

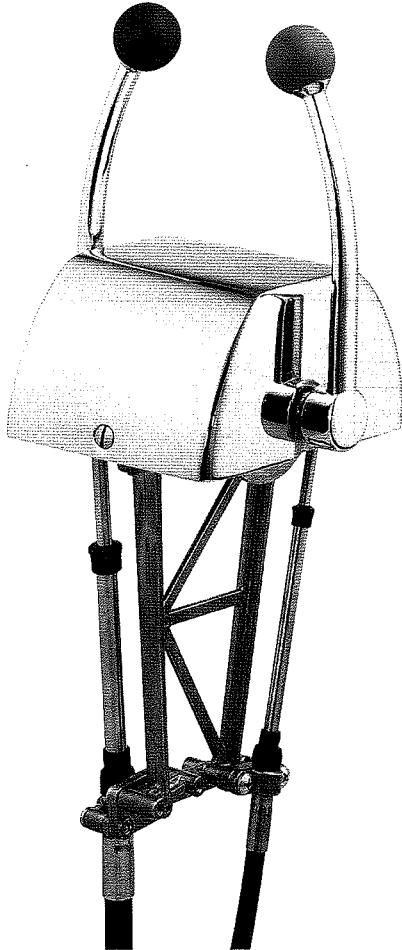


1074 Kenran Industrial Dr.
St. Louis, MO 63137
Phone: 1-800-381-9968

HUMCO ENGINE CONTROLS

Kobelt Two Handle Push Pull Control Head

Model 2015 Push Pull Control Head



DESCRIPTION

This control incorporates all the features of the Kobelt standard Push Pull Control: 3" stroke, all bronze and stainless steel and extremely heavy-duty construction. The cable support bracket has been shortened to improve cable attachment access to the Control Head.

ORDERING INFORMATION

Model Designation Order Codes:

- A - One short handle with friction and one long handle with detent
- AA - One short handle with friction and one long handle with friction
- B - Two long handles with detent
- C - Two long handles with friction
- D - Two long handles with one detent and one friction
- E - Two short handles with detent
- F - Two short handles with friction
- G - Two short handles with one detent and one friction
- K - With chrome finish cover and handles
- L - With polished brass finish cover and handles
- M - With black epoxy finish cover and chrome handles
- S - Right Hand Model with interlock (gear on right side)
- T - Left Hand Model with interlock (gear on left side)
- U - With curved handles and red or black knobs
- V - With red or black plastic grips

NOTE:

Cable connector kits are ordered separately.
Each Push Pull cable end attached to the control head requires one kit.

CONNECTION KIT ORDERING INFORMATION

- 2015-0901 Connection Kit (30 series cable)
- 2015-0902 Connection Kit (40 series cable)



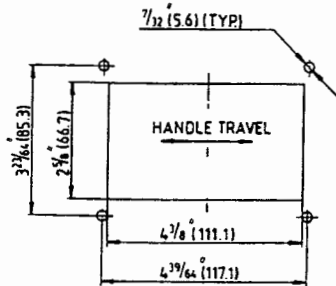
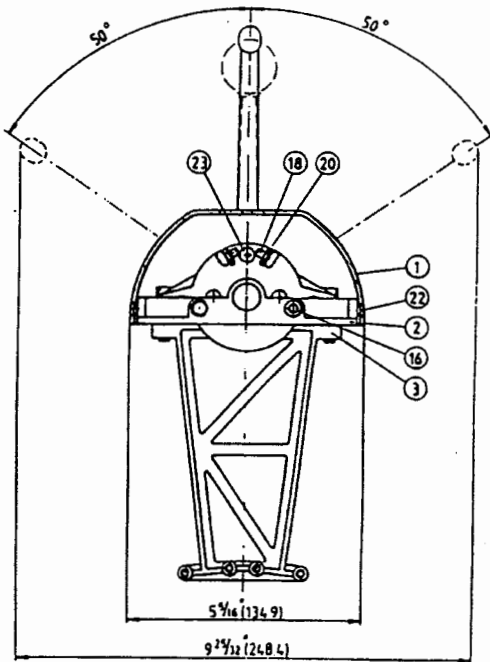
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HUMCO ENGINE CONTROLS

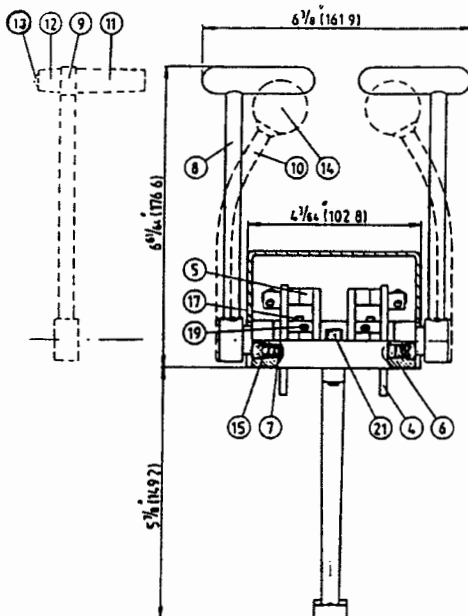
Kobelt Two Handle Push Pull Control Head

Model 2015 Two Handle Push Pull Control Head

HOBELT



ALL DIMENSIONS IN INCHES (mm.)



*Optional, depending on desired configuration.

ITEM	QUANTITY	PART NO.	DESCRIPTION
1	1	2015-0001	Dome
2	1	2015-0002	Frame
3	1	2015-0003	Support
4	2	2015-0004	Cam
5	2	2015-0005	Retainer Plate
6	1	2016-0011	Friction
7	1	2009-0011	Detent
8*	2	2009-0015	Long Handle (Standard)
8*	2	2009-0016	Short Handle (Standard)
9*	2	2009-2015	Long Handle (Plastic Grip)
9*	2	2009-2016	Short Handle (Plastic Grip)
10*	2	2009-3015	Curved Handle
11*	2	2111-0001B	Plastic Grip (Black)
11*	2	2111-0001R	Plastic Grip (Red)
12*	2	2111-0004B	Grip End (Black)
12*	2	2111-0004R	Grip End (Red)
13*	2	1011-1028	Oval Head Machine Screw
14*	2	2030-0011	Black Knob
14*	2	2030-0012	Red Knob
15	2	1201-0003	Spring
16	2	1016-1204	Hex Socket Set Screw
17	4	1016-0804	Hex Socket Set Screw
18	4	1016-0808	Hex Socket Set Screw
19	4	1024-0816	Spring Pin
20	4	1022-0108	Hex Jam Nut
21	2	1002-0016	Hex Socket Head Cap Screw
22	2	1005-0808	Oval Head Machine Screw
23	6	1019-0808	Flat Head Phillips Machine Screw
2015-0901 Parts			
1		2019-0001	Spacer
1		2018-0001	Clamp
1		1022-0158	Nut
2		1010-0810	Machine Screw
1		2105-0003	Swivel
2015-0902 Parts			
1		2015-0006	Plate
1		2108-0002	Clamp
1		2109-0002	Spacer
2		1012-0814	Machine Screw
2		1010-0808	Machine Screw
1		1022-0260	Nut
1		2105-0004	Swivel

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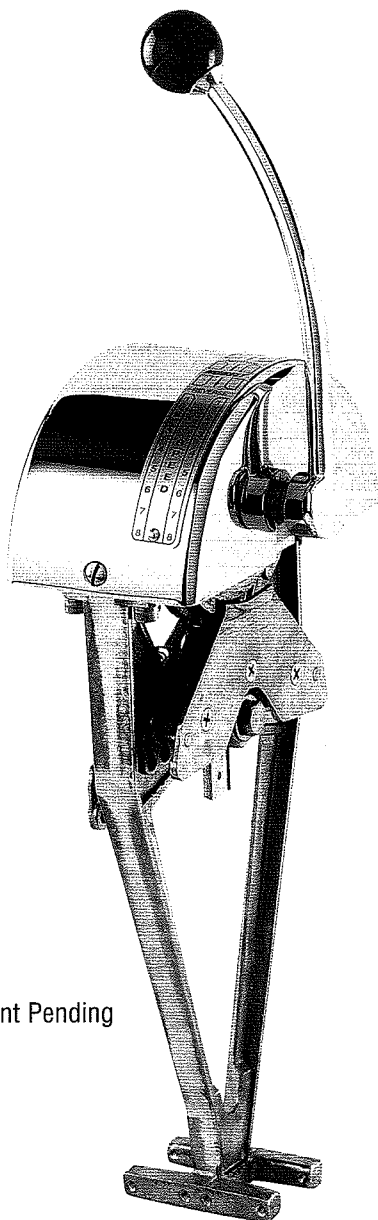
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HUMCO ENGINE CONTROLS

Kobelt Single-Lever Control Head

HOBELT

Model 2046 Medium-Duty Single-Lever Control Head



Patent Pending

DESCRIPTION

The 2046 control head was made for a marine environment and to give the boat owner years of trouble-free service. Its compact and rugged design exceeds any competitive product in value and performance. The control handle will engage the gear in either direction before throttle acceleration takes place. In order to warm up the engine without gear engagement, the control handle is pulled away from the dome approximately 1/4". This will disengage the clutch mechanism and will allow engine acceleration. When the control handle is returned to the neutral position, the clutch mechanism is automatically engaged. The control head also provides a small detent in the full throttle position in one direction only (forward). This will prevent the engine from creeping back, causing loss of RPM. By reversing the detent roller and spring assembly, the full speed detent can also be reversed.

