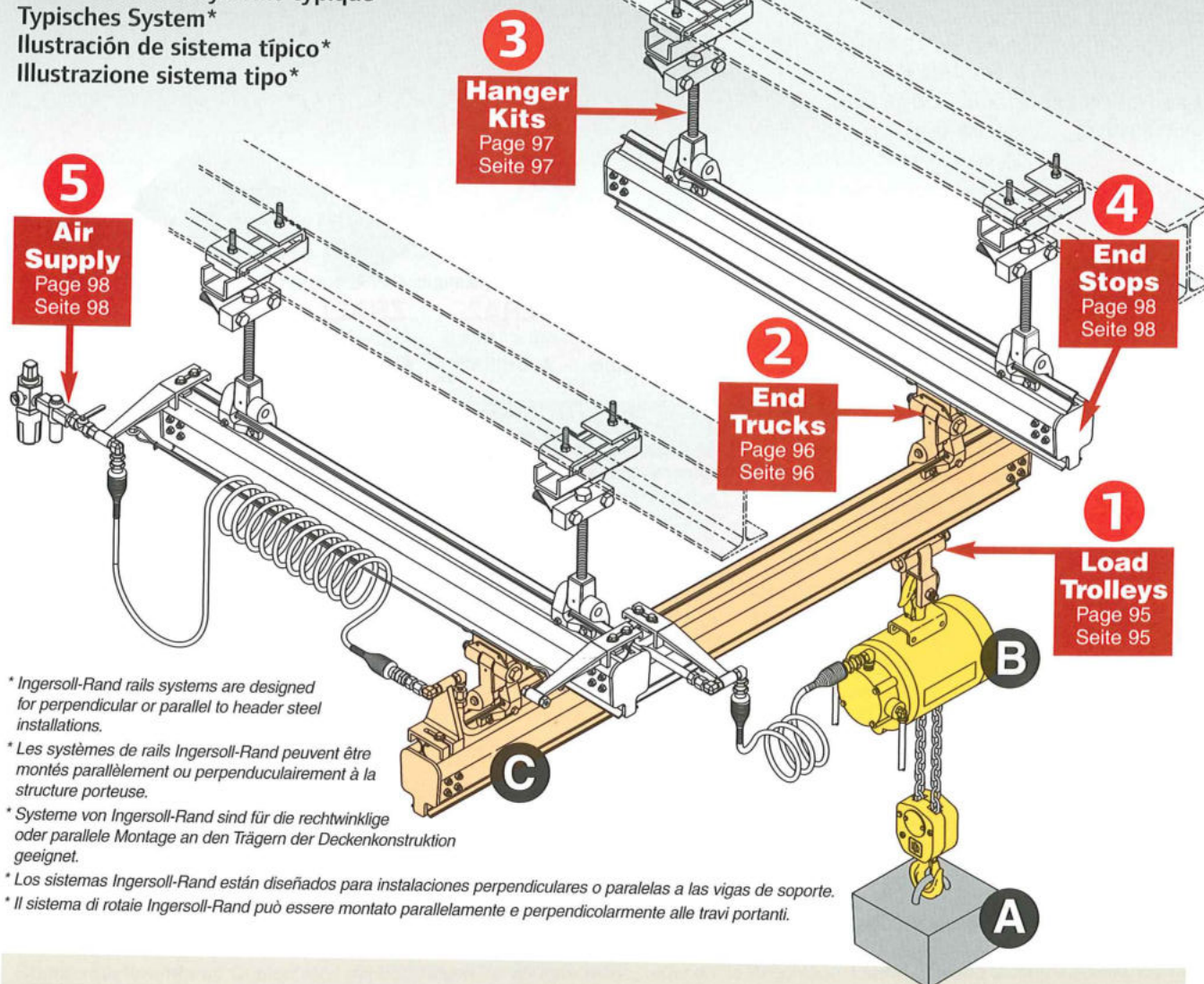


Typical system illustration*
Illustration d'un système typique*
Typisches System*
Ilustración de sistema típico*
Illustrazione sistema tipo*



* Ingersoll-Rand rails systems are designed for perpendicular or parallel to header steel installations.

