

Product Catalogue 2022

Contents ■

5



Axles

33



Suspensions

49



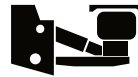
Axle & Suspension Sets

57



Bogies

65



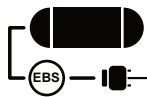
Vehicle Conversions

75



Engineering Services

77



Braking Systems

81

VALX

Valx Commercial Axles

91



Trailer Components

93



Spare Parts

103



Technical Support & Forms

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

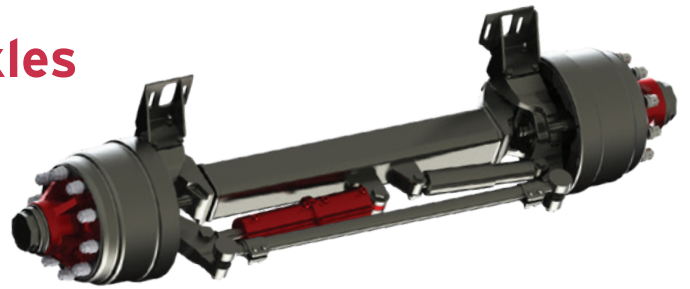
NI

T. +44 (0) 2890 740 055

What's New in this Catalogue

Full range of Heavy Duty Axles

pages: 7, 9, 11, 14, 15, 16, 22



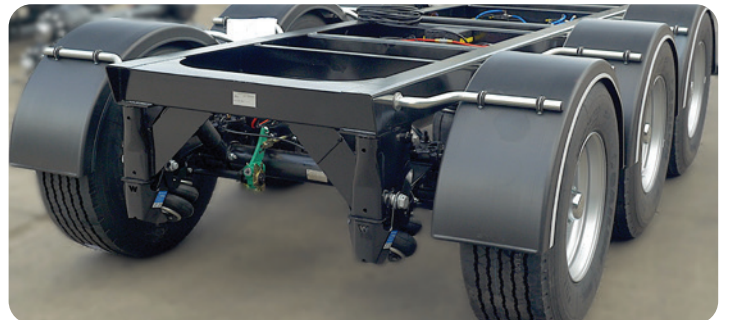
Full range of Heavy Duty Suspensions

pages: 38, 40, 46, 47



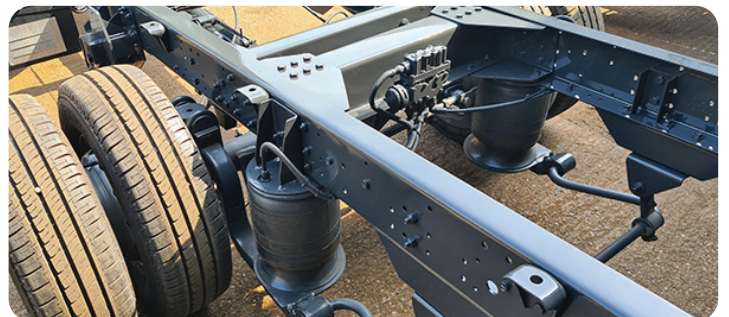
Bogie Case Studies

pages: 58 - 63



Vehicle Conversions Case Studies

pages: 70 - 74



Axles

Drum Brake, Disc Brake, Steer, Agri, Stub, FDC, Unbraked



Axles

Contents

Drum Brake Axles

100 Series	5
200 Series	6
250 Series Heavy Duty	7
300 Series	8
350 Series Heavy Duty	9
400 Series	10
500B Series Heavy Duty	11
860 Series	12
900 Series	13
950 Series Heavy Duty	14
980 Series Heavy Duty	15
C Range Heavy Duty	16
T Range Heavy Duty	16

Disc Brake Axles

6000 Series	17
7000 Series	18

Steer Axles

100 Series	19
300 Series	20
860 Series	21
980 Series Heavy Duty	22

Agri Axles

750 Series	23
97000 Series	24
97050 Series	25
97100 Series	26
97200 Series	27
97300 Series	28
97400 Series	29

Other Types of Axles

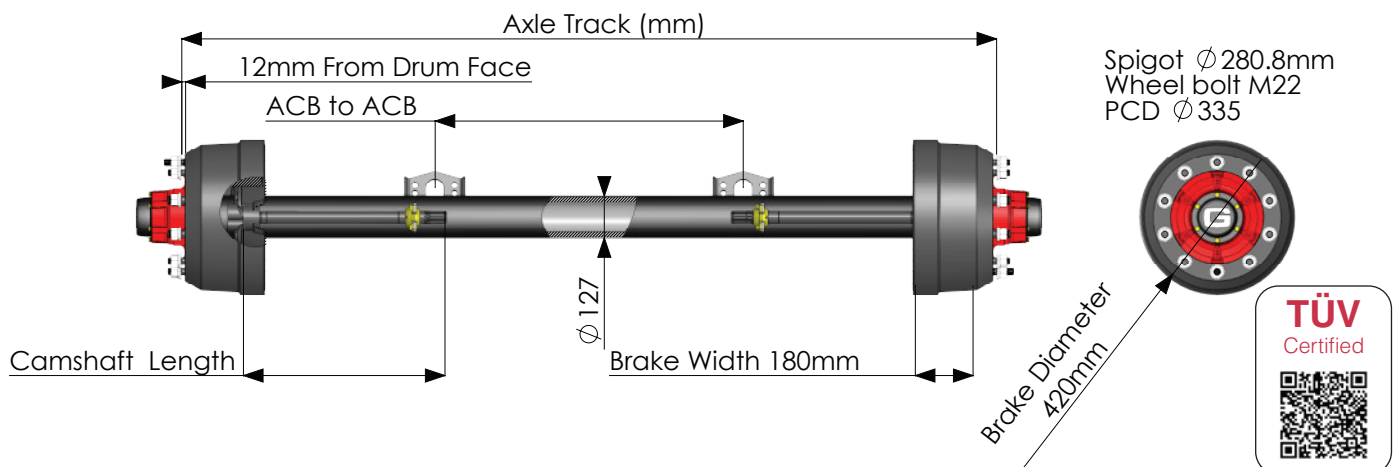
Stub Axles	30
FDC Series Axles	30
Unbraked Axles	31



100 Series

Part No	Brake Size	Beam Type	Track	Camshaft	ACB to ACB	Beam Capacity*	Brake Capacity*	Wheelbolt
60183	420x180	Ø 127mm	2045mm	618mm	493mm	11,000kg	11,000kg	MST
60183FH	420x180	Ø 127mm	2045mm	618mm	493mm	12,500kg	11,000kg	MST
60145	420x180	Ø 127mm	1920mm	618mm	369mm	11,000kg	11,000kg	MST
60530	420x180	Ø 127mm	1980mm	618mm	447mm	11,000kg	11,000kg	MST
60174	420x180	Ø 127mm	1850mm	618mm	298mm	11,000kg	11,000kg	MTT
60117	420x180	Ø 127mm	1820mm	519mm	466mm	11,000kg	11,000kg	MST
60540	420x180	Ø 127mm	2210mm	618mm	661mm	11,000kg	11,000kg	MST
60126	420x180	Ø 127mm	1820mm	618mm	273mm	11,000kg	11,000kg	MTT
60128	420x180	Ø 127mm	2150mm	618mm	598mm	11,000kg	11,000kg	MST
60150	420x180	Ø 127mm	2360mm	618mm	729mm	11,000kg	11,000kg	MST
60194	420x220	Ø 127mm	2045mm	618mm	409mm	11,000kg	11,000kg	MST

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

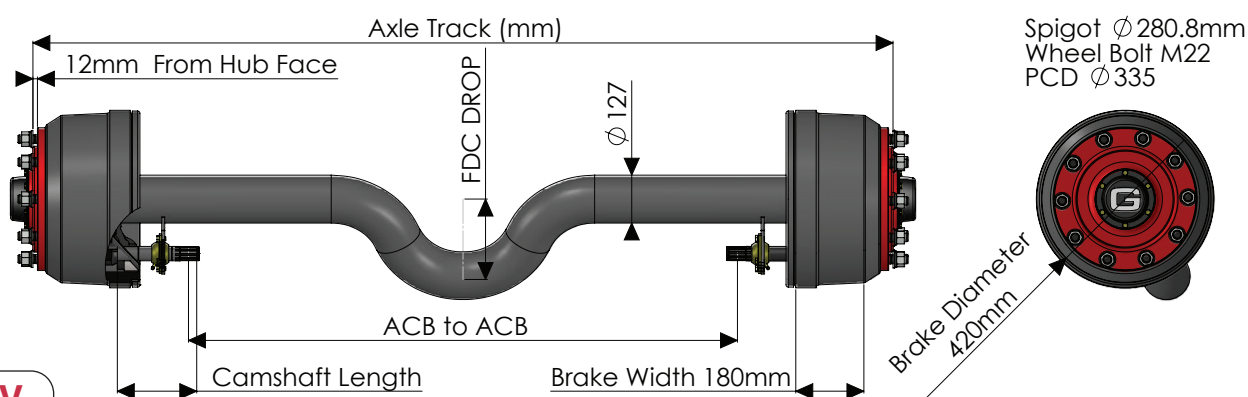
Drum Brake Axles



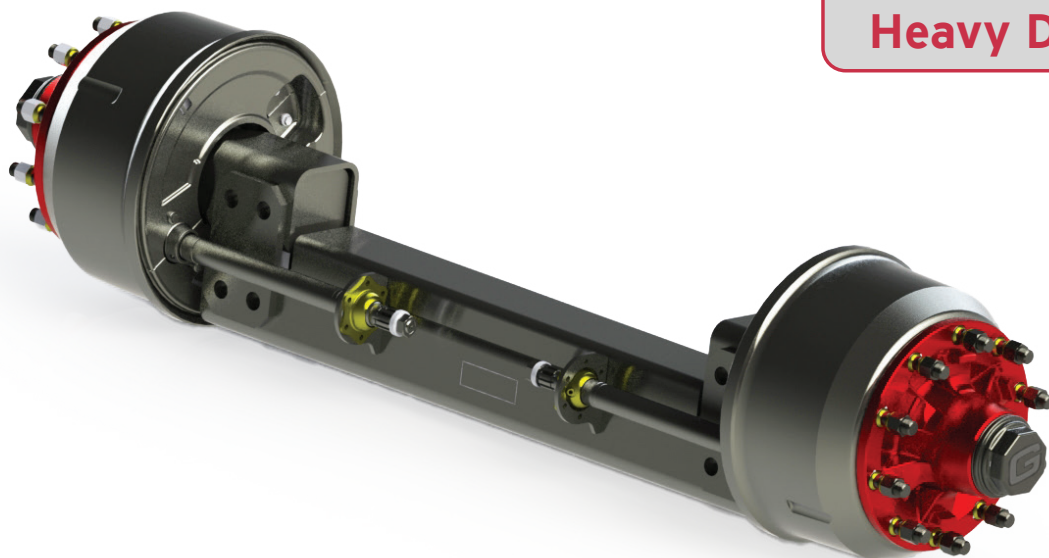
200 Series

Part No	Brake Size	Beam Type	FDC / Straight	Track	Camshaft	Beam Capacity*	Brake Capacity*	Wheelbolt
60233	420x180	Ø 127mm	FDC 230mm drop	2286mm	212mm	7,500kg	11,000kg	MST
60200	420x180	Ø 127mm	Straight	2286mm	212mm	7,500kg	11,000kg	MST
60227	420x180	Ø 127mm	Straight	2286mm	618mm	7,500kg	11,000kg	MTT
60228	420x180	Ø 127mm	FDC 230mm drop	1700mm	457mm	7,500kg	11,000kg	MST
60242	420x180	Ø 127mm	FDC 230mm drop	1640mm	430mm	7,500kg	11,000kg	MST

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



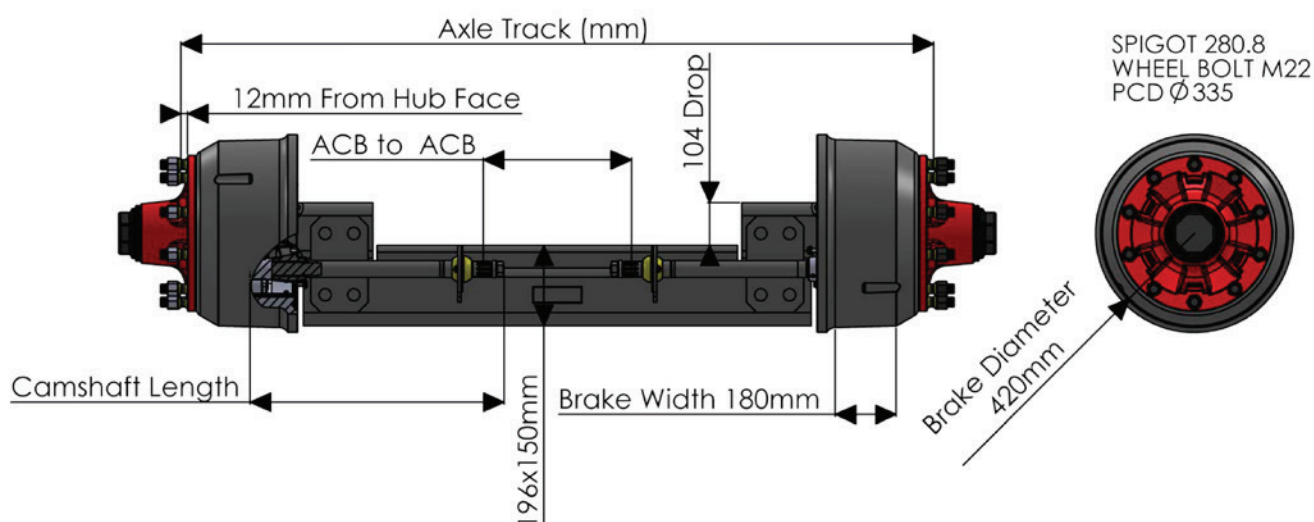
This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements



250 Series - Stepped Axle

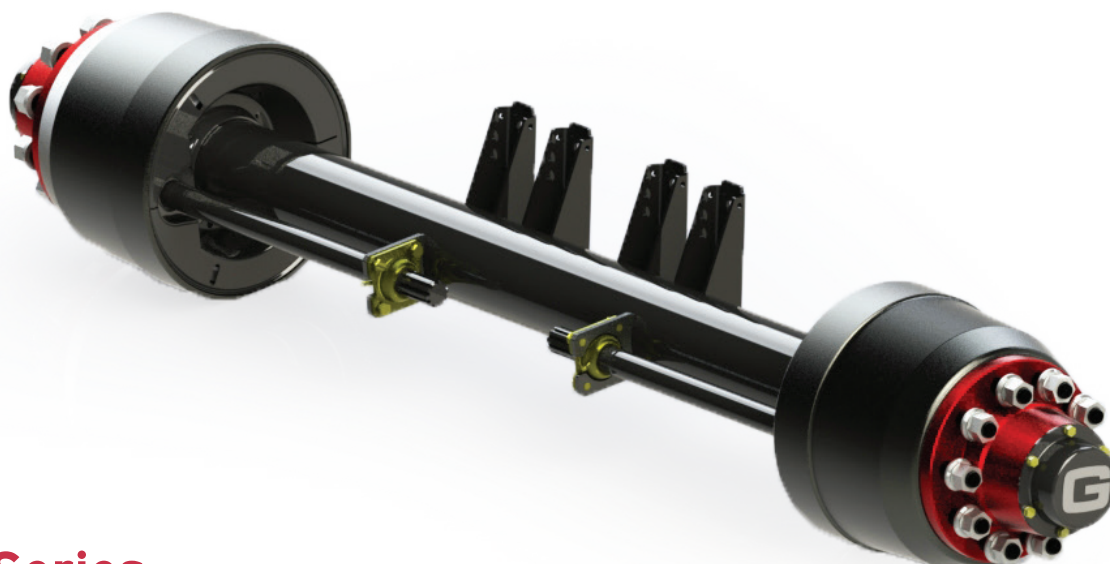
Part No	Brake Size	Beam Type	Track	Camshaft	ACB to ACB	Beam Capacity*	Wheelbolt	Axle Drop
60250	420x180	□ 150mm	1830mm	623mm	350mm	14,000kg	DTT	104mm
60251	420x180	□ 150mm	2000mm	623mm	520mm	14,000kg	DTT	104mm
60252	420x180	□ 150mm	1830mm	663mm	270mm	14,000kg	DTT	104mm
60253	420x180	□ 150mm	2000mm	280mm	1212mm	14,000kg	DTT	150mm