SPECIFICATIONS

Weight: 7.5 lbs. (3.4 kg)

ORDERING INFORMATION

Model Designation Order Codes:

- H - With one neutral safety switch
- K - With chrome finish cover and handle
- L - With satin brass finish cover and handle
- M - With black epoxy finish cover with chrome handle

The Standard Model 2046 Control Head is supplied as follows:

1. With chrome finish handle and cover
2. Without neutral safety switch

To order, state Model Number, followed by desired Model Designation Order Codes listed above.

Example: A standard model 2046 Control Head with chrome finish. Order No. **2046-K**.

NOTES:

- * Plastic labels are available to indicate Neutral, Forward and Reverse positions, as well as speed scales. Order Part No. **2046-0015**.
- * Cable connector kits are ordered separately. Each push pull cable end attached to the control head requires one kit.

CONNECTION KIT ORDERING INFORMATION

- 2046-0901** No. 10-32 (30 series cable) Connection Kit
- 2046-0902** 1/4"-28 (40 series cable) Connection Kit
- 2046-0903** Neutral Safety Switch Kit

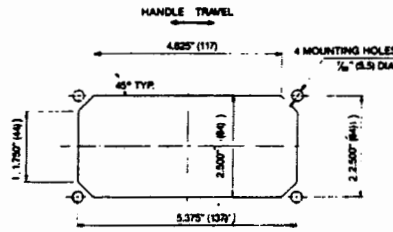
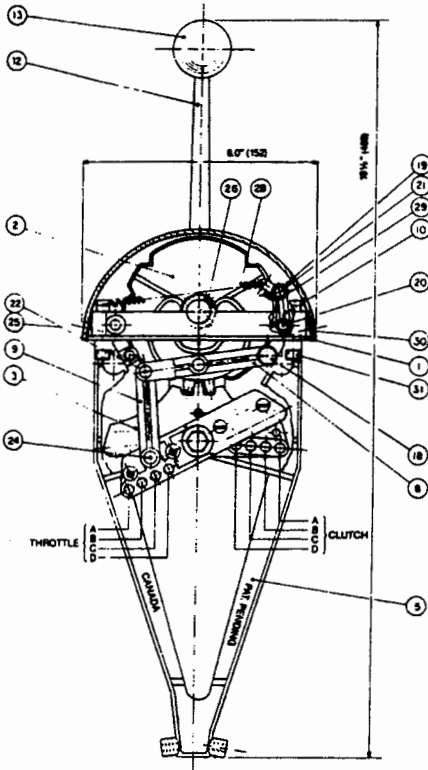


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HUMCO ENGINE CONTROLS

Kobelt Single-Lever Control Head

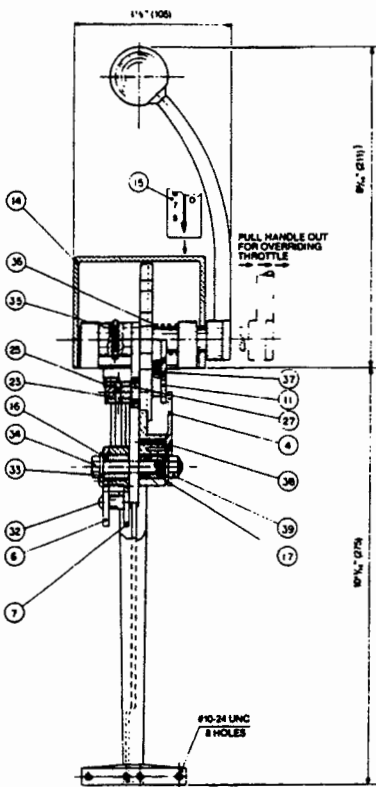
KOBELT



"CUT OUT" DIMENSIONS

ALL DIMENSIONS SHOWN IN INCHES (mm.)

	A	B	C	D
THROTTLE TRAVEL	1-5/8" (41 mm.)	1-3/8" (35mm.)	1-1/16" (27mm.)	13/16" (21mm.)
CLUTCH TRAVEL	3" (76mm.)	2-1/2" (64mm.)	1-7/8" (48mm.)	1-1/4" (32mm.)



ITEM	QUANTITY	PART NO.	DESCRIPTION
1	1	2046-0001	Frame
2	1	2046-0002	Center Cam
3	1	2046-0003	Pivot Cam
4	1	2046-0004	Retainer
5	1	2046-0005	Support
6	1	2046-0006	End Plate
7	1	2046-0007	Throttle Cam
8	1	2046-0008	Link No. 1
9	1	2046-0009	Link No. 2
10	1	2046-0010	Detent Lever
11	1	2046-0011	Cam Retainer
12	1	2046-0012	Handle
13	1	2030-0001	Knob
14	1	2004-0002	Dome
15	1	2046-0015	Name Plate
16	1	2046-0016	Throttle Bushing
17	1	2046-0017	Clutch Bushing
18	1	2046-0018	Shoulder Bolt
19	1	2046-0019	Roller
20	1	2046-0020	Frame Pin
21	1	2046-0021	Detent Link Pin
22	1	2046-0022	Link Pin
23	1	2046-0023	Link Solid Pin
24	1	2046-0024	Pivot Plate Pin
25	2	1024-0510	Spring Pin
26	1	1016-0804	Set Screw
27	1	2046-0027	Throttle Roller
28	1	1202-0001	Spring
29	4	1029-1025	Snap Ring
30	2	1005-0806	Oval Head Slotted Machine Screw
31	4	1002-1010	Socket Head Cap Screw
32	4	1004-0806	Round Head Slotted Machine Screw
33	2	1023-0211	Washer
34	1	1001-1136	Hex Head Cap Screw
35	1	1024-0816	Spring Pin
36	1	1201-0108	Spring
37	2	1009-0804	Flat Head Phillips Machine Screw
38	3	1003-0806	Flat Head Slotted Machine Screw
39	1	1022-0311	Lock Nut

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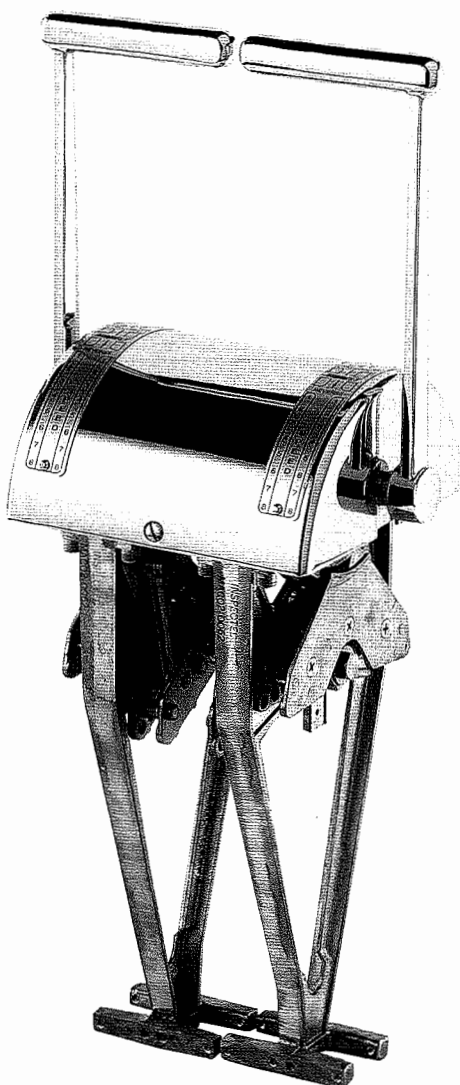
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HUMCO ENGINE CONTROLS

Kobelt Dual Lever Control Head

KOBELT

2048 Twin Engine Medium-Duty Dual Lever Control Head



DESCRIPTION

The 2048 control head is a twin engine version of the 2046 control head. It has the same features as the 2046 single lever control head, with each of two levers separately controlling each of the twin engines. In order to warm up an engine without gear engagement, a control handle is pulled away from the dome approximately 1/4". This disengages the clutch mechanism and allows engine acceleration. When the control handle is returned to the neutral position, the clutch mechanism is automatically re-engaged.

The control head also provides a detent for each handle in the full throttle position in one direction only (forward). This prevents the engine creeping back, lowering the RPM. By reversing the detent roller and spring assembly, the full speed detent can also be reversed.

