

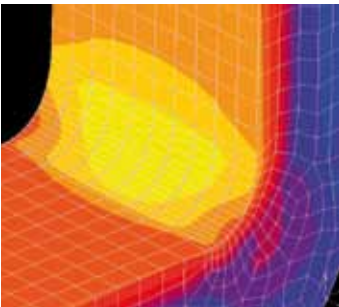
Forks





Production processes at the Piacenza plant, Italy.

Quality, Safety, Efficiency Worldwide



High quality

Bolzoni Auramo offers complete range of forks for lift trucks, construction and agricultural material handling machines, in many different capacities, sections and lengths, ISO and special mountings.



Innovation

Strongly focused on product innovation, Bolzoni Auramo has employed the most advanced technologies and software for fork designing.

By using first class raw material and applying modern technological solutions and automated production processes, forks are produced according to customer requirements and the industry's strictest standards.

Flexibility

High-capacity manufacturing facilities offer flexibility in production volume output and fork model availability, required by OEM's on equipments installed at the origin and by the after-market, suitable for different machines and various applications.



Advanced production process

Production standards for all Bolzoni Auramo forks are based on common key- features:

- Innovative and highly automated production process.
- Prime quality steel offering good welding characteristics and strong resistance to wear.
- Reinforced fork heel, bended in multi-phase press mould.
- Automated welding of upper and lower hooks with a robotic system, granting better quality of the welding, quality repeatability and higher process speed.
- Complete heat treatment with hardening and tempering on the entire fork, providing the best quality and reliability characteristics.



Production processes at the Longhua plant, P.R.C.

Certified Quality

Certified quality of chemical composition and of the heat treatment applied on raw material used. Bar coding allowing for the tracking of raw material back to source.

All forks produced comply with the parameters outlined in ISO 2328 and 2330.

In order to satisfy these standards, each different type of forks is subjected to the following tests:

- 1 fatigue test of 1,000,000 cycles at 25% overload.
- 1 static test of 2 cycles with triple nominal capacity.
- 1 resilience test at -20°C with a resulting value higher than 27 Joules.