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

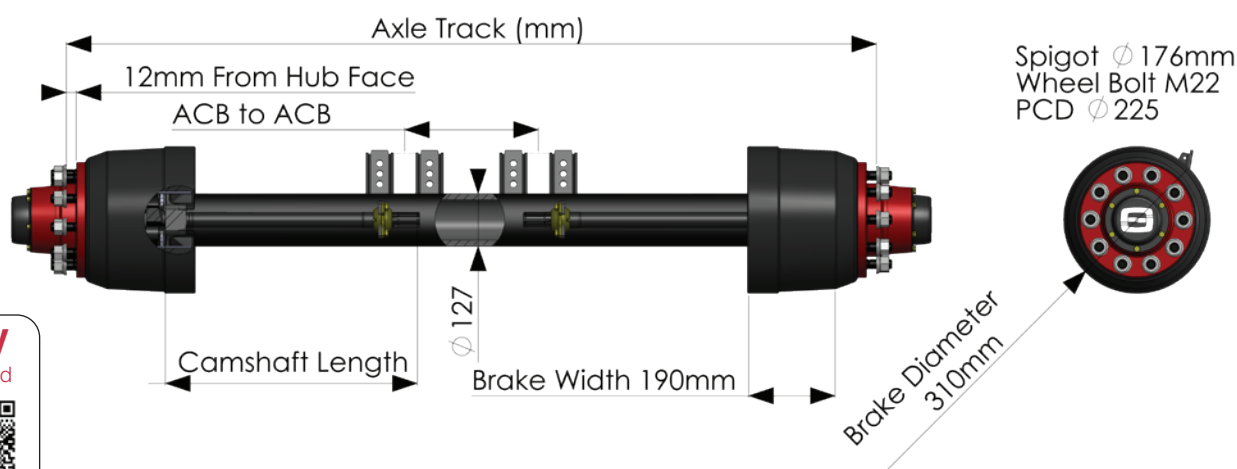
Drum Brake Axles



300 Series

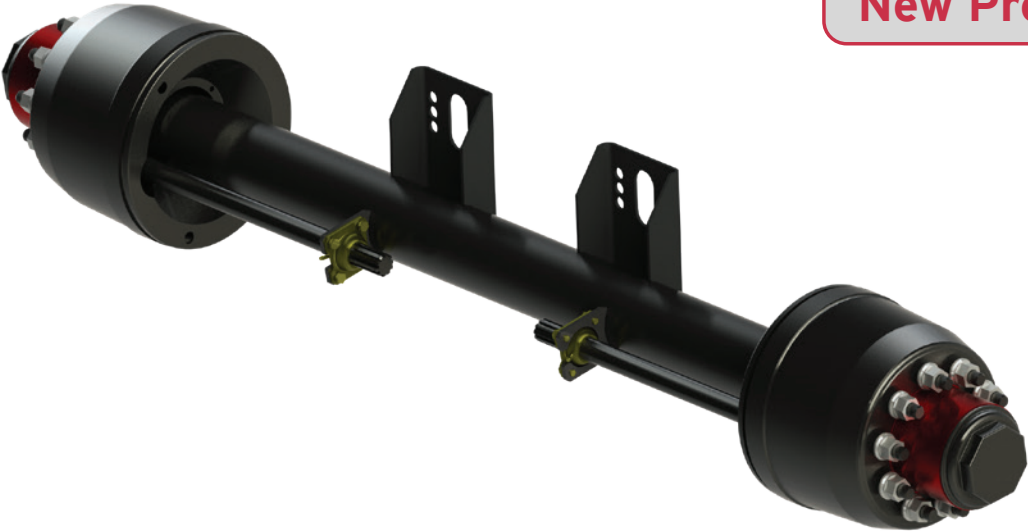
Part No	Brake Size	Beam Type	Track	Camshaft	ACB to ACB	Beam Capacity*	Brake Capacity*	Wheelbolt
60300	310x190	Ø 127mm	1820mm	519mm	388mm	11,000kg	11,000kg	MTT
60319	310x190	Ø 127mm	2400mm	610mm	786mm	11,000kg	11,000kg	MTT
60326	310x190	Ø 127mm	1950mm	610mm	337mm	11,000kg	11,000kg	MTT
60330	310x190	Ø 127mm	1920mm	610mm	306mm	11,000kg	11,000kg	MTT
60342	310x190	Ø 127mm	2185mm	519mm	753mm	11,000kg	11,000kg	MTT
60354	310x190	Ø 127mm	2390mm	610mm	776mm	11,000kg	11,000kg	MTT
60364	310x190	Ø 127mm	2000mm	610mm	386mm	11,000kg	11,000kg	MTT
60397	310x190	Ø 127mm	1850mm	610mm	236mm	11,000kg	11,000kg	MTT
60398	310x190	Ø 127mm	2470mm	610mm	856mm	11,000kg	11,000kg	MST
60366	310x190	Ø 127mm	2120mm	610mm	505mm	11,000kg	11,000kg	MTT

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

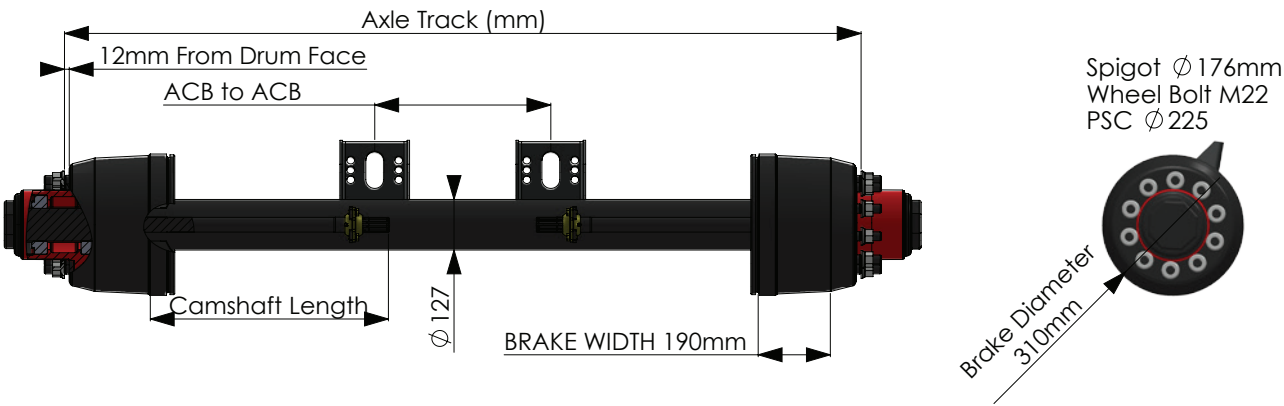
New Product



350 Series (Twin Bearing)

Part No	Brake Size	Beam Type	Track	Camshaft	ACB to ACB	Beam Capacity*	Brake Capacity*	Wheelbolt
69350	310x190	Ø 127mm	2000mm	610mm	433mm	11,000kg	11,000kg	MST
69351	310x190	Ø 127mm	2000mm	610mm	433mm	11,000kg	11,000kg	MTT

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

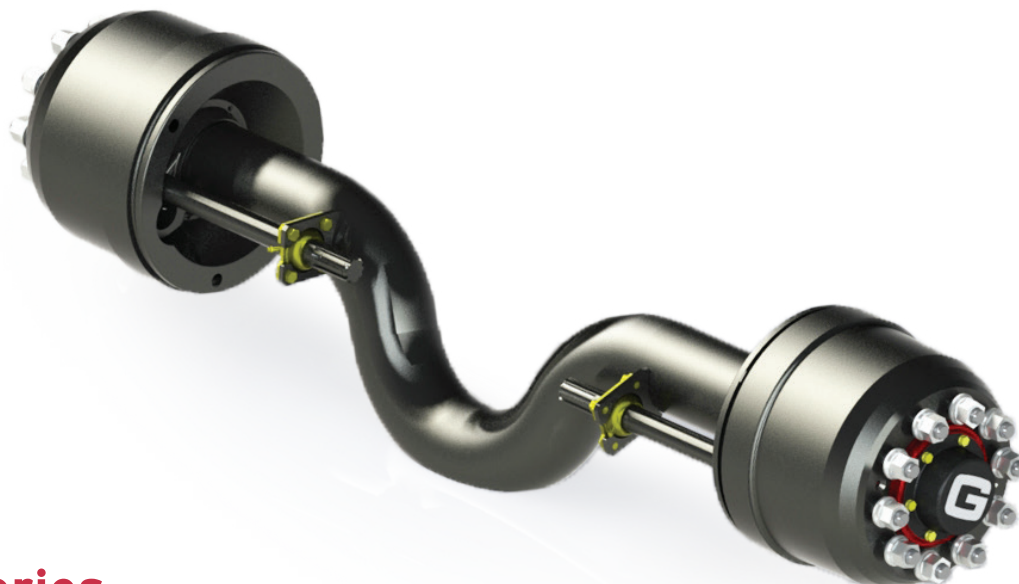
UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

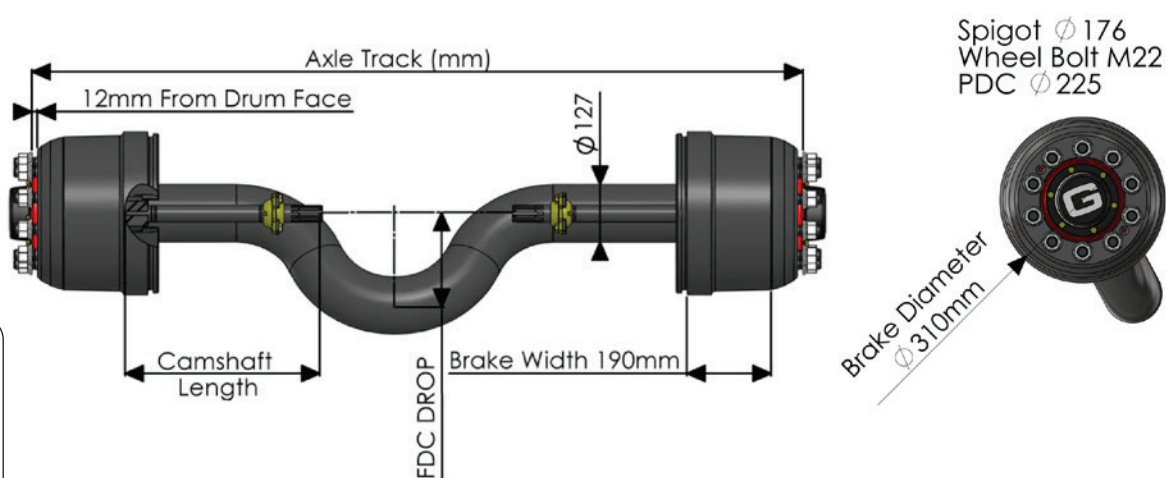
Drum Brake Axles



400 Series

Part No	Brake Size	Beam Type	FDC drop	Track	Camshaft	ACB to ACB	Beam Capacity*	Brake Capacity*	Wheelbolt
60405	310x190	Ø 127mm	Straight	2286mm	430mm	1079mm	7,500kg	11,000kg	MST
60413	310x190	Ø 127mm	205mm	1820mm	430mm	613mm	7,500kg	11,000kg	MST
60414	310x190	Ø 127mm	205mm	2286mm	212mm	1515mm	7,500kg	11,000kg	MST
60420	310x190	Ø 127mm	205mm	2286mm	212mm	1515mm	7,500kg	11,000kg	MST
60431	310x190	Ø 127mm	205mm	2180mm	212mm	1409mm	7,500kg	11,000kg	MST
60432	310x190	Ø 127mm	205mm	2286mm	212mm	1515mm	7,500kg	11,000kg	MST
60434	310x190	Ø 127mm	205mm	2408mm	212mm	1637mm	7,500kg	11,000kg	MST
60418	310x190	Ø 127mm	205mm	1700mm	430mm	493mm	7,500kg	11,000kg	MST
60436	310x190	Ø 127mm	205mm	1760mm	430mm	553mm	7,500kg	11,000kg	MST
60442	310x190	Ø 127mm	205mm	2148mm	212mm	1377mm	7,500kg	11,000kg	MST

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

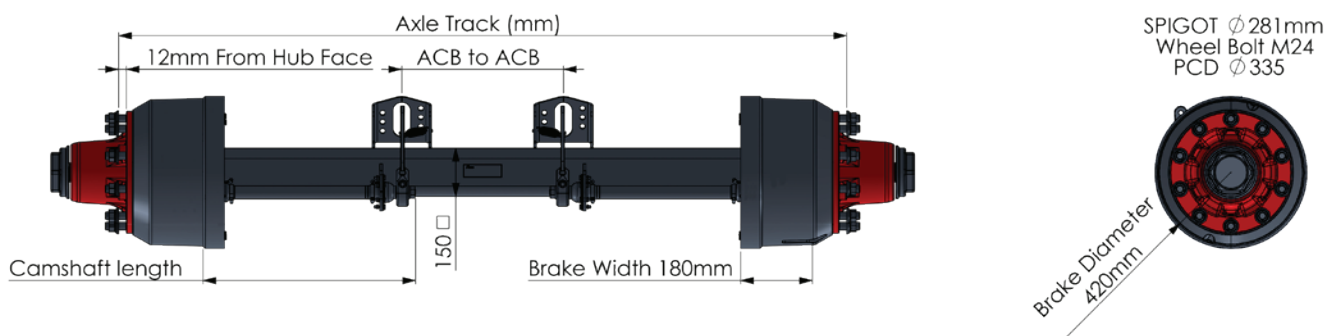
Heavy Duty



500B Series

Part No	Brake Size	Beam Type	Track	Camshaft	ACB to ACB	Beam Capacity*	Wheelbolt
69500	420x200	□ 150mm	1850mm	641mm	284mm	18,000kg	Twin M24
69501	420x200	□ 150mm	2250mm	725mm	505mm	18,000kg	Twin M24

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

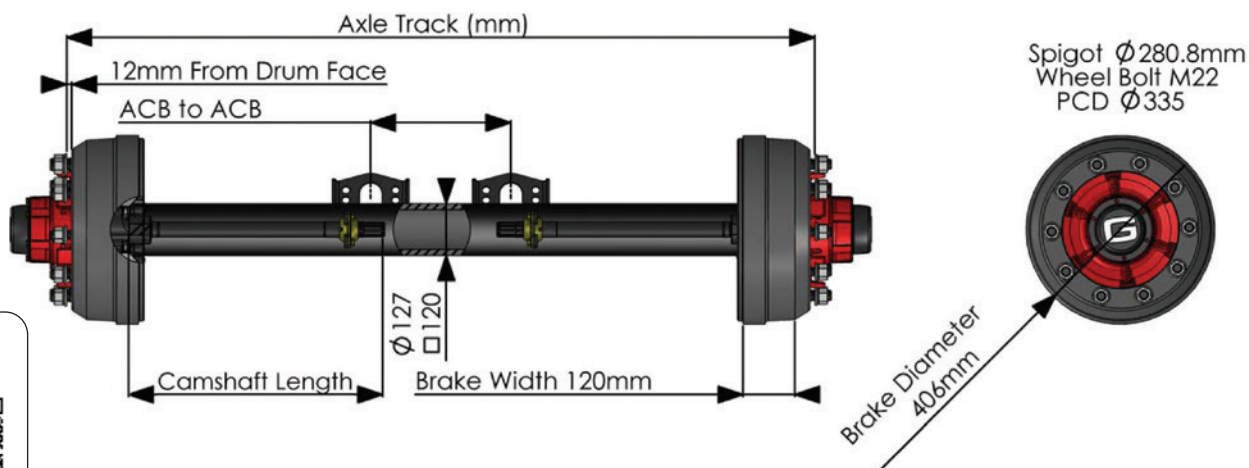
T. +44 (0) 2890 740 055



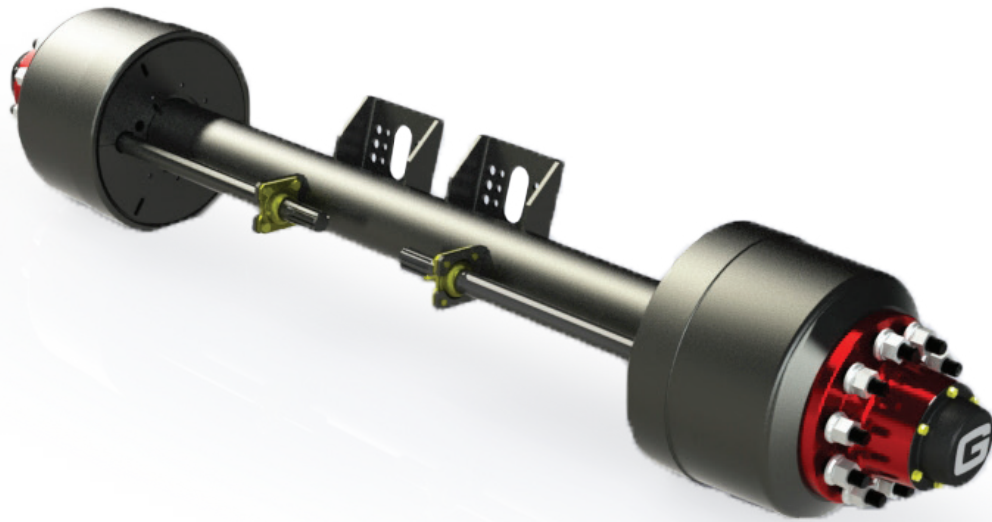
860 Series

Part No	Brake Size	Beam Type	Track	Camshaft	ACB to ACB	Beam Capacity*	Brake Capacity*	Wheelbolt
60860	406x120	Ø 127mm	1820mm	618mm	345mm	10,500kg	10,000kg	MST
60861	406x120	Ø 127mm	1900mm	618mm	426mm	10,500kg	10,000kg	MST
60862	406x120	Ø 127mm	1950mm	618mm	476mm	10,500kg	10,000kg	MST
60863	406x120	□ 120mm	2000mm	618mm	520mm	10,500kg	10,000kg	MST
60863	406x120	Ø 127mm	2000mm	618mm	526mm	10,500kg	10,000kg	MST
60864	406x120	Ø 127mm	2100mm	618mm	626mm	10,500kg	10,000kg	MST
60869	406x120	□ 120mm	2300mm	680mm	565mm	10,500kg	10,000kg	DST
60885	406x120	□ 120mm	2350mm	618mm	870mm	10,500kg	10,000kg	DST
60894	406x120	Ø 127mm	2224mm	618mm	749mm	10,500kg	10,000kg	DST