IMPORTANT:

Model 2048 is designed to work as a single station unit **ONLY**. If two stations are to be interconnected, a transfer unit **MUST** be used.

SPECIFICATIONS

Weight: 14.37 lbs. (6.5 kg)

ORDERING INFORMATION

Model Designation Order Codes:

- K - With chrome finish cover and handles
- L - With satin brass finish cover and handles
- M - With black epoxy finish cover and chrome handles

The Standard Model 2048 Control Head is supplied as follows:

1. With chrome finish handles and cover

To order, state Model Number, followed by desired Model Designation Order Codes listed above.

Example: A standard model 2048 Control Head with chrome finish cover and handles. Order No. **2048-K**.

Patent Pending

NOTES:

- * Plastic labels are available to indicate Neutral, Forward and Reverse positions, as well as speed scales. Order Part No. **2046-0015**.
- * Cable connector kits are ordered separately. Each push pull cable end attached to the control head requires one kit.

CONNECTION KIT ORDERING INFORMATION

- 2046-0901** No. 10-32 (30 series cable) Connection Kit
- 2046-0902** 1/4"-28 (40 series cable) Connection Kit
- 2046-0903** Neutral Safety Switch Kit

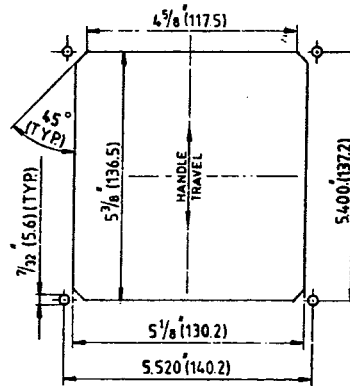
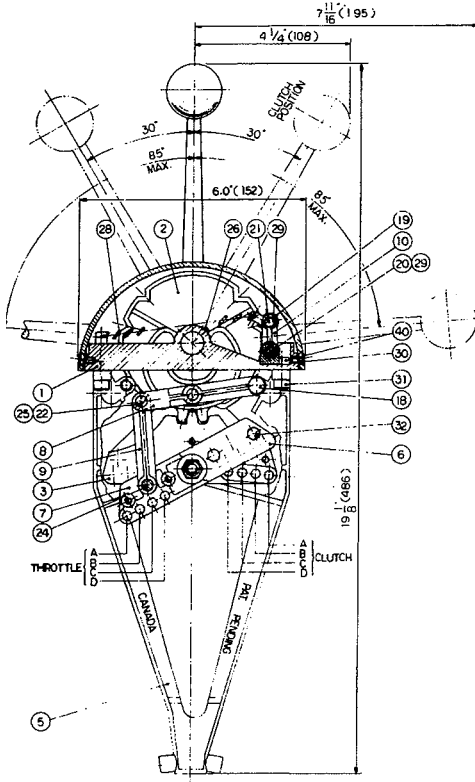


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HUMCO ENGINE CONTROLS

Kobelt Dual Lever Control Head

HOBELT

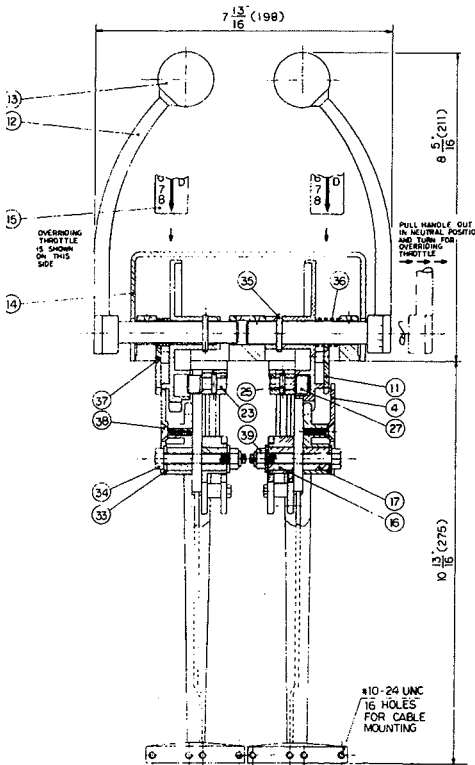


NOTES:

1. Overriding throttle motions are shown on Dwg. C-2046-1001 and C-2046-1002.
2. All dimensions are in inches (mm.)

"CUT OUT" DIMENSIONS

TRAVEL	CODE NUMBERS			
	A	B	C	D
THROTTLE TRAVEL	1-5/8" (41mm.)	1-3/8" (35mm.)	1-1/16" (27mm.)	13/16" (21mm.)
CLUTCH TRAVEL	3" (76mm.)	2-1/2" (64mm.)	1-7/8" (48mm.)	1-1/4" (32mm.)



ITEM	QUANTITY	PART NO.	DESCRIPTION
1	1	2048-0001	Frame
2	2	2046-0002	Center Cam
3	2	2046-0003	Pivot Plate
4	2	2046-0004	Retainer
5	2	2046-0005	Support
6	2	2046-0006	End Plate
7	2	2046-0007	Throttle Cam
8	2	2046-0008	Link No. 1
9	2	2046-0009	Link No. 2
10	2	2046-0010	Detent Lever
11	2	2046-0011	Cam Retainer
12	2	2046-0012	Handle
13	2	2030-0001	Black Knob
14	1	2004-0002	Dome
15*	2	2046-0015	Name Plate
16	2	2046-0016	Throttle Bushing
17	2	2046-0017	Clutch Bushing
18	2	2046-0018	Shoulder Bolt
19	2	2046-0019	Detent Roller
20	1	2048-0006	Pillow Block Pin
21	2	2046-0021	Detent Link Pin
22	2	2046-0022	Link Pin
23	2	2046-0023	Link Solid Pin
24	2	2046-0024	Pivot Plate Pin
25	4	1024-0510	Spring Pin
26	2	1016-0804	Set Screw
27	2	2046-0027	Throttle Roller
28	2	1202-0002	Spring
29	6	1029-1025	Snap Ring
30	2	1005-0808	Oval Head Slotted Machine Screw
31	8	1002-1010	Socket Head Cap Screw
32	8	1001-0808	Hex Head Cap Screw
33	4	1023-0238	Washer
34	2	1001-1136	Hex Head Cap Screw
35	2	1024-0816	Spring Pin
36	2	1201-0108	Spring
37	4	1009-0806	Flat Head Phillips Machine Screw
38	6	1009-0808	Flat Head Phillips Machine Screw
39	2	1022-0311	Lock Nut
40	1	2048-0005	Pillow Block

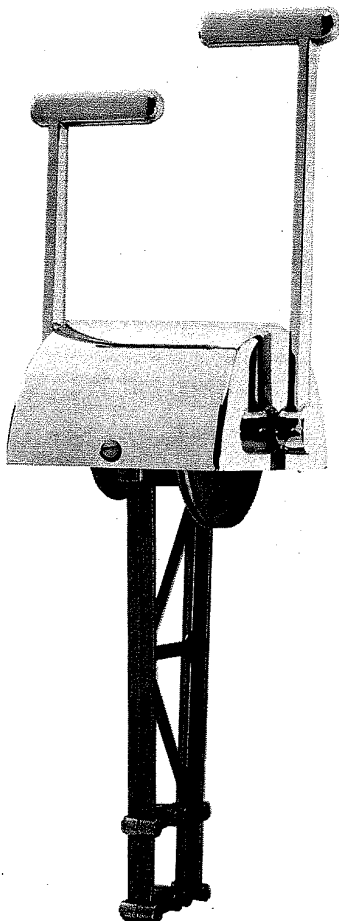
*Optional



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HUMCO ENGINE CONTROLS

Kobelb Combination Control Heads



PATENT PENDING

COMBINATION CONTROL HEADS TWIN HANDLE PUSH-PULL & WIRE OVER PULLEY

KOBELT TWIN HANDLE COMBINATION CONTROL HEADS are designed to utilize the advantages of both push-pull and wire-over-pulley controls: Push-Pull for easy installation and wire-over-pulley for control accuracy. This system will provide an economical yet superior clutch and throttle control of propulsion packages using the OMEGA gear. Available in two models.

FEATURES

- 5 YEAR GUARANTEE
- CORROSION FREE die-cast silicon brass and stainless steel hardware construction.
- PATENTED power sheave design allows easy non-slip wire-over-pulley installation.
- ADJUSTABLE push-pull stroke
- LARGE CENTER BEARING
 - no lost motion
 - high strength
 - low wear and long life
- Operating quadrants are positively pin fastened to lever shaft for safety.
- Removable dome cover for easy head and cable installation.
- Independent friction and detent are adjustable and removable.
- Suitable for #10-32 (30 series) and 1/4-28 (40 series) push-pull cables.

