

Genuine



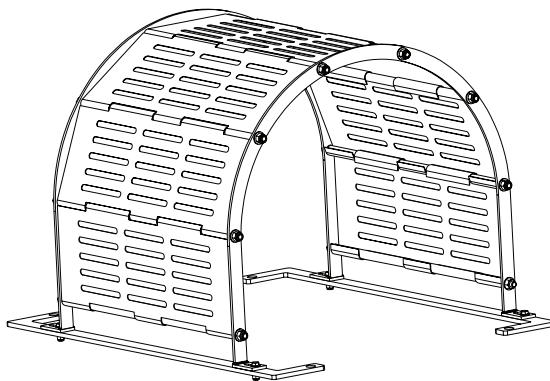
Conversion Kit for Classic Air Winches

Thank you for purchasing Genuine Ingersoll Rand parts

Only allow **Ingersoll Rand** trained technicians to perform maintenance on this product. For additional information contact **Ingersoll Rand** factory or nearest Distributor. Use in conjunction with appropriate Product Information, Maintenance and Safety Manuals. Manuals can be downloaded from www.ingersollrandproducts.com
The use of other than genuine **Ingersoll Rand** replacement parts will result in safety hazards, decreased performance and increased maintenance and will invalidate all warranties.

Infinity Style Adjustable Guards Models

HU40, HUL40, K4U, K4UL,
K5U, K5UL, K6U and K6UL



Save These Instructions

GUARD KIT

WARNING

- **Never perform maintenance on the winch while it is supporting a load.**
- **Before performing maintenance, tag controls:**
WARNING - DO NOT OPERATE -
EQUIPMENT BEING REPAIRED
- **Read Product Safety Information Manual MHD56250.**

■ General Installation

Correct disassembly (to prevent loss or damage of good parts), repair, assembly, testing and adjusting are critical to proper winch operation. Maintenance procedures are technical in nature and require training and experience to accomplish correctly. In addition, repair and testing require specialized equipment that is not typically found at the winch-mounting site.

Proper use, inspections and maintenance increase the life and usefulness of your **Ingersoll Rand** equipment. During assembly, lubricate gears, nuts, capscrews and all machined threads with applicable lubricants. Use of antiseize compound and/or thread lubricant on capscrew and nut threaded areas prevents corrosion and allows for easy disassembly of components.

It is extremely important that anyone involved with maintaining the winch be familiar with the servicing procedures of these winches and be physically capable of conducting the procedures. These personnel shall have skills that include:

1. Proper and safe use and application of mechanics common hand tools as well as special **Ingersoll Rand** or recommended tools.
2. Safety procedures, precautions and work habits established by accepted industry standards.

Ingersoll Rand cannot know of, or provide all the procedures by which product operations or repairs may be conducted and the hazards and/or results of each method. If operation or maintenance procedures not specifically recommended by the manufacturer are conducted, it must be ensured that product safety is not endangered by the actions taken. If unsure of an operation or maintenance procedure or step, personnel should place the product in a safe condition and contact supervisors and/or the factory for technical assistance.

■ Assembly

Refer to Dwg. MHP3120.

1. Secure panels (2) to frames (1) with capscrews (8) lockwashers (9) and locknuts (10).
2. Install panels one at a time:
 - a. Install crossbar (3) through first panel (2) attach frame (1) on threaded hole side and secure with capscrew (8) and lockwasher (10). Torque hand tight until final panel is installed.

NOTICE

- **Ensure all crossbars (3) are installed so capscrews (8) are located on band brake drum side.**
 - **Do not tighten down guard assembly until all panels have been installed.**
- b. Install second frame (1) on crossbar and secure with lockwasher (10) and locknut (9).
 - c. Holding second panel (2) in place, install second crossbar (3) by sliding through hooked edges of the two panels and frames.
 - d. Secure crossbar (3) with capscrews (8) lockwashers (9) and locknuts (10).
 - e. Continue until all panels are in place.
3. Tighten all fasteners and check drum guard is secure to frames (1). Refer to "TORQUE CHART" section on page 5.
 4. Remove existing four outer mounting capscrews (69), or (113), lockwashers (70), or (114) and nut (71) or (114) from winch. Refer Operation Manuals P5874 for HU40 and P5869 for K6U winch.
 5. Install base plate (2) align holes with mounting bolt holes and secure with new capscrews (11), lockwashers (12) and nuts (13).

NOTICE

- **HU40 Torque to 68 to 77 ft lbs.**
 - **K6U Torque to 120 to 126 ft lbs.**
6. Install guard assembly to base plate (2), secure with capscrews (5), washers (7) and locknuts (6), hand tight until adjusted properly.
 7. Adjust drum guard as instructed in 'Adjustments' section. Refer to "TORQUE CHART" section on page 5 and tighten.
 8. Ensure wire rope does not interfere with drum guard during winch operation.
 9. Install warning tag using wire and crip from kit. Ensure warning tag is installed so it is visible to operator.

