Socket Wrenches

- Durable for heavy-duty applications such as pipeline and construction
- Takes a wide range of square and hex sockets
- Retaining ring is easily removed for socket replacement or changeover
 - Reversing control in head
- Enclosed ratchet mechanism on Models 50, 51; semi-enclosed mechanism on Models 150, 151
- Series 150 offers a lower cost alternative without sacrificing any performance
- Ergonomic handle designs; Models 150, 151 offer choice of vinyl or padded vinyl fat grip
- Bolt-Thru design

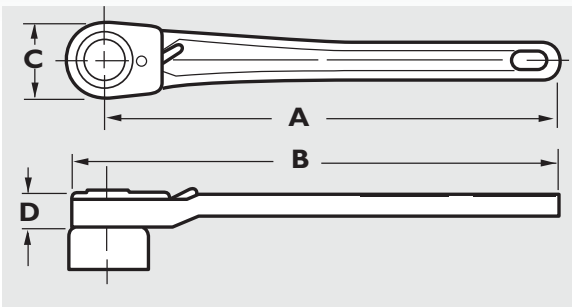
Lineman's Socket Wrench

- Designed to meet the specific needs of high line utility workers
- 3-in-1 socket fits most common utility pole fasteners: lag bolts, C clamps, and suspension bolts
- Fluorescent orange sockets make the wrench harder to lose
- Available in larger combination sizes for transmission pole hardware
 - Ergonomic 10" or 12" handles available in either cast iron or fabricated steel with choice of vinyl or padded vinyl fat grip
 - Reversing control in head
 - Bolt-Thru design
 - Semi-enclosed ratchet mechanism

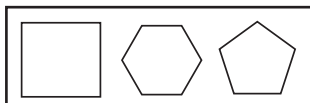


3-IN-1 SOCKET

MODEL 151T



Socket Openings



Quick-Release

Makes socket changing fast and easy.

Available on Models 50, 51, 52, 53, and 564.



50 Series Socket Wrenches

Model	A		B		C		D		Socket Openings			
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
50, 50T	10	254	11	280	2 ¹ / ₁₆	52	¹³ / ₁₆	24	⁵ / ₈ -1 ¹ / ₄	16-32	2	0,91
51, 51T	12	305	13	330	2 ¹ / ₁₆	52	¹ / ₁₆	24	⁵ / ₈ -1 ¹ / ₄	16-32	2 ¹ / ₈	0,96
52, 52F	15	38	16 ¹ / ₈	410	2 ⁷ / ₁₆	62	1 ⁷ / ₁₆	36	⁵ / ₈ -2	22-50	4 ¹ / ₈	1,87
53, 53F	20	50	21 ¹ / ₈	536	2 ⁷ / ₁₆	62	1 ⁷ / ₁₆	36	⁵ / ₈ -2	22-50	5	2,27
54	24	610	25 ⁵ / ₈	650	3 ³ / ₁₆	80	1 ¹ / ₁₆	42	1-2 ⁵ / ₈	24-60	9 ¹ / ₄	4,2
55	36	914	37 ⁵ / ₈	956	3 ³ / ₁₆	81	1 ¹ / ₁₆	43	1-2 ⁵ / ₈	24-60	13	5,9
56	36	914	38 ¹ / ₈	968	4 ³ / ₁₆	106	1 ⁷ / ₈	48	1 ¹ / ₂ -3 ¹ / ₈	38-80	24	10,9
58	43 ¹ / ₂	1105	46 ⁵ / ₈	1184	6 ¹ / ₄	159	1 ⁵ / ₁₆	49	3-7 ¹ / ₄	80-175	47	21,2
60	60	1524	64 ³ / ₈	1642	9 ¹ / ₄	235	2 ¹ / ₂	64	5-9 ¹ / ₈	125-230	100	45,0

150 Series Socket Wrenches

150, 150T	10	254	11	280	2 ¹ / ₁₆	52	¹³ / ₁₆	20	⁵ / ₈ -1 ¹ / ₄	16-32	2	0,91
151, 151T	12	305	13	330	2 ¹ / ₁₆	52	¹³ / ₁₆	20	⁵ / ₈ -1 ¹ / ₄	16-32	2 ¹ / ₈	0,96
DS 1-9	12	305	13	330	2 ¹ / ₁₆	52	¹³ / ₁₆	20	³ / ₄ -1 ¹ / ₄	19-32	2 ¹ / ₄	1,02
152	15 ³ / ₄	400	17	432	2 ¹ / ₂	64	¹³ / ₁₆	30	⁵ / ₈ -2	22-50	3 ¹ / ₄	1,70
158	8	204	9	228	2 ⁵ / ₈	52	¹³ / ₁₆	20	⁵ / ₈ -1 ¹ / ₄	16-32	1 ³ / ₄	0,79

QR Series Socket Wrenches

50 QR	10	254	11	280	2 ¹ / ₁₆	52	¹³ / ₁₆	24	⁵ / ₈ -1 ¹ / ₄	16-32	2	0,91
51 QR	12	305	13	330	2 ¹ / ₁₆	52	¹³ / ₁₆	24	⁵ / ₈ -1 ¹ / ₄	16-32	2 ¹ / ₈	0,96
52 QR	15	382	16 ¹ / ₈	410	2 ⁷ / ₁₆	62	1 ⁷ / ₁₆	36	⁵ / ₈ -2	22-50	4 ¹ / ₈	1,87
53 QR	20	508	21 ¹ / ₈	536	2 ⁷ / ₁₆	62	1 ⁷ / ₁₆	36	⁵ / ₈ -2	22-50	5	2,27
564 QR	15 ¹ / ₂	394	16 ¹ / ₂	420	2 ¹ / ₁₆	52	¹³ / ₁₆	24	⁵ / ₈ -1 ¹ / ₄	16-32	3 ¹ / ₄	1,48

Double Shot SERIES

Heavy Duty Dedicated Socket Wrenches

- Designed specifically for pipeline, utility, maintenance and construction workers.
 - Nine socket size combinations for heavy, standard, and metric hex nuts, as well as hydrant repair
 - Sockets made of rugged cast metal
 - Fluorescent orange sockets make the wrenches harder to lose
 - Handle and sockets coated with durable electrostatic epoxy paint for easy cleaning
 - Stamped, riveted handle
 - Reversing control in head
 - Vinyl grip makes working comfortable and secure
 - All wrenches 12" long, weight 2 1/4 lbs.
 - Bolt-Thru design



Double Shot Series Socket Wrenches

Model	Hex Size	Application
DS-1	1 1/4" & 1 1/16"	Mechanical joints, restraints, repair clamps, service saddles
DS-2	1 1/8" & 15/16"	Flange bolts, friction clamps, hydrant break flange, bonnet bolts
DS-3	15/16" & 3/4"	Hydrant break flange, bonnet bolts, friction clamps, service saddles
DS-4	3/4" & 7/8"	Extended range couplings below 14"
DS-5	19mm & 22mm	Extended range couplings below 14"
DS-6	1 1/8" & 1 1/16"	Gas/water industry couplings, repair clamps, service saddles, flange bolts
DS-7	17mm & 22mm (international)	Mechanical joints, restraints, repair clamps, service saddles
DS-8	22mm & 24mm (international)	Mechanical joints, restraints, repair clamps, service saddles
DS-9	24mm & 30mm (international)	Mechanical joints, restraints, repair clamps, service saddles

50F/QR SERIES

Series 50F Heavy Duty Hydrant Wrenches

- For US-style water hydrants
 - Unique Bolt-Thru design
- Available in 2 sizes: 52F and 53F
- Opens and closes any hydrant in only a 22 1/2° swing
- Long handle and pentagonal socket for better leverage
- Sockets adjust by thumb screw for versatile set up
- Socket has 9/16" square opening, accessible by turning wrench over
 - Bolt-Thru design

Series QR Reversible Wrenches with Quick Release

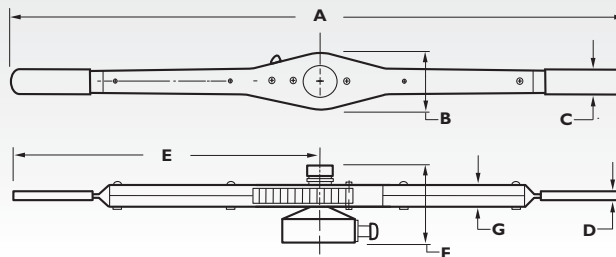
- Unique Bolt-Thru design
- Quick-Release for fast socket changes: Models 50, 51, 52, 53 and 564
- Model 564 QR has multi-angle handle adjustable in 30° increments

SERIES 50F

MODEL 564

Model 252F Hydrant Wrench

- Two handles give greater leverage for loosening and tightening nuts
- Improves safety by allowing operator to always face the road
- Permits two-person operation



200 Series Double Handle Hydrant Wrench

Model	A		B		C		D		E		F		G		Sockets			
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg		
252	32 1/2	826	2 5/8	68	1	25	5/16	8	16 1/4	413	3 1/4	83	1 1/4	32	1 1/2-2	38-51	6 1/4	2,84

Socket Sets

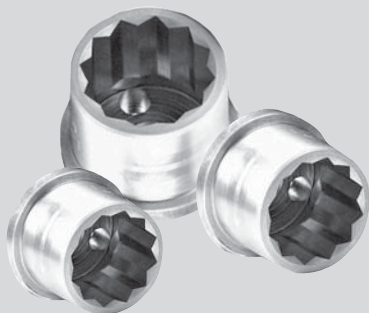
Valve Key/511/512/513

Valve Key Socket Set

Easily engage worn or corroded valve nuts

Lowell Valve Key Sockets are specifically designed to easily engage rounded-over or deformed valve nuts in the toughest situations, even when corrosion is significant.