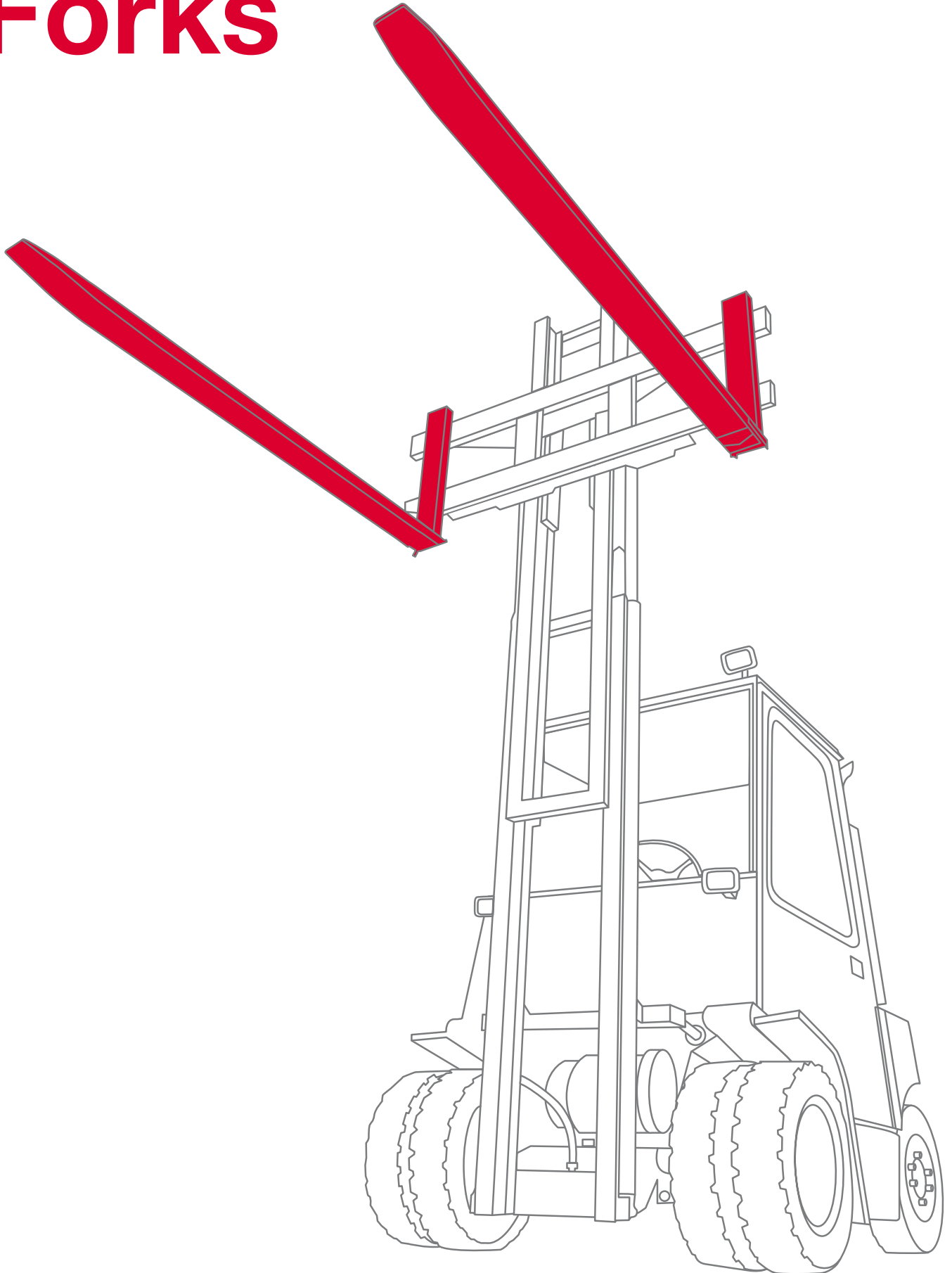
The following certifications are proof of Bolzoni Auramo's commitment to continuous improvements in quality and efficiency. The aim is to provide the best product and service support to customers worldwide, in full observance of a fair social policy towards the employees, customers, suppliers and society in general while respecting the environment:

- ISO 9001 Quality System Certification.
- ISO 3834-2 Quality Management in Welding.
- UNI EN 14001:2004 Environment Certification.

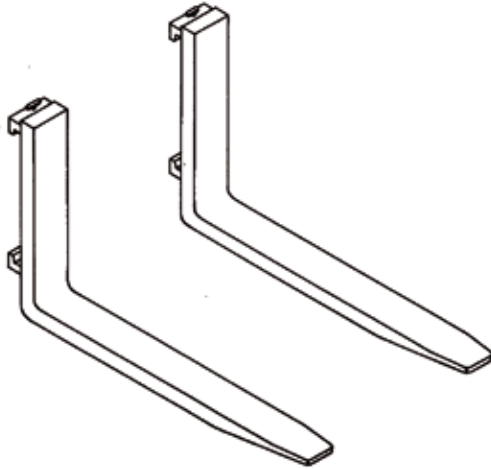
Quality checks during the production processes.



Forks



Range: 3,700 - 5,500 Lbs.



