



IHC IQIP Datasheet Package

Project: *S350 Marutai*

Quote Reference: Q06998_R6



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IHC IQIP Singapore Pte. Ltd.

No. 7 Tuas South Street 15, Block B
Singapore 637078

T +65 62 64 84 33

F +65 62 64 19 33

Sales.kjp.sg@ihciqip.com



IHC IQIP Offshore Datasheets

Date
04 May 2018

Reference
Q06998_R6

Your reference
S350 Marutai

Revision
-

Treated by
Egbert van't Hooft

Hydrohammer:

- S-350 Hydrohammer
- Transport cradle

Sleeve:

- 64" Pile Sleeve

Power pack:

- Power pack P-700

Controls:

- C-36 Control Unit

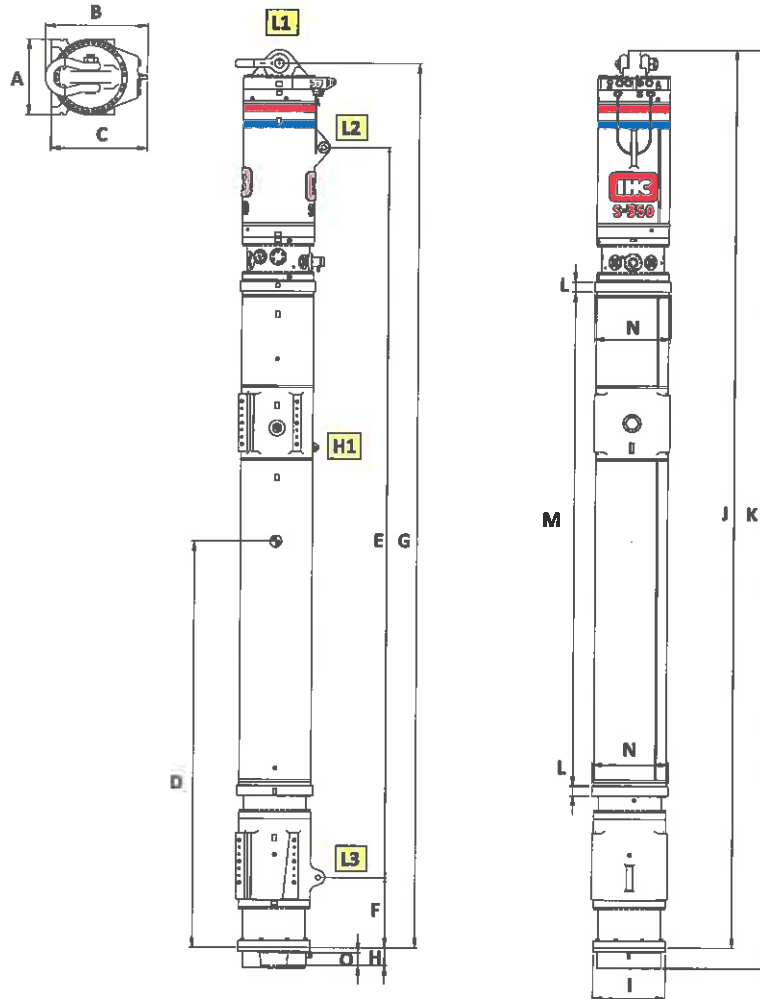
Others:

- Hose Bracket

HYDROHAMMER® S-350

Application:
Hydrohammer® for steel piles
Piling free hanging in air and underwater

concept sheet no. 1.1.10121
 revision 2
 date May, 2018
 page 1/2
 code no. 85 23 00 00



POS. DESCRIPTION	LENGTH [MM]	POS. DESCRIPTION	LENGTH [MM]
A Transport width	950	I Outer diameter	915
B Transport height (with shackle)	1285	J Length	11384
C Transport height (without shackle)	1174	K Transport length (incl. cover)	11642
D Centre of gravity	5140	L Height ballast collar	125
E Position lifting eyes	9255	M Position ballast cover	6262
F Position lifting eyes	890	N Diameter ballast collar	960
G Length under crane hook	11209	O Fall out ram weight pin	165
H Required length in sleeve	228		