* Les systèmes de rails Ingersoll-Rand peuvent être montés parallèlement ou perpendiculairement à la structure porteuse.

* Systeme von Ingersoll-Rand sind für die rechtwinklige oder parallele Montage an den Trägern der Deckenkonstruktion geeignet.

* Los sistemas Ingersoll-Rand están diseñados para instalaciones perpendiculares o paralelas a las vigas de soporte.

* Il sistema di rotaie Ingersoll-Rand può essere montato parallelamente e perpendicolarmente alle travi portanti.

WARNING: To correctly calculate the load capacity of each component described in the next pages, please apply the following rule of calculation: $A + B + (C:2)$. **A** = Load to be moved, **B** = Balancer or hoist weight, **C** = Weight of the lower rails and trolleys divided by 2.

ATTENTION: Pour calculer la capacité de charge requise pour chacun des éléments présentés dans les pages suivantes, appliquer la règle de calcul $A + B + (C:2)$. **A** = Charge à déplacer, **B** = poids de l'équilibre ou du palan, **C** = poids des rails inférieurs et chariots divisé par 2.

ACHTUNG: Für eine korrekte Kalkulation der max. Traglast der Bauteile auf den folgenden Seiten, verwenden Sie bitte folgende Berechnungsregel: $A + B + (C:2)$. **A** = Bewegte Last (Werkstück), **B** = Gewicht Hebezeug, **C** = Gewicht der unteren Schienen inkl. Trolleys geteilt durch 2.

ADVERTENCIA: para calcular correctamente la capacidad de carga de cada componente descrito en las siguientes páginas, por favor aplicar la siguiente regla de cálculo: $A + B + (C:2)$. **A** = carga a mover, **B** = peso equilibrador ó polipasto, **C** = peso de los railes inferiores y carros dividido por 2.

ATTENZIONE: Per calcolare correttamente il valore del carico per ogni parte descritta nella pagina seguente, vogliate considerare la seguente formula $A + B + (C:2)$. **A** = Carico da movimentare, **B** = peso del bilanciatore o del paranco, **C** = il peso più basso delle rail e carrelli diviso per 2.



Rail systems
Systèmes de rails
Laufschienensysteme
Sistemas de rieles
Sistemi di rotaie

Span (m) / Load capacity (kg)
 Portée (m) / Capacité de charge (kg)
 Spannweite (m) / Traglast (kg)
 Luz (m) / Capacidad de carga (kg)
 Portata (m) / Capacità (kg)



