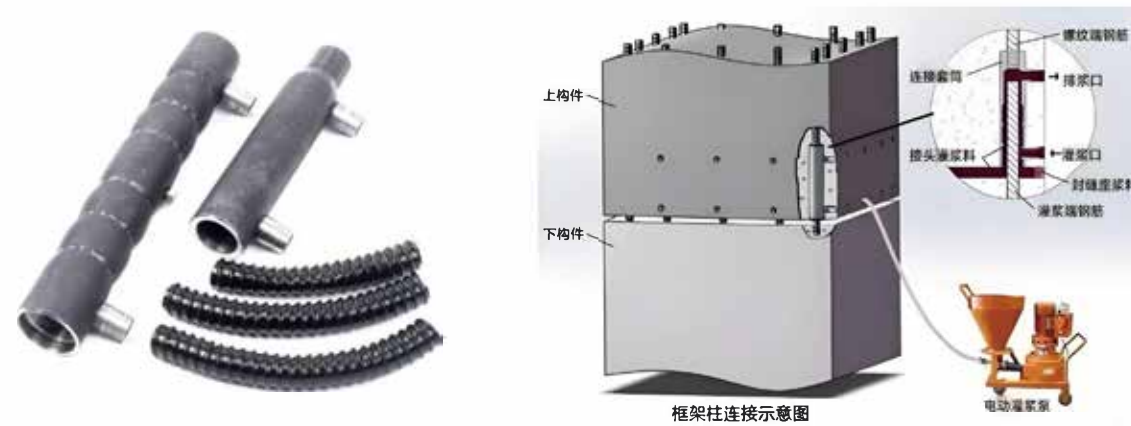


灌浆套筒 DUCTILE IRON GROUT SLEEVE

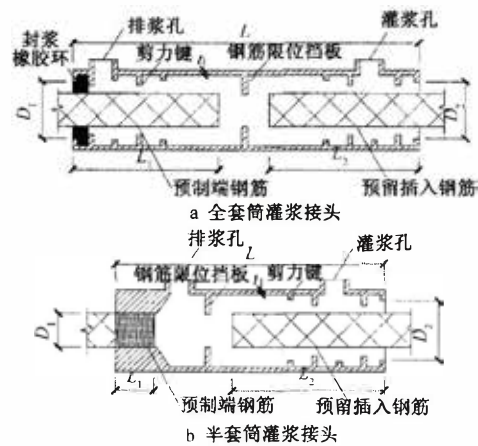


框架柱连接示意图

电动灌浆泵

The grouting sleeve is an innovative method for connecting steel bars, applicable in reinforced concrete structures, steel structures, bridge engineering, and various other fields. Its working principle involves using a specially processed sleeve that combines grouting material with the steel bar. During the connection process, a fast-hardening, non-shrink grouting material is injected, allowing the steel bar and sleeve to bond through the adhesive and mechanical interlocking properties of the materials. This connection method offers several advantages, including reliable performance, broad applicability, and ease of installation.

The principle of grouting sleeve connections primarily relies on high-strength, micro-expansion structural mortar that is filled between the steel bar and the sleeve. The confinement effect of the sleeve on the mortar, combined with the mortar's micro-expansion characteristics, enhances the bond between the steel bar and the sleeve, effectively transmitting the stress from the steel bar. This connection method does not require overlap or fusion; instead, the steel bar is inserted into the sleeve through openings at both ends to complete the connection. Grouting sleeve connections are categorized into two types based on different grouting methods: full grouting joints and semi-grouting joints.