POS. LIFTING EYES	WORKING LOAD LIMIT [TONS]	HOLE DIAM. Ø [MM]	THICKNESS [MM]
L1	150	114	145
L2	42,5	68	90
L3	35	60	75
H1	6,5	26	30

Use Green Pin® Heavy duty (type P- 6036) for Top Shackle



HYDROHAMMER® S-350

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OPERATING DATA

Max. net energy	350 kJ
Min. net energy	39 kJ
Blow rate	40 Blows/min
At max. energy and recommended oil flow	

WEIGHT

Ram	18 tons
Hammer (incl. ram, in air)	36 tons
Hammer (incl. ram, in salt water) (Only if fully submerged)	29 tons

HYDRAULIC DATA

Operating pressure	310 bar
Max. pressure	350 bar
Max. oil flow	800 l/min
Power pack, back pressure valve setting	18 - 22 bar
Power pack, back pressure valve	activated

GAS FILLING PRESSURE

Vertical pile driving only! Values will vary for:
- pile driving under different angles with the vertical,
- pile driving underwater depending on water depth.

Supply accumulator (Nitrogen)	140 - 170 bar
Return accumulator (Nitrogen):	
- with activated back pressure valve*	13 - 17 bar
- without back pressure valve	4 - 6 bar
Cap (Nitrogen or Air)	20 - 25 bar

SAFETY SETTING

Cap	60 bar
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HOSE CONNECTIONS

Oil supply 2" hose P (red)	M68x2 male
Oil return 2" hose R (blue)	M68x2 male
Nitrogen (Air) cap R ¾"	M42x2 male

* NOTE

IHC IQIP recommends to use a back pressure in the return line of the hydraulic system circuit while pile driving.
In case a power pack does not have a back pressure valve installed, it is recommended to install one.



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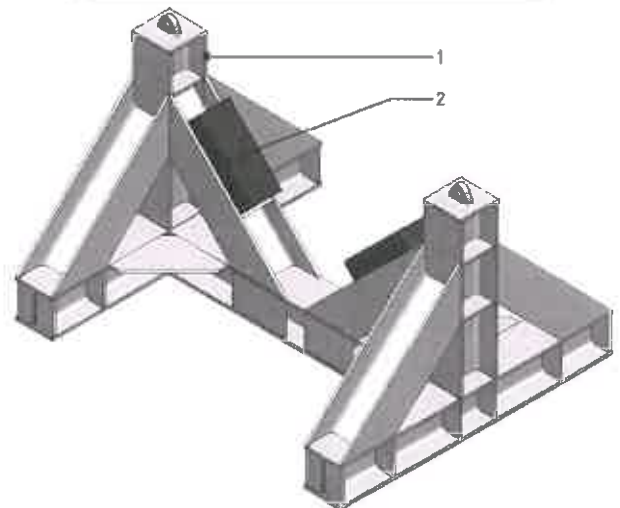
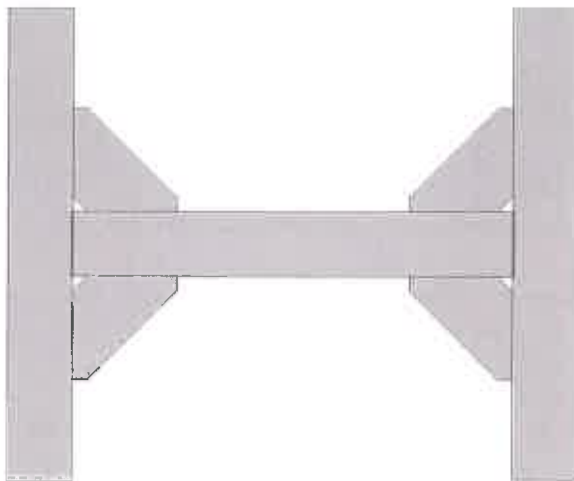
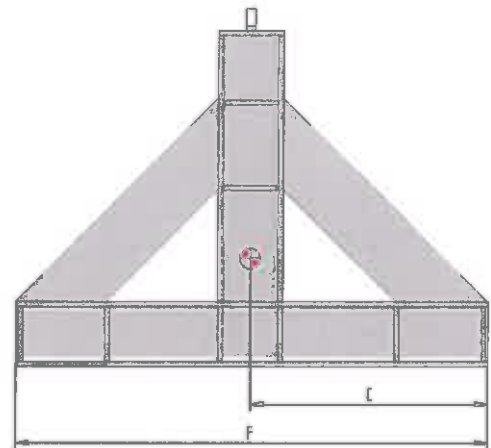
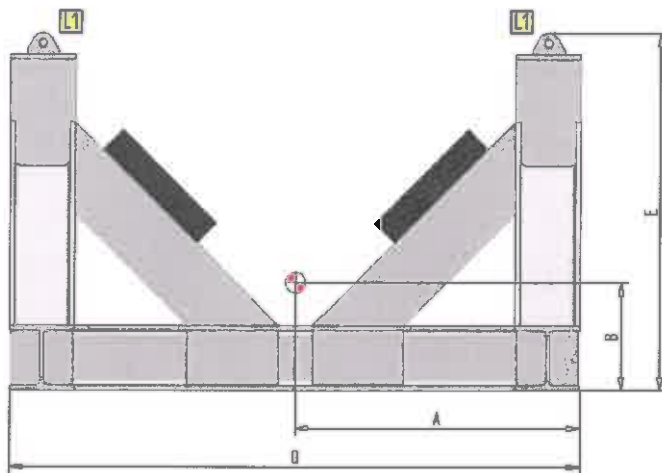
P.O. Box 204, 3360 AE Sliedrecht
Molendijk 94, 3361 EP Sliedrecht
The Netherlands