Part Number	Capacity per pair Lbs. @ 24"	Mounting Class	Fork Section			Taper Type	Fork Weight Lbs.
			W	T	L		
H51C100350910SD	3,700	II	4.0"	1.25"	36"	STD	79
H51C100351070SD	3,700	II	4.0"	1.25"	42"	STD	86
H51C100351220SD	3,700	II	4.0"	1.25"	48"	STD	93
H51C100400910SD	5,500	II	4.0"	1.50"	36"	STD	88
H51C100401070SD	5,500	II	4.0"	1.50"	42"	STD	95
H51C100401220SD	5,500	II	4.0"	1.50"	48"	STD	104
H51C100401370SD	5,500	II	4.0"	1.50"	54"	STD	115
H51C100401520SD	5,500	II	4.0"	1.50"	60"	STD	128
H51C100450910SD	5,500	II	4.0"	1.75"	36"	STD	101
H51C100451070SD	5,500	II	4.0"	1.75"	42"	STD	108
H51C100451070TP	5,500	II	4.0"	1.75"	42"	FTP	106
H51C100451220SD	5,500	II	4.0"	1.75"	48"	STD	117
H51C100451220TP	5,500	II	4.0"	1.75"	48"	FTP	115
H51C100451370SD	5,500	II	4.0"	1.75"	54"	STD	130
H51C100451370TP	5,500	II	4.0"	1.75"	54"	FTP	126
H51C100451520SD	5,500	II	4.0"	1.75"	60"	STD	143
H51C100451520TP	5,500	II	4.0"	1.75"	60"	FTP	139
H51C100451830SD	5,500	II	4.0"	1.75"	72"	STD	173
H51C122401070SD	5,500	II	5.0"	1.50"	42"	STD	128
H51C122401220SD	5,500	II	5.0"	1.50"	48"	STD	134
H51C122401220TP	5,500	II	5.0"	1.50"	48"	FTP	132
H51C122401370SD	5,500	II	5.0"	1.50"	54"	STD	152
H51C122451070SD	5,500	II	5.0"	1.75"	42"	STD	139
H51C122451220SD	5,500	II	5.0"	1.75"	48"	STD	150
H51C122451370SD	5,500	II	5.0"	1.75"	54"	STD	165
H51C122451520SD	5,500	II	5.0"	1.75"	60"	STD	176
H51C122451830SD	5,500	II	5.0"	1.75"	72"	STD	220

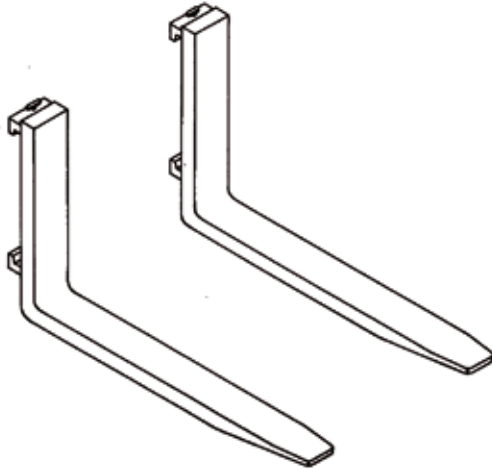
Notes:

- Taper Type:
 - STD = Standard Fork.
 - FTP = Tapered Fork.
- Warranty: 12 months from date of delivery to customers, for defective materials or workmanship. This warranty does not apply if such defect has been caused by alteration, improper use or operation.

Options:

- Different fork sections and lengths.
- Pin-type mounting.
- Forks for special applications.

Range: 8,200 - 10,000 Lbs.



Part Number	Capacity per pair Lbs. @ 24"	Mounting Class	Fork Section			Taper Type	Fork Weight Lbs.
			W	T	L		
H51E122451070SD	8,200	III	5.0"	1.75"	42"	STD	150
H51E122451220SD	8,200	III	5.0"	1.75"	48"	STD	163
H51E122451520SD	8,200	III	5.0"	1.75"	60"	STD	192
H51E122500910SD	10,000	III	5.0"	2.00"	36"	STD	151
H51E122501070SD	10,000	III	5.0"	2.00"	42"	STD	165
H51E122501070TP	10,000	III	5.0"	2.00"	42"	FTP	163
H51E122501220SD	10,000	III	5.0"	2.00"	48"	STD	179
H51E122501220TP	10,000	III	5.0"	2.00"	48"	FTP	176
H51E122501370SD	10,000	III	5.0"	2.00"	54"	STD	194
H51E122501520SD	10,000	III	5.0"	2.00"	60"	STD	212
H51E122501520TP	10,000	III	5.0"	2.00"	60"	FTP	196
H51E122501830SD	10,000	III	5.0"	2.00"	72"	STD	245
H51E122502130SD	10,000	III	5.0"	2.00"	84"	STD	289
H51E122502438SD	10,000	III	5.0"	2.00"	96"	STD	333
H51E150501070SD	10,000	III	6.0"	2.00"	42"	STD	194
H51E150501220SD	10,000	III	6.0"	2.00"	48"	STD	209
H51E150501220TP	10,000	III	6.0"	2.00"	48"	FTP	207
H51E150501370SD	10,000	III	6.0"	2.00"	54"	STD	229
H51E150501520SD	10,000	III	6.0"	2.00"	60"	STD	249
H51E150501830SD	10,000	III	6.0"	2.00"	72"	STD	304
H51E150502130SD	10,000	III	6.0"	2.00"	84"	STD	346
H51E150502438SD	10,000	III	6.0"	2.00"	96"	STD	381
H51E200401220TP	10,000	III	8.0"	1.50"	48"	FTP	201
H51E200401520TP	10,000	III	8.0"	1.50"	60"	FTP	225