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



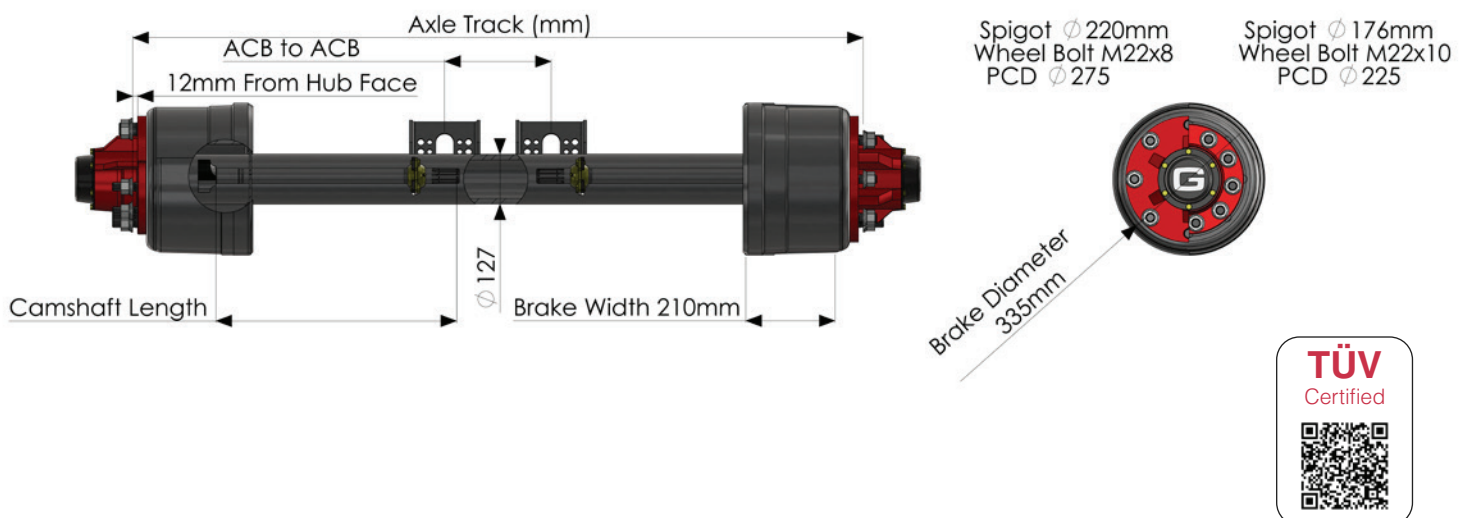
This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements



900 Series

Part No	Brake Size	Beam Type	Track	Camshaft	ACB to ACB	Beam Capacity*	Brake Capacity*	Wheelbolt
60900	335x210	Ø 127mm	1850mm	610mm	266mm	11,000kg	11,000kg	MTT
60909	335x210	Ø 127mm	2097mm	519mm	403mm	11,000kg	11,000kg	MTT
60908	335x210	Ø 127mm	1950mm	610mm	366mm	11,000kg	11,000kg	MTT
60911	335x210	Ø 127mm	1880mm	610mm	296mm	11,000kg	11,000kg	MTT
60916	335x210	Ø 127mm	2000mm	610mm	416mm	11,000kg	11,000kg	MSE
60914	335x210	Ø 127mm	2000mm	610mm	416mm	11,000kg	11,000kg	MTE

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

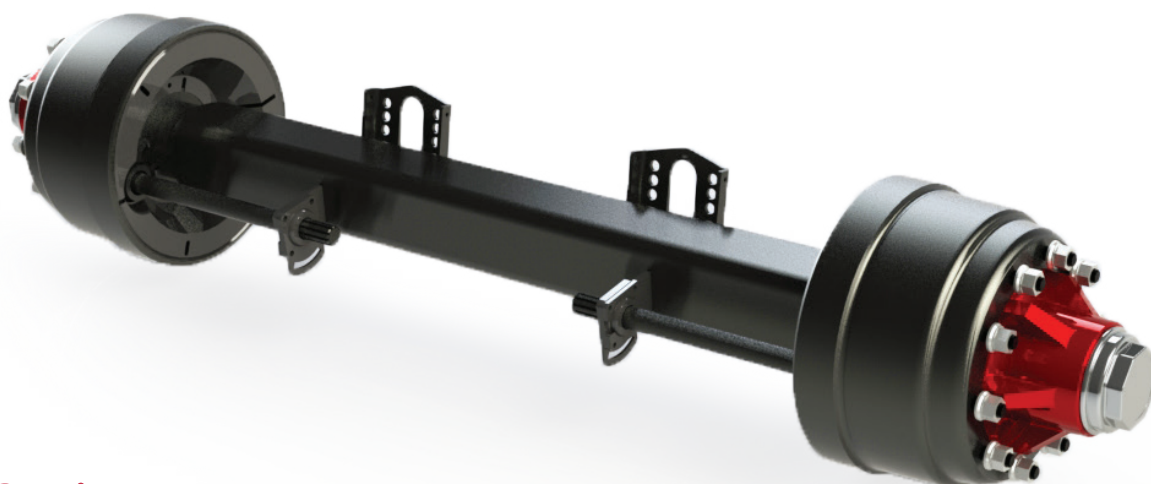
T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

Drum Brake Axles

Heavy Duty



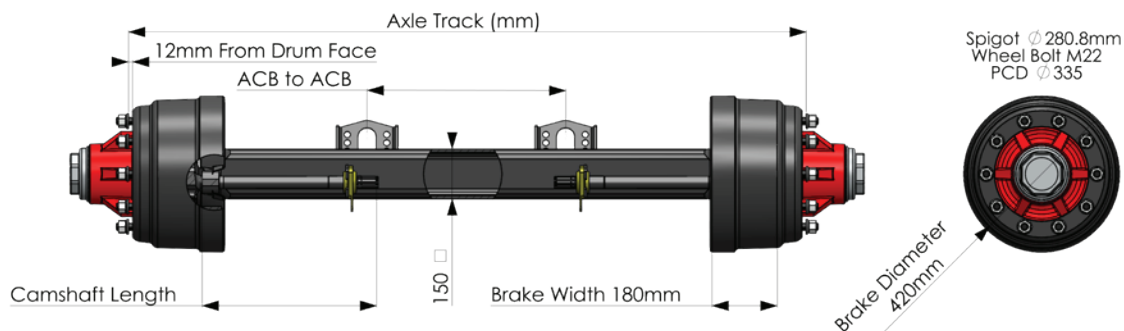
950 Series

Part No	Brake Size	Beam Type	Track	Camshaft / SP	ACB to ACB**	Beam Capacity*	Brake Capacity*	Wheelbolt
60957FD	420x180	□ 150mm	1840mm	543mm / 37	390mm	13,000kg	11,000kg	DTT
60961FD	420x180	□ 150mm	2324mm	613mm / 37	734mm	13,000kg	11,000kg	DTT
60965FD	420x180	□ 150mm	2424mm	443mm / 37	1074mm	13,000kg	11,000kg	DTT
60969F	420x180	□ 150mm	2224mm	700mm / 37	460mm	13,000kg	11,000kg	MTT
60974FD	420x180	□ 150mm	2024mm	705mm / 10	250mm	13,000kg	11,000kg	DTT
60976FD	420x180	Ø 127mm	1880mm	524mm / 10	468mm	12,500kg	11,000kg	MST
60977FD	420x180	Ø 127mm	2024mm	685mm / 10	290mm	12,500kg	11,000kg	DTT
60982F	420x180	□ 150mm	2024mm	695mm / 10	226mm	13,000kg	11,000kg	MTT
60983F	420x180	□ 150mm	2174mm	695mm / 10	376mm	13,000kg	11,000kg	MTT
60984F	420x180	□ 150mm	2224mm	695mm / 10	426mm	13,000kg	11,000kg	MTT
60991FD	420x180	□ 150mm	2174mm	705mm / 10	400mm	13,000kg	11,000kg	DTT
60992FD	420x180	□ 150mm	2224mm	705mm / 10	450mm	13,000kg	11,000kg	DTT
60993FD	420x180	□ 150mm	2024mm	618mm / 10	424mm	13,000kg	11,000kg	DTT

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.

** All ACB components comes loose.

SP - No. of Splines

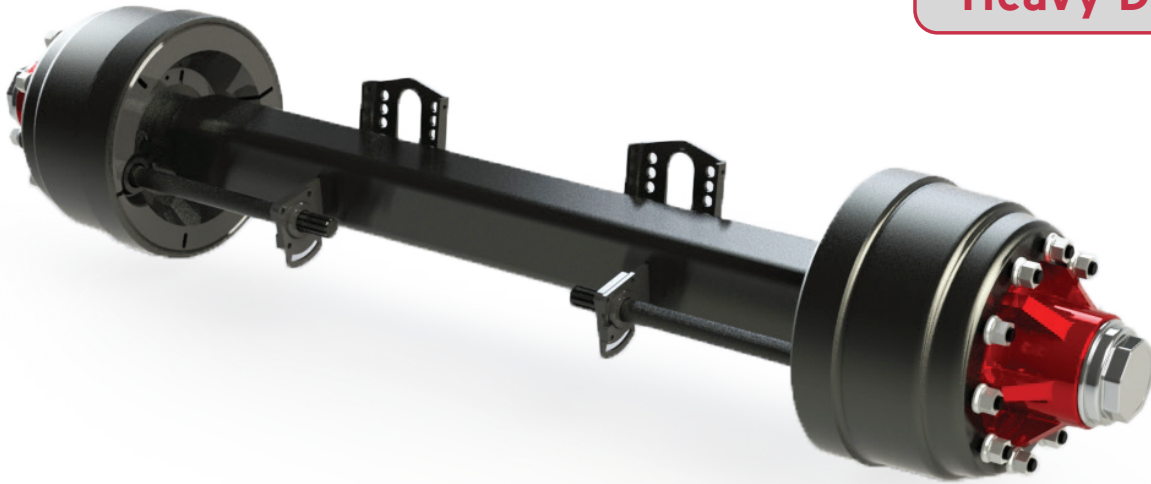


TÜV
Certified



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Heavy Duty



980 Series

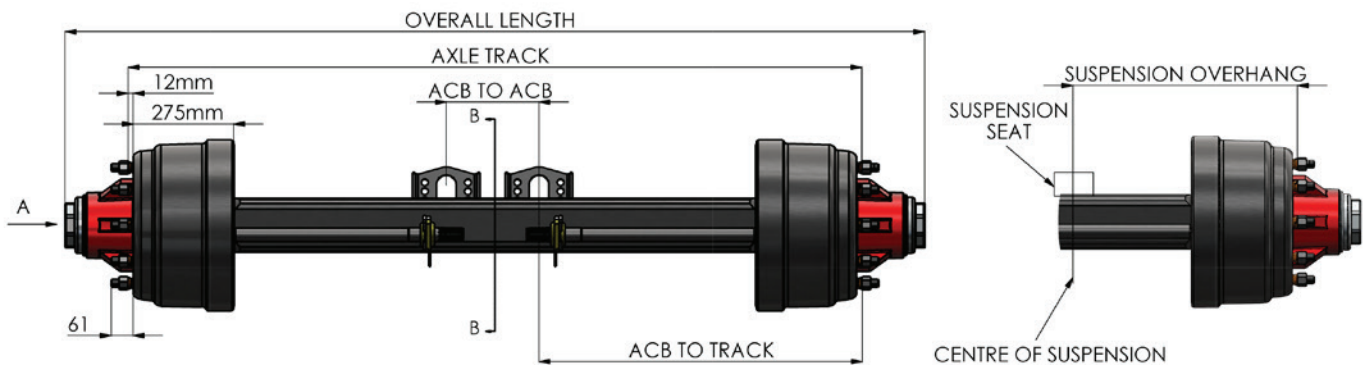
Part No	Brake Size	Beam Type	Track	Camshaft / SP	ACB to ACB*	Beam Capacity**	Brake Capacity	Wheelbolt
60987FD	420 x 180	□ 150mm	2100mm	705mm / 10	322mm	16,000kg	11,000kg	DTT
60988FD	420 x 180	□ 150mm	1840mm	543mm / 10	386mm	16,000kg	11,000kg	DTT
60979FD	420 x 180	□ 150mm	2024mm	705mm / 10	250mm	16,000kg	11,000kg	DTT

* All ACB components comes loose.

** Increased beam capacity for Off Road use:

Example 'Therefore at common speed limit of 25kph, Max beam loading @ 450 overhang would be 19,000kg'.

For full specification please ref to online datasheet: <https://granningaxles.ie/420x180-980-series>



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

Drum Brake Axles



Heavy Duty



C Range

Brake Size	Beam Type	Track	Camshaft length	ACB to ACB*	Load Capacity	Wheelbolt
420x220	□ 140mm	2149mm	700mm	530mm	13,000kg at 105km/h	10 stud Single ISO
420x220	□ 140mm	2040mm	700mm	421mm	13,000kg at 105km/h	10 stud Single ISO

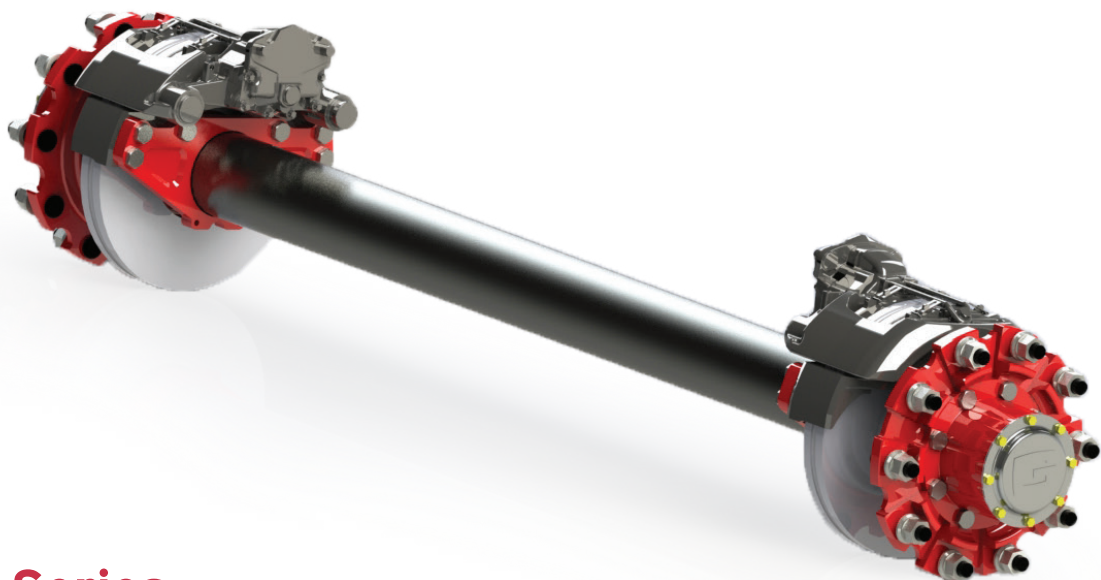
* All ACB components comes loose.