- Field-proven
- Compact size
- Lower cost than alternative tools
- No moving parts for lower maintenance than alternative tools
- Rugged, durable, yellow zinc-plated, hardened steel components
- Set includes: valve key sockets in 3 sizes (small, medium, large), 3" screw, and attachment plate in a durable carrying case



511 and 512 Ratchet Wrench Sets

For gas and water pipeline applications

- Unique Bolt-Thru design
- Quick-Release for fast socket changeover
- Reversing levers in head
- Combines standard international sockets and special devices for US-style Buffalo- and Erie-type water main curb boxes, hydrants and corporation stops
- Standard 511 set includes: 51 QR ratchet handle; $\frac{7}{8}$ ", $\frac{15}{16}$ ", $1\frac{1}{8}$ ", $1\frac{1}{4}$ " hex sockets; heavy-duty steel box. US version includes corporation socket
- Standard 512 set includes: 51 QR ratchet handle; $\frac{3}{4}$ ", $\frac{7}{8}$ ", $\frac{15}{16}$ ", $1\frac{1}{8}$ ", $1\frac{1}{4}$ " hexagonal sockets; extension bar; Buffalo ($2\frac{1}{4}$ " spanner) and Erie ($\frac{7}{8}$ " pentagonal) socket; corporation socket; and heavy-duty steel box



MODEL 511



MODEL 512

513 Ratchet Torque Wrench Sets

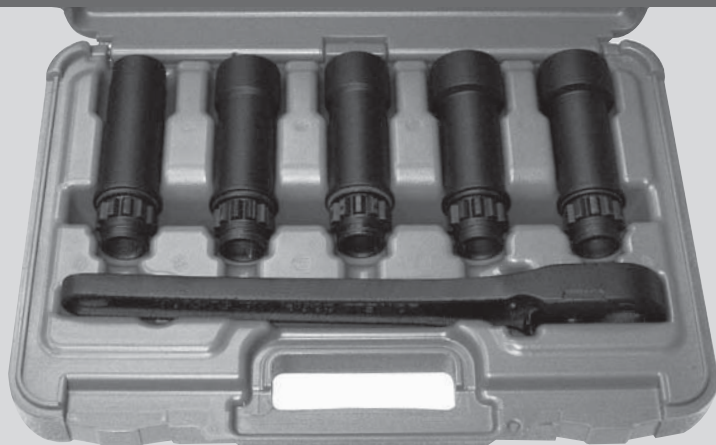
For gas and water pipeline applications

- Unique Bolt-Thru design
- 0-160 lb/ft torque indicating wrench
- Ratchet adapter with Quick-Release for fast socket changeover
- Chrome-plated torque wrench
- Easy-to-read. Can be used as a standard $1\frac{1}{2}$ " male drive torque wrench as well
- Standard set includes: 560 torque wrench (0-160 lb/ft) $18\frac{3}{4}$ " long with $\frac{1}{2}$ " square male drive; $3\frac{1}{2}$ " ratchet adapter, $\frac{3}{4}$ ", $\frac{7}{8}$ ", $\frac{15}{16}$ ", $1\frac{1}{8}$ ", $1\frac{1}{4}$ " hex sockets; heavy-duty steel box



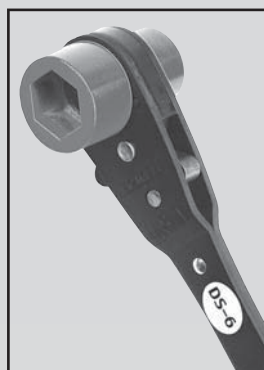
MODEL 513

Extended Reach/DoubleShot/521/531/514



Extended Reach Ratchet Wrench Set Greater leverage in tight spots

- Ideal for attaching mechanical joints in close quarters
- Each socket extends 3 1/2" from the handle to allow for clearance over obstacles
- Quick-Release for fast socket changeover
- Bolt-Thru design
- Standard set includes: Model 51 quick release handle; five sockets; 7/8", 15/16", 1 1/16", 1 1/8", 1 1/4" hexagonal extended sockets; heavy-duty molded plastic case



DoubleShot Ratchet Wrench Set Designed for specific applications

- Mechanical joints, restraints, couplings, sleeves, repair clamps, saddles, flange bolts
- Installation Set includes: DS-1 1 1/4" x 1 1/16"; DS-2 1 1/8" x 15/16"; DS-4 3/4" x 7/8"
- Repair Set includes: DS-1 1 1/4" x 1 1/16"; DS-2 1 1/8" x 15/16"; DS-3 15/16" x 3/4"
- Also available:
DS-5 19mm x 22mm;
DS-6 1 1/8" x 1 1/16"
- Each set includes three DoubleShot wrenches in a heavy-duty molded plastic case



521 and 531 Ratchet Wrench Sets

For larger applications: utility and pipeline transmission and distribution, maintenance, and construction

- Large size international sockets
- Longer handles for increased leverage
- Unique Bolt-Thru design
- Quick-Release for fast socket changeover
- Reversing levers in head
- Standard 521 set includes: 52 QR ratchet handle; 1 1/4", 1 5/16", 1 7/16", 1 1/2", 1 5/8" hex sockets; heavy-duty steel box can hold three additional sockets which may be ordered with set
- Standard 531 set includes: 53 QR handle; 1 1/4", 1 5/16", 1 7/16", 1 1/2", 1 5/8" hex sockets; heavy-duty steel box can hold three additional sockets which may be ordered with set



MODEL 521



MODEL 531

514 Adjustable Angle Ratchet Wrench Set

For ratchet action in close quarters

- Multi-angle handle adjustable in 30° increments
- Locks quickly via wing nut
- Quick-Release for fast socket changeover
- Shear pin design to prevent overtightening
- Standard set includes: Adjustable 564 QR handle; 3 1/2" ratchet adapter; 3/4", 7/8", 15/16", 1 1/16", 1 1/8", 1 1/4" hexagonal sockets; heavy-duty steel box



MODEL 514

* Please see Design Guide for complete ordering information.

www.newmantools.com tel 1-800-465-1384 fax 1-800-605-2442



Crank Handles

100 SERIES

Easier more efficient machinery adjustment

- Fixed or rotating metal handle for extra durability
- Bolt-Thru design
- Rotating plastic handle for lower cost.
- Performs many adjustments including cross feed, rise and fall, gib and quill, positioning screw, or clamping
- Ratchet arm lengths range from 7" to 12"
- Reversing control located in the head to reverse the action safely and easily
- Available in square, hex, bore and keyway, or custom openings

MODEL 101 CRANK

MODEL 103 CRANK

MODEL 114 CRANK

MODEL 112 CRANK

100 Series Ratcheting Crank Handles

Model	A		B		C		D		Gear Openings		Crank Options	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
101	7	180	7 ¹³ / ₁₆	198	1 ⁷ / ₁₆	40	1 ¹⁹ / ₃₂	15	3 ⁷ / ₈ -3 ¹ / ₄	10-19	3 ³ / ₄ -1	0,34-0,45
101A	7	180	8 ³ / ₁₆	205	2 ¹ / ₁₆	52	1 ¹⁹ / ₃₂	15	1 ¹ / ₂ -1	13-25	3 ³ / ₄ -1	0,34-0,45
103	12	305	13 ¹ / ₂	342	2 ¹ / ₂	64	7 ⁷ / ₈	22	1 ¹ / ₂ -1 ¹ / ₄	12-32	2 ¹ / ₄ -2 ³ / ₄	1,02-1,25
112	8	204	9	228	2 ¹ / ₁₆	52	7 ⁷ / ₈	22	1 ¹ / ₂ -1	13-25	1 ¹ / ₂ -2	0,68-0,91
114	10	254	11	280	2 ¹ / ₁₆	52	7 ⁷ / ₈	22	1 ¹ / ₂ -1	13-25	2-2 ¹ / ₂	0,91-1,13
115	12	305	13	330	2 ¹ / ₁₆	52	7 ⁷ / ₈	22	1 ¹ / ₂ -1	13-25	2-2 ¹ / ₂	0,91-1,13