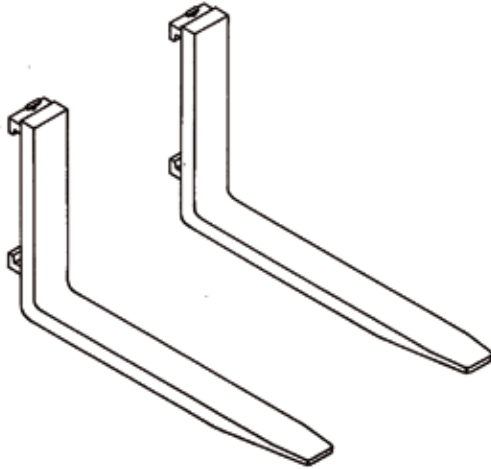
Notes:

- Taper Type:
 - STD = Standard Fork.
 - FTP = Tapered Fork.
- Warranty: 12 months from date of delivery to customers, for defective materials or workmanship. This warranty does not apply if such defect has been caused by alteration, improper use or operation.

Options:

- Different fork sections and lengths.
- Pin-type mounting.
- Forks for special applications.

Range: 12,600 - 17,500 Lbs.



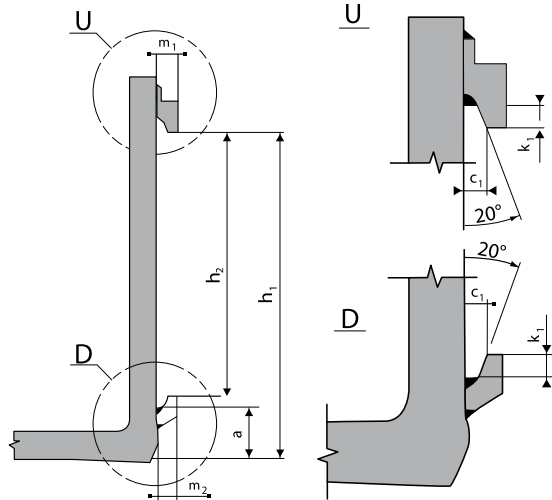
Part Number	Capacity per pair Lbs. @ 24"	Mounting Class	Fork Section			Taper Type	Fork Weight
			W	T	L		Lbs.
H51G150501220SD	12,600	IV	6.0"	2.00"	48"	STD	117
H51G150501370SD	12,600	IV	6.0"	2.00"	54"	STD	126
H51G150501520SD	12,600	IV	6.0"	2.00"	60"	STD	133
H51G150501830SD	12,600	IV	6.0"	2.00"	72"	STD	156
H51G150502130SD	12,600	IV	6.0"	2.00"	84"	STD	176
H51G150502438SD	12,600	IV	6.0"	2.00"	96"	STD	196
H51G150651220SD	17,500	IV	6.0"	2.50"	48"	STD	147
H51G150651370SD	17,500	IV	6.0"	2.50"	54"	STD	157
H51G150651520SD	17,500	IV	6.0"	2.50"	60"	STD	171
H51G150651830SD	17,500	IV	6.0"	2.50"	72"	STD	195
H51G150652130SD	17,500	IV	6.0"	2.50"	84"	STD	216
H51G150652438SD	17,500	IV	6.0"	2.50"	96"	STD	240
H51G180501220TP	15,200	IV	7.0"	2.00"	48"	FTP	118
H51G180501520TP	15,200	IV	7.0"	2.00"	60"	FTP	130
H51G200501220SD	16,800	IV	8.0"	2.00"	48"	STD	153
H51G200501830SD	16,800	IV	8.0"	2.00"	72"	STD	201
H51G200502438SD	16,800	IV	8.0"	2.00"	96"	STD	262
H51G250401220TP	13,400	IV	10.0"	1.50"	48"	FTP	130
H51G250401520TP	13,400	IV	10.0"	1.50"	60"	FTP	145

