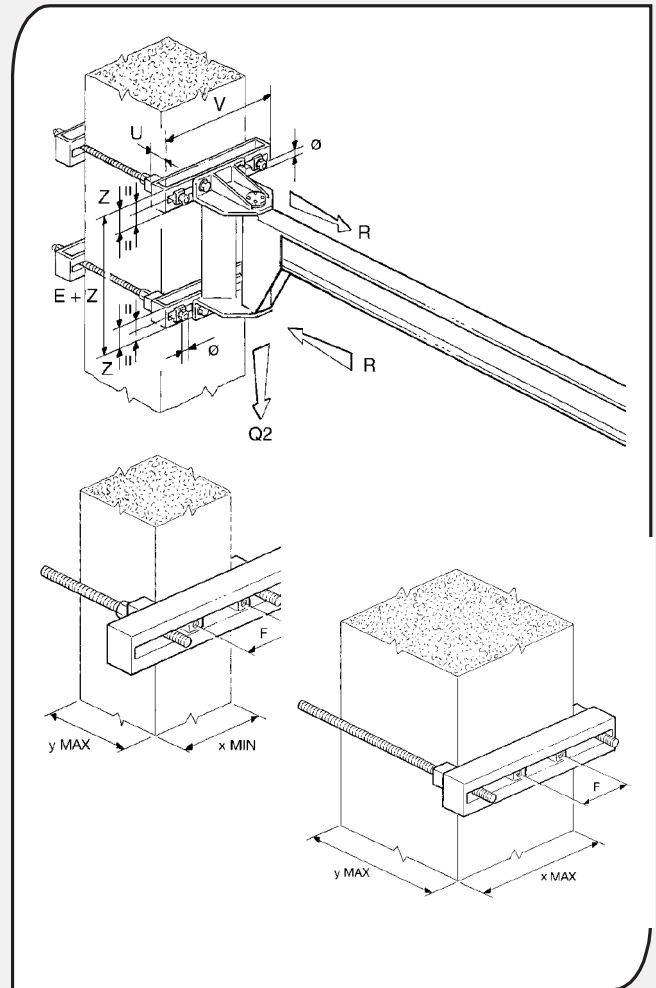


FIXING SYSTEMS FOR JIB CRANES

BRACKET AND STAYBOLTS UNIT FOR GBP/MBB/MBE WALL-MOUNTED CRANES

Size of crane	A	B	C	D	E	F	
Reactions (kN)	Q2	2.95	5	9.2	16.85	26.10	25.6
	R	11.9	21.75	27.05	49	66.8	120
Type of bracket	01		02		03		
Ø Staybolts	M14		M20		M30		
Clamping couples (Nm)	67		200		685		
Bracket type: Short (mm)	Code	GBP010110	GBP020110	GBP030110			
	U	50	60	80			
	V	400	490	532			
	Z	75	90	135			
Weight (kg)	21	36	75				
Pillar dimensions (mm)	x min	200	250	300			
	x max	330	400	400			
	y max	850	810	750			
Bracket type: Medium (mm)	Code	GBP010120	GBP020120	GBP030120			
	U	50	80	100			
	V	530	640	682			
	Z	75	120	145			
Weight (kg)	26	60	96				
Pillar dimensions (mm)	x min	200	250	400			
	x max	460	550	550			
	y max	850	770	710			
Bracket type: Long (mm)	Code	GBP010130	GBP020130	GBP030130			
	U	60	80	120			
	V	720	840	882			
	Z	85	120	155			
Weight (kg)	40	74	132				
Pillar dimensions (mm)	x min	460	550	550			
	x max	650	750	750			
	y max	830	770	670			