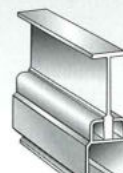
ZRAT
 (1 m = 3.0 kg)
 ALUMINIUM



ZRA1
 (1m = 5.5 kg)
 ALUMINIUM



ZRA2
 (1m = 11.3 kg)
 ALUMINIUM



ZRA2T
 (1m = 22.3)
 ALUMINIUM



ZRS2
 (1m = 11.9 kg)
 STEEL

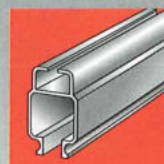


ZRS3
 (1m = 13.2 kg)
 STEEL

Span • Portée • Spannweite • Luz • Portata	Load capacity (kg) • Capacité de charge (kg) • Traglast (kg) • Capacidad de carga • Capacità (kg)					
Deflexion 1/450 • Déflexion 1/450 • Biegung 1/450 • Deflexión 1/450 • Flessione 1/450						
1 m	372	734	1361	1361	1293	1293
1,5 m	311	734	1361	1361	1293	1293
2 m	175	595	1361	1361	1293	1293
2,5 m	112	381	1361	1361	1219	1293
3 m	78	264	1011	1361	847	1293
3,5 m	57	194	742	1361	622	1074
4 m	44	149	568	1361	476	823
4,5 m	35	118	449	1361	376	650
5 m	28	95	364	1361	305	526
5,5 m	23	79	301	1361	252	435
6 m	19	66	253	1361	212	366
6,5 m	–	56	215	1361	180	312
7 m	–	49	186	1206	156	279
7,5 m	–	42	162	1051	–	–
8 m	–	37	142	923	–	–
8,5 m	–	33	126	818	–	–
9 m	–	29	112	–	–	–

Deflexion 1/500 (1) • Déflexion 1/500 (1) • Biegung 1/500 (1) • Deflexión 1/500 (1) • Flessione 1/500 (1)						
1 m	372	734	1361	1361	1293	1293
1,5 m	280	734	1361	1361	1293	1293
2 m	157	536	1361	1361	1293	1293
2,5 m	101	343	1310	1361	1097	1293
3 m	70	238	909	1361	762	1293
3,5 m	51	175	668	1361	560	967
4 m	39	134	512	1361	429	740
4,5 m	31	106	404	1361	339	585
5 m	25	86	327	1361	274	474
5,5 m	21	71	271	1361	227	392
6 m	17	60	227	1361	190	329
6,5 m	–	51	194	1259	162	280
7 m	–	44	167	1085	140	242
7,5 m	–	38	146	946	–	–
8 m	–	33	128	831	–	–
8,5 m	–	30	113	736	–	–
9 m	–	26	101	–	–	–

(1) UK standard – Norme britannique – Englische Norm – Norma inglesa – Norma inglese.



Rails ordering menu
Menu de commande des rails
Schienen-Bestellenmenü
Codificación de los carriles
Informazioni per l'ordinazione di rotaie

Rail for RUNWAY per unit — Rail pour VOIE DE ROULEMENT par unité — Schiene für LAUFBAHN durch Einheit — Carril para VIA DE RODADURA por unidad — Rail per VIA DI CORSA singola

Standard delivery package: Individually packed runway rail drilled for end stop and redundant end stop.

Conditionnement: Rail de roulement avec perçages pour butées de fin de rail et butées redondantes, conditionné individuellement.

Standardlieferumfang: gebohrte Laufschiene für Endanschläge und redundante Endanschläge, einzeln verpackt.

Se entrega de serie: la viga de rodadura con los agujeros hechos para los topes final y redundante.

Pacchetto standard fornito: Pacchetto individuale di via di corsa forato per gli stop di fine corsa e gli stop di fine corsa respingenti.

Example • Exemple • Beispiel • Ejemplo • Esempio : **30000 -4550 -2**

Rail model Type de rail Schienen-Typ Tipo del carril Tipo rotaia	Overall length Longueur hors tout Gesamtlänge Longitud total Lunghezza totale	Splice lugs ⁽¹⁾ Oreilles de liaison ⁽¹⁾ Verbindungslaschen ⁽¹⁾ Conexión entre rieles ⁽¹⁾ Boccole di collegamento ⁽¹⁾
31000 = ZRAT (6 m max.)	-XXXX = Length in mm	-2 = Welded splice lug for rail connection
30200 = ZRA1 (9 m max. - Longer lengths available on request)	-XXXX = Longueur en mm	-2 = Oreilles de liaison des rails soudées
30000 = ZRA2 (9 m max. - Longer lengths available on request)	-XXXX = Länge in mm	-2 = Geschweißte Verbindungslasche für Laufschienen
30500 = ZRS2 (7 m max.)	-XXXX = Longitud en mm.	-2 = Uniones para la conexión entre rieles
30550 = ZRS3 (7 m max.)	-XXXX = Lunghezza in mm	-2 = Boccole di collegamento tra rotaie

⁽¹⁾ No splice lug for ZRAT — Pas d'oreilles de liaison sur rails ZRAT — Keine Verbindungslasche für ZRAT — No son necesarias las uniones entre perfiles ZRAT — No boccole di collegamento per ZRAT.

