# MECHANICAL COMPONENTS

Other MECHANICAL ITEMS: Couplers, Shafts, Extenders, etc. - see MOTOR Section

# STEEL SPROCKETS and IDLER SPROCKETS

Ideal for low speed drives and robotic applications

1/4" pitch sprockets, 1/2" deep (single type with one set screw). Matching cable chains listed below. All are New. Shpg, 8 ozs.



BORE	O/A DIAMETER	PITCH DIAMETER	NO. OF TEETH	NOTES	PRICE EACH
3/8"	2.53"	2.392"	30	Hub 1-1/16" O.D. with 24 slots for 3/8" wide cog belt	\$4.00
3/8"	1-13/32"	1.282"	16	Idler type 7/8" deep	\$3.00
1/2"	1-15/32"	1-11/32"	17	Hub 1/2 dia x .3125 w/2 set screws for keyed shaft	\$5.00
1/2"	1-15/32"	1-11/32"	17	Keyed shaft - end mount not thru bore	\$5.00
	3/8" 3/8" 1/2"	3/8" 2.53" 3/8" 1-13/32" 1/2" 1-15/32"	DIAMETER DIAMETER  3/8" 2.53" 2.392"  3/8" 1-13/32" 1.282"  1/2" 1-15/32" 1-11/32"	DIAMETER         DIAMETER         TEETH           3/8"         2.53"         2.392"         30           3/8"         1-13/32"         1.282"         16           1/2"         1-15/32"         1-11/32"         17	DIAMETER         DIAMETER         TEETH           3/8"         2.53"         2.392"         30         Hub 1-1/16" O.D. with 24 slots for 3/8" wide cog belt           3/8"         1-13/32"         1.282"         16         Idler type 7/8" deep           1/2"         1-15/32"         1-11/32"         17         Hub 1/2 dia x .3125 w/2 set screws for keyed shaft

# CABLE CHAINS.... 1/4 PITCH #25

H&R NO.	OPEN LENGTH	ROLLER Diameter	O/A Width	Shpg Wt	Price Each
TM94MEC2730	14" Long	1/8"	1/4"	8 ozs	\$2.50
TM94MEC2574	16" Long	1/8"	1/4"	8 ozs	\$3.00
TM92MEC2084 *	17" Long	1/8"	1/4"	8 ozs	\$3.00
TM91MEC1849	21" Long	1/8"	3/16"	8 ozs	\$3.50
TM92MEC2014 *	36" Long	1/8"	1/4"	8 ozs	\$4.00

# Heavy Duty ROLLER CHAIN and IDLER ASSEMBLY

37" Open Length — 3/8" pitch x 3/8" wide with 3/16" dia. rollers. Fully riveted construction with 9 teeth 1-3/8' dia. idler sprocket on mounting bracket. Removed from equipment; excellent condition. Wt, 3.5 lbs.



TM92MEC2080 ----- \$3.50

# Heavy Duty FLEXIBLE MOTOR COUPLINGS

**5/32" to 1/4"** Heavy duty rubber jaw flexible coupling consists of steel hubs with set screws and rubber spider. Size 5/8 dia. x 51/64" long. Wt, 4 ozs.

TM96MEC2866 ------\$4.00 5/32" to 5/32" - Similar to TM96MEC2866 above. Wt, 4 ozs.

TM93MEC2391 -----\$4.00



Designed for 1/2 to 1/2" shafts

Constructed of machined aluminum with two flex joints and an Allen set screw at each end. Flex joints are spring steel with brass rivets. Size 1-3/4 dia. x 3-1/2" long. New. Wt, 1 lb.



TM90MEC1419 ----- \$6.00

# RIGID SHAFT STEEL EXTENDERS

Shipping Weight each, 3 ozs.