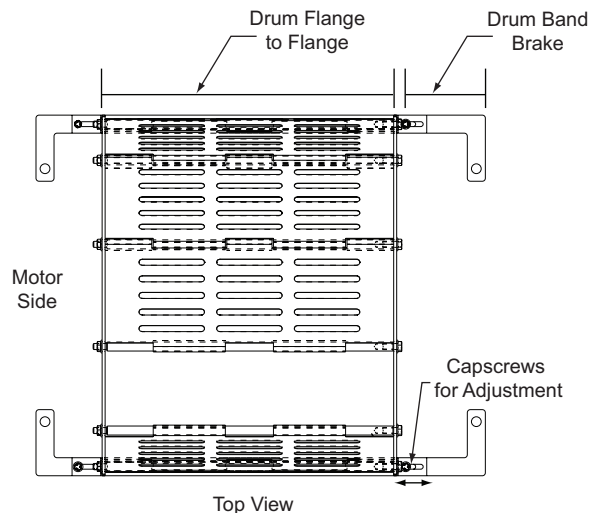
■ Adjustments

Drum guard panels must be adjusted to suit wire rope departure angle. To reposition drum guard panels remove capscrews, washers and locknuts, and slide out crossbar. Position panels to avoid wire rope contact and install crossbar and capscrews, washers and locknuts.

Drum guard assembly must be adjusted to cover the drum flange to flange. Refer to Dwg. MHP3121.

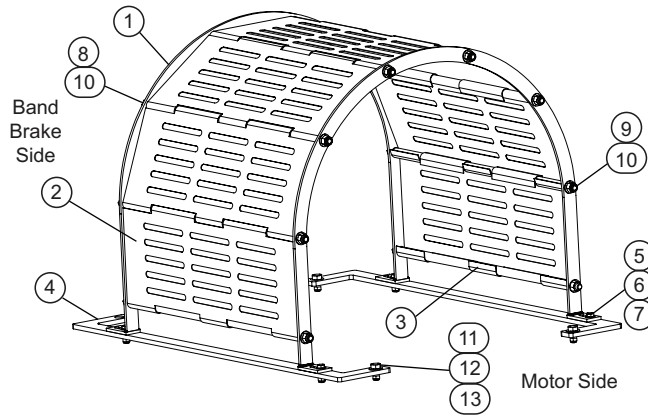
WARNING

- **Do not allow wire rope to come in contact with drum guard panels during winch operation. Wire rope could become worn and damaged. Adjust drum guard panels to clear wire rope travel angle.**
- **Ensure drum guard is centered to cover drum, flange to flange and interfere with drum band brake.**



(Dwg. MHP3121)

GUARD ASSEMBLY DRAWING AND PARTS LIST



(Dwg. MHP3120)

Item No.	Description of Part	Total Qty	Part Number					
			HU40 Series		K4U / K5U / K6U Series			
---	Guard Assembly	1	HU40-Gi-CK	HUL40-Gi-CK	K4U-K5U-Gi-CK	K4UL-K5UL-Gi-CK	K6U-Gi-CK	K6UL-GI-CK
---	Warning Label Kit	1	382-31662					
1	Frame	2	382-32554		382-35635		382-32670	
2	Panel	()	382-32315 (6)	382-32732 (5)	Contact Factory	382-35636 (7)	Contact Factory	382-32672
3	Cross Bar	()	382-32333 (8)	382-32731 (7)		382-35633 (9)		382-32673
4	Base Plate	2	382-32316	382-32730		382-35638		382-32675
5	Capscrew	4	71369276		71369276			
6	Locknut	()	71069132 (4)	71069132 (8)	71069132	71069132 (4)	71069132	71069132 (4)
7	Washer	8	71055206		71055206			
8	Capscrew	8	71371660		71371660			
9	Locknut	8	71445316		71445316			
10	Washer	()	52914 (16)		52914 (18)			
11	Capscrew (Note)	4	43802271		45885902			
12	Lockwasher	4	A-67-5		71343768			
13	Nut	4	HU-776		71355846			

Note: Ensure proper torque value is used, refer to assembly instructions.

PARTS ORDERING INFORMATION SECTION

These products are designed and constructed to provide long, trouble-free service. In time it may be necessary to order and install new parts to replace those that have been subjected to wear.

For your convenience and future reference, it is recommended that the following information be recorded.

Model Number _____

Serial Number _____

Date Purchased _____

NOTICE

- Continuing improvement and advancement of design may cause changes to this equipment which are not included in this parts list. Manuals are periodically revised to incorporate changes. Always check the manual edition number on the front cover for the latest issue.
- Using other than genuine Ingersoll Rand replacement parts will invalidate the warranty.

■ Returned Goods Policy

Ingersoll Rand will not accept any returned goods for warranty or service unless prior arrangements have been made and written authorization has been provided from the location the goods were purchased.

Products that have been modified without **Ingersoll Rand** approval, mishandled or overloaded will not be repaired or replaced under warranty. Refer to the warranty that applies to this product and is provided below.

■ Disposal



When the life of the product has expired, it is recommended that it be disassembled, degreased and parts separated as to materials so that they may be recycled.