T +31 88 015 50 00
info.iqip@ihciqip.com
www.ihciqip.com

Transport cradle

Application:
Support of Hydrohammer® type S-200 up to S-800

data sheet no. 9.2.1101
 revision 1
 date December, 2015
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 code no. 86 18 03 00



Items

- 1 Cradle
- 2 Support block

Pos.	Description	Length [mm]
A	C.O.G. width	970
B	C.O.G. height	366
C	C.O.G. depth	800

Pos.	Description	Length [mm]
D	Transport width	1940
E	Transport height	1211
F	Transport depth	1600

Pos.	Lifting eyes	Working Load Limit [tons]
L1		6,5

Hole diam. \varnothing [mm]	Thickness [mm]
26	30



Transport cradle

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Technical information

Environment Offshore & Onshore
Lifting regulations N.A.
Weight 1000 kg

Footprint information

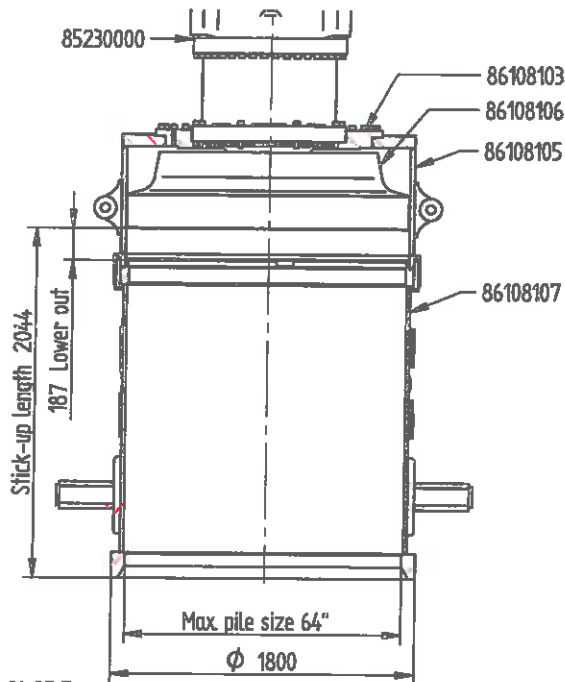
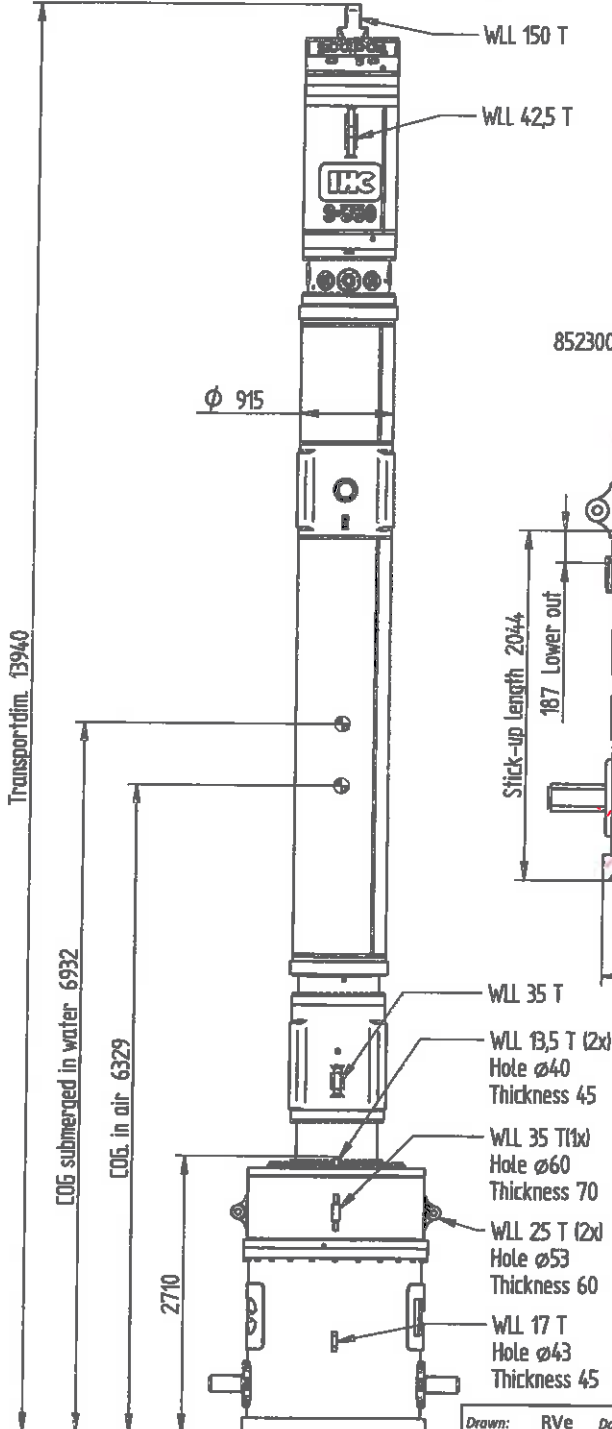
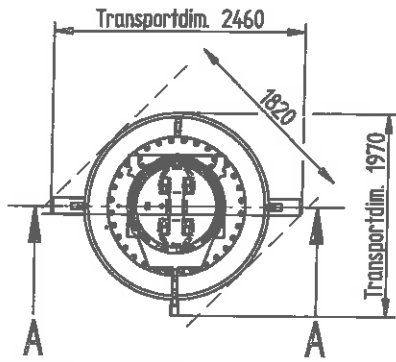
Type beam HE-220B
Foot print area 1,0 m²

Support block

Dimensions 450 x 188 x 200 mm
Material Synthetic

Storage height

Series	Height hammer center line
Unit	[mm]
Hydrohammer® S-200/280	941
Hydrohammer® S-500/600/800	1157



SECTION A-A

Max rake 1/5
Weight submerged in water 33 ton

Item	Part nr.	Mass (ton)
Hydrohammer S-350	85230000	36
Anvil housing	86108105	2,2
	+86108103	
Anvil	86108106	6,5
Pile guiding	86108107	2,25
Miscellaneous items		0,05
Total		47 ton

*Miscellaneous items incl. bolts, shackles and others.