TM No.	Bore	OD	Length	Set	Pr	ice
	Size			Screws	1-9.	10 & up
TM91MEC1714	3/8	3/4	2	1/4"	\$5.00	\$4.50

# Plastic Gear Set

One dual gear has 14 and 21 teeth respectively; shaft size 15/64". Mating gear is 1/8 pitch and has 54 teeth, 2-5/16" dia., 5/16 shaft size New. Shpg wt. 1 lb. TM99MEC3399 -------\$2.95



# ANTENNA MOUNTING KIT TV - CB - HAM - SCANNER

This kit was originally developed as an antenna mounting kit. Parts are multi-purpose for innovative people with imagination. Wall mounting kit contains: 75 ohm coaxial cable, indoor and outdoor matching transformers, "F" connectors, brackets and all required hardware.

TM97MEC2998 ------\$3.50

## Spring Wheel Winch



Winch has a cable (approx. 30") which provides approx. 5 lbs of pull at full extension. 1-1/2" drum held by 1/4" shaft to a 'U' bracket 2"H x 2-5/8"W x 1-1/2"Dp. with two mounting threaded inserts 8/32. The spring loading is

accomplished by a ratcheted drum on a 'D' shaft. Removed from equipment in excellent condition. Shpg wt. 1 Lb.

TM99MEC3276 ------\$5 95

Can be used out-

doors. Size: 13-1/2"

x 11-1/2". New. Shpg

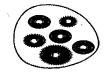
wt 3 lbs.

# BELTS, CHAINS, PULLEYS, GEARS AND ASSORTMENTS













### Plastic and Steel Gear Assortment (All Gears Mesh)

11 Pieces ranging in diameters from 11/16" thru 2-5/8". All for 0.315 (8mm) shafting. Some with bronze and ball bearings. RFE, Wt, 1 Lb. TM94MEC2666 --- \$16.95

Steel Shafting for 8mm Gears and Pulleys (ABOVE) Consists of 3 - 0.315 (8mm) x 3-7/16 Long steel shafts machined and drilled to accept pins and clips to hold gears and pulleys. Also includes asst clips, pins, and mtg bkts. RFE. Wt, 1 Lb.

TM94MEC2669 --

Cog Belt Pulley ... Designed to fit 1/2" dia keyed shaft (no set screws). Unit has 34 teeth and is 1-1/8" dia x 1/4" wide. Removed from equipment, Wt. 4 oz.



TM94MEC2636 -

# COG BELT AND PULLEY KIT Belt and Pulleys Mesh

Consists of: (1) 1/4" wide cog belt with 15" circumference. (1) 1" dia x 3/8 wide plastic pulley with bore for 6mm flatted shaft. (1) 1-7/8" dia x 1/2" wide idler style plastic pulley with 10mm bore. (1) Shafting 6mm dia x 2-3/4 long with 1 end flatted to mate with small pulley and (1) retainer pin. New. Wt, 8 oz.

TM95MEC2786 -----\$4.95

### **DUAL COG BELT PULLEY**

Designed to fit 5/16" dia. keyed shaft. Pulley has two steps. 40 teeth 2-3/32" OD x 3/8 wide and 32 teeth 1-11/16 OD by 1/2" wide. Removed from equipment. Shpg, 12 ozs.



TM92MEC2220 ---\$2.95

# STEEL SPROCKET AND CHAIN DRIVE KIT Chain & Sprockets Mesh

Consisting of: (1) 16" long (open chain) with 1/8" roller dia O/A width 1/4" #25 Pitch. (1) Drive sprocket 1-1/4" dia, 14 tooth with 3/8" long hub for use on .250 shaft with pinning. (1) shaft and pulley assy, with pinned 3/4" dia x 8 tooth steel sprocket and fixed plastic gear assy with 1 cog belt pulley 1-3/8" dia x 3/16" W and helical style drive gear 1-5/16 dia x 1/4 W. Shaft size 3" long x .250 dia. Wt, 8 oz.

TM95MEC2783 ------- \$6.95

### **IDLER PULLEY WITH BEARING**

Yellow plastic idler pulley with a center mounted, 1/4" bore sealed precision bearing. V- grooved, 1-5/8" dia with a pitch dia. 11/64"W with approx. pitch dia. 1-17/32. Actual wt. 0.03 ounces overall size 1-5/8" dia x 7/32"H. New. Wt. 0.03 oz.