Rail for BRIDGE per unit — Rail pour POUTRE MOBILE par unité — Schiene für BRÜCKE durch Einheit — Carril para VIGA PUENTE por unidad — Rail per via di corsa su PONTE MOBILE

Standard delivery package: Individually packed bridge rail drilled for end stop, redundant end stop, end trucks and safety cables.

Delivered with two end stops and two safety cables.

Conditionnement: Rail poutre mobile avec perçages pour butées de fin de rail, butées redondantes, chariots support de poutre et câbles de sécurité — Conditionné individuellement avec 2 butées de fin de rail et 2 câbles de sécurité.

Standardlieferumfang: Querschienen mit Bohrungen für Endanschläge, redundante Anschläge, Laufwagen und Sicherheitsseile. Einzeln verpackt mit 2 Endanschläge und 2 Sicherheitsseile.

Se entrega de serie: la viga puente con los agujeros hechos para los topes final y redundante, para los carros del puente y para los cables de seguridad. Se incluyen de serie dos topes finales y dos cables de seguridad.

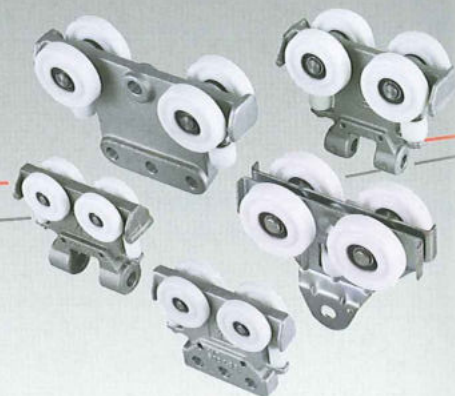
Pacchetto standard fornito: Pacchetto individuale di via di corsa per ponte mobile forato per gli stop di fine corsa, gli stop di fine corsa respingenti, i carrelli per il ponte mobile e i cavi di sicurezza. Fornito con 2 stop di fine corsa e 2 cavi di sicurezza.

Example • Exemple • Beispiel • Ejemplo • Esempio : **ZRA2 -3500 -4000 -R**

Rail model Type de rail Schienen-Typ Tipo del carril Tipo rotaia	Span Portée Spannweite Luz Corsa utile	Overall length Longueur hors tout Gesamtlänge Longitud total Lunghezza totale	Option Option Option Opción Opzione
ZRAT (6 m max.)	Span in mm	Length in mm (standard = span + 500 mm)	-R = Redundant end stops
ZRA1 (9 m max.)	Portée en mm	Longueur en mm (standard = portée + 500 mm)	-R = Butées redondantes
ZRA2 (9 m max.)	Spannweite in mm	Länge in mm (Standard = Spannweite + 500 mm)	-R = Redundante Anschläge
ZRA2T (9 m max.)	Luz en mm.	Longitud en mm. (estándar = Luz + 500 mm.)	-R = Topes finales redundantes
ZRS2 (7 m max.)	Corsa utile in mm	Lunghezza in mm (Standard = corsa + 500 mm)	-R = Fine corsa respingente
ZRS3 (7 m max.)			