Drawn:	RVe	Date:	09-03-2018
Approved:	CvM	Date:	15-03-2018
CR Number:			
Scale:	NTS		
Revision	A	CR Nr.	First Issue
Drawn:		Date:	
Approved:		Date:	

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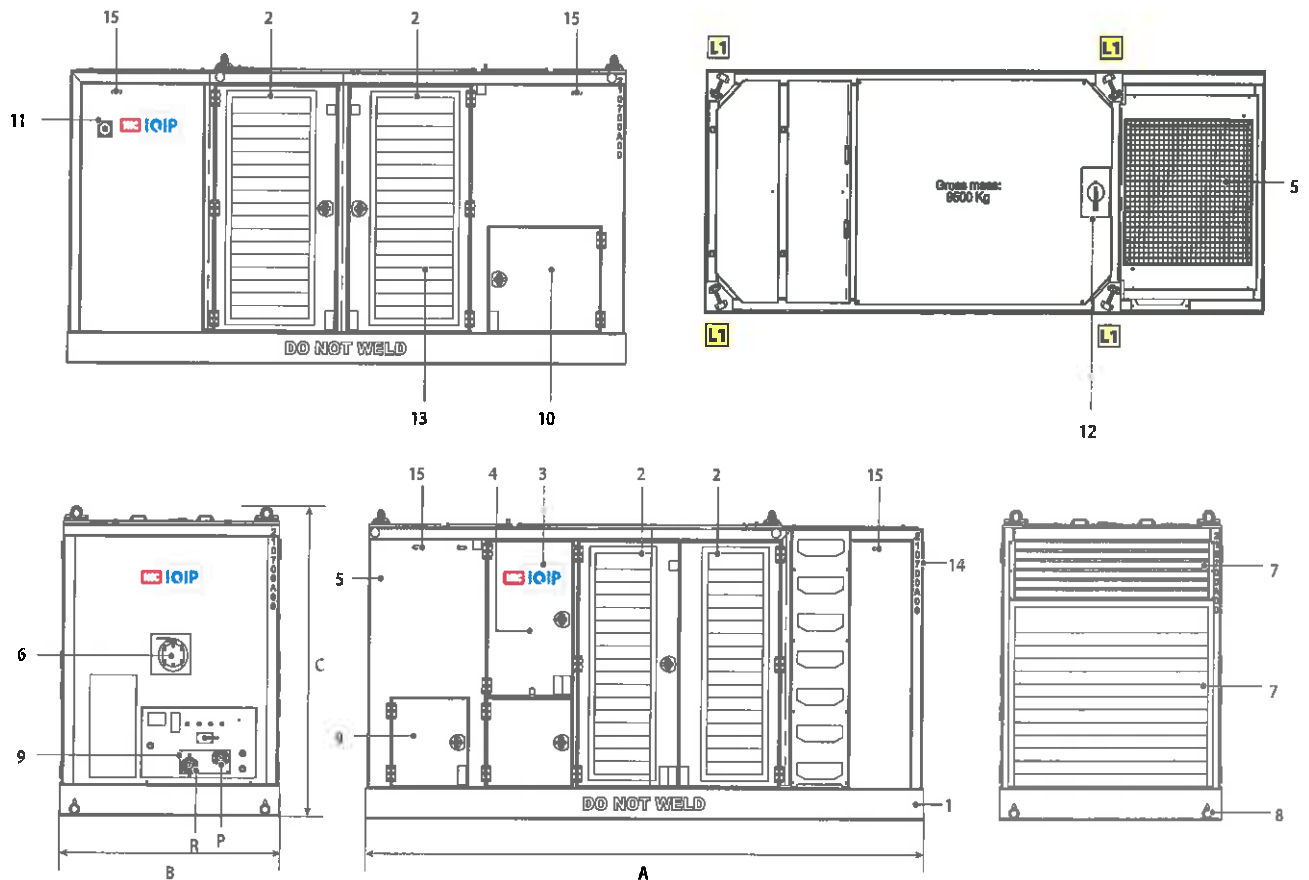
Title: **Sleeve 64 inch + S-350**

Drawing no: **V 002466** Revision: **A**

Hydraulic power pack P-700 (A-series)

Application:
Driving Hydrohammer®
Air cooled power pack

Data sheet no. 2.1.1014
 revision 5
 date May, 2018
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 code no. 86 43 40 11