T Range

Brake Size	Beam Type	Track	Camshaft length	ACB to ACB*	Load Capacity	Wheelbolt
420x220	Ø 178mm	2300mm	641mm	408mm	32000Kg 10km/h	10 stud Single ISO

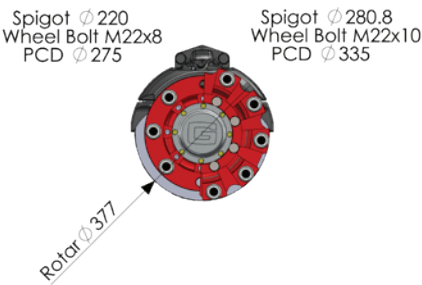
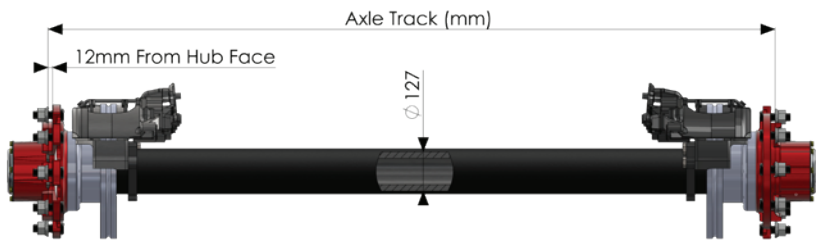
This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements



6000 Series

Part No	Beam Type	FDC / Straight	Track	Beam Capacity*	Brake Capacity*	Wheelbolt
606101	Ø 127mm	Straight	1820mm	11,000kg	10,000kg	MTT
606151	Ø 127mm	Straight	2045mm	11,000kg	10,000kg	MST
606201	Ø 127mm	Straight	1820mm	11,000kg	10,000kg	MTE
606321	Ø 127mm	Straight	2045mm	11,000kg	10,000kg	MSE
606741	Ø 127mm	Straight	2184mm	11,000kg	10,000kg	MSE
606791	Ø 127mm	FDC 230mm drop	2045mm	7,500kg	10,000kg	MSE
606881	Ø 127mm	FDC 230mm drop	2170mm	7,500kg	10,000kg	MSE
606891	Ø 127mm	FDC 230mm drop	2094mm	7,500kg	10,000kg	MSE

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

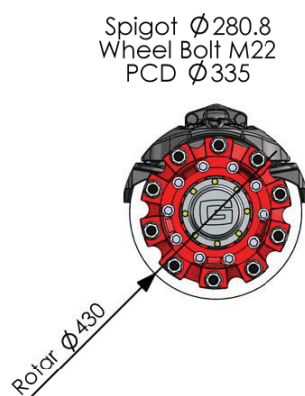
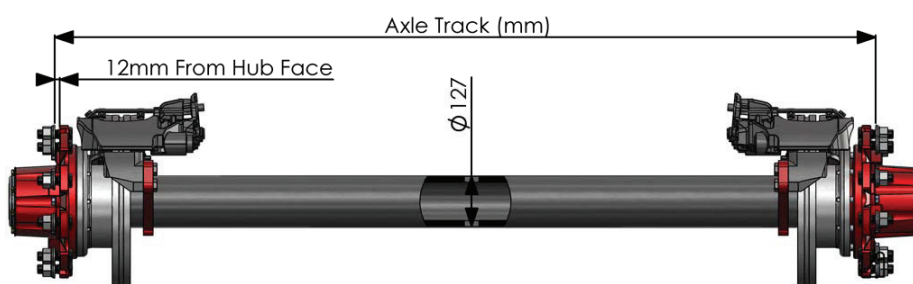
T. +44 (0) 2890 740 055



7000 Series

Part No	Beam Type	FDC / Straight	Track	Bearing	Beam Capacity*	Brake Capacity*	Wheelbolt
607001	Ø 127mm	Straight	2286mm	Inner / Outer	7,500kg	11,500kg	MST
607181	Ø 127mm	FDC 230mm drop	1770mm	Inner / Outer	7,500kg	11,500kg	MST
607231	Ø 127mm	Straight	1850mm	Twin	11,000kg	11,500kg	MTT
607291	Ø 127mm	Straight	1840mm	UniPac	11,000kg	11,500kg	MTT
607311	Ø 127mm	Straight	2174mm	UniPac	11,000kg	11,500kg	MST
607331	Ø 127mm	FDC 230mm drop	2286mm	Inner / Outer	7,500kg	11,500kg	MST
607441	Ø 127mm	Straight	1820mm	UniPac	11,000kg	11,500kg	MTT
607451	Ø 127mm	Straight	2045mm	UniPac	11,000kg	11,500kg	MST
607481	Ø 127mm	Straight	1820mm	UniPac	11,000kg	11,500kg	MTT

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



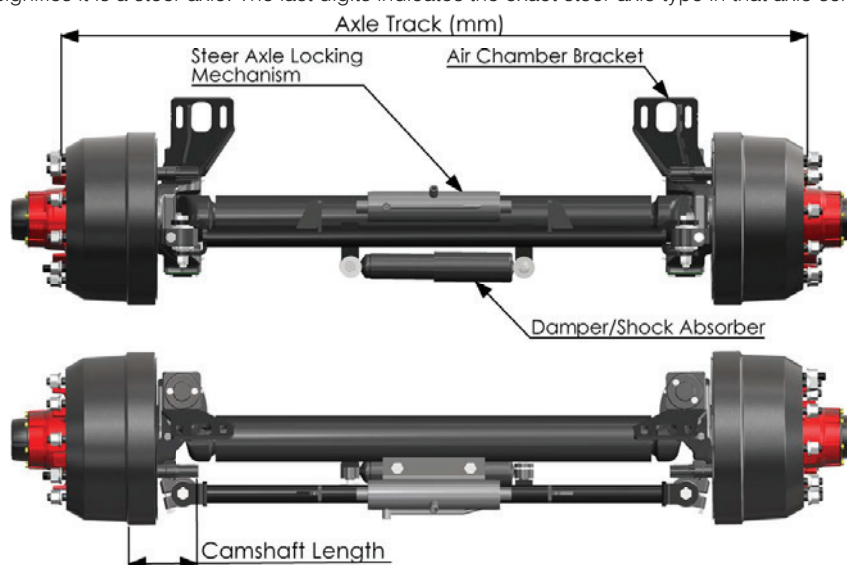
This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements



100 Series (420x180 Brake)

Part No	Track	Beam Type	Camshaft	Self Steer Command	Locking	B.Chamber Position	Wheelbolt
60117S1	1820mm	Ø 127mm	189mm	Self Steer	Hydraulic	Under Axle	MST
60128S2	2150mm	Ø 127mm	212mm	Self Steer	Hydraulic	Over Axle	MST
60145S1	1920mm	Ø 127mm	189mm	Self Steer	Hydraulic	Under Axle	MST
60183S1	2045mm	Ø 127mm	189mm	Self Steer	Hydraulic	Over Axle	MST
60183S2	2045mm	Ø 127mm	189mm	Self Steer	Hydraulic	Over Axle	MST
60183S4	2045mm	Ø 127mm	189mm	Self Steer	Air	Over Axle	MST
60183S5	2045mm	Ø 127mm	189mm	Self Steer	Air	Under Axle	MST
60183S9	2045mm	Ø 127mm	189mm	Self Steer	Hydraulic	Under Axle	MST
60183S14	2045mm	Ø 127mm	212mm	Self Steer	Hydraulic	Over Axle	MST
60183S16	2045mm	Ø 127mm	212mm	Self Steer	Hydraulic	Under Axle	MST
60183S26	2045mm	Ø 127mm	189mm	Passive	Hydraulic	Over Axle	MST

S at the end of the axle code signifies it is a steer axle. The last digits indicates the exact steer axle type in that axle series.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

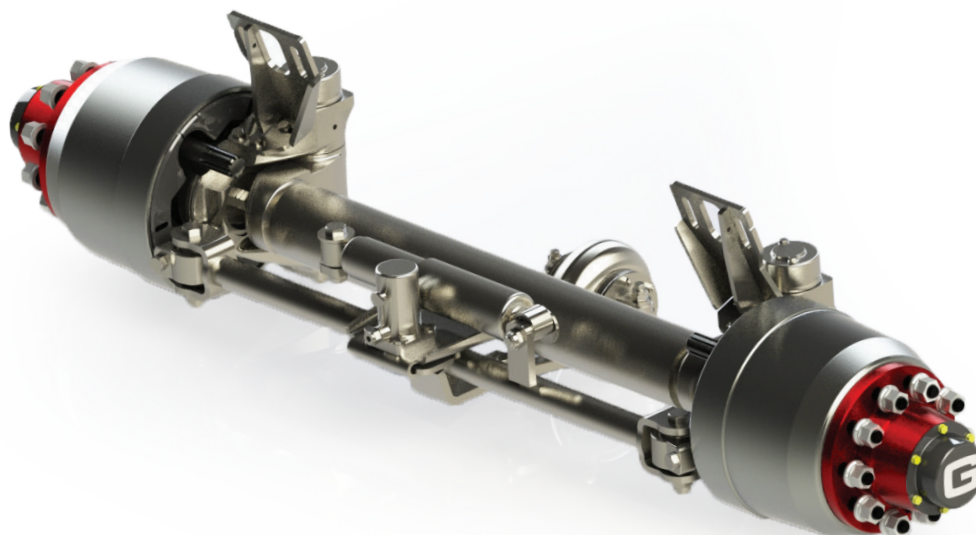
T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

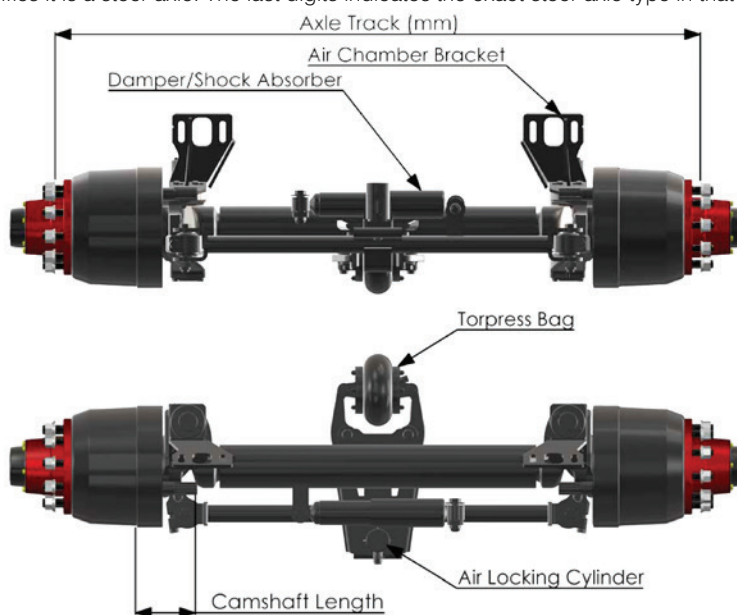
T. +44 (0) 2890 740 055



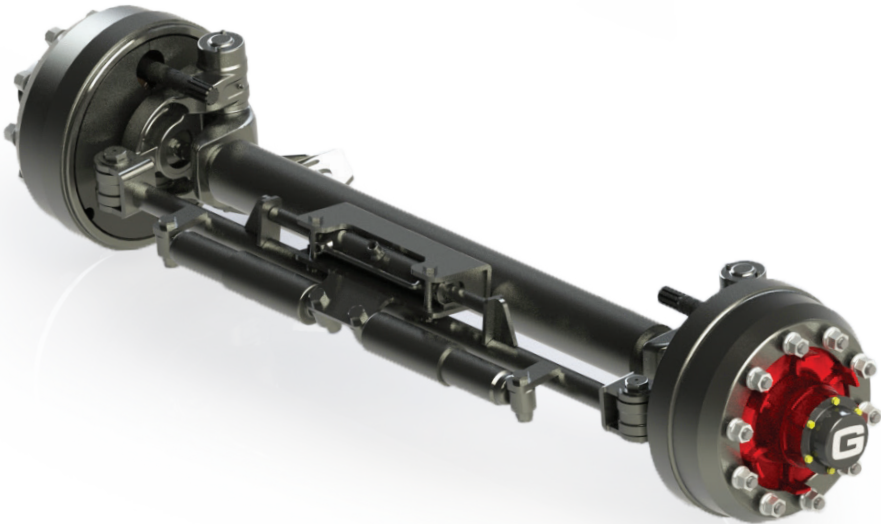
300 Series (310x190 Brake)

Part No	Track	Beam Type	Camshaft	Self Steer Command	Locking	B.Chamber Position	Wheelbolt
60325S1	1820mm	Ø 127mm	175mm	Self Steer	Air	Over Axle	MTT
60325S2	1820mm	Ø 127mm	175mm	Self Steer	Hydraulic	Over Axle	MTT
60326S2	1950mm	Ø 127mm	175mm	Self Steer	Air	Over Axle	MTT
60330S1	1920mm	Ø 127mm	175mm	Self Steer	Hydraulic	Over Axle	MTT
60330S2	1920mm	Ø 127mm	175mm	Self Steer	Air	Over Axle	MTT
60364S1	2000mm	Ø 127mm	175mm	Self Steer	Air	Over Axle	MTT
60364S2	2000mm	Ø 127mm	175mm	Self Steer	Hydraulic	Over Axle	MTT
60366S1	2120mm	Ø 127mm	175mm	Self Steer	Air	Under Axle	MTT
60397S1	1850mm	Ø 127mm	175mm	Self Steer	Air	Over Axle	MTT
60397S2	1850mm	Ø 127mm	175mm	Self Steer	Hydraulic	Under Axle	MTT

S at the end of the axle code signifies it is a steer axle. The last digits indicates the exact steer axle type in that axle series.



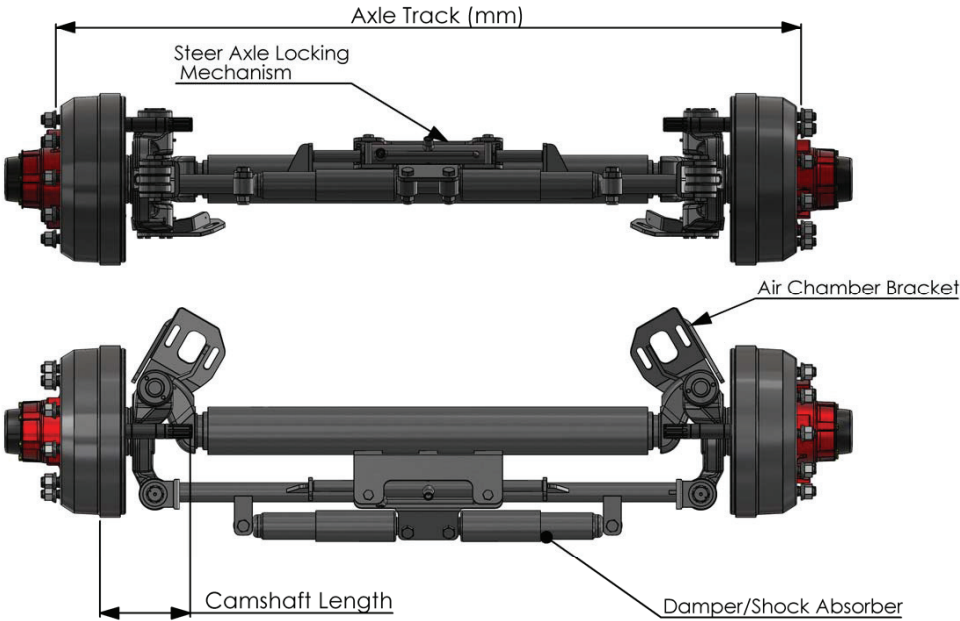
This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements



860 Series (406x120 Brake)

Part No	Track	Beam Type	Camshaft	Self Steer Command	Locking	B.Chamber Position	Wheelbolt
60863AS1	2000mm	Ø 127mm	250mm	Self Steer	Hydraulic	Under axle	MST
60863AS2	2000mm	Ø 127mm	250mm	Self Steer	Hydraulic	Under axle	MST
60863AS3	2000mm	Ø 127mm	212mm	Self Steer	Hydraulic	Under axle	MST
60863AS4	2000mm	Ø 127mm	250mm	Self Steer	Hydraulic	Under axle	DST
60869S1	2250mm	Ø 127mm	250mm	Self Steer	Hydraulic	Under axle	MST

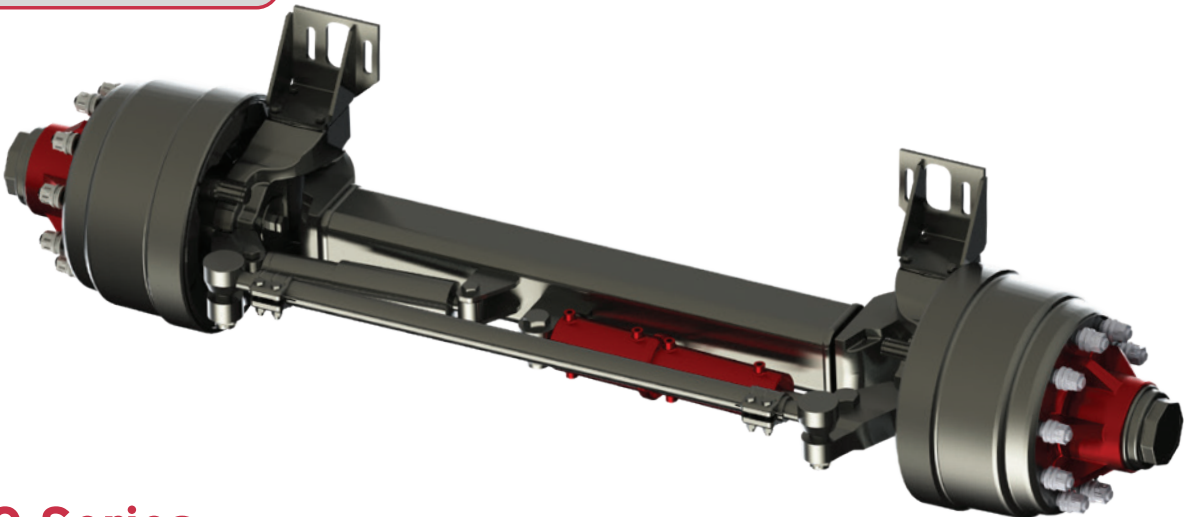
S at the end of the axle code signifies it is a steer axle. The last digits indicates the exact steer axle type in that axle series.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements



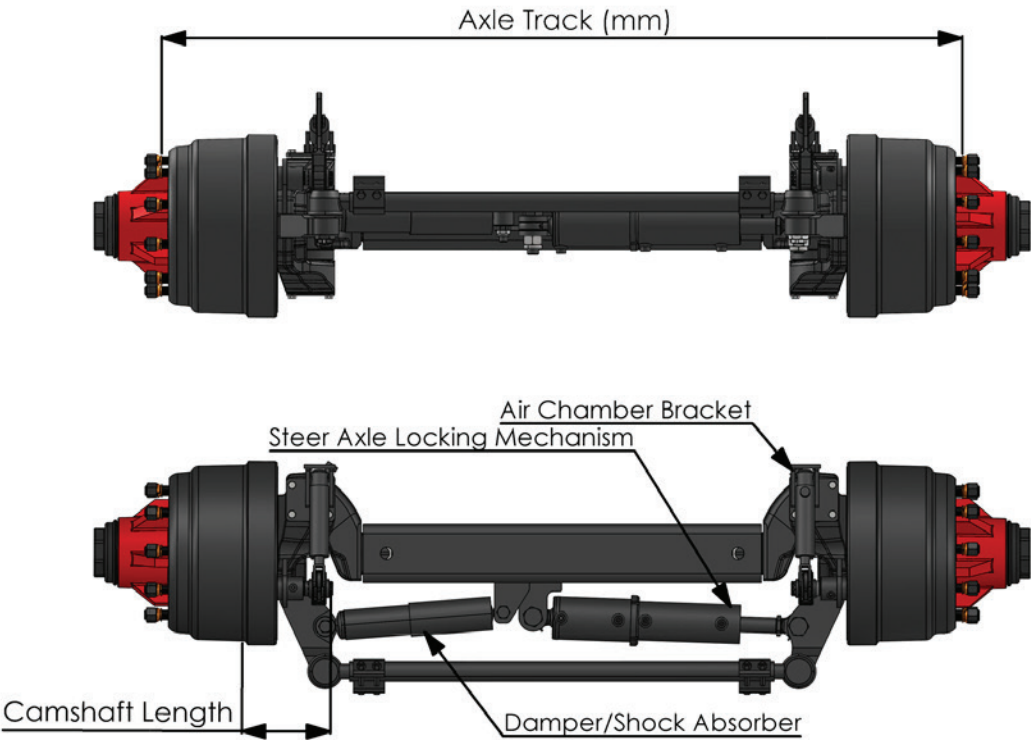
Heavy Duty



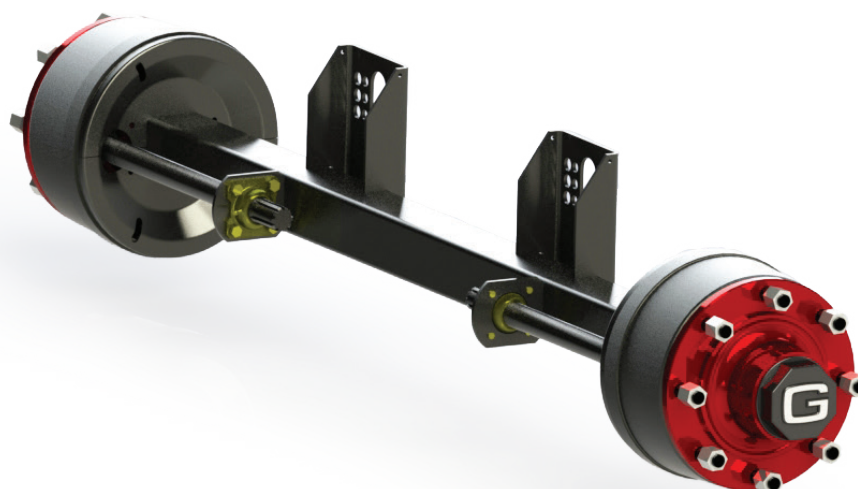
980 Series

Part No	Track	Beam Type	Camshaft	Self Steer Command	Locking	B.Chamber Position	Wheelbolt
60979AS1	2024	□ 150mm	212mm	Both	Hydrualic	Over axle	DST
60987AS1	2100	□ 150mm	212mm	Both	Hydrualic	Over axle	DST
60989AS1	2040	□ 150mm	212mm	Both	Hydrualic	Over axle	DST

S at the end of the axle code signifies it is a steer axle. The last digits indicates the exact steer axle type in that axle series.



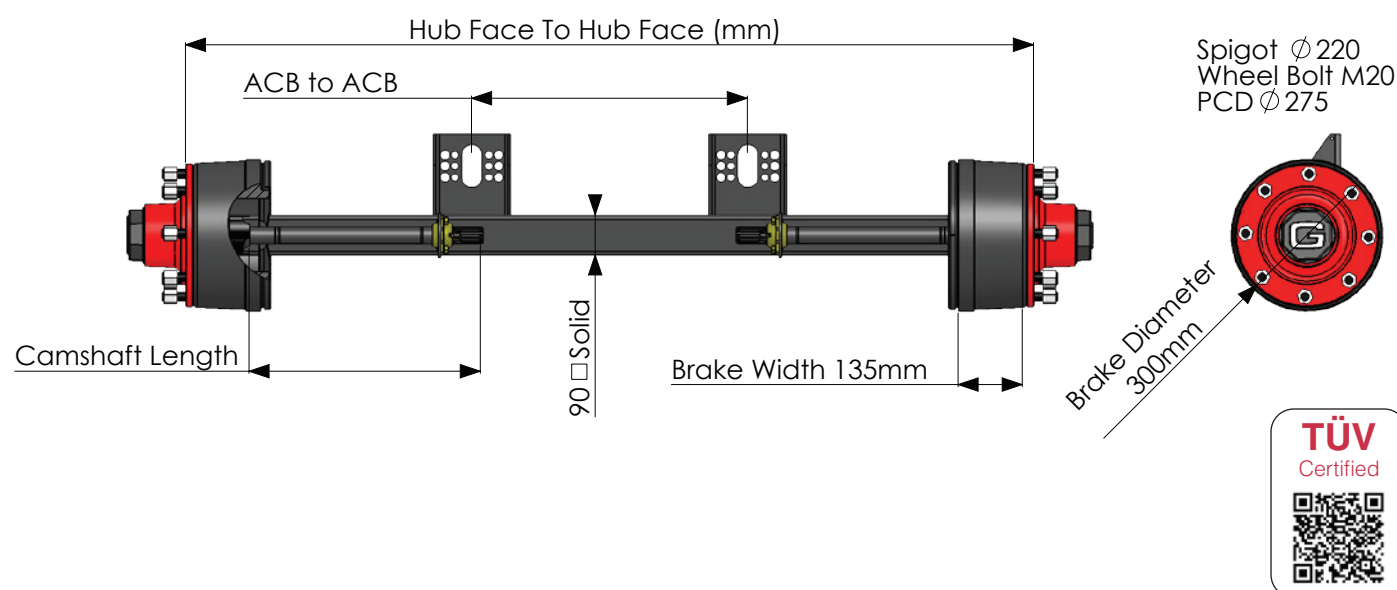
This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements



750 Series

Part No	Brake Size	Track	Beam Type	Camshaft	ACB to ACB	Beam Capacity*	Brake Capacity*	Wheelbolt
60752	300x135	2015mm	■ 90mm	519mm	738mm	8,000kg	8,000kg	DTE
60755	300x135	1894mm	■ 90mm	610mm	435mm	8,000kg	8,000kg	DTE
60756	300x135	1794mm	■ 90mm	610mm	335mm	8,000kg	8,000kg	DTE

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

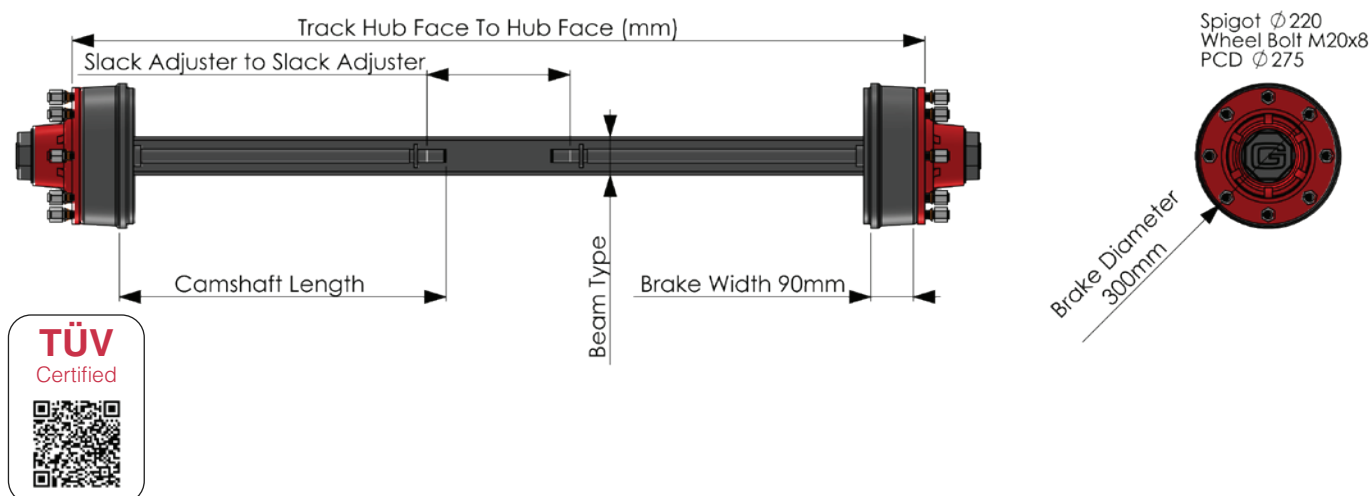


97000 Series

Part No	Brake Size	Track	Beam Type	Camshaft	Slack to Slack	Wheelbolt
97000	300x90	2000mm	■ 90mm	720mm	379mm	8 x M20
97001	300x90	1900mm	■ 90mm	560mm	586mm	8 x M20
97002	300x90	1800mm	■ 90mm	507mm	592mm	8 x M20
97004	300x90	1850mm	■ 90mm	560mm	550mm	8 x M20
97005	300x90	1850mm	■ 90mm	748mm	175mm	8 x M20
97006	300x90	1900mm	■ 90mm	560mm	586mm	8 x M20

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.

Max Beam Capacity									Brake Capacity		
25 km/h			40 km/h			60 km/h			25 km/h	40 km/h	EEC
									8,000kg	5,400kg	5,400kg
9,000kg	10,800kg	8,000kg	8,000kg	9,000kg	7,500kg	7,500kg	8,500kg	7,000kg	361-133-12	361-129-12	361-126-12



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

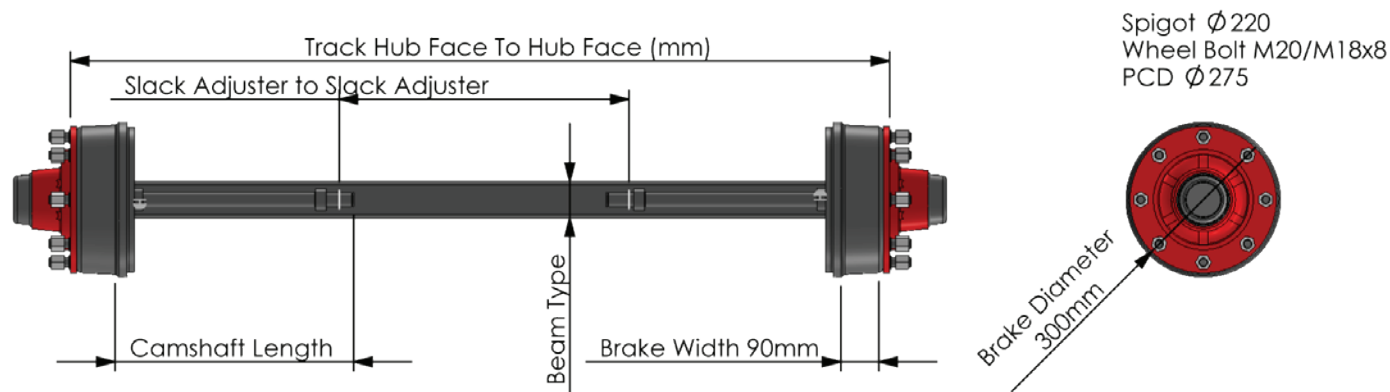


97050 Series

Part No	Brake Size	Track	Beam Type	Camshaft	Slack to Slack	Wheelbolt
97050	300x90	1800mm	■ 80mm	507mm	605mm	8 x M20
97051	300x90	1850mm	■ 80mm	560mm	455mm	8 x M18
97052	300x90	1700mm	■ 80mm	507mm	505mm	8 x M20

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.

Max Beam Capacity									Brake Capacity		
25 km/h			40 km/h			60 km/h			25 km/h	40 km/h	EEC
									8,000kg	5,400kg	5,400kg
8,000kg	9,000kg	7,000kg	7,000kg	8,000kg	6,500kg	6,500kg	7,500kg	6,000kg	361-133-12	361-129-12	361-126-12



TÜV
Certified



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

25

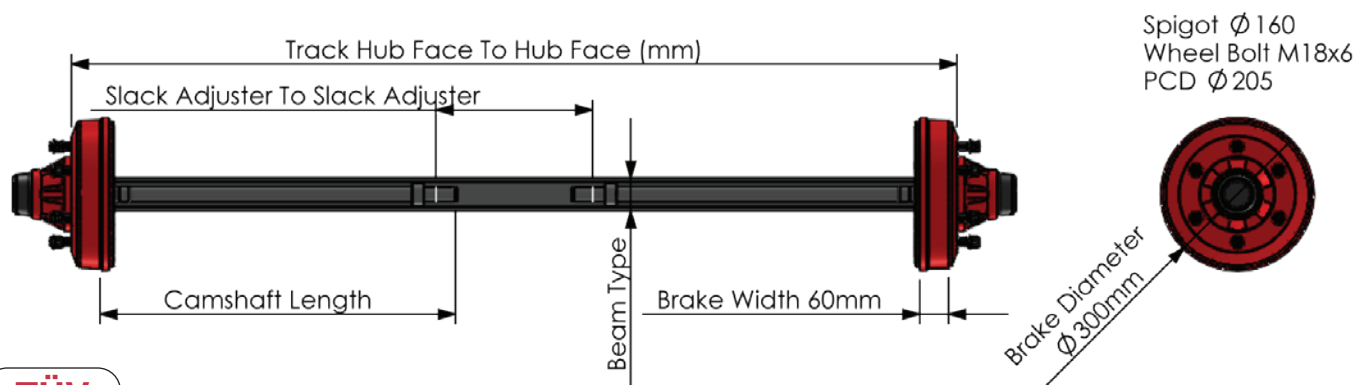


97100 Series

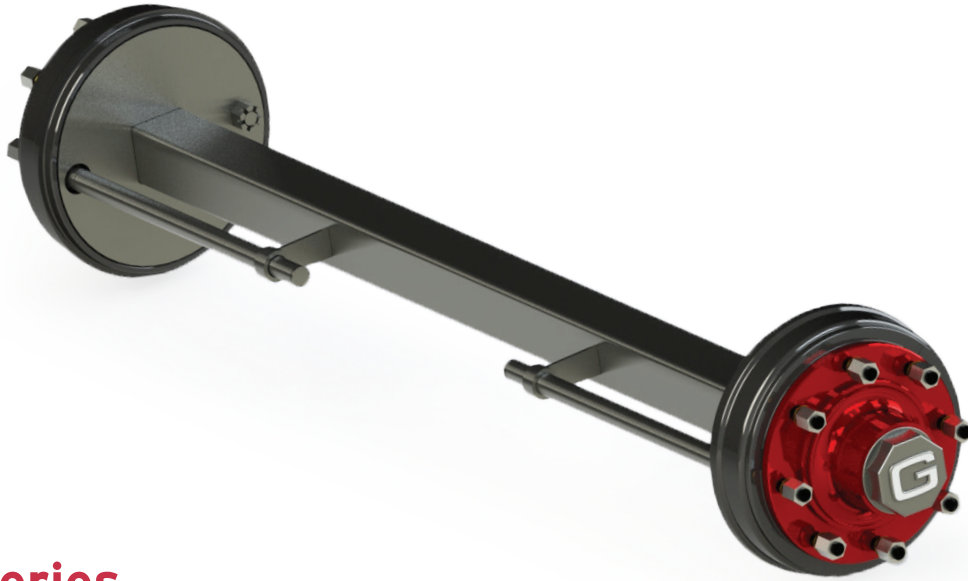
Part No	Brake Size	Track	Beam Type	Camshaft	Slack to Slack	Wheelbolt
97100	300x60	1900mm	■ 70mm	743mm	289mm	6 x M18
97101	300x60	1800mm	■ 70mm	743mm	189mm	6 x M18

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.

Max Beam Capacity									Brake Capacity		
25 km/h			40 km/h			60 km/h			25 km/h	40 km/h	EEC
									6,000kg	3,000kg	3,000kg
7,000kg	8,500kg	6,500kg	6,500kg	7,500kg	6,000kg	6,000kg	7,000kg	5,000kg	361-132-09	361-128-12	361-124-12



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

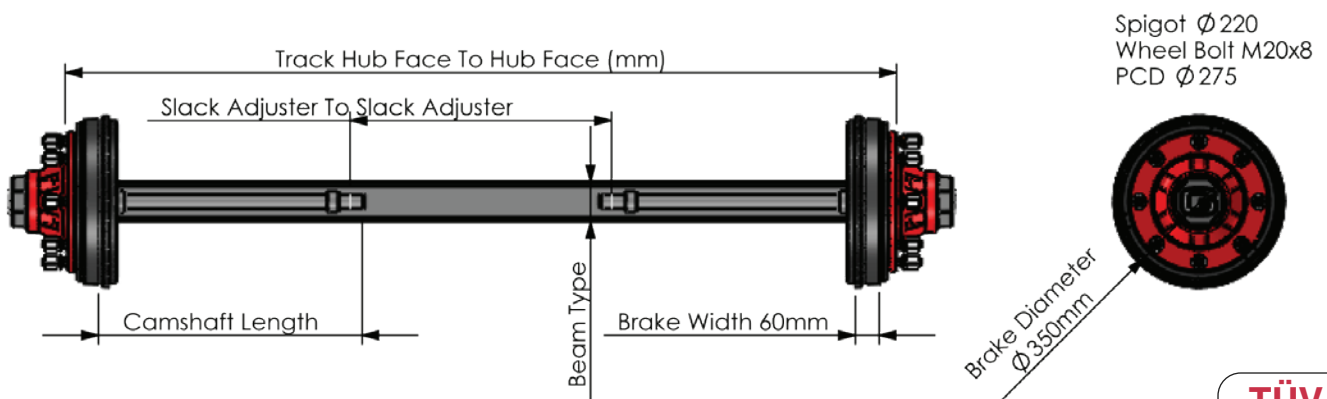


97200 Series

Part No	Brake Size	Track	Beam Type	Camshaft	Slack to Slack	Wheelbolt
97200	350x60	1900mm	■ 90mm	595mm	540mm	8 x M20
97201	350x60	1800mm	■ 90mm	545mm	540mm	8 x M20

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.

