



IWWF Official Jump Plans

Materials List

The following is a complete listing of materials required to build this ski ramp.

4" CHANNEL - 5.4 lb/ft	158' 2"
2" X 3" X 0.188 HSS	70' 4 1/2"
1" X 2" X 0.100 HSS	179'
2" X 2" X 1/4" ANGLE	168'
2" X 2" X 3/16" ANGLE	174'
1" X 1/4" FLAT	177'
2" X 1/4" FLAT	20'
3" X 1/4" FLAT	2' 2"
3/4" PIPE	8"
1 1/2" PIPE	10'
2" PIPE	8' 10"
2 1/2" PIPE	2' 6"
5/16" ROD	42'
12' CHAIN	
14' COPPER PIPE	
2 HEAVY DUTY PULLEY BLOCKS	
2 PULLEYS	
2 WINCHES	
2 HYDRAULIC JACKS, 1 1/2 TON, 13" MINIMUM TRAVEL	
18 7" x 20" x 8' DOW DOCK BILLETS	
36 HEAVY DUTY JOIST HANGERS	
24 2" X 10" FIR JOISTS	
8 1/2" X 4' X 8' SHEETS GIS PLYWOOD	
14 3/4" x 4' x 8' SHEETS GIS PLYWOOD	
AXLE AND WHEEL ASSEMBLY	
PAINT AND SEALER	
500 #10-24 X 1 1/2" WAFER HEAD TEK SCREWS (use to attach wing plywood to angle iron)	
750 #12 X 2" STAINLESS STEEL SCREWS FLAT HEAD, ROBERTSON (use to attach deck plywood, 6" spacing)	
600 #8 X 1 1/2" STAINLESS STEEL SCREWS (use to attach joists and joist hangers to joist end plates)	

- 2 - 1/4" X 2" BOLTS/NUTS - secure top of jacks
- 2 - 1/4" X 3 1/2" BOLTS/NUTS
(secure main hinge sleeves to main hinge pins)
- 24 - 1/4" X 2 1/2" S.S. BOLTS/NUTS
(secure joist end plates to deck trusses)
- 16 - 3/8" X 1" BOLTS/NUTS
(secure winches, jacking beam, safety chains and pulley blocks)
- 9 - 3/8" X 1 1/2" BOLTS/NUTS
(set screws for cable sleeves & boat bumpers, shafts for pulleys)
- 12 - 1/2" X 1" BOLTS/NUTS - to attach wings to wing hangers
- 3 - 1/2" X 5" BOLT/NUT - to attach towing bar to coupler
- 6 - 1/2" X 2 1/2" BOLTS/NUTS - to attach jack bases and wing braces

THE FOLLOWING IS A LISTING OF PIECES REQUIRED TO FABRICATE EACH COMPONENT OF THE JUMP

TRAILER FRAME

4' CHANNEL	2 @	8"	BRACKET FOR PULLEY BLOCK
	4 @	11' 4"	FRONT/REAR TRUSSES
	4 @	26'	MAIN TRAILER TRUSSES
2" X 3" HSS	5 @	11' 4"	FLOATATION SUPPORT
1" X 2" HSS	6 @	26'	FLOATATION SUPPORT
	4 @	2'	WINCH MOUNTS
1/4" X 1" FLAT	108 @	12"	TRUSSES
2" X 2" x 1/4" ANG	2 @	11"	FRAME FOR TOWING BAR
	2 @	14"	FRAME FOR TOWING BAR
	1 @	8 1/2"	FRAME FOR TOWING BAR
1/4" X 2" FLAT	8 @	3"	BRACKETS FOR JACKS AND WING BRACES
1/4" X 3" FLAT	4 @	4"	BASE PLATES FOR WINCHES
2 1/2" PIPE	2 @	2'	MAIN HINGE SLEEVES
2" PIPE	2 @	2' 2"	MAIN HINGE PINS
	5 @	10"	SLEEVES

DECK FRAME

2" X 2" x 1/4" ANG	4 @	25' 8"	TRUSSES
	2 @	14'	TRUSSES
	2 @	13" 8 1/2"	TRUSSES
1/4" X 1" FLAT	10 @	6"	WING HANGERS
	54 @	12"	TRUSSES
	20 @	9"	WING HANGERS
5/16" ROD	3 @	14'	TIE RODS
3/4" PIPE	6 @	1"	SLEEVES FOR WATERING SYSTEM
2 1/2" PIPE	2 @	3"	MAIN HINGE SLEEVES

TOWING BAR

4' CHANNEL	2 @	7' 6"
1/4" X 2" FLAT	1 @	6' 0"
1/4" X 2" FLAT	1 @	5"

CABLE SLEEVES AND BOAT BUMPERS

1 1/2" PIPE 5 @ 2'
1/4" X 2" FLAT 4 @ 3"

WING

2" X 2" X 3/16" ANG 2 @ 26'
2 @ 19' 8 3/8" APPROX
2 @ 4'
2 @ 7' 8"
2 @ 8' 11 1/3" APPROX
2 @ 6' 2 1/2" APPROX
2 @ 4' 5 1/3" APPROX
2 @ 2' 8 " APPROX

N.B. THE PIECES LISTED AS APPROX. LENGTHS SHOULD BE CUT ON THE CORRECT ANGLE TO ENSURE A GOOD FIT FOR WELDING.

WING BRACE

1" X 2" HSS 2 @ 7'

JACKING BEAM

2" X 3" HSS 1 @ 13' 8 1/2"
1/4" X 2" 2 @ 5"
3/4" PIPE 1 @ 1"

JACK BASE

1" X 2" HSS 2 @ 6"
1/4" X 2" 2 @ 5"

GENERAL NOTES:

1. Mount the trailer frame so the bottom side is a minimum of 20" off the ground at the axles. This will prevent the rear of the jump from dragging on the ground. Although it is not shown, you may build a box or small truss and weld the hangers for the axles to this. Then bolt this assembly to the trailer frame so you can adjust the position of the axles along the frame as you wish.
2. Floatation recommended are DOW Dock Billets - 7" X 20" X 8'. We secure the floatation by simply looping rope underneath each piece near the ends. Tying them snugly to the 1" X 2" HSS. Cut the billets to fill under the trailer, as shown. You may find it necessary to add weight to the bottom end of the jump to get the proper length of deck above the water.
3. Bolt the main hinge pins to the 3" sleeves that are welded to the deck trusses to insure that they will not separate.
4. The four winches allow you to move the jump in any direction and rotate it easily.
5. Secure the safety chain from each side of the trailer frame to the jacking beam. Otherwise a very strong wind may flip the deck over resulting in repair work.
6. We cover the front of the trailer frame with 3/4" plywood to

provide a working and access area. The materials list allows for this.

7. It is recommended that you have the frame sand blasted and galvanized or coated with epoxy tar.

8. Use a piece of light rope to attach each jack handle to the jump. It is not always easy to find them in the bottom of the lake.

9. Cap both ends of the 1/2" copper pipe and cut it in half. Put a tee and ball valve in the middle so you can shut the water off at that point and also adjust the height of the spray.

10. Drill holes in the 2" pipe sleeves and weld a 3/8" nut at that spot so the bolt can be used as a set screw to lock the boat bumpers and the cable sleeves in place.

11. The jack that we have used is a "Shurlift" model R040-B4, 1.5 ton, minimum height 22 7/16", maximum height - 40 15/32".

12. Note that the jump shown in the photos was built prior to using a jacking beam. We have found that the beam is a worthwhile addition. Mount the jack base as shown on the plans; not in the photos.