- | | | |
|--------------------------------|--------------------------|--------------------------|
| 1 Fuel tank | 6 Connection valve 5" | 11 Emergency stop button |
| 2 Intake grill (4x) | 7 Air outlet | 12 Exhaust |
| 3 Engine panel (A-40) (Inside) | 8 Fuel drain points (4x) | 13 Motor (Inside) |
| 4 Control cabinet | 9 Hydraulic manifold | 14 Serial number (4x) |
| 5 Air inlet oil cooler | 10 AdBlue® tank (Inside) | 15 Alarm light (4x) |

Pos. no.	Description	Dimension [mm]
A	Length	4850
B	Width	1900
C	Height	2346

Pos. Swiwd lifting eyes	Working Load Limit [tons]	Hole diam. Ø [mm]	Thickness [mm]
L1 (4x)	10	65	22



Hydraulic power pack P-700 (A-series)

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Technical specifications

Ambient air temperature	Between -20 °C and +45 °C
Maximum sound power level (Lwa)	110,3 dB (A)
Emissions	European standards: Stage 4 U.S. (EPA): Tier 4F
Environment	Onshore environment
Lifting regulations	N.A.

Container

Net weight	Approximately: 6600 kg
Weight (including oil and fuel)	Approximately: 9500 kg
Capacity of fuel tank	Approximately: 1080 liters
Capacity of hydraulic oil reservoir	Approximately: 2006 liters (fill 1750)

Diesel engine

Make / model / type	Volvo Penta / TAD1672VE / 700 BHP
Rated engine output	515 kW (at 1800 rpm; idle = 800 rpm)
Starting system	24V battery system (165 Ah)
Cooling system	Closed loop coolant, air cooled by radiator
Fuel consumption	100% ≈ 123,6 l/h; **
AdBlue®/DEF	Maximum fill capacity tank: 70 liters Between 3% and 7% of fuel consumption, on max. performance.
Diesel fuel	Depending on operation mode (ISO 22241-1). ASTM-D975-No.1 and 2-D (JIS KK 2204, EN 590) recommended

Hydraulic system

Hydraulic oil	Total EQUIVIS ZS 46 or equal*
Make / model / pump	2 x Bosch Rexroth / A11VLO260
Pump capacity / rated pressure	700 l/min / 340 bar
Pump capacity control	Continuously variable; 6 – 100%
Hydraulic oil cooling	By-pass air cooled with hydraulically driven fan
Hydraulic hose (hose connections)	2 x 2" quick connector ¾" for drain hose
Hydraulic oil tank connection	DN125 FLANG SAE 5" 3000PSI/206 bar

Electrical connections

Engine control	Power pack A-40 including IQAN (in power pack) Remote control C-34/C-36 (not in power pack) Master/slave for second powerpack
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*Biodegradable oils on request