Notes:

- Taper Type:
 - STD = Standard Fork.
 - FTP = Tapered Fork.
- Warranty: 12 months from date of delivery to customers, for defective materials or workmanship. This warranty does not apply if such defect has been caused by alteration, improper use or operation.

Options:

- Different fork sections and lengths.
- Pin-type mounting.
- Forks for special applications.



FEM/ISO Mounting Standards

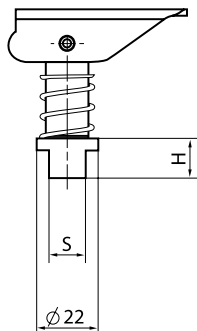
The FEM / ISO mounting is the most common way of connecting forks to the lift-truck.

According to the lift truck capacity, the ISO standards are divided into 5 classes, each of them having a „A“ and „B“ version. The difference between version „A“ and „B“ is the clearance from the lower hook to the floor. Measurements are defined by the International Standard ISO 2328.

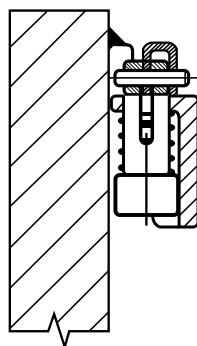
Main measurements are listed in the following chart:

Class	Truck Rated capacity	Rated load center distance in.	Fork arm type	a in.	c ₁ in. +0.04/ -0.00	h ₁ in. +0.12/ -0.12	h ₂ in.		m ₁ in. max.	m ₂ in. max.	k ₁ in. min.
	lb						in.	tol.			
1	0-1,999	24	A	3.00	0.65	15.50	12.05	+0.04/-0.00	1.10	1.03	0.55
			B	4.50		17.00					
2	2,000-5,500	24	A	3.00	0.65	18.50	15.04	+0.04/-0.00	1.22	1.14	0.55
			B	6.00		21.50					
3	5,501-10,000	24	A	3.00	0.87	22.36	18.78	+0.06/-0	1.57	1.50	0.67
			B	8.00		27.36					
4	10,001-17,500	24	A	5.00	1.03	29.25	23.54	+0.06/-0	1.85	1.78	0.79
			B	10.00		34.25					
5*	17,501-24,000	24	A	5.00	1.38	32.67	26.77	+0.06/-0	2.56	2.48	1.03
			B	10.12		37.80					

* Capacity ISO 5 are still often included in ISO 4.



Kit assembly



Kit fit on fork

Hook Pin Kits

Hook pin is a mandatory locking device which prevents the fork from sliding off the carriage.

It is supplied as a kit, including the following components:

- n. 1 pin
- n. 1 lever
- n. 1 spring pin
- n. 1 spring

Forks in service on forklift trucks

General

Fork correct dimensioning and conditions are essential for safe, cost-effective and damage-free pallet handling operations. Therefore, a regular fork inspection system should be put in place to ensure perfect operating conditions. Inspections, repairs or replacements shall be carried out as a pair.

Inspections

Forks in use shall be inspected at intervals of 12 months or less depending on possible severe application, multi-shift operation and fork conditions. Regular inspections should be carried out by trained personnel. In case of detected damage, failures, deformations etc. forks shall be withdrawn from service and not be returned to service unless satisfactorily repaired or rerated.