For additional information contact:

Ingersoll Rand

2724 Sixth Avenue South
Seattle, WA 98134 USA
Phone:(206) 624-0466
or(866) 273-3278
Fax:(206) 624-6265

or

Ingersoll Rand

Douai Operations
529, Avenue Roger Salengro
59450 Sin Le Noble, France
Phone:(33) 03-27-93-08-08
Fax:(33) 03-27-93-08-00

TORQUE CHART

Standard Coarse Thread Torque

Size	SAE Grade 5			SAE Grade 8		
	Dry	Lubricated	PTFE	Dry	Lubricated	PTFE
1/4-20	8-10	6-7	4	12-14	9-10	5-6
5/16-18	17-20	13-15	8-9	25-28	18-21	11-13
3/8-16	31-35	23-26	14-16	44-49	33-37	20-22
7/16-14	49-56	37-42	22-25	70-79	52-59	31-36
1/2-13	75-85	57-64	34-38	106-121	80-90	48-54
9/16-12	109-123	82-92	49-55	154-174	115-130	69-78
5/8-11	150-170	113-128	68-77	212-240	159-180	95-108
3/4-10	267-302	200-227	120-136	376-426	282-320	169-192
7/8-9	429-487	322-365	193-219	606-687	455-515	273-309
1-8	644-729	483-547	290-328	909-1030	681-772	409-463
1 1/8-7	794-900	596-675	357-405	1288-1460	966-1095	580-657
1 1/4-7	1121-1270	840-952	504-571	1817-2059	1363-1545	818-927

Standard Fine Thread Torque

Size	SAE Grade 5			SAE Grade 8		
	Dry	Lubricated	PTFE	Dry	Lubricated	PTFE
1/4-20	10-11	7-8	4-5	14-15	10-12	6-7
5/16-24	19-22	14-16	9-10	27-31	20-23	12-14
3/8-24	35-40	26-30	16-18	49-56	37-42	22-25
7/16-20	55-63	41-47	25-28	78-88	58-66	35-40
1/2-20	85-96	64-72	38-43	120-136	90-102	54-61
9/16-18	121-137	91-103	55-62	171-194	128-146	77-87
5/8-18	170-193	127-144	76-87	240-272	180-204	108-122
3/4-16	297-337	223-253	134-152	420-476	315-357	189-214
7/8-14	474-537	355-403	213-242	669-758	502-568	301-341
1-12	704-798	528-599	317-359	995-1127	746-845	448-507
1 1/8-12	1023-1159	767-869	460-572	1444-1637	1083-1227	650-736
1 1/4-12	1425-1615	1069-1211	641-727	2012-2280	1509-1710	905-1026

Metric Coarse Thread Torque

Size	Class 8.8/9.8			Class 10.9		
	Dry	Lubricated	PTFE	Dry	Lubricated	PTFE
M6x1	9-10	6-7	4	11-12	8-9	5-6
M8x1.25	21-23	16-18	9-11	26-30	20-22	12-13
M10x1.5	41-47	31-35	19-21	53-60	39-45	24-27
M12x1.75	71-81	54-61	32-36	91-103	68-77	41-46
M14x2	115-130	86-98	52-59	147-166	110-125	66-75
M16x2	165-187	124-140	74-84	227-257	170-193	102-116
M20x2.5	321-364	241-273	144-164	443-502	332-376	199-226
M22x2.5	439-497	329-373	197-224	605-686	454-514	272-309
M24x3	556-630	417-473	250-284	767-869	575-652	345-391
M30x3.5	1103-1250	827-938	496-563	1521-1724	1141-1293	685-776

Metric Fine Thread Torque

Size	Class 8.8/9.8			Class 10.9		
	Dry	Lubricated	PTFE	Dry	Lubricated	PTFE
M8x1	22-25	17-19	10-11	28-32	21-24	13-14
M10x1.25	44-49	33-37	20-22	56-63	42-47	25-28
M12x1.25	78-89	59-67	35-40	100-113	75-85	45-51
M14x1.5	125-141	93-106	56-64	159-180	119-135	72-81
M16x1.5	176-200	132-150	79-90	243-276	183-207	110-124
M18x1.5	257-291	193-219	116-131	355-402	266-302	160-181
M20x1.5	358-406	268-304	161-183	494-559	370-420	222-252
M22x1.5	484-548	363-411	218-247	667-756	500-567	300-340
M24x2	609-690	456-517	274-310	839-951	630-713	378-428
M30x2	1227-1390	920-1043	552-626	1692-1918	1269-1438	761-863

Notes:

1. Definitions:

DRY: Cadmium plate, zinc plate, and oiled fasteners.

LUBRICATED: Moly sulfide paste, carnaba wax, moly sulfide grease and copper-based anti-sieze coated fasteners.

PTFE: 2% minimum PTFE (teflon) coated fasteners.

2. All torque values foot-pounds unless noted.

3. SAE grade 5 equivalent to ASTM A325 Type 2 and ASTM A449.

4. SAE grade 8 equivalent to ASTM A354 Grade BD, ASTM A490 Type 1.

5. If mixing fasteners use lowest torque value.

6. Torque values 75 to 85% of fastener proof load ref.

SERVICE NOTES

SERVICE NOTES