Impakdriver

Model	Contents	Drive in	Len in
0690M	Driver	3 ³ / ₈	4 ⁷ / ₈
0690MG	Driver	1 ¹ / ₂	4 ⁷ / ₈
0065M	Set	3 ³ / ₈	4 ⁷ / ₈
0067M	Set	3 ³ / ₈	4 ⁷ / ₈
0065MG	Set	1 ¹ / ₂	4 ⁷ / ₈



200 SERIES

Easily loosen and tighten frozen fasteners

- Tighten or loosen screws, nuts and bolts with a hammer blow
 - Quick, easy, and safe
- Rugged construction for long-term durability and reliability
 - Prevents expensive, unnecessary damage to fasteners and machinery
 - Available in five different sets, with and without bits and sockets.
 - Available bits include both straight and Phillips
 - Available hex sockets for use with 0690M (3/8") Impakdriver



Length mm	Dia. in mm	Bits	Hex Sockets		lb	kg
			lb	kg		
124	1/4	32	None	None	1/8	0,51
124	1/4	32	None	None	1/8	0,51
124	1/4	32	4*	None	1/2	0,68
124	1/4	32	4*	7/16, 1/2, 3/16	1/4	0,79
124	1/4	32	4*	None	1/2	0,68

* 3/8 straight 1/2 straight #2 phillips #4 phillips

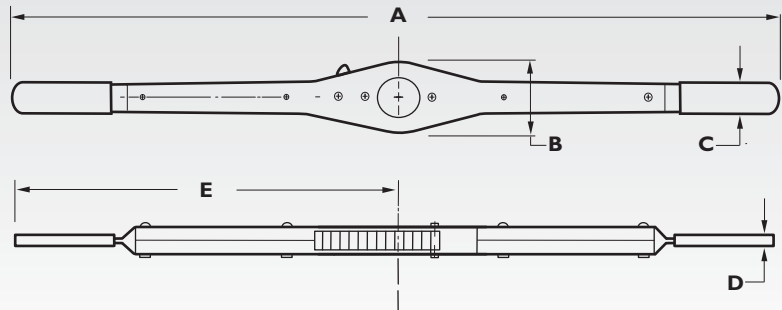
Light, durable and economical

- Riveted stampings
- Factory pre-assembled, gears not replaceable
- Reversing controls in head
- Slim profile gears
- Vinyl grip
- Bolt-Thru design
- Custom sizes available

model 201

model 203

model 241



200 Series Double Handle Wrenches

Model	A		B		C		D		E		Gear Openings		lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		
201	13 3/4	349	1 1/16	40	3/4	19	5/8	16	6 7/8	175	3/8-3/4	10-19	1 1/4	0,57
203	19	483	2 1/2	64	1	25	7/8	22	9 1/2	241	1/2-1 1/4	12-32	2 1/2	1,13
241	27 3/8	702	3 3/8	92	1	25	7/8	22	13 13/16	351	3/4-1 13/16	19-46	4 3/4	2,15

Torque Wrenches

T-Torker® SERIES

For repetitive jobs requiring identical torque settings

- Highly durable
- Provides audible overrunning when any factory-preset torque is reached
- Torque values accurate to $\pm 10\%$
- Fast, easy one-handed tightening in the right-hand direction
- Size and weight designed for hand comfort
- T-shape creates effective leverage
- Flanged reversing collar disengages the ratchet mechanism and locks the tool for conventional backing off and loosening
- All mechanisms are sealed in die-cast handle and lubricated for the normal life of the tool
- Available in three models: Utility, Industrial, and ratchet-only



SERIES T-TM

Series T-TM

For industrial applications

- Designed to accommodate any factory-preset torque limit and variety of shaft-end accessories
- Applications include: production, assembly, inspection, quality control, field service, in-plant set up and maintenance
- Torque range is 5-80 lb-in
- Settings should be in 5 lb-in increments
- Customized shafts available on request



SERIES T-T

Series T-T

For Utility applications

- Specifically designed for US-style, No-HUB® cast iron soil pipe installations as prescribed by the Cast Iron Soil Pipe Institute
- Factory-preset and sealed to values of 60, 75, or 80 lb-in
- 5/16" or 3/8" hexagonal socket hardened to 42-48 Rc is forged on end of drive shaft

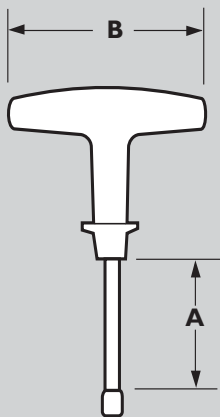


SERIES TR

Series TR

For maintenance applications

The TR series consists of no-torque ratchet T-handle wrenches whose superior design and construction makes them suitable for a variety of applications



Torque Wrenches

Model	No.	Drive Type	A		B		Torque			Basic Application	
			in	mm	in	mm	lb-in	nm	lb		kg
T-T	3T000	5/16 hex female	2 1/2	61	4	98	60 or 75	6,8 or 8,5	7/8	0,40	Utility
T-T	3T001	3/8 hex female	2 1/2	61	4	98	80	9,0	7/8	0,40	Utility
T-M	3M000	1/4 sq male	1 7/8	46	4	98	5-80	0,55-9,0	7/8	0,40	Industrial
T-R	3R000	1/4 sq male	1 7/8	46	4	98	N/A	N/A	7/8	0,40	Maintenance

* Please see Design Guide for complete ordering information.

Valve Wheel Wrenches

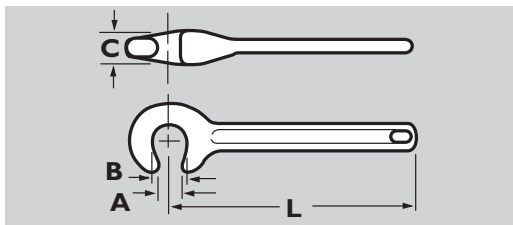
For added force to turn frozen wheels

- Rugged, cast iron or aluminum
- Large size, non-ratcheting extension arms
- Specially-shaped end opening engages without slipping or marring surfaces
- Available in 4 lengths: 8", 15", 22", and 30"



Valve Wheel Wrenches

Model	L	A	B	C	lb	kg
	in	mm	in	mm	in	mm
Cast Iron						
V0	8	204	$\frac{21}{32}$	17	$\frac{3}{4}$	19
V1	15	381	1	25	$1\frac{1}{16}$	30
V2	22	559	$1\frac{3}{16}$	33	$1\frac{1}{2}$	38
V3	30	762	2	51	$2\frac{3}{16}$	56
Aluminum						
V0	8	204	$\frac{21}{32}$	17	$\frac{3}{4}$	19
V1	14	356	1	25	$1\frac{1}{16}$	30
V2	$20\frac{1}{2}$	521	$1\frac{3}{8}$	35	$1\frac{1}{2}$	38



Strap Wrenches

The Warnock

For handling highly-polished surfaces

- Cast metal handle
- Strap made of polyester yarn coated with latex for durability and extra grip
- Drop-forged shackle swings away from handle for quick strap adjustment, securely holds strap in closed position and provides extra turning force
- Custom strap lengths are available on request



The Simplex

For heavy-duty applications

- Cast metal handle
- Strap made of polyester yarn coated with latex for durability and extra grip
- Strap and unique nose configuration provides powerful gripping
- Conforms to US Federal Spec. GGG-W-651, Type V
- Custom strap lengths available on request

Strap Wrenches

Model	Handle Length	Strap Width	Strap Length	Turning Capacity	Gear Openings	lb	kg
	in	mm	in	mm	in	mm	mm
Warnock							
W-12	12	305	$\frac{1}{4}$	32	17	430	2 51 188 255
W-18	18	458	$1\frac{3}{4}$	44	30	760	5 127 250 339
W-24	24	610	$2\frac{1}{4}$	58	54	1370	12 305 330 447
Simplex							
S-6	6	153	$\frac{1}{2}$	13	22	559	4 102 20 27
S-12	12	305	$\frac{1}{4}$	32	17	430	2 51 188 255
S-18	18	458	$1\frac{3}{4}$	44	30	760	5 127 250 339
S-24	24	610	$2\frac{1}{4}$	58	54	1370	12 305 330 447

Ratchet Arms

100 SERIES

Low cost adjustable arms

- Riveted stampings
- Factory pre-assembled, gears not replaceable
- Reversing controls in head
- Slim profile gears
- Vinyl grip on 112, 114 & 115
- Bolt-Thru design