Max Beam Capacity									Brake Capacity		
25 km/h			40 km/h			60 km/h			25 km/h	40 km/h	EEC
									7,000kg	N/A	5,400kg
11,000kg	12,500kg	10,000kg	10,000kg	11,500kg	9,500kg	9,500kg	10,500kg	8,500kg	361-134-12	N/A	361-126-12



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

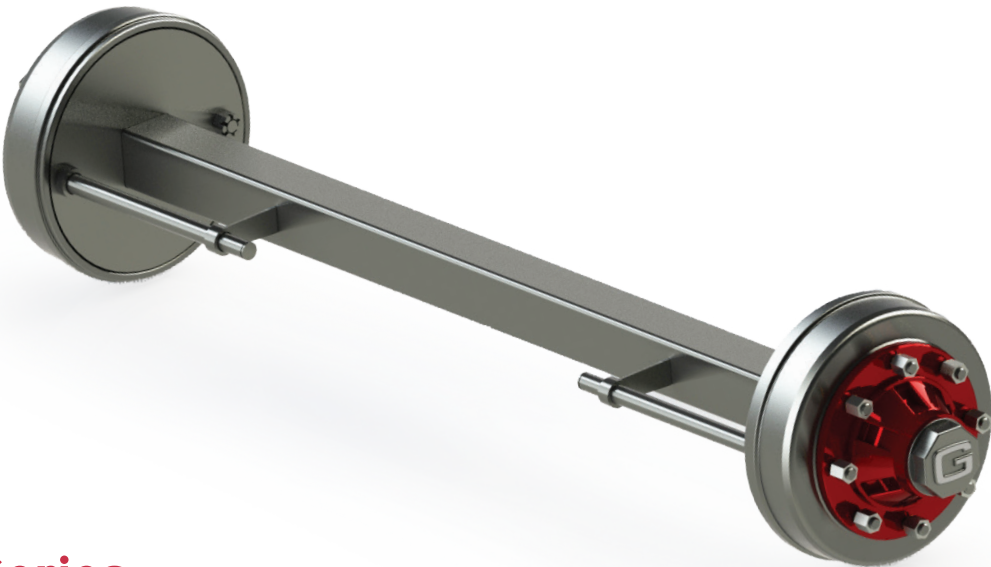
T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

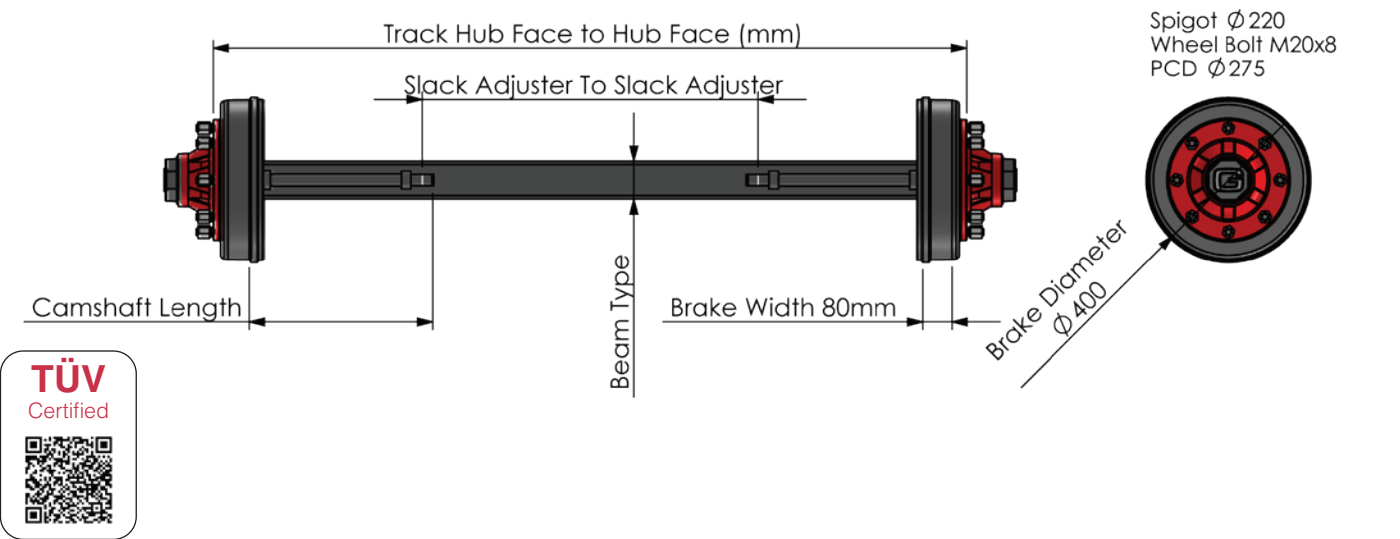


97300 Series

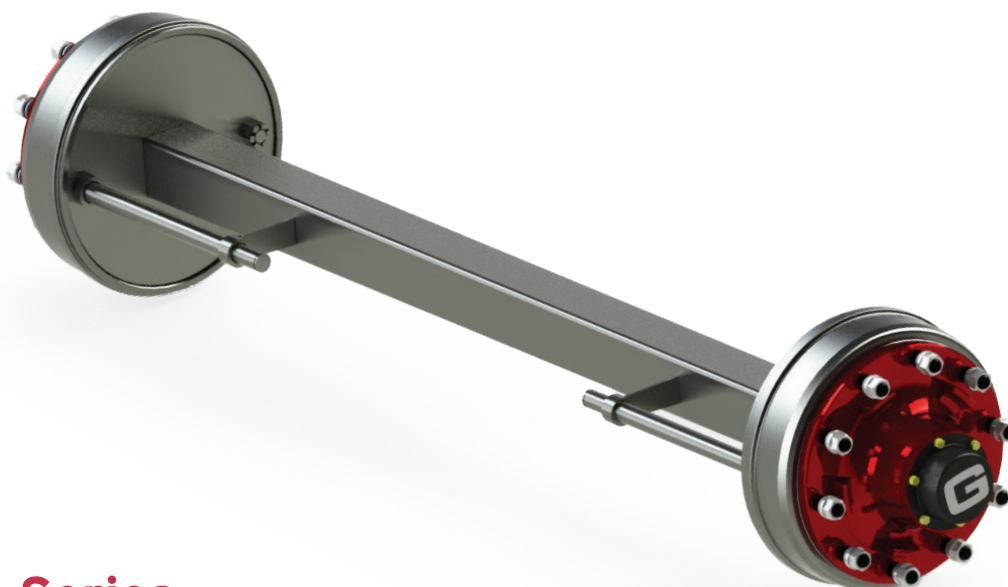
Part No	Brake Size	Track	Beam Type	Camshaft	Slack to Slack	Wheelbolt
97300	400x80	2000mm	■ 100mm	477mm	882mm	8 x M20
97301	400x80	1900mm	■ 100mm	477mm	782mm	8 x M20

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.

Max Beam Capacity									Brake Capacity		
25 km/h			40 km/h			60 km/h			25 km/h	40 km/h	EEC
									13,000kg	7,000kg	7,000kg
12,000kg	13,000kg	11,000kg	11,000kg	12,500kg	10,500kg	10,500kg	11,500kg	9,500kg	361-135-09	361-131-12	361-127-12



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

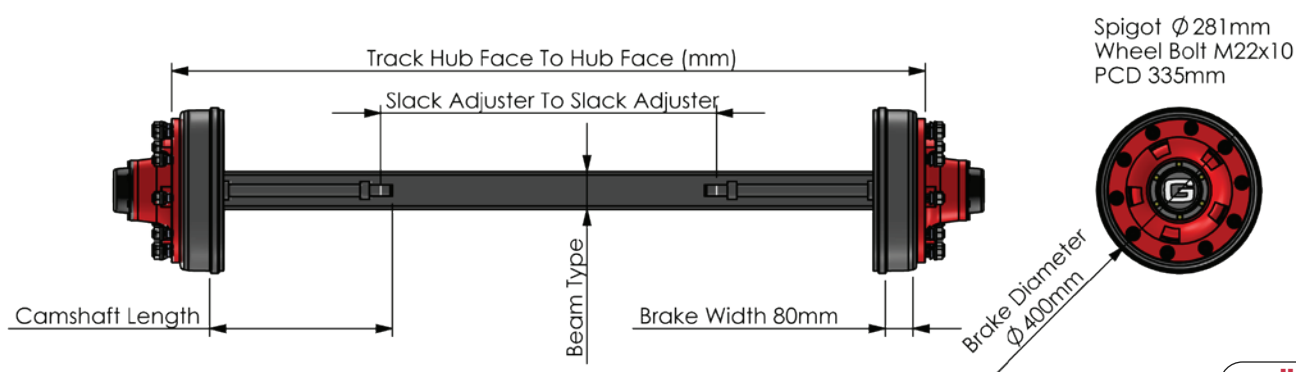


97400 Series

Part No	Brake Size	Track	Beam Type	Camshaft / SP	Slack to Slack	Wheelbolt
97400	400x80	2000mm	■ 100mm	455mm / 38	911mm	10 x M22
97401	400x80	1900mm	■ 100mm	455mm / 38	811mm	10 x M22
97450	400x80	1900mm	■ 100mm	560mm / 38	604mm	10 x M22

* Values provided may vary depending on suspension overhang, speed, road conditions, offset wheels.
SP - No. of Splines

Max Beam Capacity									Brake Capacity		
25 km/h			40 km/h			60 km/h			25 km/h	40 km/h	EEC
									13,000kg	7,000kg	7,000kg
13,500kg	14,500kg	12,000kg	13,000kg	14,000kg	11,500kg	12,000kg	13,000kg	11,000kg	361-135-09	361-131-12	361-127-12



TÜV
Certified



This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

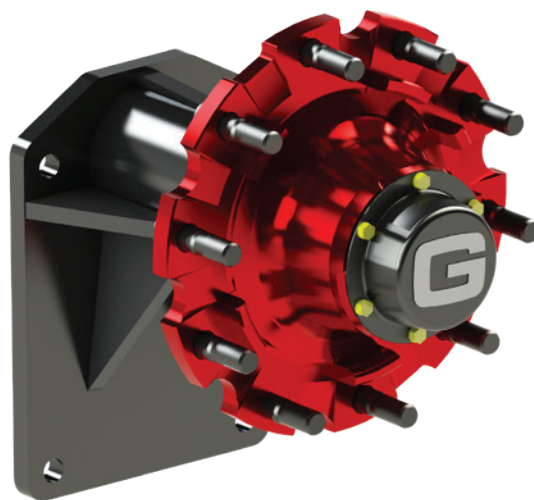
T. +44 (0) 2890 740 055



Stub Axles

We offer a full range of stub axles.

- Available in all Spigot and PCD sizes
- Braked and Unbraked.
- With or without mounting plates



FDC Axles (Forged Drop Centre)

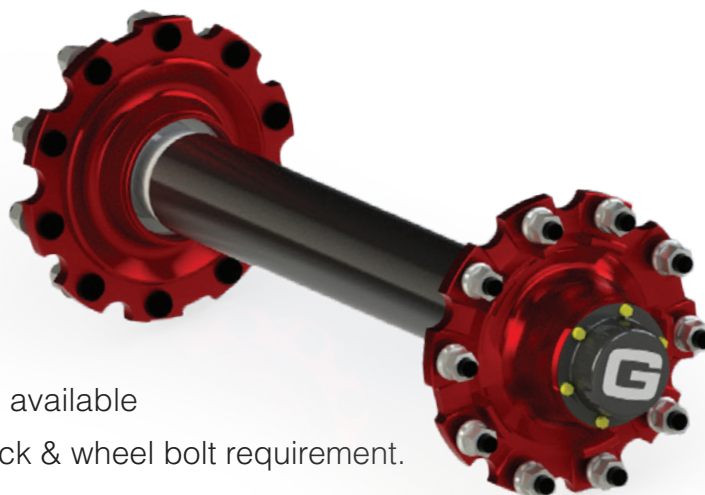
Our FDC axle is designed to allow clearance under your vehicle.

- We offer a 205mm and a 230mm drop.
- Offset available to suit the Driveshaft position
- Axles can be built as either Drum or Disc Brake.
- Available as a fixed or steer axle version.



We offer a large range of suspension solutions to suit your FDC axles, our Engineering team are ready to help.

Unbraked Axles



We also have a range of unbraked axles available in the following specifications to your track & wheel bolt requirement.

Axle Series	Beam Type	Spigot	PCD	Wheel Bolt
100	Ø 127mm	Ø 280mm	Ø 335mm	10 x M22
200	Ø 127mm	Ø 280mm	Ø 335mm	10 x M22
300	Ø 127mm	Ø 173mm	Ø 225mm	10 x M22
400	Ø 127mm	Ø 173mm	Ø 225mm	10 x M22
6000	Ø 127mm	Ø 220mm	Ø 275mm	8 x M22
7000	Ø 127mm	Ø 280mm	Ø 335mm	10 x M22
750	■ 90mm	Ø 220mm	Ø 275mm	8 x M20
950	□ 150mm	Ø 280mm	Ø 335mm	10 x M22
97000	■ 90mm	Ø 220mm	Ø 275mm	8 x M20
97050	■ 80mm	Ø 220mm	Ø 275mm	8 x M20
97100	■ 70mm	Ø 160mm	Ø 205mm	6 x M18
97200	■ 90mm	Ø 220mm	Ø 275mm	8 x M20
97400	■ 100mm	Ø 280mm	Ø 335mm	10 x M22

This is a sample table from our range, other specifications are available or can be manufactured. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

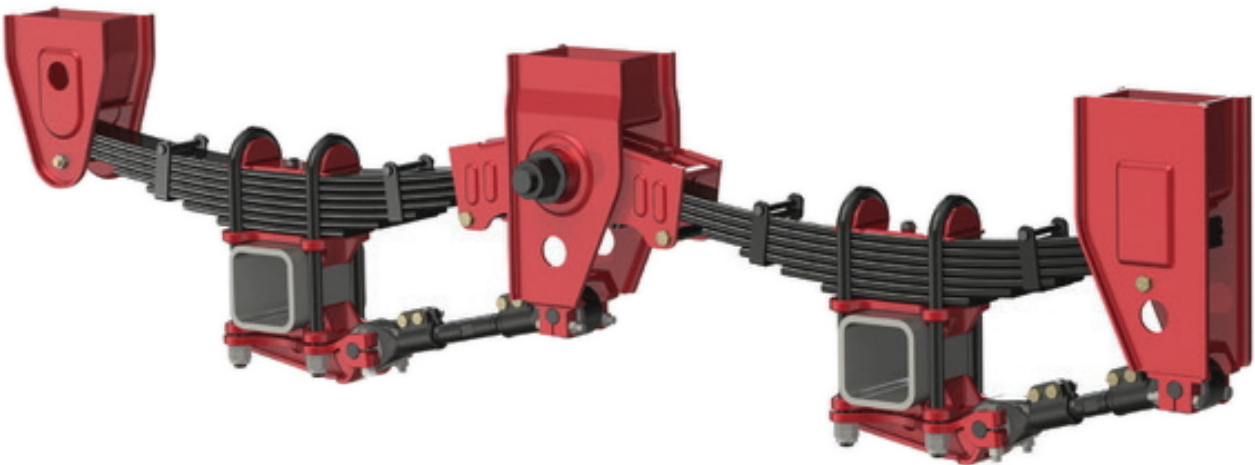
NI

T. +44 (0) 2890 740 055



Suspensions

Air, Mechanical, Hydraulic, Walking Beam, Argo, Cantilever, Agri, Heavy Duty



Suspensions

Contents

Air Suspension

Overslung	33
Underslung	34

Mechanical Suspension

Overslung	35
Underslung	36
Ultra-Underslung	37
100mm Wide - Heavy Duty	38
16T Series - Heavy Duty	40
Wide Spread	41
C22000 Range	42

Hydraulic Suspension	43
----------------------------	----

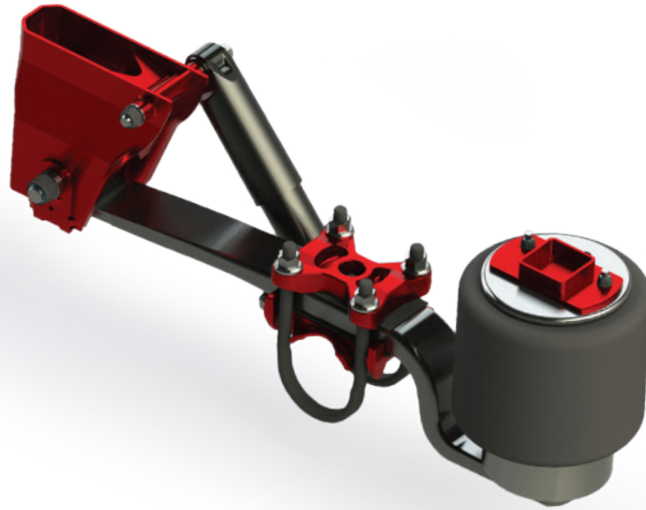
Hydraulic Drawbar	44
-------------------------	----