Rail systems
Systèmes de rails
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Sistemas de rieles
Sistemi di rotaie



1 Load trolleys • Chariots de translation sous poutres mobiles • Laufwagen für Profilschienen • Carro de traslación • Carrelli di traslazione



For use with:
 Pour utilisation avec:
 In Verbindung mit:
 Para uso con:
 Per utilizzo con:



Simple trolley Chariot simple Einfacher Laufwagen Carro sencillo Carrello semplice		SWL 227 kg Ref. 31057	SWL 227 kg Ref. 30281	SWL 454 kg Ref. 30172	SWL 454 kg Ref. 30821	SWL 454 kg Ref. 30821
Load trolley (with suspension axle) Chariot avec axe de suspension Lastenlaufwagen Carro de carga Carrello di sospensione (con asse di sosp.)		—	SWL 227 kg Ref. 30304	SWL 454 kg Ref. 30923	SWL 454 kg Ref. 30842	SWL 454 kg Ref. 30842
Hoist trolley Chariot porte-palan Laufwagen für Hebezeuge Carro de polipasto Carrello porta paranco		SWL 227 kg Ref. 31313	SWL 227 kg Ref. 30313	SWL 454 kg Ref. 30314	SWL 454 kg Ref. 30315	SWL 454 kg Ref. 30315
Dual hoist trolley Chariots jumelés porte-palan Doppelter Laufwagen für Hebezeuge Carro doble de polipasto Doppio carrello porta paranco		—	SWL 454 kg Ref. 30303	SWL 908 kg Ref. 30906	SWL 908 kg Ref. 30830	SWL 908 kg Ref. 30830
3 hole trolley Chariot large 3-Loch-Laufwagen Carro de 3 agujeros Carrello largo		SWL 227 kg Ref. 31056	SWL 227 kg Ref. 30279	SWL 454 kg Ref. 30015	SWL 454 kg Ref. 30510	SWL 454 kg Ref. 30510
Reaction trolley (for cantilevered loads) Chariot 3 roues (pour portes-à-faux) Reaktionslaufwagen (für vortragende Lasten) Carro de reacción (para cargas descentradas) Carrello di reazione (per travi a sbalzo)		—	—	SWL 454 kg Ref. 30016	SWL 454 kg Ref. 30511	—
Bumper trolley Chariot de butée Anschlaglaufwagen Carro paragolpes Carrello respingente	 Ref. XXXXX-1200, L = 305 mm Ref. XXXXX-2400, L = 610 mm Ref. XXXXX-3600, L = 915 mm Ref. XXXXX-4800, L = 1220 mm	—	30307-1200 30307-2400 30307-3600 30307-4800	30148-1200 30148-2400 30148-3600 30148-4800	30148-1200 30148-2400 30148-3600 30148-4800	30148-1200 30148-2400 30148-3600 30148-4800

Curved rails for ZRA1 monorail installations
Rails courbes pour installations monorails ZRA1
Gebogene Schienen für ZRA1 Monoschiene-Installationen
Railes curvos para instalaciones monorail ZRA1
Travi curve per installazione monorotaie ZRA1



Ref.		
914 mm	15°	30254
914 mm	30°	30255
914 mm	45°	30256
914 mm	60°	30257
914 mm	90°	30258

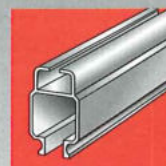
Note: The ZRA1 monorails use the same components as the ZRA1 bridge cranes (hanger kits, load trolleys, etc), except dual hoist trolley, ref. 30303.

Nota: Les configurations monorails ZRA1 utilisent les mêmes composants que les poutres mobiles ZRA1 (suspensions, chariots de charge, etc), sauf chariot jumelé porte-palan, réf. 30303.

Anmerkung: Mit ZRA1 Monoschiene werden die gleichen Komponenten wie mit ZRA1-Brücken verwendet (Aufhängungen, Laufwagen etc.) außer Doppelter Laufwagen für Hebezeuge, Ref. 30303.

Nota: los monorrailes ZRA1 usan los mismos componentes que la viga puente ZRA1 (Kit de suspensión de carros de carga, etc) excepto el carro doble de polipasto, ref. 30303.

Nota: La configurazione monorotaie ZRA1 utilizza gli stessi componenti dei carri ponti ZRA1 (sospensioni, carrelli di carico, etc...) ad eccezione del doppio carrello per paranco, rif. 30303.