TM99MEC3273 -\$1.95

# Cog Belt Pulley Assortment

7 Pieces -- 4 pulleys 1-7/8" dia, 1 pulley 1-1/4" dia, 2 idler pulleys 1-3/32". All for 1/2" wide cog belts, with .315" dia bore (8mm). RFE, Wt, 8 oz. TM94MEC2670 -----

**FIBER** BUSHING



Designed to fit under cut 1/4" shaft. Unit has a rubber shaft seal on small diameter side. Size 13/16 dia. x 1/4" long stepped to 5/8 dia. x 5/16" long New. Shpg, 1 oz.

TM91MEC1874

## CAPSTAN/IDLER 1/2" DIA. X 1/4" HIGH

Friction drive capstan/idler. Designed to fit over a 5/32 dia. (4mm) shaft. O/A length 11/16" long. New. Shpg, 2 ozs. TM93MEC2403 ---



\$1.00

ALUMINUM SHAFT COLLAR - FOR 1/2" SHAFT

Smooth bore. Designed to be used as sprocket hub, bearing holder, spacer, etc. Furnished with Allen head cap screw and nut. Size 3/4 wide x 15/16 x 7/16" thick. Removed from equipment; excellent condition. Shpg, 2 ozs.



TM92MEC2325 -\$1.00

# STEEL CHAIN, SPROCKET & DRIVE KIT Cable Chains & Sprockets Mesh

Converts rotary motion to linear motion Consists of: (1) 16" open length 1/4 pitch #25 cable chain roller dia 1/8"

O/A width 1/4". (1) Steel sprocket 14 tooth 1-1/4" dia, bore for 1/4" dia flatted shaft .480 dia x 3/16" hub tapped for set screw. (1) Shaft assembly with pinned 3/4" dia 8 tooth steel sprocket plastic 1-15/16 dia x 1/4" w/ helical drive pulley and 1-3/8 dia x 3/16 wide plastic cog belt pulley (mates with rack listed below). O/A shaft size .250 dia x 3" long. (1) 8" long x base width 3/4" gear rack, plastic (mates with cog belt pulley on shaft assembly). Wt, 1 Lb.



# ROBOTIC DRIVE KIT WITH COG BELT, MOTOR, & PULLEYS (Belt Meshes with All Pulleys)

Consists of: (1) Buehler Series 13.018 D.C. Reversible motor rated 25 VDC 2800 RPM 200MA No Load. Stall torque approx. 30 oz/in (will operate on voltages as low as 6 VDC with reduced speed & torque. Shaft end mtg. with 3 tapped holes and equipped with metal cog belt pulley 1/2" dia x 1/2" long. O/A Size 1-7/8" dia x 3" long. Wire leads for conn. (1) Cog belt 1/4" wide circumference 15". (1) Plastic cog belt pulley 1" dia x 3/8" wide with bore for 6MM flatted shaft. (1) Plastic cog belt pulley idler style 1-7/8" dia x 3/" wide with bore 10 MM. (1) shaft 6MM dia x 2-1/2" long with 1 end flatted. Wt, 2 Lbs. TM95MEC2787 ------

STEEL GEA	AR BEI weight 1 lb.		EY5				Great Va	lue at Low	Cost 1
H&R NO.	BORE	O/A DIAMETER	FACE DIAMETER	NO. OF GROOVES	нив	KEY	SCREW HOLES	OVERALL L & W	PRICE EACH
TM97MEC3005	1"	2-1/2"	5/8"	21		N	N	2-3/4L, 3/4W	\$1.95
TM97MEC3006	1/2"	1-1/2"	7/8"	40	1-1/8L, 5/16W	Υ	2	1-5/8L, 7/8W	\$2.00
TM97MEC3007	1/4"	1-3/4"	7/16"	28	1-3/4L, 5/16W	N	2	7/8L. 2W	\$2.50
TM97MEC3008	1/2"	7/8"	7/16"	25	•	N	2	1-1/8L, 1/2W	\$1.95
TM97MEC3009	3/4"	7/8"	7/16"	14	-	N	2	1-1/8L, 9/16W	\$1.95
TM97MEC3010	5/8"	2-1/8"	5/8"	34	1-3/4 L, 5/16W	Y	2	1-1/8L, 2-1/4W	\$1.95
TM97MEC3011	1/2"	1-1/16"	1/2"	17	-	N	3	5/8L, 1-3/4W	\$3.00