ORDERING INFORMATION:

- A — One short handle with friction and one long handle with detent.
- AA — One short handle with friction and one long handle with friction.
- B — Two long handles with detent.
- C — Two long handles with friction.
- D — Two long handles with one detent and one friction.
- E — Two short handles with detent.
- F — Two short handles with friction.
- G — Two short handles with one detent and one friction.
- *H — With one neutral safety switch.
- *J — With two neutral safety switch.
- K — With chrome finish cover and handle.
- L — With satin brass finish cover and handle.
- M — With black nylon finish cover and chrome handle.

The standard control head is supplied as follows:

- i. One short handle with friction and one long handle with detent.
- ii. Without neutral safety switch.
- iii. With chrome finish cover and handle.

To order state Model number 2923 or 2924 followed by Model Designation Letter Codes:

Example: Standard 2923 control head.
Ordering number 2923 AK

NOTE:

Cable kits are ordered separately. Each cable end attached to the control head requires one kit. To order, state control head number followed by:

- 0901 #10-32 (30 Series)
- 0902 1/4-28 (40 Series)

NEUTRAL SAFETY SWITCH

Ordering number: 2923-0903
2924-0903

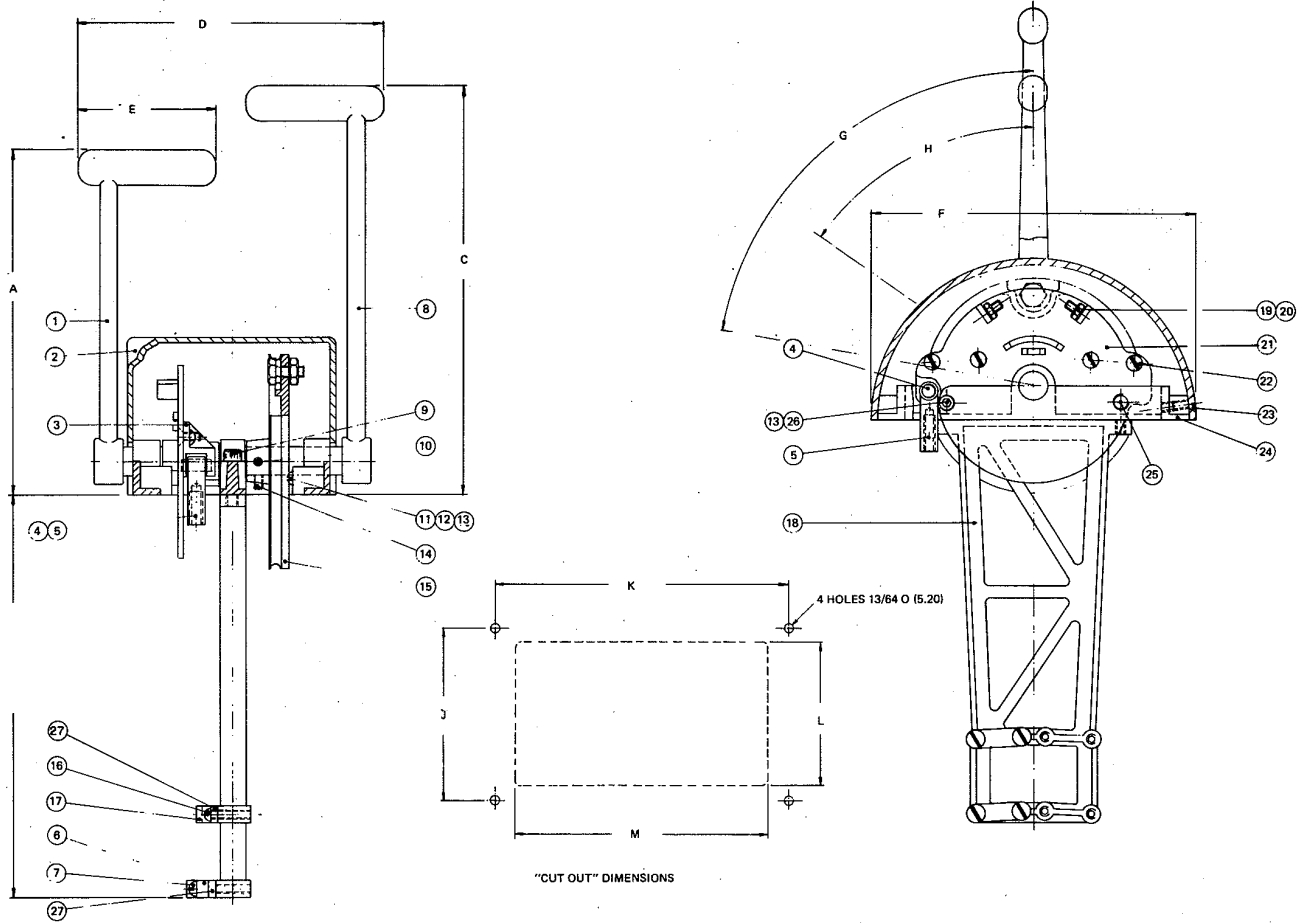
*Neutral safety switch is normally installed with detented handle.



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HUMCO ENGINE CONTROLS

Kobelt Combination Control Heads



MODEL	A	B	C	D	E	F	G	H	J	K	L	M
2923	7-1/2 (191)	8-3/4 (222)	8-15/16 (227)	6-5/8 (168)	3 (76)	5-15/16 (151)	80°	60°	3-3/4 (95)	5-1/4 (133)	3-1/8 (79)	4-5/8 (117)
2924	7-1/2 (191)	8-3/4 (222)	8-15/16 (227)	6-5/8 (168)	3 (76)	7 (178)	80°	55°	3-3/4 (95)	6-3/8 (168)	3-1/8 (79)	5-1/2 (139)

2923

2924

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	*	2011-0004	Handle (Short)
2	1	2011-0002	Dome
3	1	2011-0006	Pin Retainer
4	*	1025-0411	Pin
5	*	2105-0001	Clevis 10-32 UNF (30 Series)
5	*	2105-0002	Clevis 1/4-28 UNF (40 Series)
6	*	2108-0002	Cable Clamp (40 Series)
7	*	1004-0816	Cable Clamp Screw (40 Series)
8	*	2011-0003	Handle (Long)
9	2	1002-1020	Capscrew
10	2	1024-0816	Spring Pin
11	*	2542-0012	Detent Pin
12	*	1201-0003	Spring (Detent)
13	2	1016-1205	Setscrew
14	2	1016-1004	Setscrew
15	1	2303-0003	Power Sheave
16	*	1004-0810	Cable Clamp Screw (30 Series)
17	*	2108-0001	Cable Clamp (30 Series)
18	1	2011-0008	Support
19	2	1016-0808	Setscrew
20	2	1022-0108	Nut
21	1	2011-0005	Pivot Plate
22	2	1003-0808	Screw
23	2	1005-0808	Screw
24	1	2011-0001	Frame
25	*	2542-0008	Friction Plug
26	*	1201-0002	Spring (Friction)
27	2	2109-0001	Spacer

*Quantity used may vary.

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	*	2011-0004	Handle (Short)
2	1	2012-0002	Dome
3	1	2012-0006	Pin Retainer
4	*	1025-0411	Pin
5	*	2105-0001	Clevis 10-32 UNF (30 Series)
5	*	2105-0002	Clevis 1/4-28 UNF (40 Series)
6	*	2108-0002	Cable Clamp (40 Series)
7	*	1004-0816	Cable Clamp Screw (40 Series)
8	*	2011-0003	Handle (Long)
9	2	1002-1020	Capscrew
10	2	1024-0816	Spring Pin
11	*	2542-0012	Detent Pin
12	*	1201-0003	Spring (Detent)
13	2	1016-1205	Setscrew
14	2	1016-1004	Setscrew
15	1	2303-0004	Power Sheave
16	*	1004-0810	Cable Clamp Screw (30 Series)
17	*	2108-0001	Cable Clamp (30 Series)
18	1	2011-0008	Support
19	2	1016-0808	Setscrew
20	2	1022-0108	Nut
21	1	2012-0005	Pivot Plate
22	4	1003-0808	Screw
23	2	1005-0808	Screw
24	1	2012-0001	Frame
25	*	2542-0008	Friction Plug
26	*	1201-0002	Spring (Friction)
27	2	2109-0001	Spacer

*Quantity used may vary.