2

End trucks • Chariots supports de poutres mobiles
Brückenfahrwagen • Suspensiones del puente
Sospensioni per ponte mobile



ZRAT

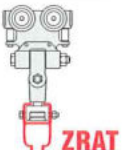
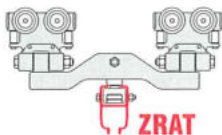
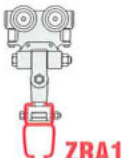
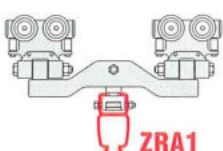
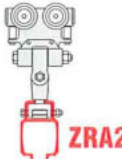
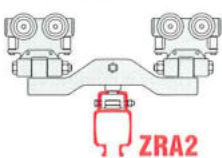
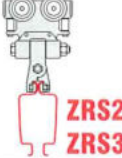
ZRA1

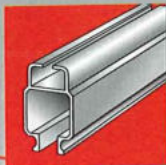
ZRA2

ZRS2 & 3

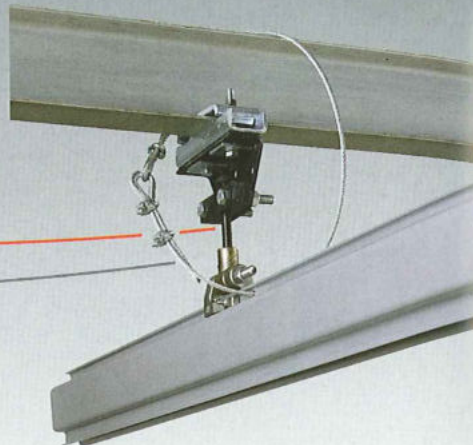
KBK1

KBK2
& KBK2L

 ZRAT	SWL 227 kg Ref. 31059	SWL 227 kg Ref. 30283	SWL 454 kg Ref. 30909	SWL 454 kg Ref. 30822	SWL 227 kg Ref. 30283	SWL 454 kg Ref. 30639
 ZRAT	SWL 454 kg Ref. 31060	SWL 454 kg Ref. 30286	SWL 908 kg Ref. 30911	SWL 908 kg Ref. 30826	SWL 454 kg Ref. 30286	SWL 908 kg Ref. 30846
 ZRA1	SWL 227 kg Ref. 31059	SWL 227 kg Ref. 30283	SWL 454 kg Ref. 30909	SWL 454 kg Ref. 30822	SWL 227 kg Ref. 30283	SWL 454 kg Ref. 30639
 ZRA1	SWL 454 kg Ref. 31060	SWL 454 kg Ref. 30286	SWL 908 kg Ref. 30911	SWL 908 kg Ref. 30826	SWL 454 kg Ref. 30286	SWL 908 kg Ref. 30846
 ZRA2	—	SWL 227 kg Ref. 30295	SWL 454 kg Ref. 30176	SWL 454 kg Ref. 30824	SWL 227 kg Ref. 30295	SWL 454 kg Ref. 30927
 ZRA2	—	SWL 454 kg Ref. 30272	SWL 908 kg Ref. 30177	SWL 908 kg Ref. 30828	SWL 454 kg Ref. 30272	SWL 908 kg Ref. 30643
 ZRS2 ZRS3	—	SWL 227 kg Ref. 30320	SWL 454 kg Ref. 30913	SWL 454 kg Ref. 30597	SWL 227 kg Ref. 30320	SWL 454 kg Ref. 30563
 ZRS2 ZRS3	—	SWL 454 kg Ref. 30298	SWL 908 kg Ref. 30915	SWL 908 kg Ref. 30599	SWL 454 kg Ref. 30298	—



Rail systems
Systèmes de rails
Laufschienensysteme
Sistemas de rieles
Sistemi di rotaie



3

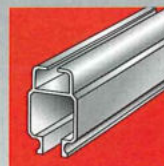
Hanger kits • Suspensions sous structure IPN, IPE, etc •
Aufhängegesätze • Soportes de suspensión • Kits di sospensione su travi