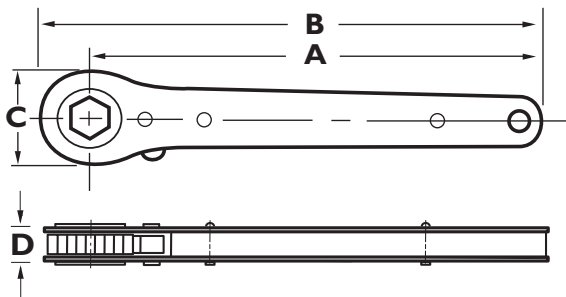
MODEL 101

MODEL 103

MODEL 112, 114, 115

100 Series Ratchet Arms

Model	A		B		C		D		Gear Openings		lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm		
101	7	180	7 ¹³ / ₁₆	198	1 ⁹ / ₁₆	40	1 ⁹ / ₃₂	15	3 ³ / ₈ -3 ¹ / ₄	10-19	3 ³ / ₄	0,34
101A	7	180	8 ¹ / ₁₆	205	2 ¹ / ₁₆	52	1 ⁹ / ₃₂	15	1 ¹ / ₂ -1	13-25	3 ³ / ₄	0,34
103	12	305	13 ¹ / ₂	342	2 ¹ / ₂	64	7 ⁷ / ₈	22	1 ¹ / ₂ -1 ¹ / ₄	12-32	2 ¹ / ₄	1,02
112	8	204	9	228	2 ¹ / ₁₆	52	7 ⁷ / ₈	22	1 ¹ / ₂ -1	13-25	1 ¹ / ₂	0,68
114	10	254	11	280	2 ¹ / ₁₆	52	7 ⁷ / ₈	22	1 ¹ / ₂ -1	13-25	2	0,91
115	12	305	13	330	2 ¹ / ₁₆	52	7 ⁷ / ₈	22	1 ¹ / ₂ -1	13-25	2	0,91



10/10Z/40 SERIES

Basic Ratchet Arms

- Cast malleable iron
- Durable in rugged, heavy-duty applications
- Reversing controls in head
- Enclosed, replaceable gears
- Wide range of standard and special openings available
- Slim profile
- Conform to US Federal Spec. GGG-W-653, Type I, Class I
- Bolt-Thru design



SERIES 10

SERIES 10Z

10 Series Ratchet Arms

Model	A		B		C		D		E		Gear Openings		lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		
11	6	152	6 ¹⁵ / ₁₆	176	1 ¹³ / ₁₆	46	2 ²³ / ₃₂	18			3 ³ / ₈ -3 ¹ / ₄	10-19	1	0,45
12	8	204	9	228	1 ¹⁵ / ₁₆	50	7 ⁷ / ₈	22			3 ³ / ₈ -3 ¹ / ₄	10-19	1	0,45
13	10	254	11	280	1 ¹⁵ / ₁₆	50	7 ⁷ / ₈	22			3 ³ / ₈ -3 ¹ / ₄	10-19	1 ¹ / ₂	0,68
14	10	254	11 ¹ / ₄	286	2 ¹ / ₁₆	52	1 ¹³ / ₁₆	20			1 ¹ / ₂ -1	13-25	1 ³ / ₄	0,79
15	12	305	13 ¹ / ₄	336	2 ¹ / ₁₆	52	1 ¹³ / ₁₆	20			1 ¹ / ₂ -1	13-25	2	0,91
16	15	382	16 ¹ / ₂	420	3	76	1 ⁷ / ₃₂	30			1 ¹ / ₂ -1 ¹ / ₂	13-36	4 ³ / ₄	2,16
17	18	458	19 ¹ / ₂	495	3	76	1 ⁷ / ₃₂	30			1 ¹ / ₂ -1 ¹ / ₄	13-36	5 ¹ / ₂	2,50

10Z Series Ratchet Arms

11Z	6	152	6 ¹⁵ / ₁₆	176	1 ¹³ / ₁₆	46	2 ²³ / ₃₂	18	2 ¹ / ₂	64	3 ³ / ₈ -3 ¹ / ₄	10-19	1	0,45
12Z	8	204	9	228	1 ¹⁵ / ₁₆	50	7 ⁷ / ₈	22	2 ¹ / ₂	64	3 ³ / ₈ -3 ¹ / ₄	10-19	1	0,45
13Z	10	254	11	280	1 ¹⁵ / ₁₆	50	7 ⁷ / ₈	22	2 ¹ / ₂	64	3 ³ / ₈ -3 ¹ / ₄	10-19	1 ¹ / ₂	0,68
14Z	10	254	11 ¹ / ₄	286	2 ¹ / ₁₆	52	1 ¹³ / ₁₆	20	3	76	1 ¹ / ₂ -1	13-25	1 ³ / ₄	0,79
15Z	12	305	13 ¹ / ₄	336	2 ¹ / ₁₆	52	1 ¹³ / ₁₆	20	3	76	1 ¹ / ₂ -1	13-25	2	0,91
16Z	15	382	16 ¹ / ₂	420	3	76	1 ⁷ / ₃₂	30	4	102	1 ¹ / ₂ -1 ¹ / ₂	13-36	4 ³ / ₄	2,16
17Z	18	458	19 ¹ / ₂	495	3	76	1 ⁷ / ₃₂	30	4	102	1 ¹ / ₂ -1 ¹ / ₄	13-36	5 ¹ / ₂	2,50

* Please see Design Guide for complete ordering information.

20 SERIES

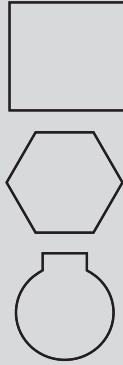
Heavy Duty, remote reversing Ratchet Arms

- Knurled knob operates on half-turn for maximum safety and convenience
- Durable for heavy-duty applications
- Enclosed, replaceable gears
- Wide range of standard and special openings and lengths
- Conform to Federal Spec. GGG-W-653, Type I, Class 2
- Bolt-Thru design



SERIES 20

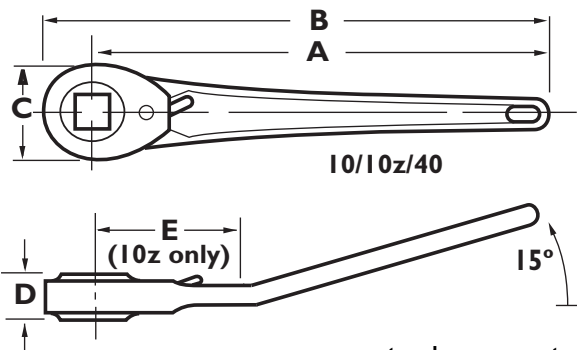
Gear Openings



SERIES 40

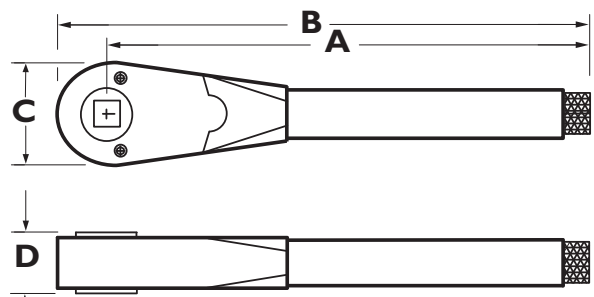
40 Series Ratchet Arms

Model	A		B		C		D		Gear Openings			
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
41	24	610	25 ⁷ / ₈	645	3 ³ / ₄	95	1 ³ / ₈	35	3 ³ / ₄ -1 ¹³ / ₁₆	19-46	12	5,44
42	36 ¹ / ₄	920	38 ¹ / ₄	972	3 ³ / ₄	95	1 ³ / ₈	35	3 ³ / ₄ -1 ¹³ / ₁₆	19-46	14	6,35
44	36	914	38 ⁷ / ₁₆	976	4 ¹ / ₈	124	1 ¹ / ₂	38	1 ¹ / ₁₆ -2 ³ / ₈	27-60	16	7,26
45	24	610	27	686	6 ¹ / ₈	156	1 ¹¹ / ₁₆	43	1 ¹¹ / ₁₆ -3 ¹ / ₄	42-80	16	7,26
46	38	965	41 ¹ / ₁₆	1042	6 ¹ / ₈	156	1 ¹⁵ / ₃₂	38	1 ¹¹ / ₁₆ -3 ¹ / ₄	42-80	25	11,35
47	42	1066	45 ¹¹ / ₁₆	1160	7 ³ / ₈	188	1 ³ / ₄	44	2 ¹ / ₂ -3 ³ / ₈	70-95	37	16,8
48	43 ⁷ / ₁₆	1107	48	1219	8 ³ / ₁₆	224	1 ⁷ / ₈	48	2 ³ / ₄ -4 ⁷ / ₈	70-120	56	25,2