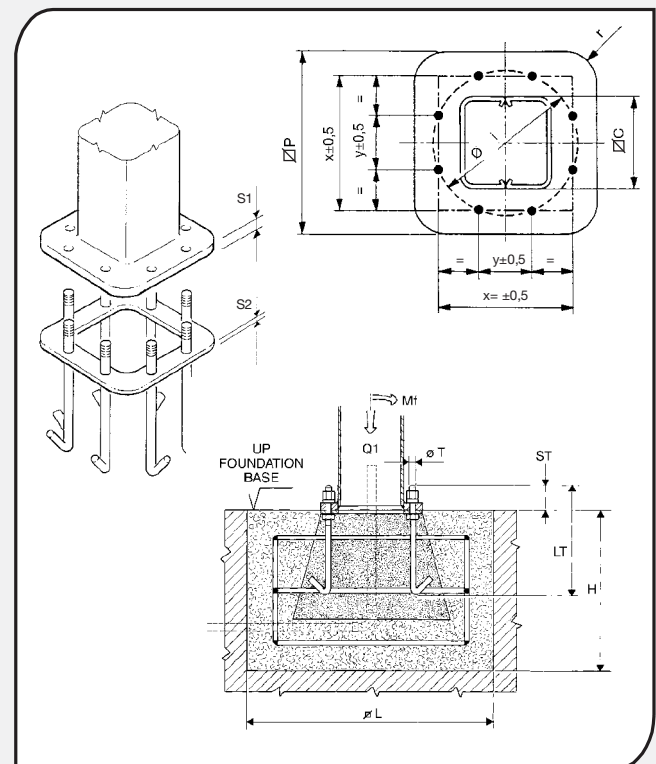


Note: The bracket and staybolts unit, used in the wall-mounted version for fixing the bracket to a pillar, is available on request.

BASE PLATES, FOUNDATION FRAMES AND PLINTHS FOR GBA/CBB/CBE SERIES COLUMN-MOUNTED CRANES

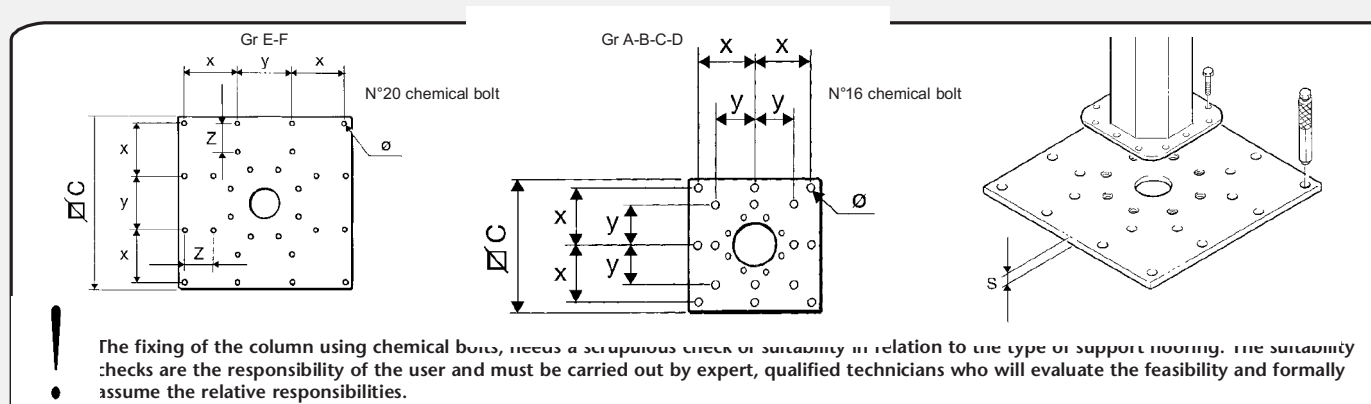
Size	A	B	C	D	E	F	
Base plate and foundation (mm)	☒ C	190	220	270	320	380	450
	☒ P	280	310	390	440	550	620
	S1	20	20	25	25	30	30
	S2	8	8	10	10	12	12
	x	240	268	337	388	471	540
	y	100	111	140	161	195	224
	Ø	260	290	365	420	510	585
	r	70	71	86	95	136	137
Anchorage bolts (mm)	ØT	M14	M14	M22	M22	M33	M33
	LT	450	450	550	550	800	800
	ST	40	40	55	55	75	75
Clamping couples (Nm)	67	67	265	265	920	920	
Frame/bolts weight (kg)	7	8	20	21	60	62	
Foundation plinth (mm)	☒ L	1200	1300	1400	1700	2000	2400
	H	800	800	900	900	1100	1100
Reaction (kN)	Q1	3.3	5.7	10.15	18.4	28.7	29.35
Momentum (kNm)	MF	5.7	10.16	18.9	35.86	69.92	115.1

! The dimensions of the plinths are purely indicative! The plinth must be dimensioned by expert, qualified technicians considering the real consistency of the ground and the maximum pressure allowed by this.