# MECHANICAL COMPONENTS

# PRECISION BALL BEARINGS

High quality...single row radial bearings. New, except where noted. Shpg Wt each, 4 ozs.

INCH SIZED						
H&R NO.	BORE	O.D.	WIDTH	PRICE 1-9	EACH 10 & UP	
TM00MEC4430(D)	0.085	0.500	0.109	\$1.40	\$1.20	
TM89MEC2949	0.125	0.375	0.1562	\$2.75	\$2.50	
TM91MEC1757	0.250	0.625	0.196	\$2.75	\$2.50	
TM91MEC1758(A)	0.250	0.6250	0.196	\$3.45	\$3.10	
TM00MEC4432	0.250	0.650	0.196	\$1.75	\$1.50	
TM00MEC4431(B)	0.250	0.750	0.218	\$1.75	\$1.50	
TM97MEC3048	0.312	0.865	0.275	\$3.45	\$3.10	
TM97MEC2975(C)	0.312	0.630	0.196	\$2.75	\$2.50	
TM89MEC4180 (B)	0.6875	1.5625	0.6875	\$1.50	\$1.25	

- (A) With 0.6875 flange on one side
- (B) Single race unshielded
- (C) Removed from equipment in good condition
- (D) End bearing

# METRIC SIZED (also shown in inches) -- Like new condition

H&R		ORE	_	.D.		тн	PRIC	EACH
NO.	mm	Inches	mm	Inches	mm	Inches	1-9	10&UP
TM94MEC2668	6	0.2362	10	0.3937	3	0.1181	\$2.75	\$2.10
TM90MEC1362	8	0.3150	22	0.8661	7	0.2756	\$2.25	\$2.00
TM97MEC2974	. 9	0.2300	19	0.750	6	0.236	\$2.25	\$1.95
TM90MEC1364	15	0.5906	35	1.3780	11	0.4331	\$3.00	\$2.50
TM90MEC1366	30	1.1811	62	2.4409	16	0.6299	\$3.00	\$2.50

# LEAD SCREW ASSEMBLY 17" Overall Length

### The state of the s

Machined steel 17" overall length, threaded portion 3/8" dia #16 thread x 15" long. Ends machined to 1/4" dia. Supplied with bronze follower nut 1-1/16" dia x 3/4" long. 1/4" to 1/4" flex coupler and a 1/4" linear bearing. Removed from equipment; excellent condition. Shpg. Wt. 1 Lb.

TM94MEC2601 ---

### 14" Overall Length

Machined steel14" overall length, threaded portion is 12-1/2", coarse thread 0.670" OD, 5 turns per inch truck travel. Roll pin stops allow 9" travel, but may be removed to allow full travel of 12". Truck OD 1" with 1/2" thread on one end. One end of shaft is machined 1/4" long to 0.380" dia. Opposite end has same bearing surface with a 1" shaft flatted 1/4" dia. Removed from equipment in excellent condition. Shpg wt. 2 lbs.

TM98MEC3154 -----PRICE BREAK!

### LEAD SCREW ASSEMBLY 10-3/4" Overall Length The same of the sa

Stainless steel lead screw. Threaded portion is 3/8" dia. 10"L, bearing pressed on one end, 1/2" shoulder, other end is 3/16" flatted. 3-1/2"L follower has a mounting shoulder 1-1/2" dia., 3/8" thick with three mounting holes. The pressed fiber follower has roller bearings on both ends and smoothly travels 5 turns per inch. New. Shpg. Wt. 1 Lb.