Cracks

Check visually inner heel and top and bottom hook areas to detect possible cracks. Apply non-destructive crack detection tests if necessary. If surface cracks are detected, forks should be withdrawn from service.

Straightness

Check the straightness of the upper face of the blade and the front face of the shank. If deviation exceeds 0,5% of blade length or shank height, fork shall be withdrawn from service.

Angle

Check the fork upper face of the blade to load face of the shank. If fork has a deviation greater than 3 degrees from original specifications, fork shall be withdrawn from service

Height difference in fork tips

Check a pair of forks mounted on the fork carrier to detect difference in tip heights. If difference in tip heights exceeds 3% of the blade length, the pair of forks shall be withdrawn from service.

Locking devices

Check the fork positioning locking to ensure their normal operation and wear conditions. If any fault is found, fork shall be withdrawn from service.

Marking

Forks shall be marked with the nominal capacity and load center – according to ISO 2330. If marking is not clearly legible, fork shall be withdrawn from service.

Hooks

Check the fork hooks for possible wear, damage and cracks. If clearance between fork and fork carrier is visually excessive, forks shall be withdrawn from service.

Wear

Forks must be checked regularly to ensure the heel thickness is not less than 10% of the original thickness as per ISO 5057. If the fork thickness is less than 10%, the fork must be replaced or rerated.