Note: The foundation frame with logbolts, used in the column-mounted version for fixing the column itself to the foundation plinth is supplied on request.

COUNTERPLATES FOR FIXING TO THE FLOOR WITH CHEMICAL BOLTS OF THE GBA/CBB/CBE COLUMN-MOUNTED CRANES

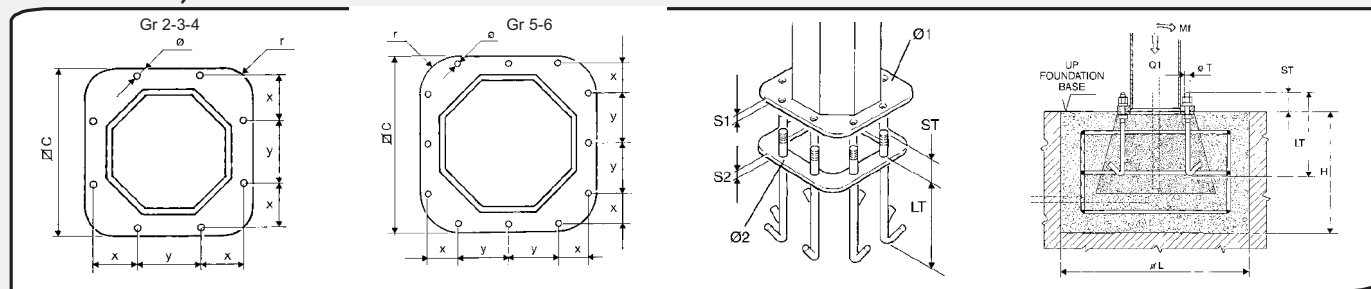


The fixing of the column using chemical bolts, needs a scrupulous check of suitability in relation to the type of support flooring. The suitability checks are the responsibility of the user and must be carried out by expert, qualified technicians who will evaluate the feasibility and formally assume the relative responsibilities.

Size of jib crane		A	B	C	D	E	F	
Counterplate code		GBA5A0030	GBA5B0030	GBA5C0030	GBA5D0030	GBA5E0030	GBA5F0030	
Counterplate measurements (mm)								
	$\varnothing C$	600	600	900	900	1200	1200	
	S	20	20	30	30	40	40	
	x	260	260	410	410	370	370	
	y	180	180	260	260	380	380	
	Z	-	-	-	-	200	200	
	\varnothing	15	19	19	25	25	29	
Counterplate weight (kg)		56	56	191	191	452	452	
Maximum tilting momentum allowed (kNm)		Mf	9.98	15.4	29.13	53.39	103.59	158.58
Fixing characteristics	Type of concrete of the floor: Class Rck minimum (kg/cm ²)	250	250	250	250	250	250	
	Type of chemical bolts (e.g. HILTI HVU with threaded bars HILTI HAS)	M12	M16	M16	M20	M20	M24	
	Minimum thickness of the block of the floor (mm)	140	170	170	220	220	270	
	Diameter of the hole in the floor (mm)	14	18	18	24	24	28	
	Depth of the hole in the concrete of the floor (mm)	110	125	125	170	170	210	
	Clamping couples of the anchors (HILTI) (Nm)	60	120	120	260	260	450	
	Minimum resistance to traction of one anchor (kN)	9.6	13.6	16.5	26.5	27	37.9	

* For the clamping couples of the bolts see the relative clamping couples for the logbolts page 28