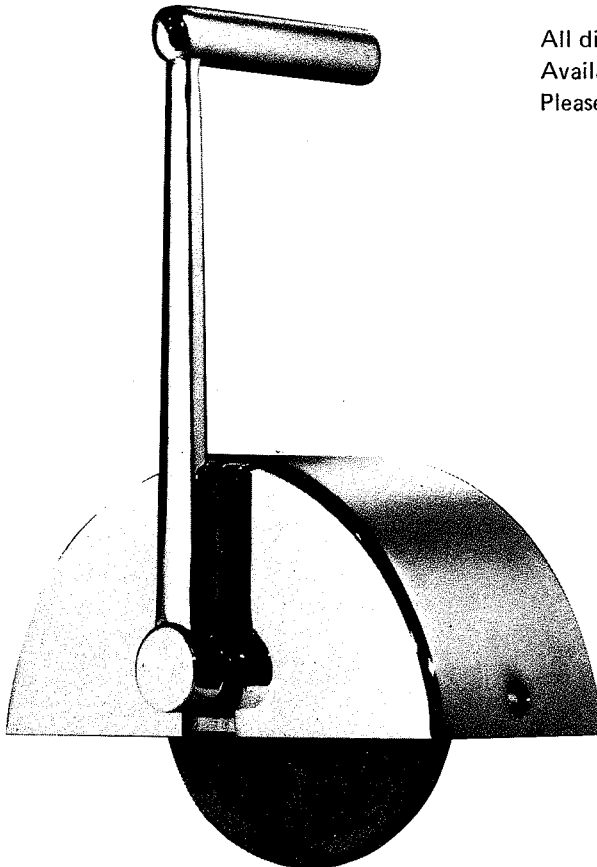
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HUMCO ENGINE CONTROLS

Kobelt Single Handle Control Heads

KOBELT MANUFACTURING
 COMPANY LIMITED

Single Handle Control Heads (Patented)



All die-cast brass construction with removable dome.
 Available in Brass or Chrome finish.
 Please specify when ordering.

6

Model No.	Sheave Dia.	Cable Size
*2207	2 5/8"	3/32"
2210	4"	3/32" or 1/8"
2214	4 3/4"	1/8"

Application	Standard Handle Code No.	Long Handle Code No.	Description
Master Clutch Control	S-1	L-1	Handle with Detent
Secondary Clutch Control	S-2	L-2	Handle, No Detent
Master Throttle Control	S-3	L-3	Handle with friction
Secondary Throttle Control	S-4	L-4	Handle, no friction
Master Single Lever Control		*L-5	Long Handle with friction

*Model 2207 not recommended for L-5.



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HUMCO ENGINE CONTROLS

Kobel Single Handle Control Heads



Single Handle Control Heads Installation Instructions

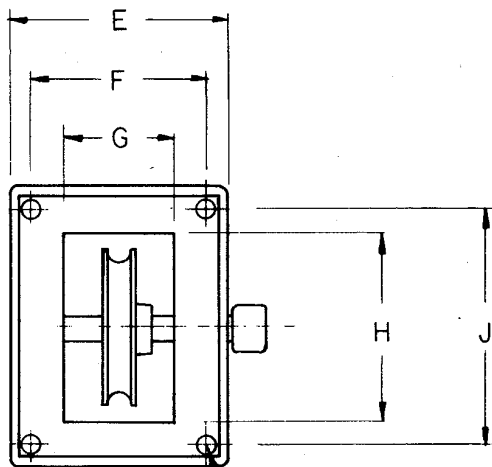
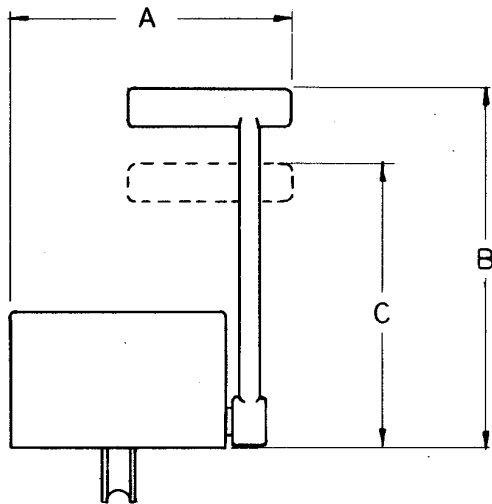
Cut out hole (see detail for cut out size) in desired position. Remove control cover, install control with four screws or bolts (not supplied). If a water-tight joint is required apply some sealer between control frame and

deck before fastening down. To prevent warping of the control frame, it is recommended to have a flat surface for mounting the control. Place cable under the washer and in sheave groove. After positioning control handles, tighten capscrews on the control sheaves firmly and install cover.

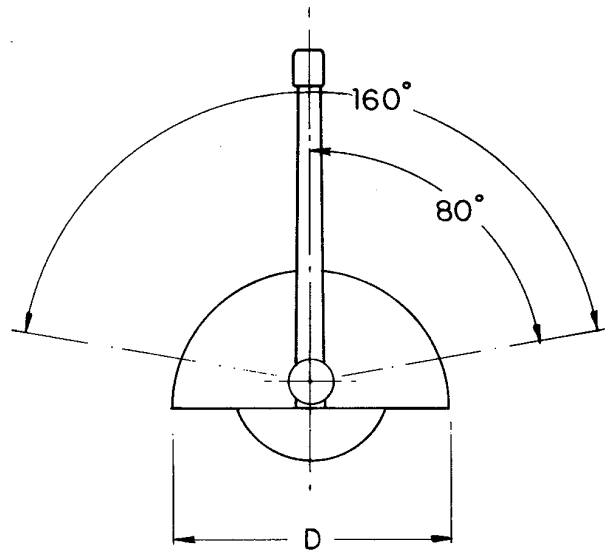
SINGLE HANDLE CONTROL HEAD DIMENSIONS

MODEL No.	A	B	C	D	E	F	G	H	J
2207	4 3/4"	7"	6"	4 3/4"	3 1/2"	2 3/4"	1 7/8"	3 1/4"	4"
2210	4"	8 3/4"	7 1/2"	6 1/2"	3 5/16"	2 1/2"	1 3/4"	4 1/2"	5 19/64"
2214	4"	8 3/4"	7 1/2"	7 1/8"	3 5/16"	2 1/2"	1 5/8"	5 9/16"	6 3/8"

ALL DIMENSIONS IN INCHES



4-HOLES $\frac{13}{64}$ DIA.





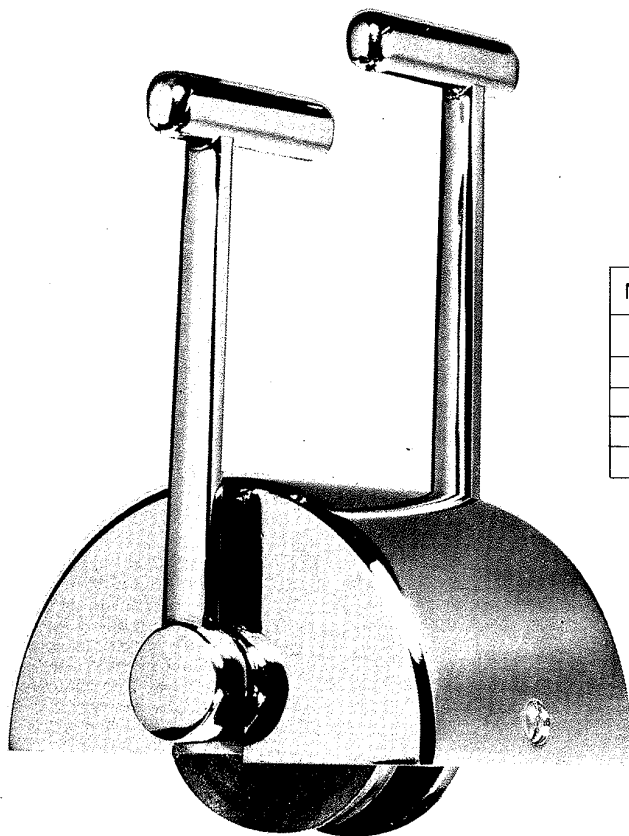
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HUMCO ENGINE CONTROLS

Kobel Double Handle Control Heads

KOBELT MANUFACTURING
COMPANY LIMITED

Double Handle Control Heads (Patented)



All die-cast brass construction, with removable dome
Brass or Chrome finish.
Please specify when ordering.

Model No.	Sheave Dia.	Cable Size
*2208	2 5/8"	3/32"
*2209	3 1/4"	3/32" - 1/8"
2212	3 1/4" - 4"	3/32" - 1/8"
2215	4 3/4"	1/8"
**2216	4 3/4"	1/8"

6

Application	Std. Handle Code No.	Std. & Long Handle Code No.	Long Handle Code No.	Description
Master Twin Clutch Control	S-1		L-1	Two Handles with detent
Secondary Twin Clutch Control	S-2		L-2	Two Handles, no detent
Master Twin Throttle Control	S-3		L-3	Two Handles with frictions
Secondary Twin Throttle Controls	S-4		L-4	Two Handles, no frictions
Master Clutch and Throttle Control	S-5	M-5	L-5	One Handle with detent One Handle with friction
Secondary Clutch and Throttle Control	S-6	M-6	L-6	One Handle, no detent One Handle, no friction
Master Single Lever Control with Over-riding Throttle		*M-7		One Long Handle with friction One Short Handle with friction
Master Twin Engine Single Lever Control			*L-8	Two Long Handles with frictions

*Model 2208 and 2209 not recommended for M-7 or L-8

**Model 2216 is available with two sheaves on both control handles which eliminates the use of a jack shaft or splicing in multi-station control systems, but only in versions S-6, M-6 and L-6.