Walking Beam Suspension	45
-------------------------------	----

Argo Bogie - Heavy Duty	46
-------------------------------	----

Cantilever Suspension - Heavy Duty	47
--	----

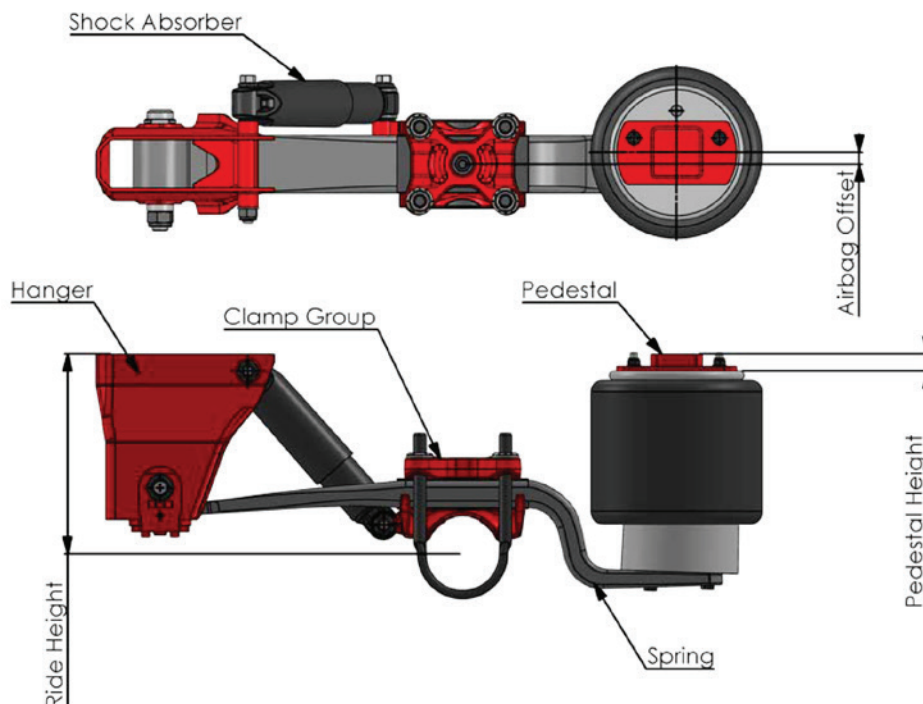
Agri Suspension	48
-----------------------	----



Overslung Type

Part No	Beam Type	Suspension Capacity*	Ride Height Min	Ride Height Max	Pedestal	Airbag Offset
PTS 38-80L	Ø 127mm	8,000kg	360mm	400mm	None	None
PTSL 42-105	Ø 127mm	10,500kg	400mm	445mm	None	70mm
31801	Ø 127mm	9,000kg	375mm	420mm	50mm	65mm
31802	Ø 127mm	9,000kg	400mm	445mm	75mm	20mm
31554	Ø 127mm	9,000kg	350mm	395mm	30mm	20mm
31533	Ø 127mm	10,000kg	405mm	425mm	30mm	90mm
31565	Ø 127mm	11,000kg	425mm	455mm	None	30 / 50 / 95mm
31831	Ø 127mm	13,000kg	235mm	275mm	30mm	30 / 50 / 95mm

* Capacity calculated per Axle



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

Ireland

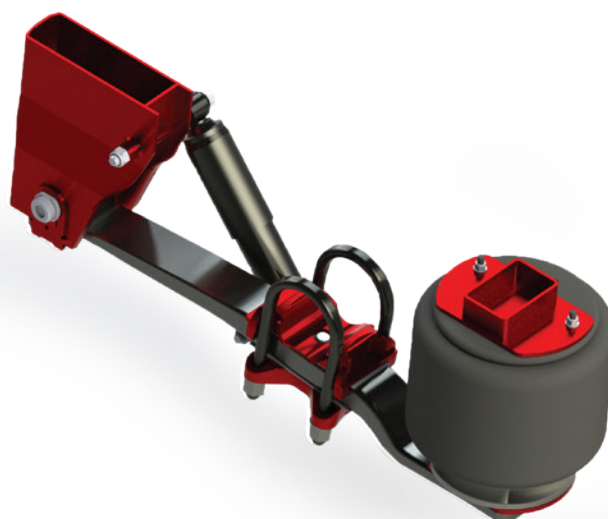
T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

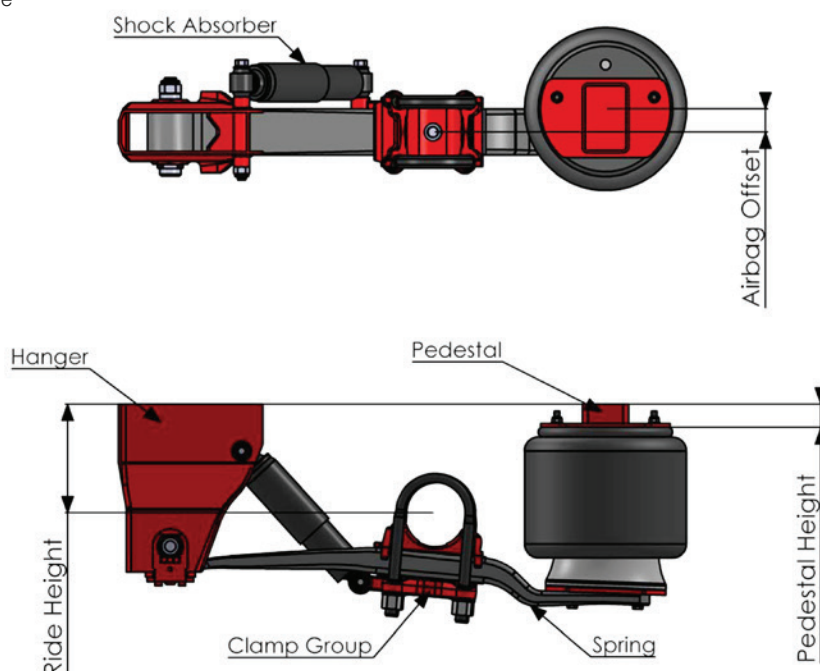
T. +44 (0) 2890 740 055



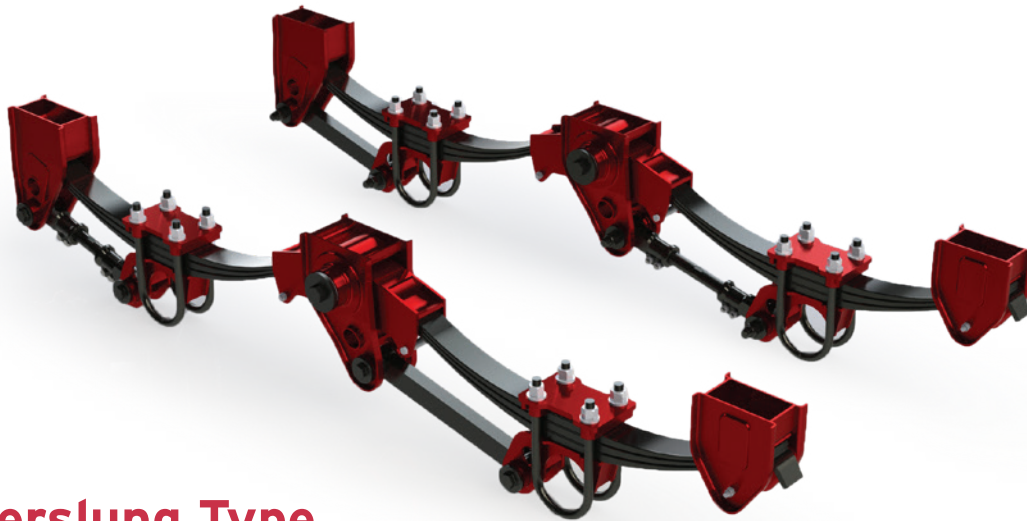
Underslung Type

Part No	Beam Type	Suspension Capacity*	Ride Height Min	Ride Height Max	Pedestal	Airbag Offset
PTL 17 85/105	Ø 127mm	10,500kg	170mm	200mm	None	0 / 70mm
PTL 17 125	Ø 127mm	12,500kg	170mm	200mm	None	0 / 70mm
PTL 26 85/105	Ø 127mm	10,500kg	215mm	260mm	43mm	0 / 70mm
PTS 38 85/105	Ø 127mm	10,500kg	320mm	405mm	80mm	0 / 70mm
PTS 43 125	Ø 127mm	12,500kg	370mm	455mm	130mm	0
31502	Ø 127mm	10,000kg	175mm	210mm	None	50mm
31512	Ø 127mm	10,000kg	225mm	260mm	50mm	50mm
31560	Ø 127mm	11,000kg	245mm	275mm	30mm	30 / 50 / 95mm
31596	Ø 127mm	13,000kg	215mm	245mm	None	30 / 50 / 95mm

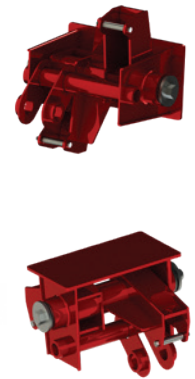
* Capacity calculated per Axle



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements



Offset Hanger Arrangement



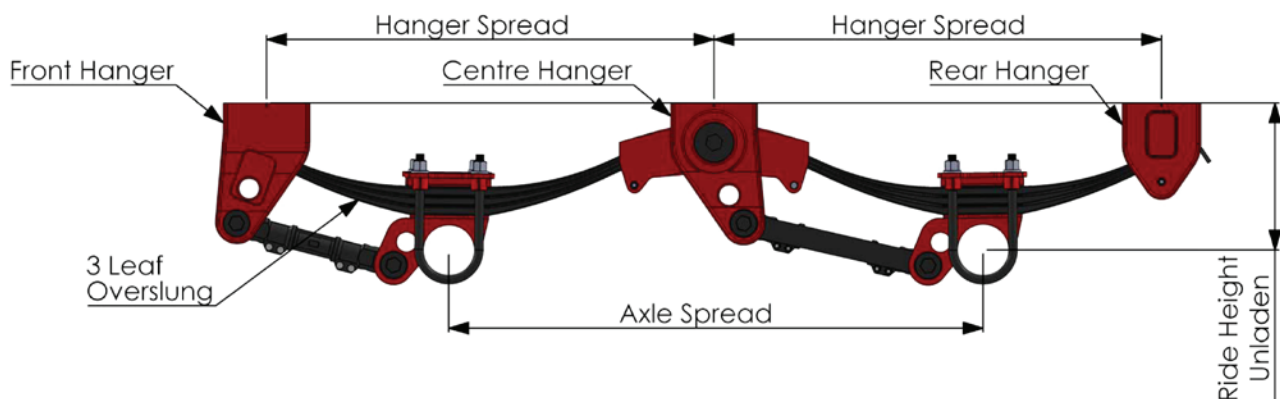
Overslung Type

Part No	Beam Type	Suspension Capacity*	Axle Spread	Number of Axles	Ride Height (unladen)	SpringType
SUSP G 20957 305	Ø 127mm	11,000kg	1310mm	Tri	393mm	4 Leaf
SUSP G 20948 265	Ø 127mm	11,000kg	1310mm	Tandem	356mm	4 Leaf
SUSP G 20861 305	Ø 127mm	11,000kg	1360mm	Tandem	385mm	4 Leaf
SUSP G 20722 305	Ø 127mm	11,000kg	N/A	Mono	385mm	4 Leaf
SUSP G 20925 305	Ø 127mm	11,000kg	1360mm	Tri	385mm	4 Leaf
SUSP G 20514 305	Ø 127mm	11,000kg	1310mm	Tri	370mm	3 Leaf
SUSP G 20515 265	Ø 127mm	11,000kg	1360mm	Tri	330mm	3 Leaf
SUSP G 20512 305	Ø 127mm	11,000kg	1310mm	Tandem	370mm	3 Leaf
SUSP G 20513 305	Ø 127mm	11,000kg	1360mm	Tandem	370mm	3 Leaf
SUSP G 20511 305	Ø 127mm	11,000kg	N/A	Mono	370mm	3 Leaf

* Capacity calculated per Axle

Other suspension arrangements with mono leaf, multileaf , riser blocks also available. See website for more info.

Offset hangers available in the above arrangements on request.



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

Ireland

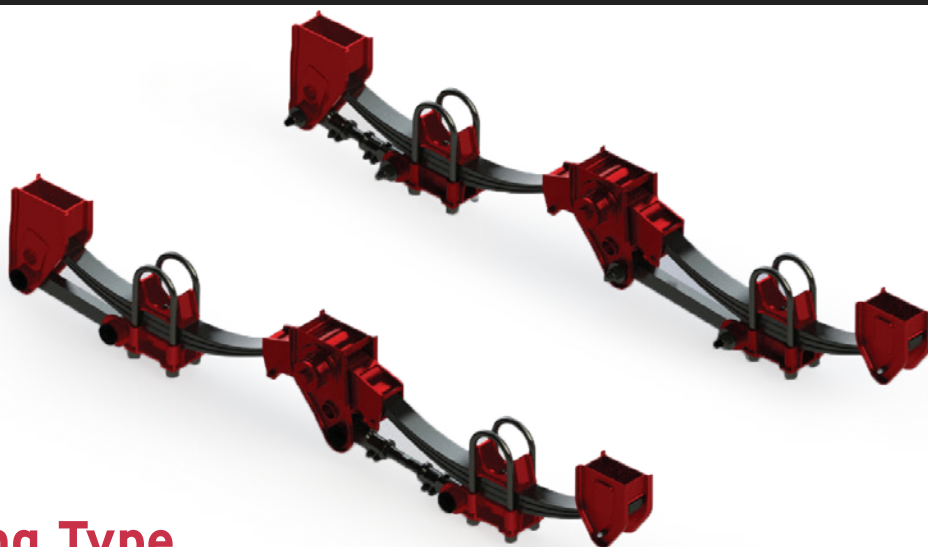
T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

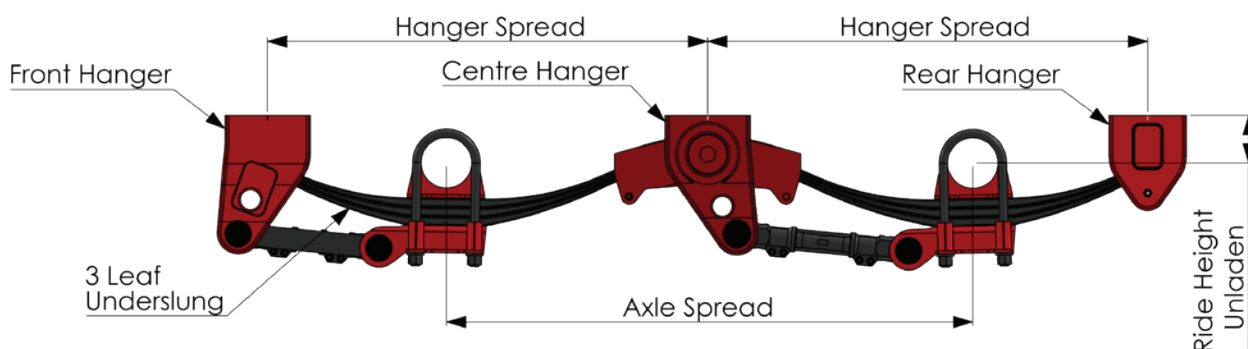


Underslung Type

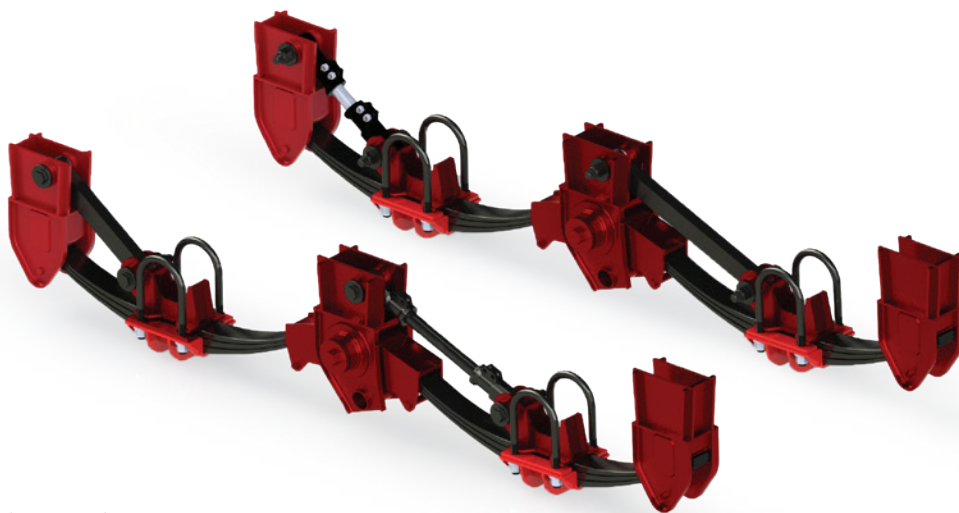
Part No	Beam Type	Suspension Capacity*	Axle Spread	Number of Axles	Ride Height (Unladen)	Spring Type
SUSP G 20516 265	Ø 127mm	11,000kg	N/A	Mono	68mm	3 Leaf
SUSP G 20517 305	Ø 127mm	11,000kg	1310mm	Tandem	105mm	3 Leaf
SUSP G 20518 305	Ø 127mm	11,000kg	1360mm	Tandem	105mm	3 Leaf
SUSP G 20519 305	Ø 127mm	11,000kg	1310mm	Tri	105mm	3 Leaf
SUSP G 20520 265	Ø 127mm	11,000kg	1360mm	Tri	75mm	3 Leaf
SUSP G 20772 305	Ø 127mm	11,000kg	1310mm	Tri	105mm	4 Leaf
SUSP G 20856 305	Ø 127mm	11,000kg	1550mm	Tandem	137mm	3 Leaf
SUSP G 20857 305	Ø 127mm	11,000kg	1550mm	Tandem	139mm	4 Leaf
SUSP G 20906 305	Ø 127mm	11,000kg	1310mm	Tandem	105mm	4 Leaf
SUSP G 20976 305	Ø 127mm	11,000kg	1310mm	Tri	105mm	4 Leaf

* Capacity calculated per Axle

Other suspension arrangements with mono leaf, multileaf , riser blocks also available. See website for more info.