For use with:
 Pour utilisation avec:
 In Verbindung mit:
 Para uso con:
 Per utilizzo con:



ADJUSTABLE (± 22 mm) ADJUSTABLE (± 22 mm) EINSTELLBAR (± 22 mm) AJUSTABLE (± 22 mm) REGOLABILE (± 22 mm)		 63 → 127 mm	H = 287 mm 30287-006	H = 287 mm 30287-006	H = 295 mm 30195-006	H = 273 mm 30814-006	H = 273 mm 30814-006
		 63 → 127 mm	H = 439 mm 30287-012	H = 439 mm 30287-012	H = 447 mm 30195-012	H = 425 mm 30814-012	H = 425 mm 30814-012
		 127 → 254 mm	H = 287 mm 30288-006	H = 287 mm 30288-006	H = 295 mm 30196-006	H = 273 mm 30815-006	H = 273 mm 30815-006
		 127 → 254 mm	H = 439 mm 30288-012	H = 439 mm 30288-012	H = 447 mm 30196-012	H = 425 mm 30815-012	H = 425 mm 30815-012
SHORT COURTE KURZ CORTO CORTO		 63 → 127 mm	H = 156 mm 30300	H = 156 mm 30300	H = 164 mm 30921	H = 142 mm 30840	H = 142 mm 30840
		 127 → 254 mm	H = 156 mm 30301	H = 156 mm 30301	H = 164 mm 30922	H = 142 mm 30841	H = 142 mm 30841
PARALLEL BEAM FER PORTEUR PARALLELE PARALLEL ZUM TRÄGER VIGA PARALELA TRAVE PARALLELA		 63 → 127 mm	H = 292 mm 30290	H = 292 mm 30290	H = 301 mm 30199	H = 279 mm 30817	H = 279 mm 30817
		 127 → 254 mm	H = 292 mm 30291	H = 292 mm 30291	H = 301 mm 30900	H = 279 mm 30818	H = 279 mm 30818
		Block mount	H = 244 mm 30289	H = 244 mm 30289	H = 253 mm 30198	H = 231 mm 30816	H = 231 mm 30816
PERPENDICULAR BEAM FER PORTEUR PERPENDICULAIRE RECHTWINKLIG ZUM TRÄGER VIGA PERPENDICULAR TRAVE PERPENDICOLARE		 63 → 127 mm	H = 292 mm 30292	H = 292 mm 30292	H = 301 mm 30901	H = 279 mm 30819	H = 279 mm 30819
		 63 → 127 mm	H = 292 mm 30293	H = 292 mm 30293	H = 301 mm 30902	H = 279 mm 30820	H = 279 mm 30820
		Block mount	H = 244 mm 30285	H = 244 mm 30285	H = 253 mm 30193	H = 231 mm 30813	H = 231 mm 30813
RIGID RIGIDE STARR RIGIDA RIGIDO		Rigid mount	30227	30227	30052		

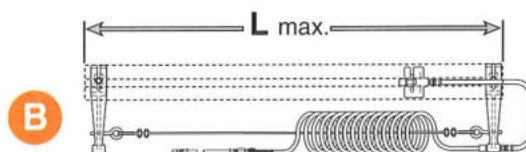
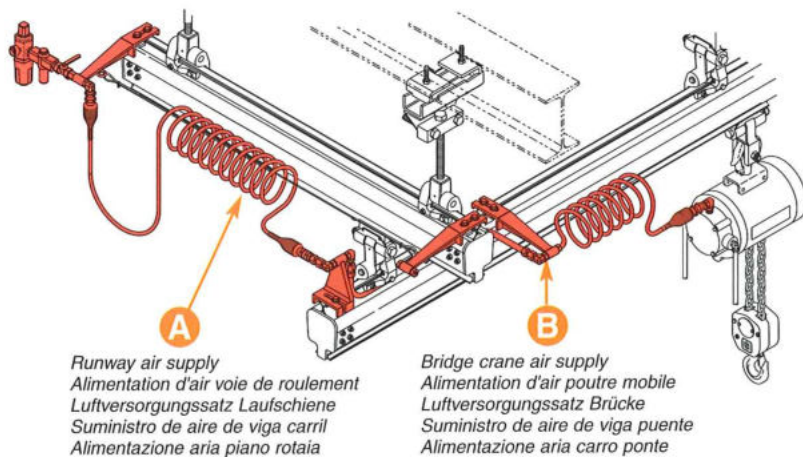