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HUMCO ENGINE CONTROLS

Kobelt Double Handle Control Heads



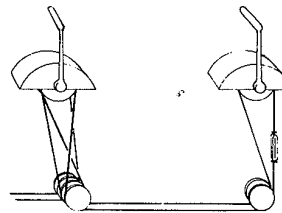
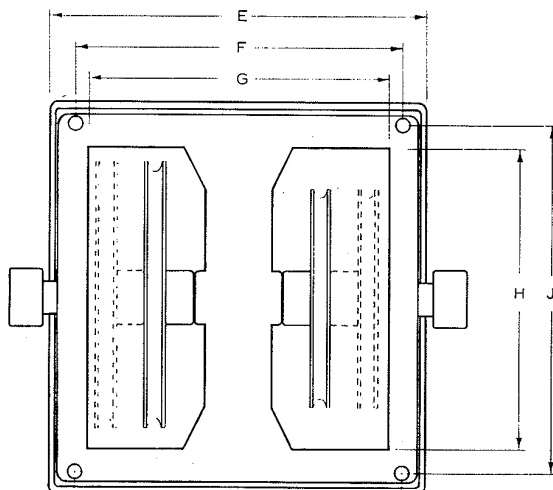
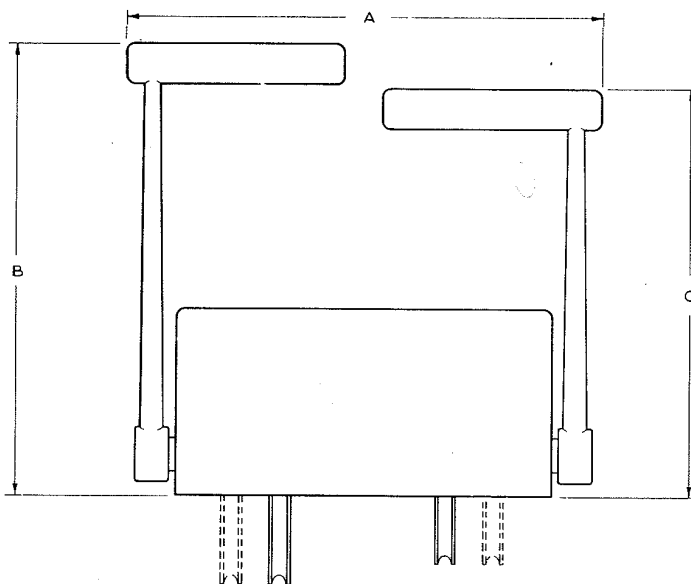
Double Handle Control Heads Installation Instructions

Cut out hole (see detail for cut out size) in desired position. Remove control cover, install control with four screws or bolts (not supplied). If a water-tight joint is preferred, apply some sealer between control frame and

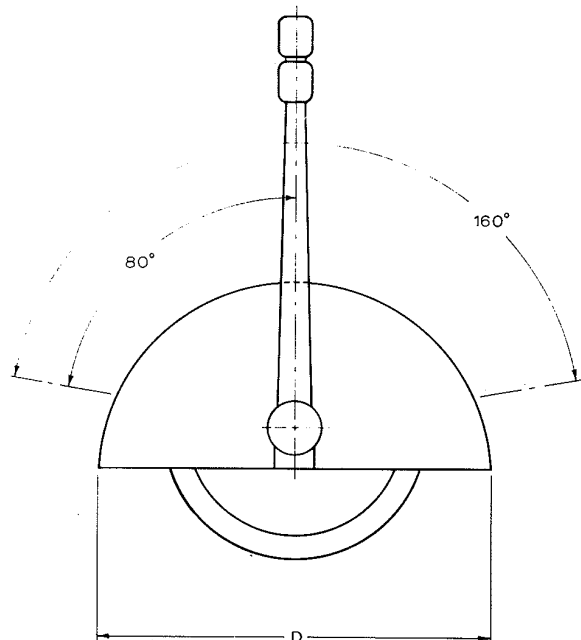
deck before fastening down. To prevent warping of the control frame, it is recommended to have a flat surface for mounting the control. Place cable under the washer and in sheave groove. After positioning control handles, tighten capscrews on the control sheaves firmly and install cover.

DOUBLE HANDLE CONTROL HEAD DIMENSIONS

MODEL No.	A	B	C	D	E	F	G	H	J
2208	5 ⁷ / ₈ "	7"	6"	4 ³ / ₄ "	3 ¹ / ₂ "	2 ³ / ₄ "	2 ¹ / ₄ "	3 ¹ / ₄ "	4"
2209	6 ¹ / ₄ "	7"	6"	5 1/16"	4"	3 3/8"	2 ¹ / ₂ "	4 1/8"	4 ¹ / ₄ "
2212	6 ⁷ / ₁₆ "	8 ⁵ / ₁₆ "	7 ¹ / ₂ "	6"	4 ⁹ / ₁₆ "	3 ³ / ₄ "	3 ¹ / ₈ "	4 ¹ / ₂ "	5 ¹ / ₄ "
2215	6 ⁷ / ₁₆ "	8 ⁵ / ₁₆ "	7 ¹ / ₂ "	7 ³ / ₁₆ "	4 ⁹ / ₁₆ "	3 ³ / ₄ "	3 ¹ / ₈ "	5 ¹ / ₂ "	6 ³ / ₈ "
2216	8 ¹¹ / ₁₆ "	8 ⁵ / ₁₆ "	7 ¹ / ₂ "	7 ³ / ₁₆ "	6 ¹⁵ / ₁₆ "	6"	5 ¹ / ₂ "	5 ¹ / ₂ "	6 ³ / ₈ "



KOBELT's Model 2216 control head is available with an additional built-in sheave (pulley) for connecting a remote station directly to the master control head. This feature can eliminate an expensive and space consuming jackshaft installation.



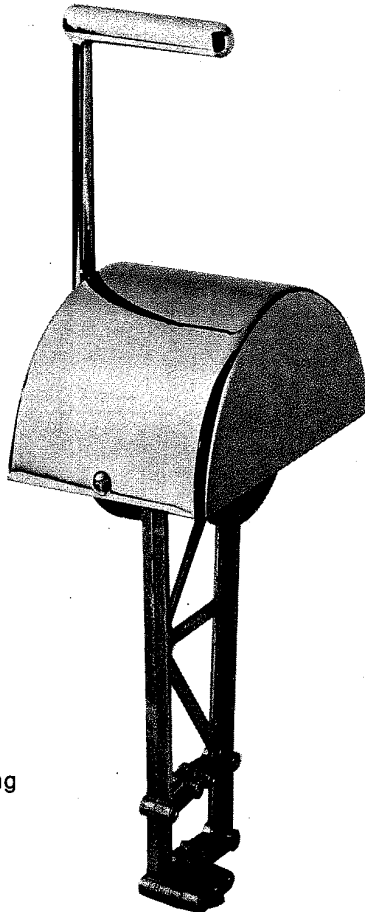


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HUMCO ENGINE CONTROLS

Kobel Combination Control Heads

KOBELT MANUFACTURING COMPANY LIMITED



Patent Pending

COMBINATION CONTROL HEADS SINGLE HANDLE PUSH-PULL AND WIRE OVER PULLEY

KOBELT SINGLE HANDLE COMBINATION CONTROL HEADS are designed for single handle push-pull control with wire-over-pulley accommodation for multi-station control installation. This allows for easy control installation, and at the same time eliminates unnecessary stiffness and lost motion which are common in multi-station push-pull installations.

Available in two models:

370 Model 2911 with 3" stroke
Model 2912 with 4" stroke

FEATURES

- 5 YEAR GUARANTEE
- CORROSION FREE die cast silicon brass and stainless steel hardware construction.
- ADJUSTABLE push-pull stroke
- LARGE CENTER BEARING
 - No lost motion
 - High strength
 - Low wear and long life
- Operating quadrants are positively pin fastened to lever shaft for safety.
- Removable dome cover for easy head and cable installation.
- Independent friction and detent are adjustable and removable.
- Suitable for #10-32 (30 series) and 1/4-28 (40 series) cables.
- Optional safety switch which prevents engine starting unless control head is in neutral (center) position is available either pre-installed or in kit form.
- PATENTED power sheave design allows easy non-slip wire-over-pulley installation.

ORDERING INFORMATION:

Model Designation Letter Codes

- *H — With one neutral safety switch.
- K — With chrome finish cover & handle.
- L — With satin brass finish cover & handle.
- M — With black nylon finish cover & chrome handle.
- N — One long handle with detent.
- O — One long handle with friction.
- P — One short handle with detent.
- R — One short handle with friction.

