

Krupp Hydraulic All-Terrain Crane
70 GMT-AT
80 ton Capacity



Superstructure Specification

Boom

38'0" - 122'0" 4 section full power boom

Telescoping cycle:

1. section 75 sec.

2. section 75 sec.

3. section 47 sec.

High speed

1. section 50 sec.

2. section 45 sec.

3. section 31 sec.

* Jibs

33'0" swing-away lattice extension
alternatively

33'0" - 52'6" 2 stage off-set swing-away
lattice extension

Main Hoist

Axial piston motor with planetary gear
and fail safe brake

Single line pull max.: 13,700 lbs

Single line speed max.: 330 ft./min.

Drum diameter: 17"

Rope diameter: 3/4"

Rope length: 650 ft.

* Auxiliary Hoist

Axial piston motor with planetary gear
and fail safe brake

Single line pull max.: 10,600 lbs

Single line speed max.: 420 ft./min.

Drum diameter: 13"

Rope diameter: 5/8"

Rope length: 570 ft.

Hook Blocks

70 ton 7 sheaves

*1 30 ton 3 sheaves, 10 ton single sheave,

8 ton single hook

Boom Elevation

Hydraulic cylinder with integral holding
valve

Boom angle from -1.4° to +80°

Elevation cycle: 90 sec.

High speed: 50 sec.

Swing Gear

Axial piston motor with planetary gear
Holding and service brake

Swing speed: 0 - 2.5 rpm variable

Engine

6 cyl. Daimler Benz diesel OM 352A,

water-cooled, 139 hp at 2300 rpm

Tank capacity 50 gal. diesel

Hydraulic system

3 separate circuits: 2 axial piston pumps
with integrated infinitely variable speed
and load control,

1 axial piston pump

Tank capacity: 250 gal. hydraulic oil

*1 Hydraulic oil cooler for extreme

working conditions

Control system

Infinite variation of all crane motions by
hydraulic pilot circuit, control levers
with automatic dead man position

Counterweight

2200 lbs permanently mounted

*1 15400 lbs, 24200 lbs

Operator's cab

Full vision, all steel, safety glass,
fully adjustable hydraulically suspended
seat, engine coolant cab heater,
complete instrumentation of engine and
crane operating controls

*1 Stationary diesel cab heater

Safety installations

Anti two block and hoist rope lowering
switch, lock valves, pressure relief valves

*1 Electronic load moment safety device
with automatic shut-off and digital
display of actual and permissible load,
radius and operating modes

Carrier specification

Chassis

Krupp heavy-duty 4-axle carrier, welded
box-type frame from high tensile steel

Engine

8 cyl. Daimler Benz diesel OM 422 A,
water-cooled, 330 hp at 2300 rpm

Tank capacity: 75 gal. diesel

Transmission

Automatic gear box with torque
converter

MAN 2 speed transfer case

with longitudinal differential lock

Axles

1. drive/steer axle

2. steering axle

3. drive axle

4. drive axle

Drive axles with planetary gears

Transverse differential lock on all

drive axles

*1 All wheel drive and steer

Suspension

Parabolic leaf springs with hydraulic
suspension lock-out

Tyres

8 tyres 16.00 - 25

*1 20.5 - 25

Steering

ZF semi-integral ball nut hydraulic
power steering

Brakes

Service brake:

Pneumatic dual circuit brake system

front axles with disc brakes

Rear axles with brake drums

Permanent brake:

Hydraulic retarder of automatic gear box

Auxiliary brake:

Pneumatically operated spring-loaded
brake acting on 3. and 4. axle

Driver's cab

Single cab, all steel, safety glass,
adjustable hydraulically suspended

driver's seat

Engine coolant heating system

Complete instrumentation and

driving controls

*1 Stationary diesel cab heater

Outriggers

Independent horizontal and vertical
motion of each beam, operated from

crane cab and each side of chassis

Sight level device

Electrical equipment

Three phase alternator 28 V/55 A

2 batteries 12 V/180 Ah

Lights and control circuit 24 V

Performance

road speed max. 47 mph, min. 0.1 mph

Gradeability 60%, 51%, 45% dependent

on counterweight turning radius: 45 ft,

all wheel steer: 33 ft

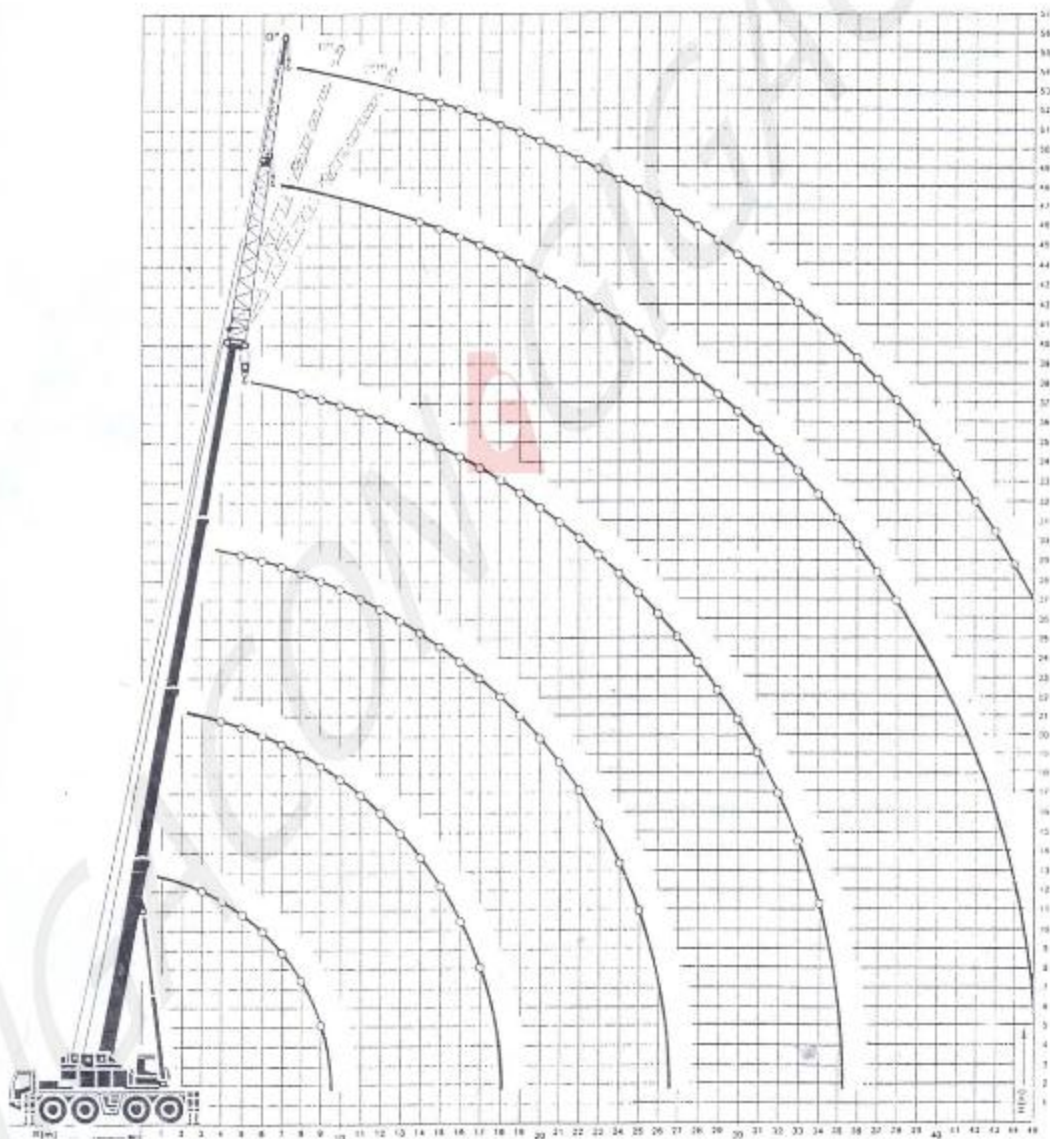
*1 Optional items

Hook height-Diagram

Hook height-Diagram

Hook block: Measure of the distance to the boomhead

Capacity	tons	70	30	10	8	5
Number of sheaves		7	3	1		
Distance S	m	1,8	1,8	1,8	2,1	2,1