20 Series Ratchet Arms

Model	A		B		C		D		Gear Openings			
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
21	7 ³ / ₈	188	8 ¹ / ₁₆	208	1 ⁹ / ₁₆	40	1 ³ / ₁₆	20	5 ¹ / ₁₆ -9 ¹ / ₃₂	10-14	1	0,45
22	10 ¹ / ₂	266	11 ¹ / ₂	292	2	50	1	25	3 ⁷ / ₈ -3 ¹ / ₄	10-19	2	0,91
23	12 ³ / ₈	314	13 ³ / ₁₆	345	2 ³ / ₈	60	1 ¹ / ₈	28	1 ¹ / ₂ -1	13-25	3 ¹ / ₂	1,59
24	15 ³ / ₁₆	395	17 ¹ / ₁₆	434	3 ¹ / ₈	80	1 ⁷ / ₃₂	30	1 ¹ / ₂ -1 ¹ / ₄	13-36	6 ¹ / ₄	2,84
25	18 ¹ / ₂	470	20 ¹ / ₁₆	510	3 ³ / ₈	80	1 ⁷ / ₃₂	30	1 ¹ / ₂ -1 ¹ / ₄	13-36	6 ³ / ₄	3,06
26	18 ³ / ₈	473	20 ¹ / ₁₆	522	3 ³ / ₈	95	1 ³ / ₈	35	3 ³ / ₄ -1 ¹³ / ₁₆	19-46	11 ⁷ / ₈	5,39
27	24 ³ / ₈	625	26 ³ / ₁₆	675	3 ³ / ₄	95	1 ³ / ₈	35	3 ³ / ₄ -1 ¹³ / ₁₆	19-46	12	5,4
28	36 ³ / ₁₆	935	39 ³ / ₁₆	995	4 ⁷ / ₈	124	1 ¹ / ₂	38	1 ¹ / ₁₆ -2 ³ / ₈	27-60	18	8,17



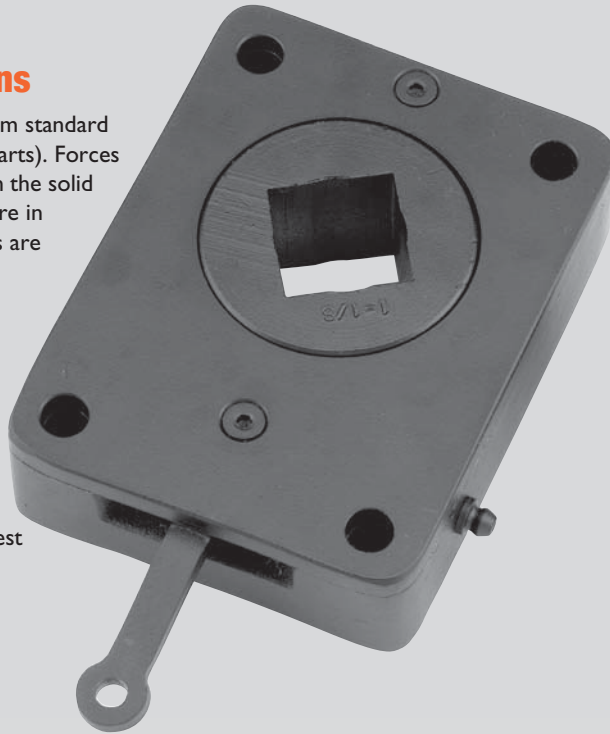
Ratchet Clutches

70/700 SERIES

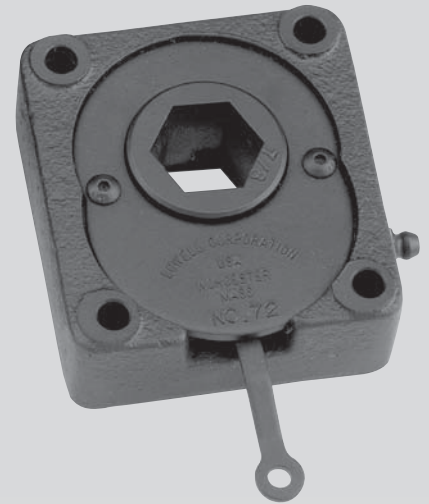
70 Series Clutches Rugged and reliable for heavy duty applications

Lowell ratchet clutches are designed from standard bodies, gears, pawls, and springs (see charts). Forces are applied in an optimum manner between the solid steel gear and hefty pawl so that loads are in compression rather than in shear. Gears are a low carbon steel. Rugged tooth design has large contact area with pawl.

- Mounting holes provided in body
- Keyways are per ANSI/ASME B17.1
- Lubrication is recommended after every 1200 hours of operation
- Specials may be ordered with size, shape, and tooth arrangements of your choice
- Free running neutral available on request
- Durable, cast iron construction
- Custom models available
- 100% made in USA



70 Series Clutches



700 Series Clutches

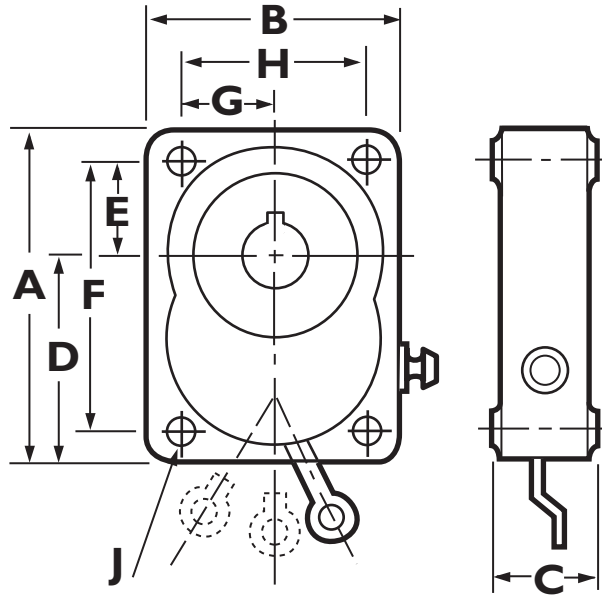


700 Series Clutches Low cost and weight with high performance

- Fingertip control of a range of motion: one-way left, one-way right, freewheeling, and fully locked
- Control lever can be connected to hydraulic, pneumatic, or electric actuators for remote shifting
- Simple design ensures durability and reduces purchase and operating costs
- High drive torque to weight ratio.
- Maximum driving efficiency
- Minimal overrunning torque
- Versatile mounting options
- Standard gear openings available in hex, square, and bore and keyway (per ANSI/ASME B17.1)
- Can be used singly or in combination
- Open sided for easy, minimal maintenance
- Alignment is not critical
- Custom models available
- 100% made in USA