The standard control head is supplied as follows:
i. Without neutral safety switch.
ii. With chrome finish cover and handle.
iii. With one long handle with friction and detent.

To order, state Model number followed by Model Designation Letter Codes:

Example: Standard 2911 control head.
Ordering Number: 2911-KO

NOTE:

Cable kits are ordered separately. Each cable end attached to the control head requires one kit. To order, state control head number followed by:

- 0901 #10-32 (30 Series)
- 0902 1/4-28 (40 Series)

NEUTRAL SAFETY SWITCH.

Ordering Number: 2911-0903
2912-0903

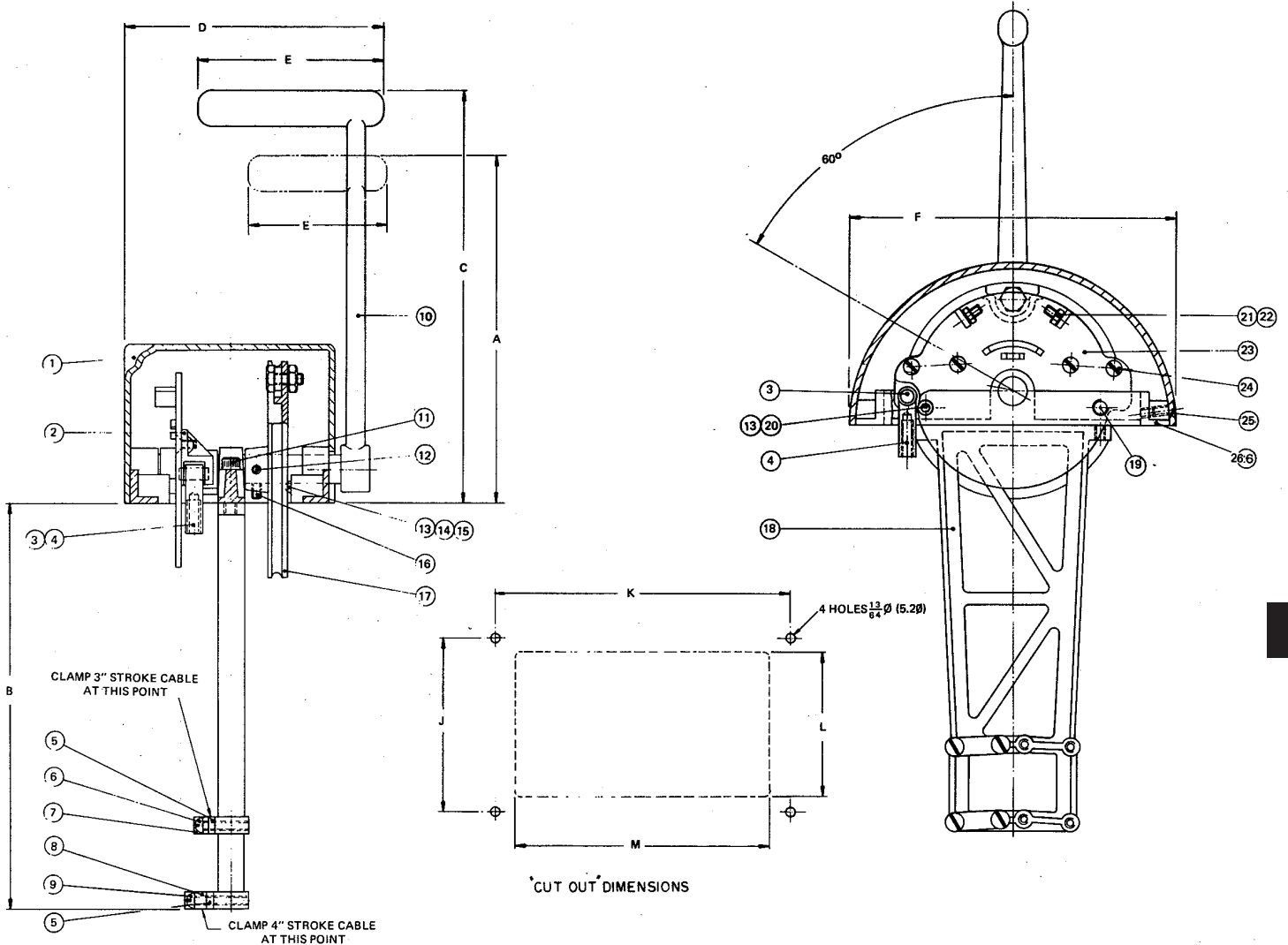
*Neutral safety switch is normally installed with detented handle.



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HUMCO ENGINE CONTROLS

Kobel Combination Control Heads



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MODEL	A	B	C	D	E	F	G	H	J	K
2911	8-3/4 (222)	8-15/16 (227)	4 (102)	5-9/16 (141)	60°	5-15/16 (151)	3-3/4 (95)	5-1/4 (133)	3-1/8 (79)	4-5/8 (117)
2912	8-3/4 (222)	8-15/16 (227)	4 (102)	5-9/16 (141)	55°	7 (178)	3-3/4 (95)	6-3/8 (168)	3-1/8 (79)	5-1/2 (139)

2911

2912

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	1	2911-0001	Dome
2	1	2011-0006	Pin Retainer
3	•	1025-0411	Pin
4	•	2105-0001	Clevis 10-32 UNF (30 Series)
4	•	2105-0002	Clevis 1/4-28 UNF (40 Series)
5	•	2109-0001	Spacer
6	•	1004-0810	Cable Clamp Screw (30 Series)
7	•	2108-0001	Cable Clamp (30 Series)
8	•	2108-0002	Cable Clamp (40 Series)
9	•	1004-0816	Cable Clamp Screw (40 Series)
10	1	2534-0003	Handle (Long)
**10	1	2534-0004	Handle (Short)
11	2	1002-1020	Cap screw
12	2	1024-0816	Spring Pin
13	2	1016-1205	Set screw
14	•	1201-0003	Spring (Detent)
15	•	2542-0012	Detent Pin
16	2	1016-1004	Set screw
17	1	2303-0003	Power Sheave
18	1	2011-0008	Support
19	•	2542-0008	Friction Plug
20	•	1201-0002	Spring (Friction)
21	2	1016-0808	Set screw
22	2	1022-0108	Nut
23	1	2011-0005	Pivot Plate
24	2	1003-0808	Screw
25	2	1005-0808	Screw
26	1	2011-0001	Frame

ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	1	2912-0001	Dome
2	1	2012-0006	Pin Retainer
3	•	1025-0411	Pin
4	•	2105-0001	Clevis 10-32 UNF (30 Series)
4	•	2105-0002	Clevis 1/4-28 UNF (40 Series)
5	•	2109-0001	Spacer
6	•	1004-0810	Cable Clamp Screw (30 Series)
7	•	2108-0001	Cable Clamp (30 Series)
8	•	2108-0002	Cable Clamp (40 Series)
9	•	1004-0816	Cable Clamp Screw (40 Series)
10	1	2534-0003	Handle (Long)
**10	1	2534-0004	Handle (Short)
11	2	1002-1020	Cap screw
12	2	1024-0816	Spring Pin
13	2	1016-1205	Set screw
14	•	1201-0003	Spring (Detent)
15	•	2542-0012	Detent Pin
16	2	1016-1004	Set screw
17	1	2303-0004	Power Sheave
18	1	2011-0008	Support
19	•	2542-0008	Friction Plug
20	•	1201-0002	Spring (Friction)
21	2	1016-0808	Set screw
22	2	1022-0108	Nut
23	1	2012-0005	Pivot Plate
24	2	1003-0808	Screw
25	2	1005-0808	Screw
26	1	2012-0001	Frame

*Quantity used may vary.
**Optional.

*Quantity used may vary.
**Optional.

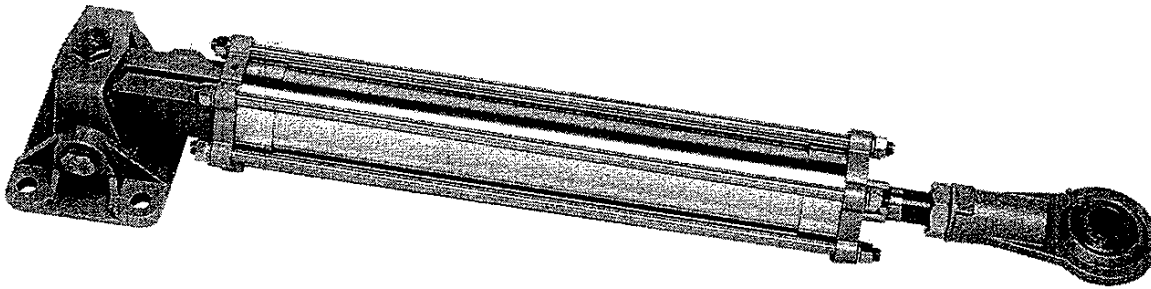


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HUMCO ENGINE CONTROLS

Kobel Steering Cylinder

KOBELT MANUFACTURING COMPANY LIMITED



MODEL 7085 3 1/2" Steering Cylinder

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These cylinders are constructed entirely in bronze and stainless steel. They are available in a balanced or unbalanced configuration. If a single cylinder is not sufficient to provide the required rudder torque, it can be installed in a twin cylinder configuration whereby two plain cylinders can be installed with some means of synchronization control or using one servo-cylinder, our Model 7085-S acting as a master of the duo. The 7085 cylinder is rated at a maximum operating pressure of 1000 psi (69 bar) and is available in many stock lengths. The cylinder bore is 3-1/2" and the piston rod is 1-1/2" in diameter.