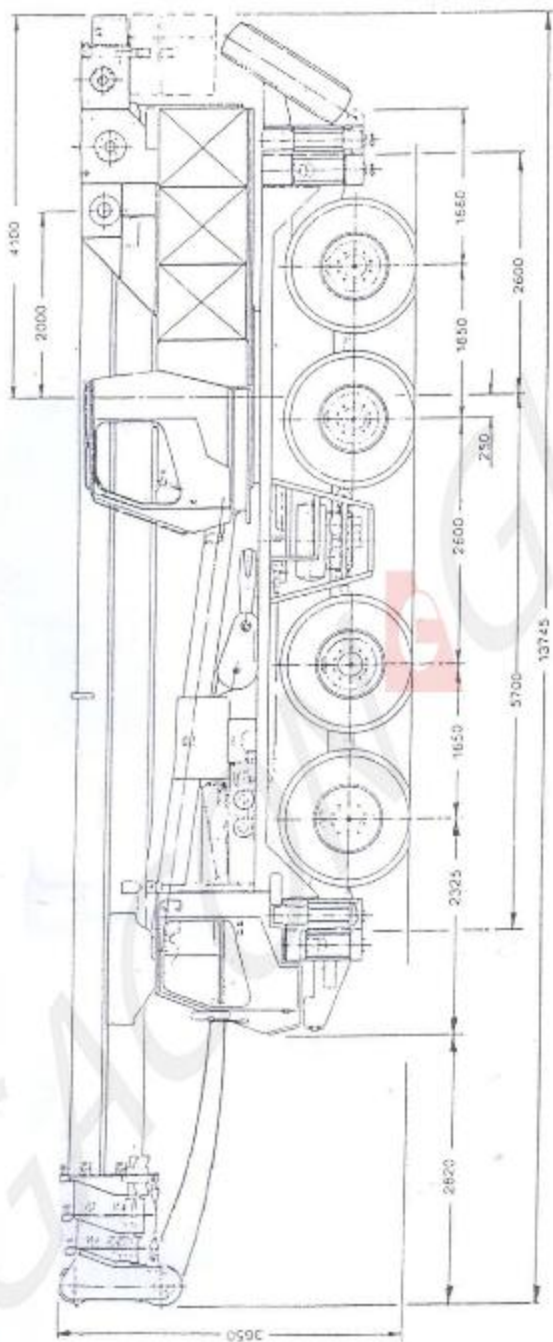


Fig. 1 - Dimensions

vehicle width 2750 mm

Lifting capacity DIN 15019.2

Radius (m)	Crane with 11,0 tons counterweight							
	0x		Boom extended		1x		2x	
	11,5		Boom length (m)		20,0		28,5	
						3x		
						20,0		
Lifting capacity (tons)								
A1		A		F		A		
A		F		A		A		
3	70,0	60,0	17,6					
3,5	63,3	54,0	15,9	36,0	15,9			
4	55,5	48,8	14,3	36,0	14,3			
4,5	49,0	44,8	13,0	36,0	13,0			
5	44,0	41,1	11,8	35,6	11,8	20,0		
6	36,2	35,6	9,6	31,5	9,6	20,0		
7	31,0	31,0	7,9	28,3	7,9	19,0		
8	26,5	26,5	6,4	25,5	6,4	17,4	12,0	
9	22,0	22,0	5,2	22,0	5,2	15,9	12,0	
10				18,6	4,3	14,6	11,6	
11				16,0	3,5	13,4	11,0	
12				13,8	2,8	12,2	10,3	
13				12,0	2,3	11,1	9,8	
14				10,6	1,8	10,3	9,2	
15				9,4		9,3	8,5	
16				8,3		8,2	8,0	
17				7,3		7,3	7,5	
18						6,5	7,0	
19						5,8	6,5	
20						5,1	6,1	
21						4,5	5,5	
22						4,0	5,0	
23						3,6	4,5	
24						3,1	4,1	
25						2,7	3,7	
26							3,4	
27							3,0	
28							2,7	
29							2,4	
30							2,2	
31							1,9	
32							1,7	
33							1,5	
34							1,3	
35								

A = With outriggers, 360° slewing range
 A1 = With outriggers, +10° slewing range to the rear
 F = Without outriggers +10° slewing range to the rear