70/700 SERIES

70 Series Clutches



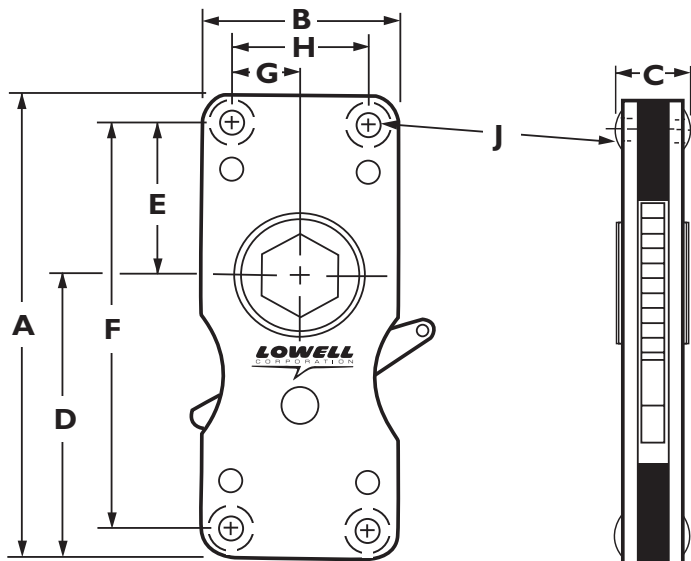
70 Series Ratchet Clutches

MODEL	A		B		C		D		E		F		G		H		J		Gear Openings		Max Torque		Overrun Speed	Gear Teeth		
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	lb-ft	NM				
71	2 ⁷ / ₈	73	2 ¹ / ₈	60	1 ⁵ / ₁₆	24	1 ¹ / ₄	44	1 ¹ / ₁₆	20	2 ¹ / ₄	58	7 ⁷ / ₈	22	1 ¹ / ₄	44	1 ⁷ / ₆₄	6	3 ³ / ₈ -3 ¹ / ₄	10-19	1 ¹ / ₂	0,68	200	272	250	16
72	3 ¹ / ₄	82	2 ⁷ / ₈	74	1 ³ / ₁₆	30	1 ⁷ / ₈	48	1 ¹ / ₁₆	26	2 ⁵ / ₈	66	1 ¹ / ₈	28	2 ¹ / ₄	58	1 ⁷ / ₆₄	6	1 ¹ / ₂ -1	13-25	2 ¹ / ₄	1,02	300	406	100	16
73	4	102	3 ¹ / ₈	80	1 ⁵ / ₁₆	34	2 ⁷ / ₁₆	62	1 ³ / ₁₆	30	3 ¹ / ₄	82	1 ¹³ / ₁₆	30	2 ³ / ₈	60	2 ³ / ₆₄	8	1 ¹ / ₂ -1 ¹ / ₄	13-36	3 ¹ / ₂	1,59	500	678	100	20
74	5 ¹ / ₈	130	3 ⁷ / ₈	98	1 ⁷ / ₁₆	36	3 ¹ / ₈	80	1 ¹ / ₂	38	4 ¹ / ₈	105	1 ¹³ / ₁₆	36	2 ⁷ / ₈	74	2 ⁵ / ₆₄	10	3 ¹ / ₄ -1 ¹³ / ₁₆	19-46	6 ¹ / ₄	2,84	800	1085	75	20
75	6 ¹ / ₂	165	5	128	1 ⁹ / ₁₆	40	4	102	1 ⁷ / ₈	48	5 ¹ / ₄	134	1 ⁷ / ₈	48	3 ³ / ₄	95	1 ⁷ / ₃₂	14	1 ¹ / ₁₆ -2 ³ / ₈	27-60	11	5,0	1500	2034	60	24
76	8 ³ / ₈	213	6 ¹ / ₄	159	1 ⁷ / ₁₆	37	5 ¹ / ₄	133	2 ¹ / ₂	64	7 ¹ / ₈	181	2 ¹ / ₂	64	5	127	1 ⁷ / ₃₂	14	1 ¹¹ / ₁₆ -3 ¹ / ₄	42-80	15	6,8	2500	3390	50	24
77	9 ³ / ₄	248	7 ¹ / ₂	191	1 ¹ / ₂	38	6	152	3 ³ / ₈	79	8 ⁷ / ₁₆	214	3 ¹ / ₈	79	6 ¹ / ₄	159	1 ⁷ / ₃₂	14	2 ¹ / ₈ -3 ⁷ / ₈	70-95	24	10,89	4100	5560	50	24
78	10 ⁷ / ₈	276	8 ³ / ₈	213	1 ¹⁵ / ₁₆	49	6 ¹ / ₂	165	3 ⁵ / ₈	92	9 ³ / ₈	238	3 ⁷ / ₁₆	87	6 ¹ / ₈	175	1 ⁷ / ₃₂	14	2 3/4-4 1/8	70-120	29	13,15	6260	8490	30	24

700 Series Ratchet Clutches

701	4	102	1 ³ / ₈	41	2 ¹ / ₃₂	17	2 ⁷ / ₁₆	62	1 ²¹ / ₆₄	34	3 ¹ / ₂	89	3 ¹ / ₁₆	14	1 ¹ / ₈	29	1 ¹³ / ₁₆	5	3 ³ / ₈ -3 ¹ / ₄	10-19	3 ³ / ₄	0,34	85	115	250	16
702	5 ¹ / ₄	133	2 ³ / ₈	60	6 ¹ / ₆₄	24	3 ³ / ₈	92	1 ¹ / ₄	32	4 ¹ / ₂	114	1 ¹³ / ₁₆	21	1 ³ / ₈	41	1 ⁷ / ₆₄	7	1 ¹ / ₂ -1	13-25	1 ¹ / ₂	0,68	175	237	100	20

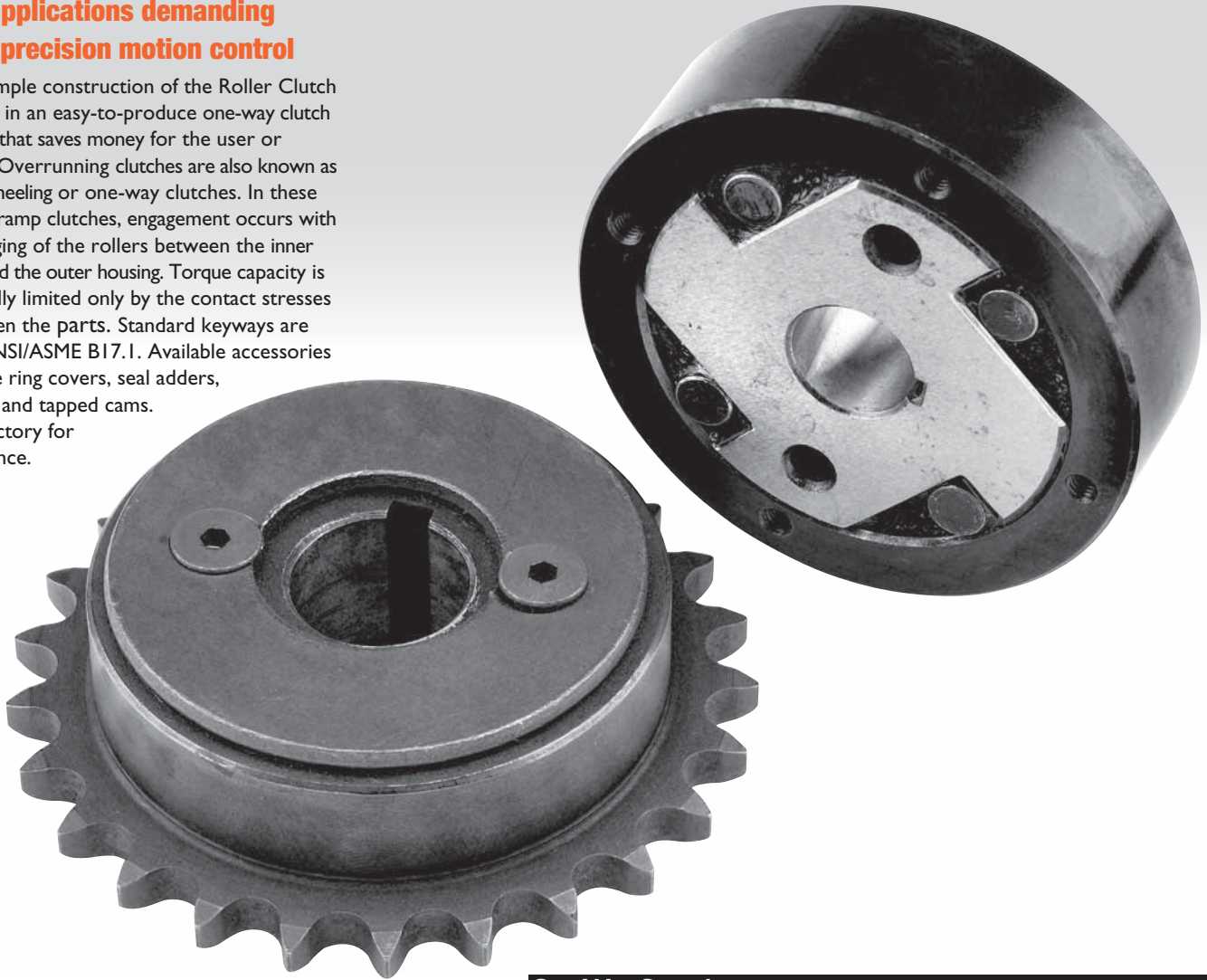
700 Series Clutches



Roller Clutches

For applications demanding high precision motion control

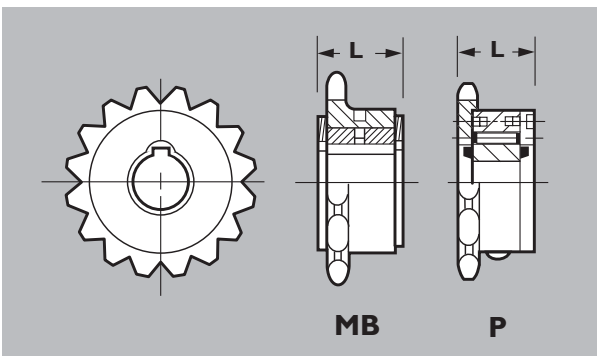
The simple construction of the Roller Clutch results in an easy-to-produce one-way clutch device that saves money for the user or OEM. Overrunning clutches are also known as free-wheeling or one-way clutches. In these roller-ramp clutches, engagement occurs with a wedging of the rollers between the inner cam and the outer housing. Torque capacity is normally limited only by the contact stresses between the parts. Standard keyways are per ANSI/ASME B17.1. Available accessories include ring covers, seal adders, drilled and tapped cams. Call factory for assistance.