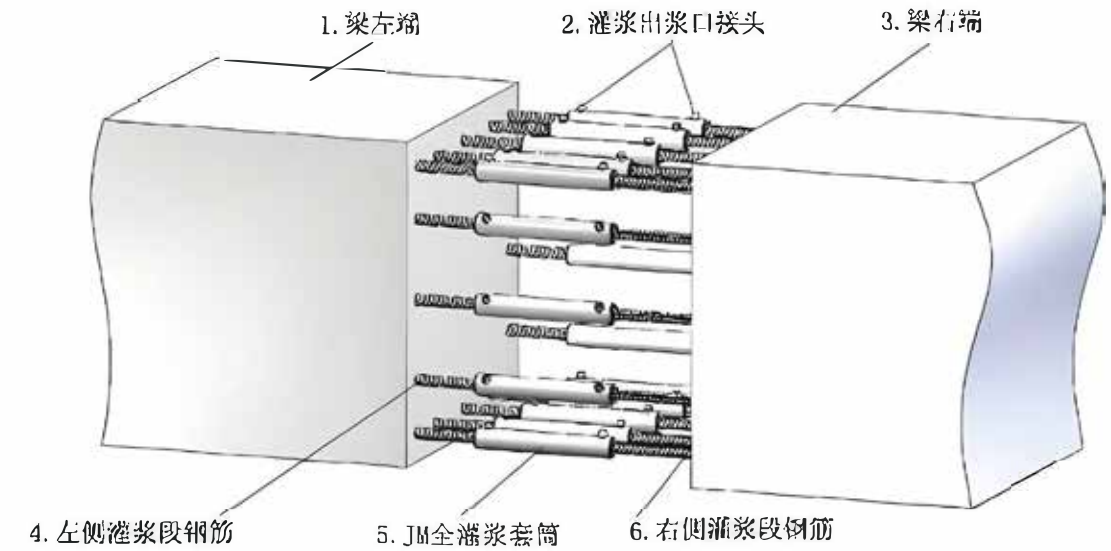


Full grouting sleeve



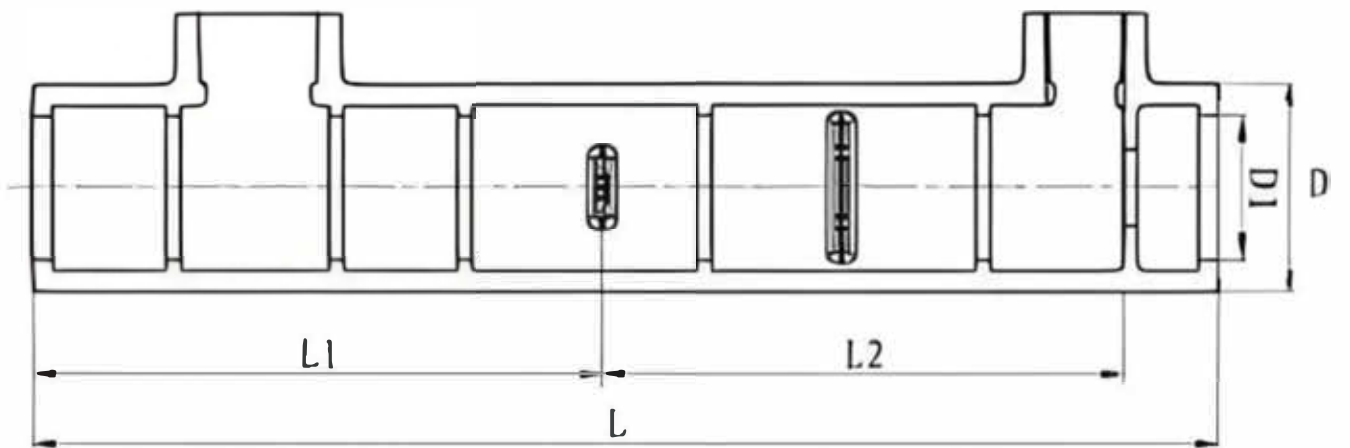
Half grouting sleeve

The full grouting sleeve is connected to the steel bar through grouting at both ends, while the semi-grouting sleeve is connected to the steel bar via grouting at one end and a mechanical connection at the other end. This connection method is appropriate for the longitudinal reinforcement of vertical structural members, such as prefabricated shear wall components and prefabricated frame columns.



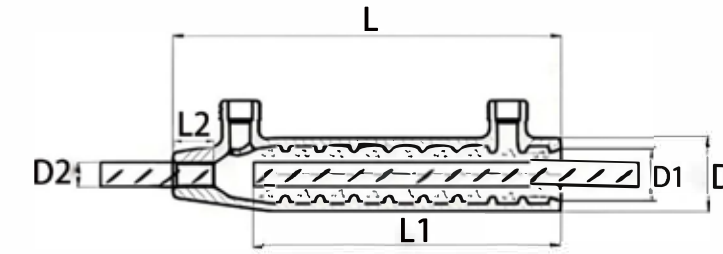
The development and application of grouting sleeve connection technology has made up for the shortcomings of traditional steel structure connection methods, such as welding and bolt connections, and provided more choices and conveniences for engineering practice.

The fully grouting joint can match the steel bar diameters: $\Phi 12\text{mm}$, $\Phi 14\text{mm}$, $\Phi 16\text{mm}$, $\Phi 18\text{mm}$, $\Phi 20\text{mm}$, $\Phi 22\text{mm}$, $\Phi 25\text{mm}$, $\Phi 28\text{mm}$, $\Phi 32\text{mm}$, $\Phi 36\text{mm}$, $\Phi 40\text{mm}$.



Model	D(mm)	D1(mm)	L(mm)	Insertion depth of reinforcement at assembly end L1(mm)	Factory steel bar insertion depth L2(mm)
QCMΦ 12F	44	36	250	96 ~ 5120	116 ~ 5130
QCMΦ 14F	46	37.8	280	112 ~ 5135	132 ~ 5145
QCMΦ 16F	48	39.6	310	128 ~ 5150	148 ~ 5160
QCMΦ 18F	50	41.6	350	144 ~ 5170	164 ~ 5180
QCMΦ 20F	52	43.2	370	160 ~ 5180	180 ~ 5190
QCMΦ 22F	54	44	410	176 ~ 5200	196 ~ 5210
QCMΦ 25F	58	46	450	200 ~ 5220	220 ~ 5230
QCMΦ 28F	62	48 ~ 53.4	505	224 ~ 5250	248 ~ 5255
QCMΦ 32F	66	50 ~ 556	570	256 ~ 5280	276 ~ 5290
QCMΦ 36F	75	63	650	320	330
QCMΦ 40F	95	81	810	400	400

Semi-grouted joints can match the diameter of the steel bars Φ 12mm、Φ 14mm、Φ 16mm、Φ 18mm、Φ 20mm、Φ 22mm、Φ 25mm、Φ 28mm、Φ 32mm。



Model	D(mm)	D1(mm)	L(mm)	Rebar insertion depth L1(mm)	Rebar connection thread length L2(mm)
QCMΦ 12H	35.6	28	144	96 ~ 116	19.5
QCMΦ 14H	38	30	161	112 ~ 132	20
QCMΦ 16H	39.8	31.4	177	128 ~ 148	22
QCMΦ 18H	41.8	33.4	196	144 ~ 164	25
QCMΦ 20H	43.6	35.2	215	160 ~ 174	27
QCMΦ 22H	47.5	37.5	235	176 ~ 196	30
QCMΦ 25H	52.4	40.4	265	200 ~ 220	35
QCMΦ 28H	60.5	48.5	293	224 ~ 244	39.5
QCMΦ 32H	63	48 ~ 53	331	256 ~ 276	45.5

Application