Lifting capacity DIN 15019.2

Radius (m)	Crane with 11,0 tons counterweight						
	Boom 3 x extended with swing-away fly-jib						
	10,0m			16,0m			
	* Boom length (m)						
	35,7+10,0	37,2 + 10,0		37,2 + 16,0			
	Inclination of swing-away fly-jib						
	0°	0°	11°	22°	0°	11°	22°
	Lifting capacity in tons						
8,5	7,20						
9	7,00						
10	6,70	5,50					
11	6,30	5,50			3,70		
12	6,00	5,50	5,30		3,70		
13	5,70	5,50	5,10	4,70	3,70	3,70	
14	5,40	5,50	4,90	4,50	3,70	3,55	
15	5,10	5,40	4,70	4,30	3,60	3,40	
16	4,90	5,10	4,50	4,10	3,50	3,30	2,90
17	4,70	4,90	4,30	3,90	3,40	3,20	2,80
18	4,50	4,70	4,10	3,80	3,30	3,10	2,70
19	4,30	4,50	3,90	3,60	3,20	3,00	2,60
20	4,10	4,30	3,70	3,50	3,10	2,90	2,50
21	3,90	4,10	3,60	3,40	3,00	2,80	2,45
22	3,80	4,00	3,50	3,20	2,90	2,70	2,35
23	3,60	3,80	3,30	3,10	2,80	2,60	2,25
24	3,50	3,70	3,20	3,00	2,70	2,50	2,20
25	3,30	3,50	3,10	2,90	2,60	2,40	2,10
26	3,10	3,30	3,00	2,80	2,55	2,30	2,05
27	2,90	3,10	2,90	2,70	2,45	2,20	2,00
28	2,70	3,00	2,80	2,60	2,40	2,10	1,90
29	2,60	2,80	2,70	2,50	2,30	2,05	1,85
30	2,50	2,70	2,60	2,50	2,25	2,00	1,80
31	2,30	2,50	2,50	2,40	2,20	1,90	1,75
32	2,10	2,30	2,30	2,40	2,15	1,85	1,70
33	1,90	2,10	2,10	2,20	2,00	1,80	1,65
34	1,70	1,90	1,90	2,00	1,90	1,75	1,60
35	1,50	1,70	1,70	1,80	1,80	1,70	1,55
36	1,30	1,50	1,50	1,60	1,65	1,60	1,50
37	1,10	1,30	1,40	1,50	1,50	1,55	1,45
38	1,00	1,10	1,20	1,30	1,35	1,45	1,40
39					1,20	1,30	1,35
40					1,10	1,15	1,30
41					1,00	1,00	1,20
42					0,90	0,90	1,05
43					0,75	0,85	0,90
44					0,65	0,75	0,80

Crane with outriggers, 360° slewing range

* = 1st and 3rd telescopic section retracted by 0,75m

Lifting capacity DIN 15019.2

Radius m	Crane with 7,0 tons counterweight					
	Boom extended					
	0 x	1x	2x	3x		
	Boom length (m)					
	11,5	20,0	28,5	37,2		
	Lifting capacity (to)					
	A	F	-A	F	A	A /
3	60,0	17,6				
3,5	52,0	15,9	36,0	15,9		
4	47,6	14,3	36,0	14,3		
4,5	43,8	13,0	36,0	13,0		
5	40,6	11,8	35,6	11,8	20,0	
6	34,9	9,6	31,5	9,6	20,0	
7	29,0	7,9	28,3	7,9	19,0	
8	23,4	6,4	23,3	6,4	17,4	12,0
9	19,3	5,2	19,2	5,2	15,9	12,0
10			16,2	4,3	14,6	11,6
11			13,8	3,5	13,4	11,0
12			11,9	2,8	11,8	10,3
13			10,3	2,3	10,2	9,8
14			9,0	1,8	8,9	9,2
15			7,8		7,8	8,5
16			6,9		6,7	7,8
17			6,0		5,9	6,9
18					5,1	6,1
19					4,4	5,4
20					3,8	4,8
21					3,3	4,3
22					2,8	3,8
23					2,4	3,4
24					2,0	3,0
25					1,7	2,6
26						2,3
27						2,0
28						1,8
29						1,5
30						1,3
31						1,1
32						
33						
34						
35						

A = Crane with outriggers 360° slewing range

F = Crane without outrigger ±10° slewing range to the rear.