**Values are indications

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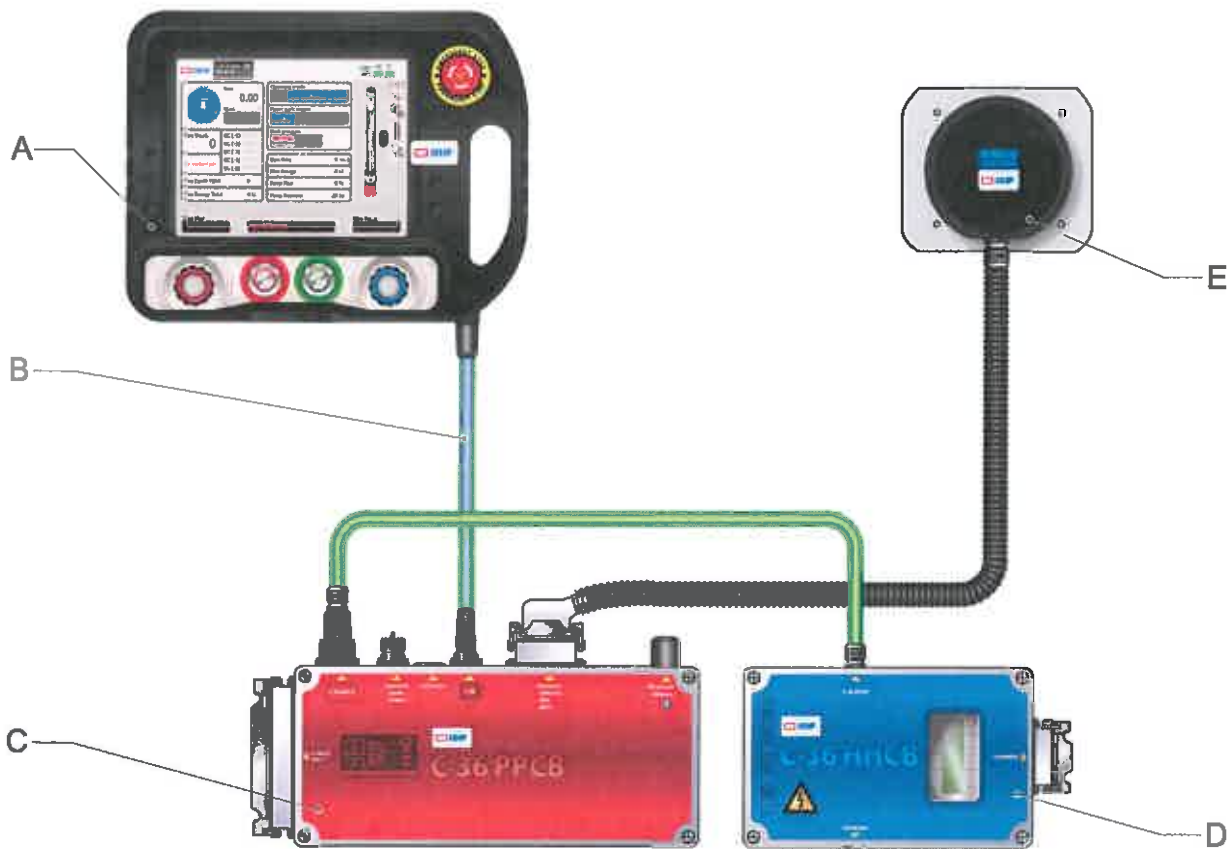
P.O. Box 204, 3360 AE Sliedrecht
Molendijk 94, 3361 EP Sliedrecht
The Netherlands
T +31 88 015 50 00
info.iqip@ihciqip.com
www.ihciqip.com

C-36 CONTROL SET

Application:

Manual or automatic process control of a Hydrohammer® system operating in air and to a waterdepth up to -5 m. Logging of system and process data.

data sheet no. 3.1.1006
 revision 1
 date July, 2017
 page 1/2
 code no. N/A



POS	DESCRIPTION	FUNCTION	TYPE
A	C-36 Operation unit	See separate data sheet 3.1.1005	C-36
B	C-36 Connection cable	Power supply and communication	-
C	C-36 Power pack control box	Power pack control	C-36 PPCB
D	C-36 Hydrohammer® control box	Hydrohammer® control	C-36 HHCB
E	C-36 Antenna	GPS, GPRS, Wifi (with C-36)	-
-	C-36 AC Charger	Charging C-36	-
-	C-36 DC Charger	Charging C-36	-

C-36 CONTROL SET

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revision	1
date	July, 2017
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TECHNICAL SPECIFICATIONS C-36 CONTROL SET

Use	Location	Inside cabinet of power pack
Compatibility	Backward compatible	All Hydrohammer® types, and only the power pack series with variable displacement pumps.
Environment	Working temperature	-30°C / +50°C
	Storage temperature	-45°C / +60°C

C-36 Operation unit

See separate data sheet, no. 3.1.1005

C-36 Power pack control box

Protection grades	Housing	IP 67 (water-tight, underwater up to -1 m)
Material	Housing, front side	Aluminum with marine coating
	Housing, back side	Aluminum with marine coating
Provisions to install	Mounting brackets	4 x
Dimensions L x W x H	Operational	340 x 181 x 96 mm
Weight	Operational	12 kg
Functionality	Control	Power pack / Hydrohammer® control box

C-36 Hydrohammer® control box, with cable

Protection grades	Housing	IP 67 (water-tight, underwater up to -1 m)
Material	Housing, front side	Aluminum with marine coating
	Housing, back side	Aluminum with marine coating
Provisions to install	Mounting brackets	4 x
Dimensions L x W x H	Operational	335 x 201 x 96 mm
Weight	Operational	10,5 kg
Functionalities	Transfer of electrical signals adjustable current booster	From / to Hydrohammer® 120 V _{max} @ 4 A _{max} . Switching the hammer valves