TM99MEC3400 -----

### SOLENOID DASHPOT ACTUATOR ASSEMBLY



Consists of a 24 VDC 22 Ohms intermittent duty tubular solenoid with pull at 1/8" approx 100 oz coupled to a dashpot of the push action type. End screw adjustable to approx 8 oz retarding force, (actuating distance adjustable 3/16" to 1/2") with attached "U" Shaped plastic actuating arm, (unit was designed to slow solenoid plunger return after actuation). All parts easily removed from plastic mtg base. O/A Size 4 x 3-1/4 x 2-11/16 high. New. Wt, 1.5 Lbs.

TM94SLD2677---

### **RUBBER DRIVE BELTS**

New, High Qua	ality Deits		(5	Shipping v	wt 1 lb)
H&R NO.	CIRCUM. ( meas	WIDTH sured in in	THICK nches )	WT.	PRICE EACH
TM97MEC3020	29	5/16	3/32	1 oz.	\$2.75
TM97MEC3021	19	3/8	3/32	1 oz.	\$2.25
TM97MEC3022	15	3/8	3/32	1 oz.	\$2.10
TM97MEC3023	32	3/8	5/32	2 oz.	\$2.50
TM97MEC3024	21	1/4	3/32	1 oz.	\$2.00
TM97MEC3025	8	5/16	3/32	1 oz.	\$1.50
TM97MEC3026	19	3/8	5/32	1 oz.	\$2.00
TM97MEC3027	19	3/8	3/16	1 oz.	\$2.25
TM97MEC3028	54	3/8	3/16	3 oz.	\$5.50

### FLAT PERFORATED DRIVE BELTS

By Goodyear rubberized elastic ideal for robotics drive, turntable drive etc. Relaxed thickness .040". New.

Goodyear# 23P61315/16" W x 23-1/8" Circumference, Wt. 4 oz.	
TM94MEC2740 \$1.0	0

Goodyear# 23P612...1-3/4" W x 23-1/8" Circumference, Wt, 4 oz. TM94MEC2739 -----

### STEEL THREADED ROD BOLT KITS

Each kit consists of two, 10" lengths of threaded steel rods, 4 hex nuts, 4 flat washers and 4 lock washers. These kits can save you time and money in the fabrication of special fastenings. Rods can be cut to length with a hack-saw; heated and bent to make 'U' bolts etc. A few of the many applications are anchors in concrete, joist fastening, hangers, etc. New.



TM90TOL1181	3/8" dia.	Shpg wt 1 lb \$1.75
TM90TOL1182	1/2" dia.	Shpg wt 2 lbs \$2.00

## **DUAL MOTOR DRIVEN** X-Y ACTUATOR ASSEMBLY



Heavy molded plastic with various threaded brass inserts for mounting, driven by two Buehler reversible miniature gear head motors rated 24 VDC 15 RPM, less than 50 MA no load (will operate over the voltage range of 12 to 28 VDC). Unit also contains a module with 7 SPST mag reed switches, and a module with 2 reed switches. Motors have attached plastic gears which drive

actuator arms, with one driving the other, a max of approx 4-1/2" in either direction. O/A Size 9" x 7-1/2" x 2-1/4". Removed from equipment. Excellent condition. Wt, 1.5 Lbs.

TM95MEC2815 --------\$39.95

## MOTOR DRIVEN ACTUATOR ASSEMBLY

Heavy molded plastic with various threaded brass inserts for mounting, driven by a Buehler reversible miniature gear head motor rated 24 VDC 15 RPM, less than 50 MA no load (will



operate over the voltage range of 12 to 28 VDC). Unit also contains a module with 7 SPST mag reed switches, and two SPDT roller leaf micro switches. Motor has attached plastic gear which drives actuator arm a maximum of 4-1/2" in either direction. Arm size 1/2" wide x 3/16 thick x 9" long. O/A size of assembly 11" long x 2-1/2"W x 2" deep. Removed from equipment, excellent condition. Wt, 1 Lb.

TM95MEC2814 -----