BASE PLATES, FOUNDATION FRAMES FOR GBR SERIES COLUMN-MOUNTED CRANE



Size of jib crane		2	3	4	5	6	
Base plate and foundation frame (mm)							
	$\varnothing C$	750	860	910	1100	1220	
	S1	20	25	30	35	40	
	S2	10	10	10	10	10	
	x	199	230	241	185	215	
	y	281	325	341	320	350	
	$\varnothing 1$	27	33	39	39	39	
	$\varnothing 2$	25	31	37	37	37	
	r	150	170	180	220	240	
Anchorage bolts (mm)							
	$\varnothing T$	M 24x2.5	M 30x3.5	M 36x4	M 36x4	M 36x4	
	LT	600	700	800	800	800	
	ST	90	105	125	130	135	
Clamping couples for the logbolts (Nm)		350	680	1200	1200	1200	
Weight of the frame with logbolts (kg)		34.5	52.5	80	113	120	
Foundation plinth (mm)							
	$\varnothing L$	2500	3000	3200	4000	4200	
	H	1150	1300	1300	1300	1300	
Maximum reaction (kN)		Q1	79	126	183	183	183
Maximum tilting momentum (kNm)		Mf	179	270	335	649	788

DUTIES AND RESPONSIBILITIES OF THE CLIENT AND/OR THE INSTALLER OF THE JIB CRANE

Preparation of the place of installation of the jib crane

To allow the installation of the jib crane it is necessary to carry out the following operations in advance:

- check suitability, adequacy of the support structures, obtaining the relevant declaration signed by an expert, qualified technician;
- check there are no obvious defects on the support structures and the fixing;
- check the suitability of the maneuvering areas (rotation) available to the jib crane, especially if it operates in areas where there are other cranes and manufacturing machines;
- check the suitability and the correct functioning of the electrical power supply:
 - 1) correspondence between the voltage of the power line with the voltage for the motors
 - 2) that there is a suitable switch, selector of the electric line;
 - 3) adequacy of the section of cable of the electric power line;
 - 4) the presence and suitability of the earthing system

Set up the weights for the **test runs as equal to: nominal lifting capacity x 1.1**

Set up the weights for the **static runs as equal to: nominal lifting capacity x 1.25.**

Set up the equipment for the slinging and the lifting of the weights for the load runs.

Installation of the jib crane

The installation of the jib crane, for the importance of the operations, if not carried out correctly can cause **serious risks for the safety of people** nearby in the assembly stage and the successive phase of use of the crane.

In any case this task must be entrusted to specialised installers for the assembly of industrial systems, following careful evaluation of the following parameters:

- environmental characteristics of the place of work (e.g. working surface, etc)
- height of the work level at a height with respect to the load level
- dimensions and weight of the parts to be installed
- available space for the handling of the parts to be installed.

Fixing of the crane to the structures

The check of the suitability of the anchorings to the pillar or to the floor as well as the sizing of the plinths must always be carried out by expert, qualified technicians who will formally assume their responsibilities.

Assembly of the jib crane

Before proceeding to the assembly of the parts and to the putting into action of the jib crane, the installer must ensure that the characteristics of the crane are adequate to the use which it is intended for and in particular:

- 1) the lifting capacity of the crane is \geq with respect to the loads to lift.
- 2) the characteristics of the fixing structures (plinth, floor, wall, pillar, etc.) have been **"declared suitable"** by the user or by expert technicians, engaged by the user.
- 3) the characteristics of the lifting unit (trolley/hoist), if not part of the supply, are compatible with those of the jib crane in relation to:
 - a. Lifting capacity of the hoist: must be \leq with respect to the lifting capacity of the jib crane.
 - b. **Weight of the trolley/hoist:** must be \leq with respect to the maximum ones intended
 - c. **Lifting/moving speed:** must be \leq with respect to the maximum ones allowed.
 - d. **Headroom of the figure of the hoist trolley:** must be \leq with respect to those allowed.
 - e. **Reactions on the trolley wheels:** must be \leq with respect to the maximum ones allowed.

In the case of the jib crane with laminate girder, check the width of the wing of the girder which must correspond to that intended for the wheels of the trolley.

Following the installation activities of the jib cranes, it is the precise duty of the installer to:

- 1) lead the activities of the putting into service as described in the manual of "Instructions for use"
- 2) fill in the report of the "check and correct installation" of the crane, deliberating over the "suitability for use"
- 3) take care of the complete editing of the responsibility of parts as intended in the checks register.