4 End stops and splice bolt kit
Butées et raccords de rails
Endanschläge und Verbindungssätze
Tope final y uniones
Fine corsa e raccordi per rotaie

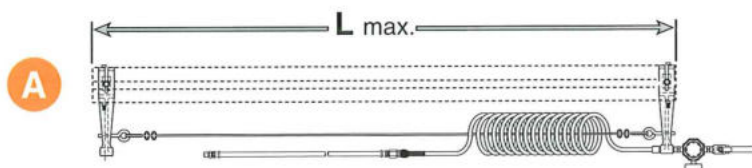
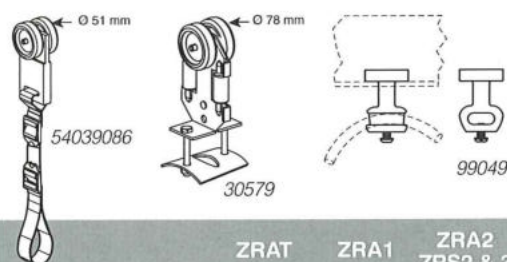


End stop Butée de fin de rail Endanschlag Tope final Fine corsa per rotaie		Ref. 31022	Ref. 30275	Ref. 30183	Ref. 30804	Ref. 30808
Redundant Butée additionnelle (redondante) Zusätzlicher Anschlag Redundante Respingente		Ref. 31024	Ref. 30277	Ref. 30185	Ref. 30806	Ref. 30810
Adjustable end stop Butée réglable Einstellbarer Anschlag Tope final ajustable Fine corsa e respingente regolabile		Ref. 30738	Ref. 30738	Ref. 30733	Ref. 30733	Ref. 30733
Splice bolt kit Kit de raccordement Verbindungssatz Uniones Kit di raccordo		Ref. 31020	Ref. 30231	Ref. 30057	Ref. 30515	Ref. 30515

5 Air supply
Alimentations d'air
Luftversorgungssätze
Suministro de aire
Alimentazione aria



Ø 3/8"	Ref.	Ø 1/2"	Ref.
L = 9 m	ZHS90025	L = 9 m	ZHS90026



Ø 3/8"	Ref.	Ø 1/2"	Ref.
L = 15 m	90000-1	L = 15 m	90001-1
L = 22.5 m	90000-2	L = 22.5 m	90001-2
L = 30 m	90000-3	L = 30 m	90001-3
L = 37.5 m	90000-4	L = 37.5 m	90001-4
L = 45 m	90000-5	L = 45 m	90001-5

ELECTRIC

	ZRAT	ZRA1	ZRA2 ZRS2 & 3
Festoon trolley Chariot porte-guirlande Girlandenwagen Carro portamangueras Carrelli portacavo	—	54039086	54039078

	ZRAT	ZRA1	ZRA2 ZRS2 & 3
Slider Glisseur porte-guirlande Girlandengleiter Deslizador Cursore	99048	99048	99049

PNEUMATIC & ELECTRIC

	ZRAT	ZRA1	ZRA2 ZRS2 & 3
Festoon trolley Chariot porte-guirlande Girlandenwagen Carro portamangueras Carrelli portacavo	31005 + 31011	30579	30581