One Way Sprocket

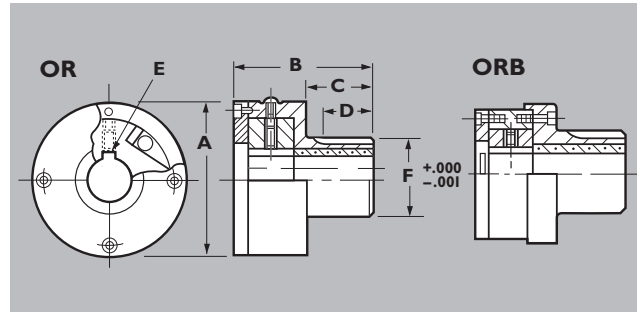
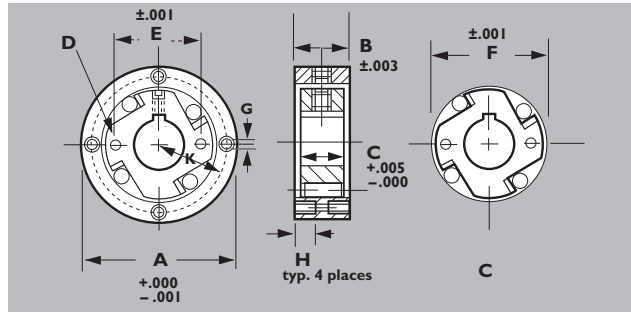
Max. Bore		Cam Size	Pitch	Number of Teeth		MB		L P	
in	mm	in	in	mb	p	in	mm	in	mm
$\frac{9}{16}$	14,3	5	35	15;16 +	17 +	$\frac{13}{16}$	20,6	61/64	24,2
$\frac{5}{8}$	16	14	35	20 +	21 +	$\frac{13}{16}$	20,6	1 11/32	34,1
$\frac{7}{8}$	22,2	28	35	25 +	26 +	$1 \frac{1}{16}$	27	1 5/32	29,4
$\frac{9}{16}$	14,3	5	40	12 +	13 +	$\frac{13}{16}$	20,6	1 1/16	27
$\frac{5}{8}$	16	14	40	15 +	16 +	$\frac{13}{16}$	20,6	1 5/32	29,4
$\frac{7}{8}$	22,2	28	40	20 +	21 +	$1 \frac{1}{16}$	27	1 9/32	32,6
$\frac{5}{8}$	16	14	50	12 +	13 +	$\frac{13}{16}$	20,6	1 13/64	30,6
$\frac{7}{8}$	22,2	28	50	15;16 +	17 +	$1 \frac{1}{16}$	27	1 11/32	34,1
$1 \frac{1}{4}$	32	100	50	20;21 +	22 +	$\frac{1}{8}$	35	1 9/16	39,7
$\frac{5}{8}$	16	14	60	12 +	13 +	$\frac{13}{16}$	20,6	1 21/64	33,7
$\frac{7}{8}$	22,2	28	60	14 +	15 +	$1 \frac{1}{16}$	27	1 29/64	37
$1 \frac{1}{4}$	32	100	60	18 +	19 +	$\frac{1}{8}$	35	1 11/16	42,9

* Please call 800-456-9355 for complete ordering information



Type MB: Stocked in smallest sprocket listed. See Cam & Ring Assemblies for bore size availability. **Type P:** Made to order. Seals optional.

* Please see Design Guide for complete ordering information.

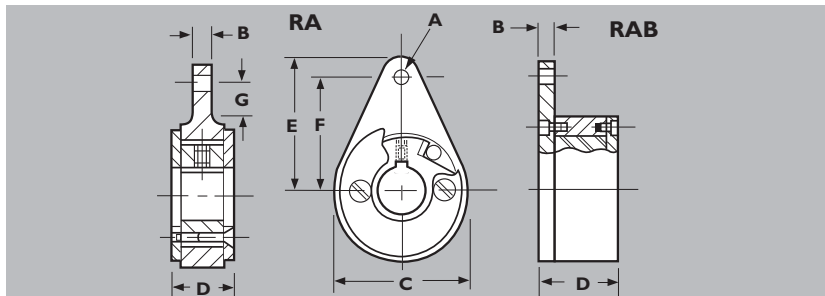


Cam and Ring Assembly

Cam only Model	Complete Model	A	B	C	D	E	F	G	H	K	Bore Openings	Torque	Overrun Speed
		in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	mm	lb-ft nm	rpm
C5	CR5	1/2 38,1	2 1/32 16,7	4 1/64 16,3	9/64 3,6	5 3/16 21	1 1/64 25,8	6-32 7/32 5,6	1 9/32 32,5	1/4-1/2 6,4-12,7	5 6,77	1800	
C14	CR14	1 7/8 47,6	2 1/32 16,7	4 1/64 16,3	9/64 3,6	1 1/16 28,6	1 3/8 34,9	6-32 9/32 7,1	1 1/16 42,9	3/8-5/8 9,5-17,1	14 18,96	1800	
C28	CR28	2 3/8 66,7	2 5/32 19,8	4 9/64 19,4	1 1/64 5,2	1 27/64 36,1	1 29/32 48,4	8-32 3/8 9,5	2 9/32 58	5/8-7/8 17,1-22,2	28 37,92	1500	
C100	CR100	3 1/2 88,9	1 1/2 26,2	1 1/64 25,8	1 17/64 6,7	1 7/8 47,6	2 41/64 67,1	10-32 3/8 9,5	3 76,2	3/4-1 1/4 19-31,8	100 135,43	1000	
C200	CR200	4 1/2 111,1	1 5/8 41,3	1 39/64 40,9	1 17/64 6,7	2 27/32 67,5	3 3/32 83,3	1/4-20 7/16 11,1	3 3 96,8	1 1/2-2 38,1-50,8	200 270,86	800	
C500	CR500	5 7/8 149,2	1 5/16 45,6	1 29/32 45,2		4 9/16 115,9	1 1/2 12,7	5 1/4 133,4	2 1/2-2 3/4 57,2-69,9	500 677,14	600		

Overrunning Clutch

Model	A	B	C	D	E	F	G	H	Bore Openings	Torque	Overrun Speed
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	lb-ft nm	rpm
OR5	1/8 41,3	1 15/16 49,2	1 13/16 20,6	7/16 11,1	3 1/16 x 3 3/32 4,8 x 2,4	7/8 11,1	4 1/64 16,3	1 1/16 27	1/4-1/2 6,4-12,7	5 6,77	1800
OR14	2 50,8	2 1/8 54	1 25,4	9/16 14,3	3 1/16 x 3 3/32 4,8 x 2,4	1 1/4 31,8	4 1/64 16,3	1 3/16 30,2	3/8-5/8 9,5-17,1	14 18,96	1800
OR28	2 3/8 66,7	2 29/32 69,1	1 15/16 23,81	5/16 33,3	3 1/16 x 3 3/32 4,8 x 2,4	1 3/8 34,9	1 9/64 19,4	1 3/4 44,4	3/8-7/8 17,1-22,2	28 37,92	1500
OR100	3 3/8 85,7	3 1/16 77,8	1 7/16 36,5	1 25,4	1 1/2 x 1/2 6,4 x 3,2	1 3/4 44,5	1 1/64 25,8	1 3/4 44,4	1/2-1 19-25,4	100 135,43	1000
ORB100	3 5/8 92	3 1/32 84,9	1 1/2 38,1	1 13/16 20,6	3 1/8 x 3 1/16 9,5 x 4,8	2 1/4 57,2	1 1/64 25,8	2 50,8	3/4-1 1/4 19-31,8	100 135,43	1000
ORB200	4 1/2 114,3	4 1/2 114,3	2 1/16 52,4	1 5/16 33,3	3 1/8 x 3 1/16 9,5 x 4,8	3 76,2	1 39/64 40,9	2 1/2 63,5	1 1/2-2 38,1-50,8	200 270,86	800
ORB500	6 152,4	5 29/32 131	2 1/2 63,5	2 50,8	1 1/2 x 1/4 12,7 x 6,4	4 1/2 114,3	1 29/32 45,2	3 76,2	2 1/4-2 3/4 57,2-69,9	500 677,14	600



Roller Arm Assembly

Model	A	B	C	D	E	F	G	Bore Openings	Torque	Overrun Speed
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	lb-ft nm	rpm
RA14	1/4 6,4	1/4 6,4	1 7/8 47,6	1 13/16 20,6	1 3/4 44,5	1 1/2 38,1	7/16 11,1	3/8 - 5/8 9,5 - 17,1	14 18,96	1800
RA100	5/16 7,9	5/16 7,9	3 3/4 95,3	1 3/8 34,9	3 7/16 87,3	3 76,2	1 25,4	3/4 - 1 1/4 19 - 31,8	100 135,43	1000
RAB200	1 13/32 10,3	3/8 9,5	4 1/2 114,3	2 3/8 60,3	4 1/4 108	3 3/8 92,1		1 1/2 - 2 38,1 - 50,8	200 270,86	800
RAB500	1 17/32 13,5	3/8 9,5	6 152,4	2 27/32 64,3	5 1/2 139,7	4 3/4 120,7		2 1/4 - 2 3/4 57,2 - 69,9	500 677,14	600