These cylinders are economically priced and will outperform any other product in the market place as far as durability and savings are concerned.

Ordering Information

7085-B Balanced Cylinder
7085-U Unbalanced Cylinder

7085 BALANCED CYLINDER

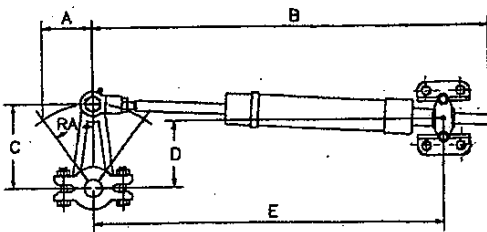
Stroke inches	Main Cylinder Displacement *	
	inch ³	cm ³
10	78.5	1286
12	94.2	1543
16	125.6	2058
20	157	2573

* Displacement is based on one cylinder

7085 UNBALANCED CYLINDER

Stroke inches	Main Cylinder Displacement **	
	inch ³	cm ³
10	174.8	2864
12	209.8	3438
16	279.7	4583
20	349.6	5729

** Displacement is based on two cylinders



Balanced cylinder option

STROKE	TORQUE		A		B		C		D		E		
	in.	mm	lb-ft	kg-m	in.	mm	in.	mm	in.	mm	in.	mm	
10	254	4580	633	5	127	36.0	914	8.7	221	7.9	201	35.9	913
12	305	5560	769	6	152	40.0	1016	10.5	266	9.5	242	38.9	989
16	406	7400	1023	8	203	48.0	1219	14.0	354	12.7	322	44.9	1141
20	508	9200	1272	10	254	56.0	1422	17.4	443	15.9	403	50.9	1294

Torque is based on one cylinder at 1000 psi



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HUMCO ENGINE CONTROLS

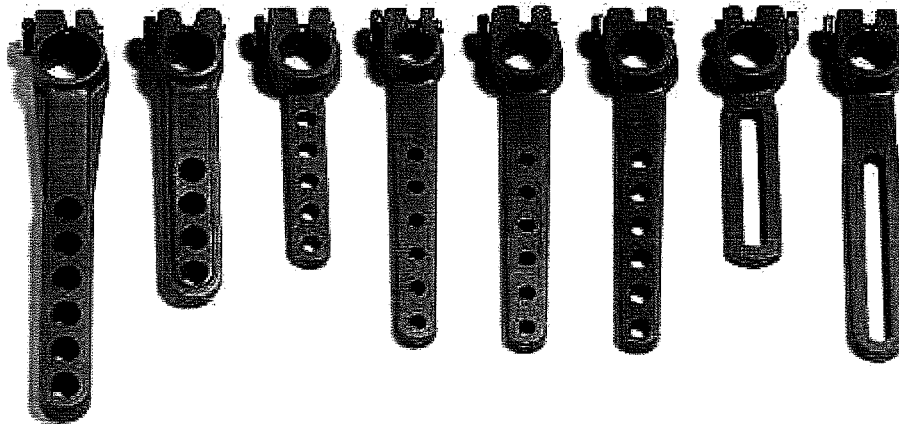
Kobelt Control Cable Fittings and Hardware

KOBELT

Control Cable Fittings and Hardware

Levers are used to connect a rod ball end, or ball-joint to another mechanical connection. This is useful for changing the stroke required, or turning a shaft.

The part numbers are shown below the levers.
e.g. 2104-0001 is the leftmost.



2104 Levers -0001 -0002 -0003 -0004
 -0005 -0006 -0007 -0008

Part#	Length	Holes	Hole size	Bore sizes for shaft
2104-0001	5"	6	1/4"	1/2", 5/8", 3/4"
2104-0002	3 1/2"	4	1/4"	1/2", 5/8"
2104-0003	3"	5	3/16"	5/8"
2104-0004	4 1/4"	6	3/16"	1/2"
2104-0005	4 1/4"	6	3/16"	5/8"
2104-0006	4 1/4"	6	1/4"	5/8"
2104-0007	3"	slotted	1/4"	5/8"
2104-0008	4 3/8"	slotted	1/4"	5/8"

Please specify the bore size you would like. You can tell us the size or add the following letter code to complete the part number. e.g.
2104-0001-A
Add "-A" for 1/2"
Add "-B" for 5/8"
Add "-C" for 3/4"

UNIVERSAL CATCH-A-BOLT

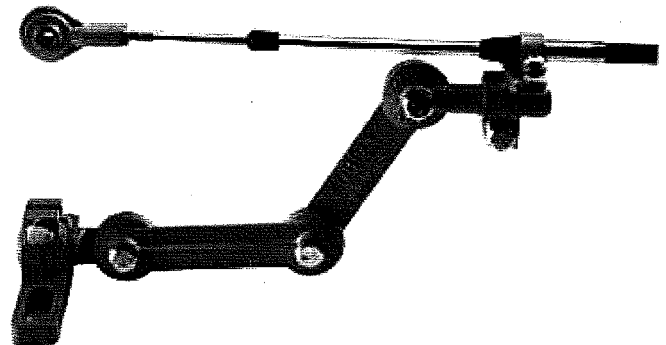
This is a universal adaptor kit which replaces all specialty adaptor kits.

Part # 2128

This adaptor kit can be used to take either 30 or 40 series cables, and either single or double cables (similar to the 2131 and 2142 adaptors).

Order the 2128 and the connector you need:

Part#	Description
2128-0031	30 series - Single cable clamp
2128-0032	30 series - Double cable clamp
2128-0041	40 series - Single cable clamp
2128-0042	40 series - Double cable clamp



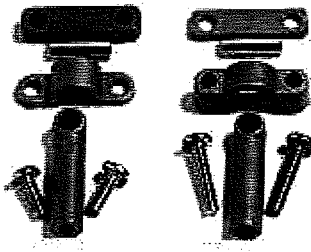


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HUMCO ENGINE CONTROLS

Kobel Control Cable Fittings and Hardware

Control Cable Fittings and Hardware



CONTROL HEAD CONNECTION KITS

These kits are designed for attaching a push-pull cable to the control head. Since cables are either 33 series or 43 series, you need to have the kit that matches the control head and the cable series being used. That's why kits are not just included with the control heads.

To order a connection kit, order either:

0901 (for 33 series cables)

0902 (for 43 series cables)

0912 (for 60 series cables; **not available for all models**)

The part number looks like this:

20xx-0901 where xx is the control head. e.g. 2009-0901 for a 2009 control head.

You need one kit for every cable connected to a control head. If you are running cables in "series", you will need more control head connection kits because the cable runs from control head to control head. For example, a 2 station, single engine system would use 4 connection kits for a parallel installation, but a series installation would need 6 kits.

2091 to 2094 control heads include connection kits for the 47 series "interconnecting" cable. You still need to get the -0901 or -0902 kits for the primary control head.

Connection kits are not always interchangeable. If you happen to have a kit for one control head, it probably will not work on a different model.

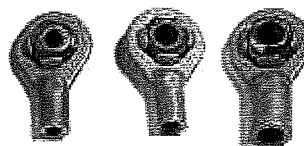
THROTTLE EXTENSION KITS

The throttle extension kits will add up to 1" of extra stroke for the throttle on Models 2046, 2048, 2081, 2083, 2085, 2091 to 2094. Please state the control head number followed by the numbers:

- 0905** 30 Series Throttle (including Connection Kit)
- 0906** 40 Series Throttle (including Connection Kit)
- 0907** 30 Series Override/Trolling Kit (including Connection Kit)
- 0908** 40 Series Override/Trolling Kit (including Connection Kit)

ROD BALL ENDS

Rod Ball Ends are commonly used to connect a push-pull cable to the engine or clutch. The rod ball end is screwed onto the end of the cable, and the rod ball end uses a bolt through the ball end that attaches it to a lever.



We have rod ball ends of various sizes:

Part#	Thread size	Bolt Hole
2143	3/16" UNF	3/16"
2143/4	3/16" UNF	1/4"
2144	1/4" UNF	1/4"
2144/3	1/4" UNF	3/16"
2145	5/16" UNF	5/16"
2146	3/8" UNF	5/16"
2148	1/2" UNF	5/8"
2149	5/8" UNF	3/4"