Lifting capacity DIN 15019.2

Radius m		Crane with 1,0 tons counterweight							
		Boom extended							
		0 x		1x		2x		3x	
		Boom length (m)						122'	
		11,5		20,0		28,5		37,2	
		Lifting capacity (to)							
		A	F	A	F	A	A		
3		60,0							
3,5		51,0		36,0					
4		46,7		36,0					
4,5		43,0		36,0					
5		39,2		35,6		20,0			
6		30,2		30,0		20,0			
7		23,2		23,1		19,0			
8		18,5		18,4		17,4		12,0	
9		15,1		15,0		15,1		12,0	
10				12,5		12,4		11,6	
11				10,4		10,2		11,0	
12				8,6		8,4		9,6	
13				7,1		7,0		8,1	
14				6,0		5,8		6,9	
15				5,0		4,9		6,0	
16				4,2		4,1		5,1	
17				3,5		3,4		4,4	
18						2,8		3,8	
19						2,3		3,3	
20						1,8		2,8	
21						1,4		2,4	
22						1,0		2,0	
23								1,7	
24								1,4	
25								1,1	
26									
27									
28									
29									
30									

A = Crane with outriggers 360° slewing range
 F = Crane without outriggers 10° slewing range to the rear.

Lifting capacities DIN 15019.2

The planning and execution of crane operations is to be exclusively based on the following load capacity tables.

Indications contained in other data sheets are not applicable.

Special instructions relating to the load capacity tables:

- The crane operator has to ensure that the load and reach values indicated in the load capacity tables, are never exceeded. The existing overload protection system does not relieve the crane operator of his responsibilities. The safe load indicator must never be used as scales.
- Load capacity = useful load + hook block + hoisting equipment.
- Weight of hook blocks:

hook block	70 Mp	=	0.83 Mp
hook block	30 Mp	=	0.38 Mp
Hook block	10 Mp	=	0,20 Mp
swivel hook	8 Mp	=	0.26 Mp
swivel hook	5 Mp	=	0.12 Mp

CAUTION:

The load capacity of the hook block must never be exceeded.

- Instructions relating to a boom length of 20.0 m
Telescopic section I to be extended by 1/2, telescopic section II to be extended by 1/2.
- When folded swing-away lattice of 10/16 m is fitted on the boom-basic, the load capacities is reduced as follows:

	with outriggers	free-on-wheels ±10' towards the rear
Boom 3 times extended	100 kg	-
Boom 2 times extended	150 kg	-
Boom once extended	200 kg	300 kg
Boom retracted	400 kg	600 kg

- When the swing-away lattice of 10/16 m is bolted onto the front of the boom, the load capacity at the main boom is reduced as follows:

-- 10 m swing-away fly jib:

	fly-jib only with hook block	
Boom 3 times extended	1200 kg	1500 kg
Boom 2 times extended	1500 kg	1800 kg
Boom once extended	1500 kg	2000 kg
Boom retracted	1800 kg	2500 kg

-- 16 m swing away fly jib:

	fly-jib only with hook block	
Boom 3 times extended	1600 kg	2000 kg
Boom 2 times extended	1700 kg	2200 kg
Boom once extended	1900 kg	2500 kg
Boom retracted	2700 kg	3600 kg

- Works free-on-wheels with the folded swing-away lattice bolted in front of the boom is not allowed.
Danger of tipping over!

- When working with the folded 10/16 m swing-away lattice at the 3-times telescoped boom and the hook block reeded-in at the main boom, the lifting capacity in the table of the swing-away fly-jib is reduced as follows:

with hook block 70 t 1000 kg
with hook block 30 t 500 kg

- Operations with folded 10/16 m swing-away fly-jibs.

-- Main boom 3-times extended.

- CAUTION:

The boom, when lowered to a horizontal position, must only be extended when at least the 7-ton counterweight is mounted, as otherwise there is a danger that the crane might tip.

- CAUTION:

Do not slew the crane when the outriggers are not extended, as this might cause the crane to tip.

CAUTION:

During free-on-wheel operation, to increase stability the supporting cylinders with the supporting plates have to be extended until short above the ground.

- Before commencing work, ensure that the crane is adjusted level and check throughout the crane operations that the level position is maintained.
Refer to para. 4.04.01
- Ensure that the maximum wind speeds are observed for all operations.
Refer to para. 4.06.01
- Remarks as to the S.L.I.
 - 1) Two-hook-operation is not secured by SLI.
The SLI secures the one-hook-operation only.
Two-hook-operation can lead to overloading of the machine.
 - 2) Adjust intended work condition at the SLI
 - 3) Extend and retract the telescopic section acc.to instructions.
Otherwise the safe load indicator would not function correctlyOnly in consideration of these points, the S.L.I. is functioning accurately and switches off correctly.
- The heights of pulleys and hooks are theoretically determined.
The real values differ thereof because of the deflection, in dependence on the load.