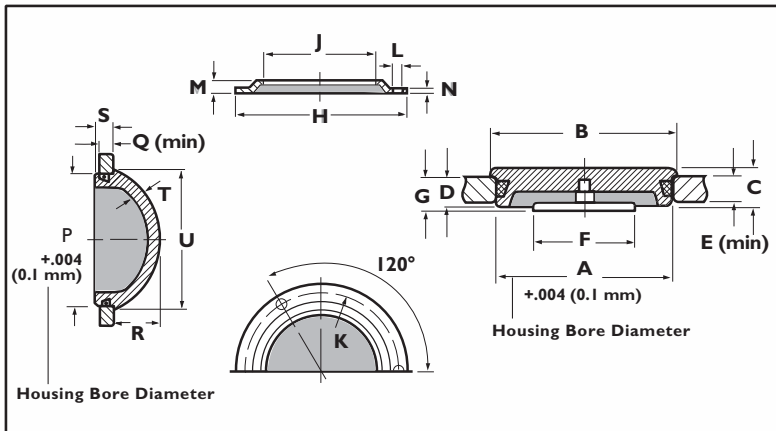
* Please call 800-456-9355 for complete ordering information



Observation Windows

For trouble-free visual inspection

- Solid, shock-resistant transparent acrylic
- Withstands temperatures up to 220°F and internal pressures up to 8.8 psi (.61 Bar) or higher with optional guard ring
- Removable film protects polished face from damage during delivery and assembly
- White reflectors are furnished with all windows up to 8-inch diameter (removable if not desired)



Oil Window

Model	ØA		ØB		C		D		E(min)		ØF		Reflector G	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
14200	7/8	22,2	1	25	11/32	8,5	7/32	7	7/32	5	3/4		13/32	10
20200	1 1/4		1 3/8		11/32		7/32		7/32		1 1/8		13/32	
21200		32		35		8,5		7		5		28		10
24200	1 1/2	38,1	1 5/8	41	11/32	8,5	7/32	7	7/32	5	1 1/8	28	13/32	10
32200	1 31/32	50	2 1/8	53	13/32	10	11/32	8,5	1/4	6	1 1/8	28	13/32	10
48200	2 59/64	75	3 1/16	76	13/32	10	11/32	8,5	1/4	6	1 1/8	28	13/32	10
64200	3 13/16	100	4 1/16	103	13/32	10	11/32	8,5	1/4	6	1 1/8	28	13/32	10
95200	5 29/32	150	6	153	13/32	10	11/32	8,5	1/4	6	1 1/8	28	13/32	10
96100	7 7/8	200	7 63/64	203	13/32	10	11/32	8,5	1/4	6	—	—	—	—
97100	9 27/32	250	9 61/64	253	1/2	12	13/32	10	10/32	8	—	—	—	—
98100	11 57/64	300	11 59/64	303	20/32	15	1/2	12	13/32	10	—	—	—	—

Guard Ring for Push-Fit Oil Windows

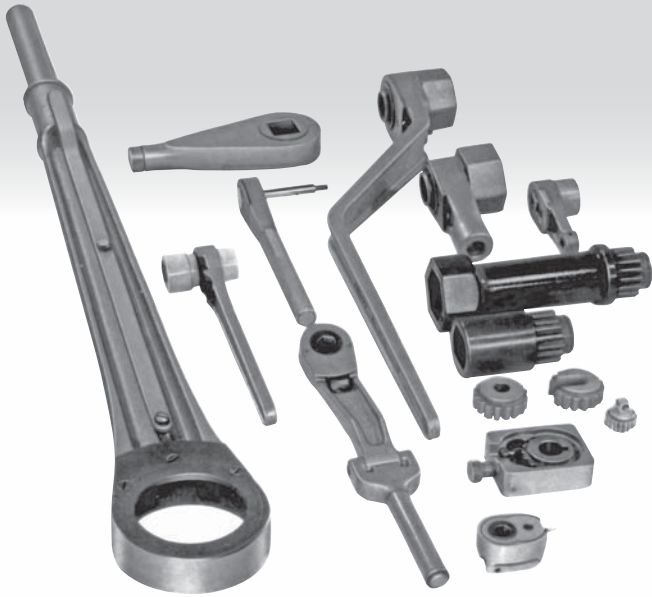
Model	Ø H		Ø J		Ø K		Ø L		M		N		Use with
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	
44600	2 3/4	69	1 13/16	46	2 31/64	63	9/64	3,6	1/8	3,2	1/32	0,8	32200
62600	3 7/8	98	2 3/4	70	3 35/64	90	3/16	4,8	1/8	3,2	3/64	1	48200
78600	4 7/8	123	3 3/4	95	4 17/32	115	3/16	4,8	1/8	3,2	3/64	1	64200

Oil Circulation Indicator

Model	Ø P		Q (min)		R		S		T		Ø U	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
24700	1 1/2	38,1	7/32	5	2 7/32	21	9/32	7	7/32	5	1 5/8	41
47700		75		6		30		8,5		5		80
48700	3		1/4		1 3/16		11/32		7/32		3 3/16	



Specials



How may we help you?

Frequently, application or design engineers require a non-standard motion control device. Sometimes we can meet this need by modifying an existing product. For example, we can alter the shape or size of the drive, change the number of teeth on a gear, add a free-running neutral, shorten, lengthen, bend, off-set or hinge the handle and reposition mounting configurations.

Other applications may require a completely new design. Starting with a sketch or detailed drawing of the application, samples are fabricated in some cases and then the product is manufactured.

To discuss your application, call your local Lowell distributor or factory representative.

Repair Parts

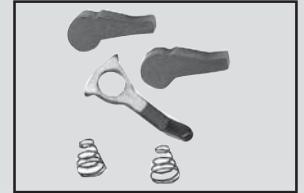
Complete Kits

Complete repair kits are available for many of our ratchet arms, clutches, and socket wrenches.

10 and 40 Series Ratchet Arms 70 Series Ratchet Clutches 50 Series Socket Wrenches Quick Release Series Socket Wrenches

Contents:

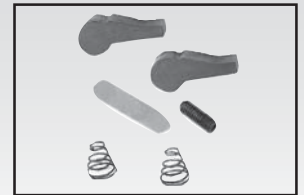
2 pawls, 2 pawl springs, 1 shifter



20 Series Ratchet Arms

Contents:

2 pawls, 2 pawl springs, 1 shifter screw,
1 rod spring

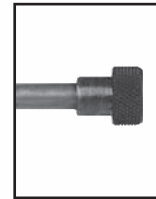


Rod and Knurl Kits

20 Series Ratchet Arms

Contents:

1 rod and knurl assembly, 1 shifter screw,
1 rod spring

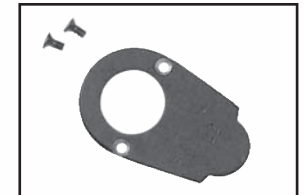


Cover Plate Kits

10 Series Ratchet Arms 20 Series Ratchet Arms 40 Series Ratchet Arms 70 Series Ratchet Clutches

Contents:

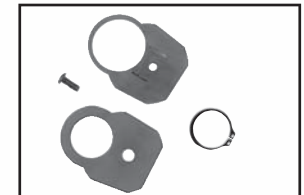
1 cover plate, 1 or more cover screws



50 Series Socket Wrenches

Contents:

1 cover plate, 1 cover spacer,
1 snap ring, 1 or more cover screws



50 Series Socket Wrenches Quick Release Series Socket Wrenches

Contents:

1 cover plate, 1 cover spacer,
1 cover screw, 1 latch, 2 latch springs



* Please see Design Guide for complete ordering information.

Warranty

Lowell's products are guaranteed against defects in material and workmanship for a period of one year after installation so long as date of installation is less than 24 months after date of manufacture. The Lowell Corporation certifies that Lowell T-Torkers have been calibrated to an accuracy of plus or minus ten percent of the torque value stamped on the tool. These are delicate instruments. Do not use them as hammers. This Warranty will be void if there is any evidence of using these tools as a hammer. These tools are guaranteed to be free from defects in material and workmanship for a period of one year from the date of sale, provided they are used as torque instruments.

THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER OF MERCHANTABILITY, FITNESS FOR USE, OR OTHERWISE. Lowell shall have no liability for defects until the goods are returned to it with its permission. Buyer's exclusive remedy shall be the replacement, correction or refund of the purchase price of the defective part, at Lowell's option. In no event shall Lowell be liable for incidental or consequential damages for any cause whatsoever, whether breach or warranty or otherwise.



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