Repairs and tests

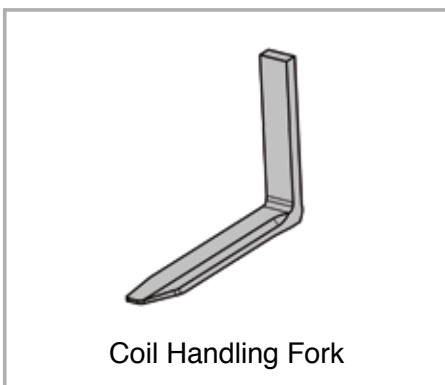
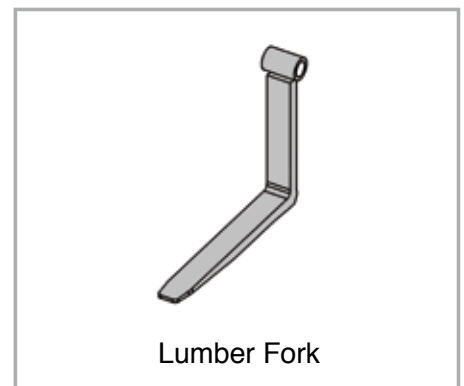
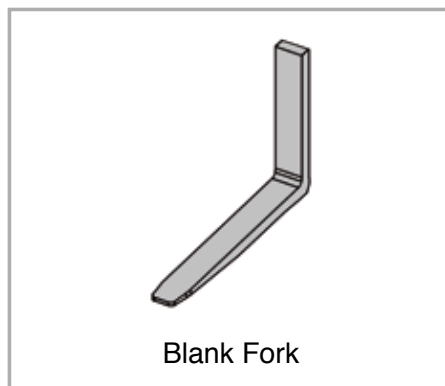
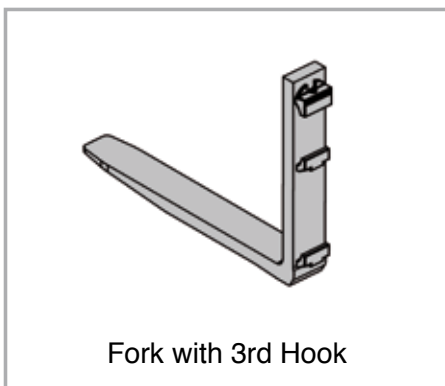
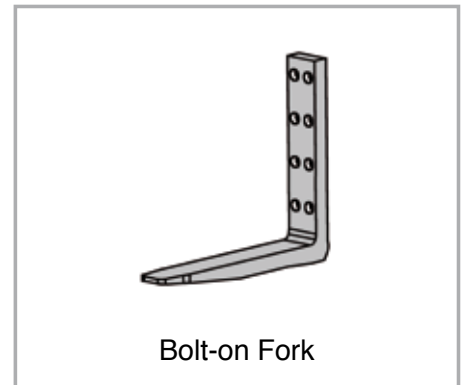
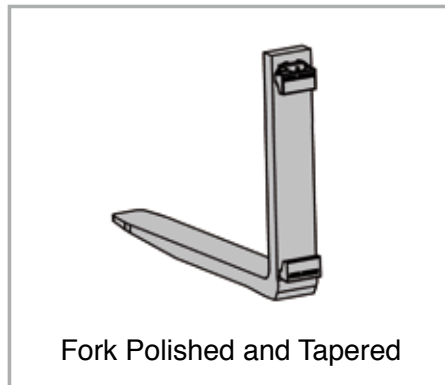
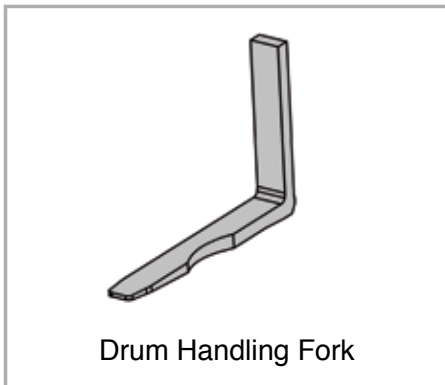
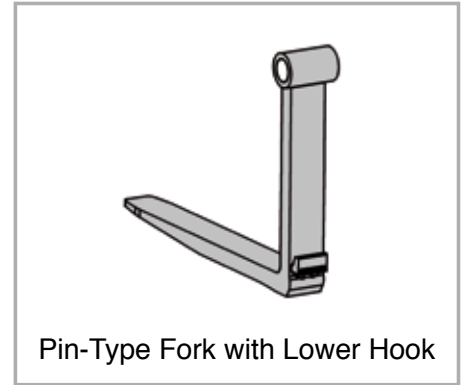
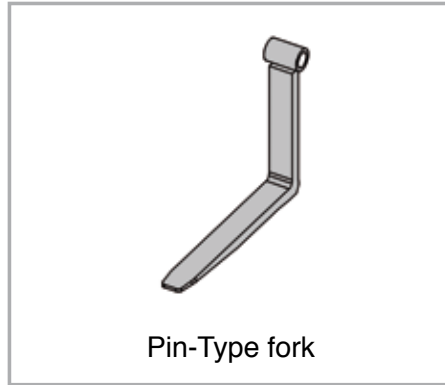
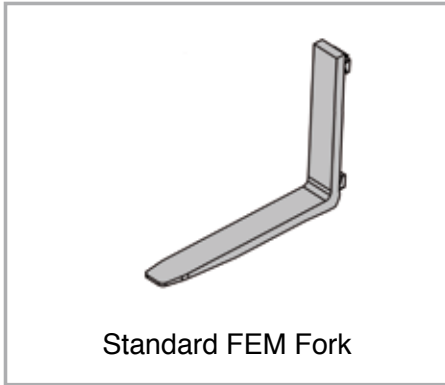
Repairs should be decided or carried out by authorized, expert personnel only, in accordance with recommendations of fork manufacturer. Do not repair surface cracks or wear by welding.

In case of repairs requiring fork re-setting, forks should be subjected to an appropriate heat-treatment.

Fork subjected to repairs different from repairs or replacements of the positioning lock and/or marking, can only return to service after having passed a yield test as described in ISO 2330.

A wide range of ITA/ISO mounting forks with different tip and taper shapes, special application forks used in a variety of industries and handling situations:

Bolzoni Auramo has the right fork for any application ...



...and even more!

For any questions or for further information, please contact Bolzoni Auramo.



**Forks are produced in the dedicated
state-of-the-art manufacturing plants
in Piacenza, Italy and
Longhua Town, Hebei, P.R. China.**



www.bolzonigroup.com



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