C-36 Antenna, with antenna cable

Protection grades	Housing	IP 67 (water-tight, underwater up to -1 m)
Material	Housing, front side	Solid plastics
	Housing, back side	Stainless steel
Provisions to install	Back side	2 x magnet (with anti-scratch film protection)
Dimensions L x W x H	Operational	200 x 180 x 90 mm
Weight	Operational	2,5 kg
Functionality	Transfer of radio wave signals	GPS / GPRS / Wifi

Transport, storage and protection

Dimensions L x W x H	C-36 Set transport case	651 x 496 x 397 mm
Weight, case	(empty/full)	10,5/36 kg
Material, case	Polypropylene	
Contents, case	- C-36 PPCB - C-36 HHCB - C-36 Antenna - C-36 Connection cable 15m	



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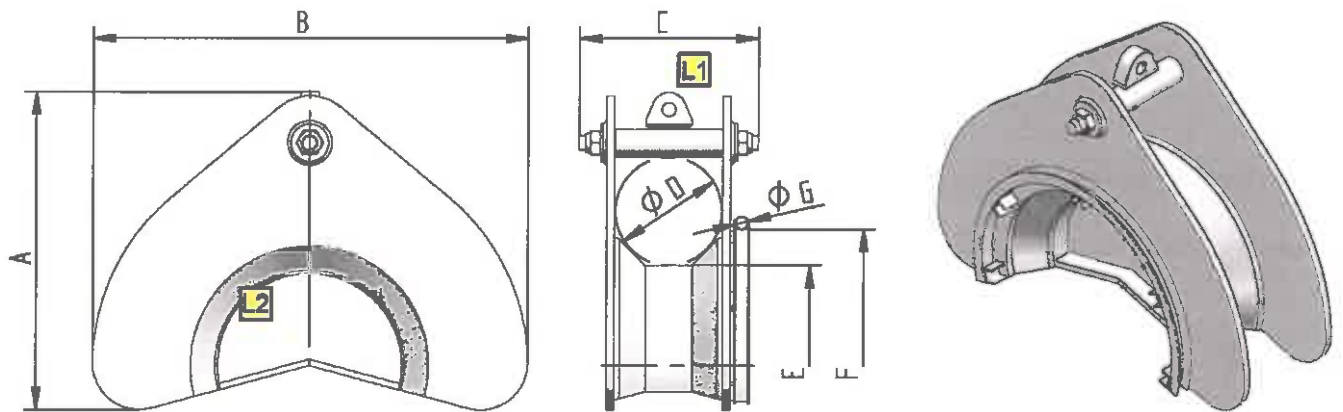
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info.iqip@ihciqip.com
www.ihciqip.com

Hose bracket

Application:
**For support of long hydraulic hose bundle
 with rail for control cable**

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 revision 5
 date May, 2018
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Description	WEIGHT	A	B	C	D	E	F	G
Article no.	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
86410600	432	1025	1390	575	∅ 350	320	435	40
86410700	1150	1777	2200	565	∅ 414	800	905	40
86410506*	175	990	1235	410	□ 125x275	512	520	35
86410507*	175	990	1235	410	□ 125x275	512	520	35
86410710	1687	2168	2850	620	∅ 450	1100	1235	40
86410714**	3448	2168	2850	1280	∅ 450	1100	1235	40

*Included hose clamp block

** 2x Hose bracket 86410710

Pos. Lifting eyes	Maximum Load Limit [tons]	Hole diam. ∅ [mm]	Thickness [mm]	Article No.
L1	17	43	45	86410600
L1	25	53	60	86410700
L1	3,25	37	28	86410506* (2x2")
L1	3,25	37	28	86410507* (2x1½")
L1/L2(4x)	25/3,5	53/20	60/22	86410710
L1(2x)/L2(8x)	25/3,5	53/20	60/22	86410714

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 Molendijk 94, 3361 EP Sliedrecht
 The Netherlands

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