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

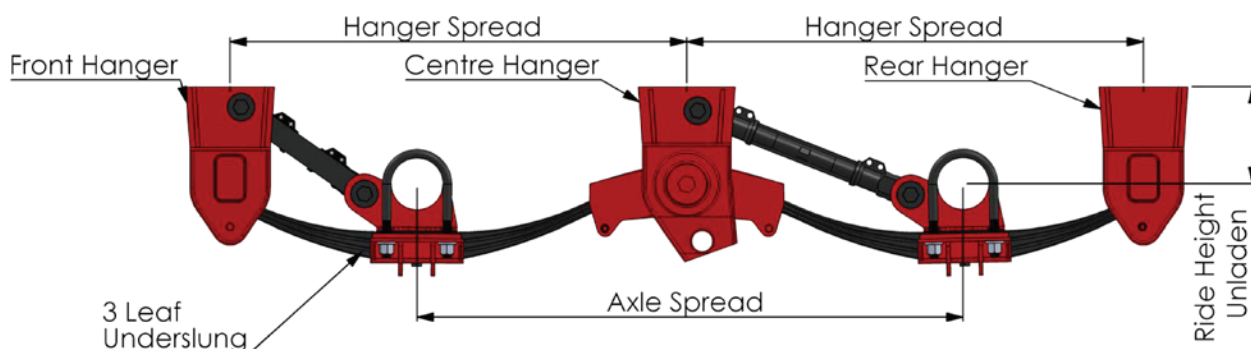


Ultra Underslung Type

Part No	Beam Type	Suspension Capacity*	Axle Spread	Number of Axles	Ride Height (Unladen)	Spring Type
SUSP G 20557	Ø 127mm	11,000kg	1310mm	Tri	230mm	3 Leaf
SUSP G 20558	Ø 127mm	11,000kg	1360mm	Tri	230mm	3 Leaf
SUSP G 20559	Ø 127mm	11,000kg	1310mm	Tandem	230mm	3 Leaf
SUSP G 20560	Ø 127mm	11,000kg	1360mm	Tandem	230mm	3 Leaf
SUSP G 20561	Ø 127mm	11,000kg	N/A	Mono	230mm	3 Leaf
SUSP G 20730	Ø 127mm	11,000kg	1310mm	Tandem	230mm	4 Leaf
SUSP G 20733	Ø 127mm	11,000kg	1360mm	Tandem	230mm	4 Leaf
SUSP G 20776	Ø 127mm	11,000kg	1310mm	Tri	230mm	4 Leaf
SUSP G 20807	Ø 127mm	11,000kg	1550mm	Tandem	139mm	12 Leaf Multi
SUSP G 20818	Ø 127mm	11,000kg	1550mm	Tandem	235mm	12 Leaf Multi
SUSP G 20834	Ø 127mm	11,000kg	1600mm	Tandem	238mm	12 Leaf Multi

* Capacity calculated per Axle

Other suspension arrangements with mono leaf, multileaf, riser blocks also available. See website for more info.



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

Mechanical Suspension



Heavy Duty



Offset Hanger Arrangement



100mm Wide (13 Tonne)

Part No	Axle Spread (mm)	Unladen Height	No. of Axles	Spring Type	Axle Seat Type	Hanger Spacing	Hanger Height
97656	1360	315	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97657	1360	380	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97658	1360	315	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97659	1360	315	TANDEM	100mm 3 LEAF	36187	1205,1205	A=286, B=289, C=175
97660	1360	380	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97661	1360	380	TANDEM	100mm 3 LEAF	36187	1205,1205	A=286, B=289, C=175
97668	1500	315	TANDEM	100mm 3 LEAF	97704	1260,1260	A=286, B=289, C=175
97669	1500	315	TANDEM	100mm 3 LEAF	36187	1260,1260	A=286, B=289, C=175
97670	1500	380	TANDEM	100mm 3 LEAF	97704	1260,1260	A=286, B=289, C=175
97671	1500	380	TANDEM	100mm 3 LEAF	97704	1260,1260	A=286, B=289, C=175
97672	1500	380	TANDEM	100mm 3 LEAF	36187	1260,1260	A=286, B=289, C=175
97773	1500	315	TANDEM	100mm 3 LEAF	97704	1260,1260	A=286, B=289, C=175
97676	1360	315	TRI	100mm 3 LEAF	97704	1205,1363, 1205	A=286, B=289, C=175

* Capacity calculated per Axle

Other suspension arrangements with mono leaf, multileaf , riser blocks also available. See website for more info.

Axle Seat Types



97704 SEAT
(R127)



36187 SEAT
(150SQ)

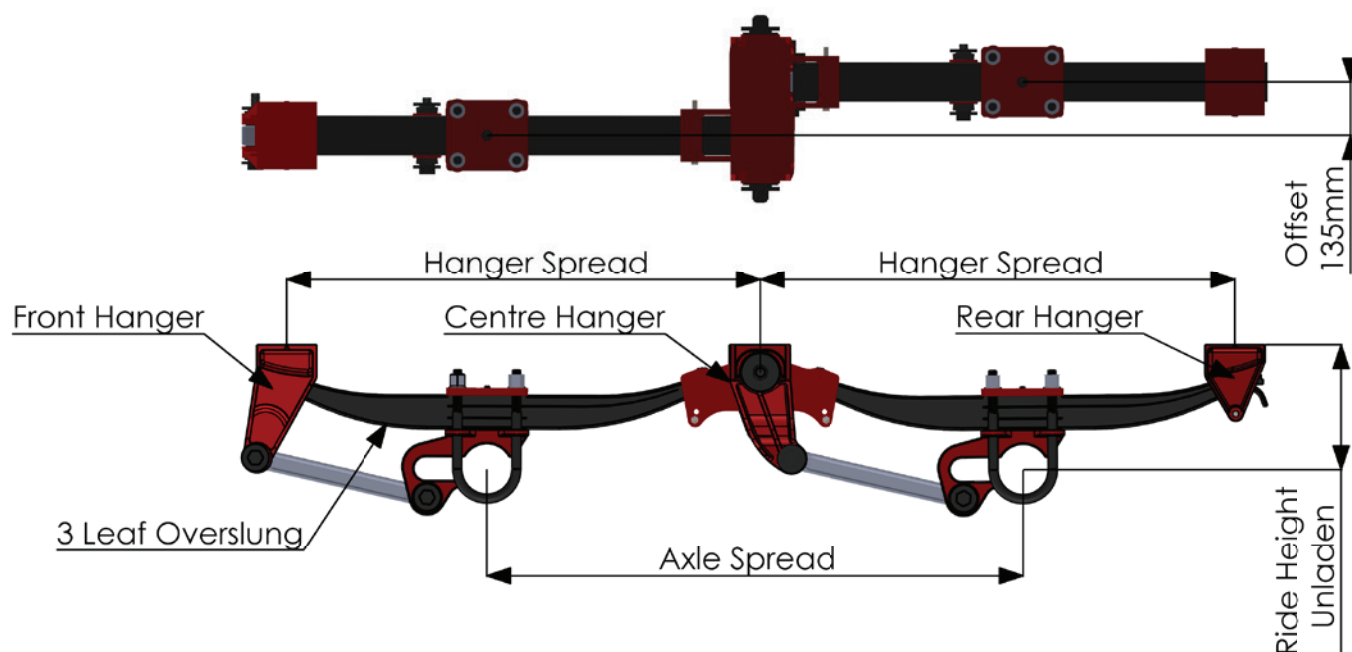
This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

100mm Wide Offset (13 Tonne)

Part No	Axle Spread (mm)	Unladen Height	No. of Axles	Spring Type	Axle Seat Type	Hanger Spacing	Hanger Height
97662	1360	315	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97663	1360	315	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97664	1360	315	TANDEM	100mm 3 LEAF	36187	1205,1205	A=286, B=289, C=175
97665	1360	380	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97666	1360	380	TANDEM	100mm 3 LEAF	97704	1205,1205	A=286, B=289, C=175
97667	1360	380	TANDEM	100mm 3 LEAF	36187	1205,1205	A=286, B=289, C=175
97673	1500	315	TANDEM	100mm 3 LEAF	36187	1260,1260	A=286, B=289, C=175
97674	1500	380	TANDEM	100mm 3 LEAF	97704	1260,1260	A=286, B=289, C=175
97675	1500	380	TANDEM	100mm 3 LEAF	36187	1260,1260	A=286, B=289, C=175
97774	1500	315	TANDEM	100mm 3 LEAF	97704	1260,1260	A=286, B=289, C=175
97781	1500	315	TANDEM	100mm 3 LEAF	97704	1260,1260	A=286, B=289, C=175

* Capacity calculated per Axle

Other suspension arrangements with mono leaf, multileaf , riser blocks also available. See website for more info.

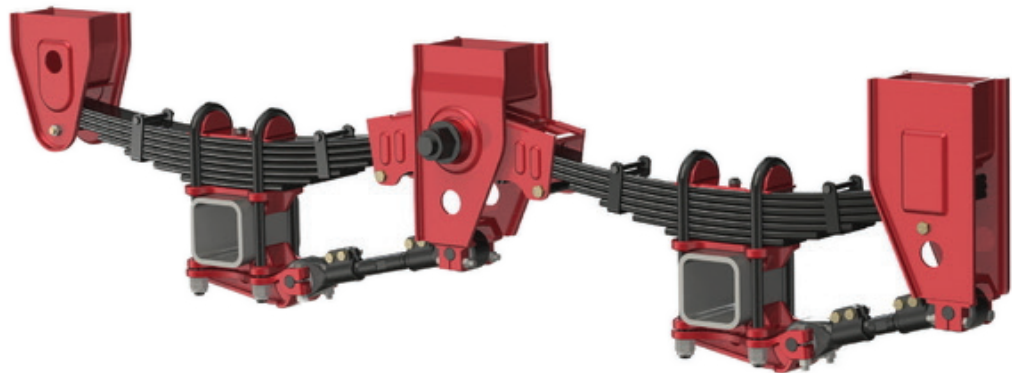


This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements



Heavy Duty

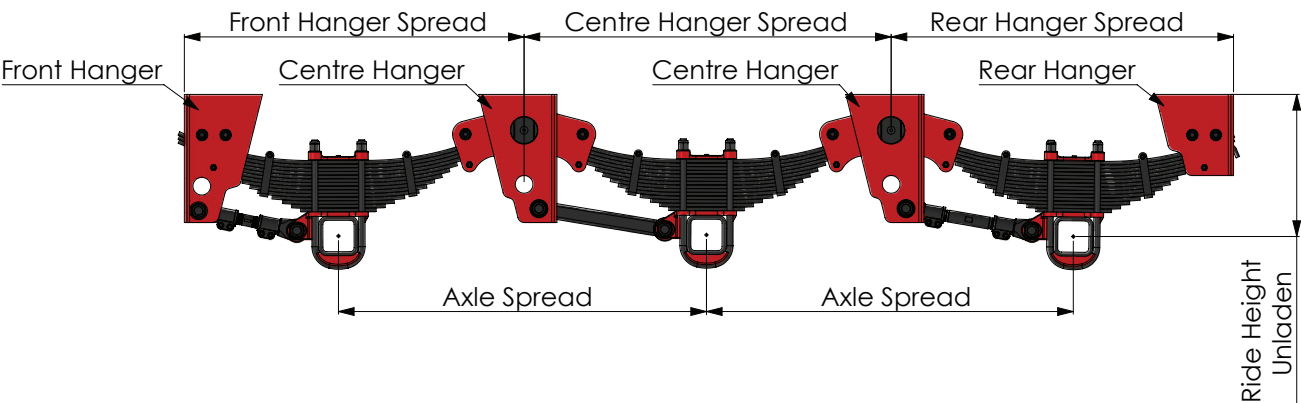
Offset Hanger Arrangement



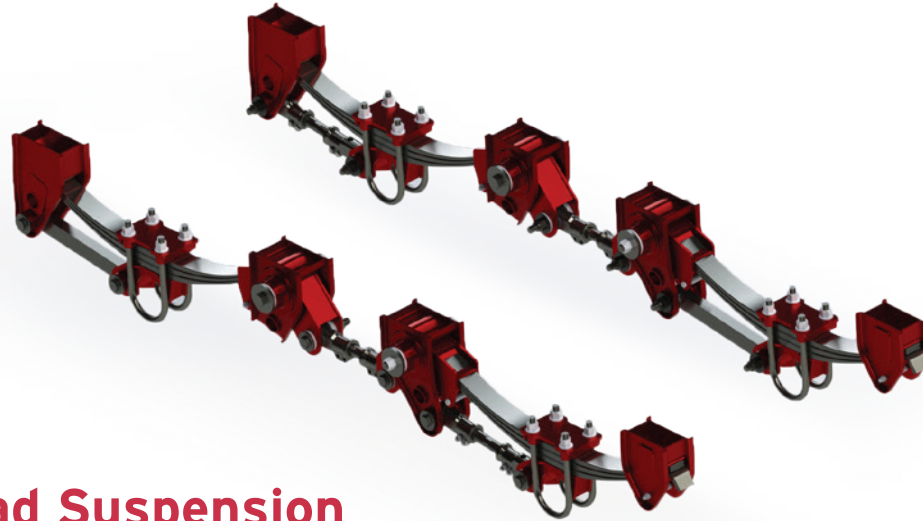
16T series

Part No	Beam Type	Suspension Capacity*	Axle Spread	Number of Axles	Ride Height (unladen)	Spring Type
SUSP G 21041	□ 150mm	16,000kg	1360mm	Tandem	200mm	9 leafs 90x16
SUSP G 21042	□ 150mm	16,000kg	1500mm	Tandem	200mm	9 leafs 90x16
SUSP G 21043	□ 150mm	16,000kg	1360mm	Tandem	250mm	9 leafs 90x16
SUSP G 21044	□ 150mm	16,000kg	1500mm	Tandem	250mm	9 leafs 90x16
SUSP G 21045	□ 150mm	16,000kg	1360mm	Tandem	395mm	9 leafs 90x16
SUSP G 21046	□ 150mm	16,000kg	1820mm	Tandem	444mm	9 leafs 90x16
SUSPM150-2	□ 150mm	16,000kg	1500mm	Tandem	395mm	9 leafs 90x16

* Capacity calculated per Axle
Offset hangers available in the above arrangements on request.



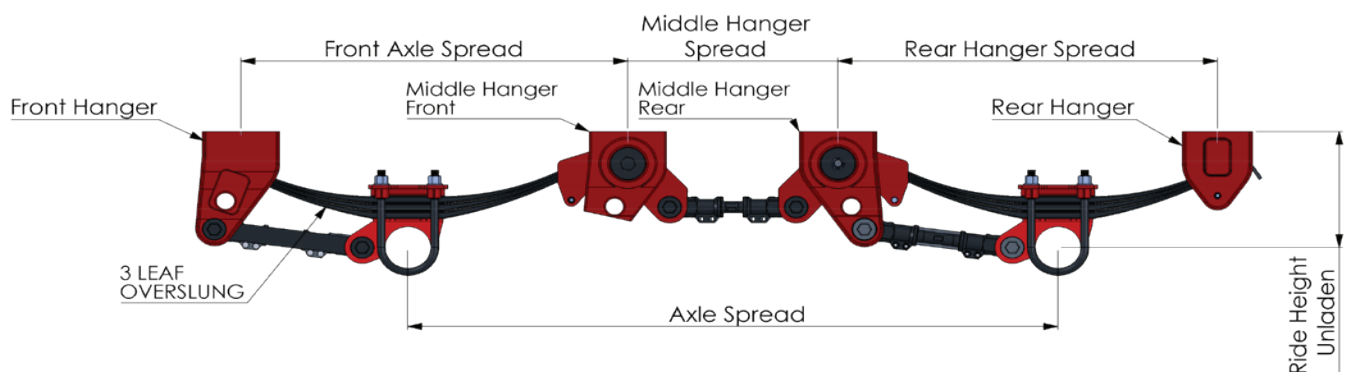
This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements



Wide Spread Suspension

Part No	Beam Type	Suspension Capacity*	Axle Spread	Clamping Style	Ride Height (unladen)	Spring Type
SUSP G 20885	Ø 127mm	11,000kg	1850mm	Underslung	115mm	3 Leaf
SUSP G 20922 305	Ø 127mm	11,000kg	1850mm	Overslung	362mm	3 Leaf
SUSP G 20554	Ø 127mm	11,000kg	1850mm	Underslung	115mm	4 Leaf

* Capacity calculated per Axle



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

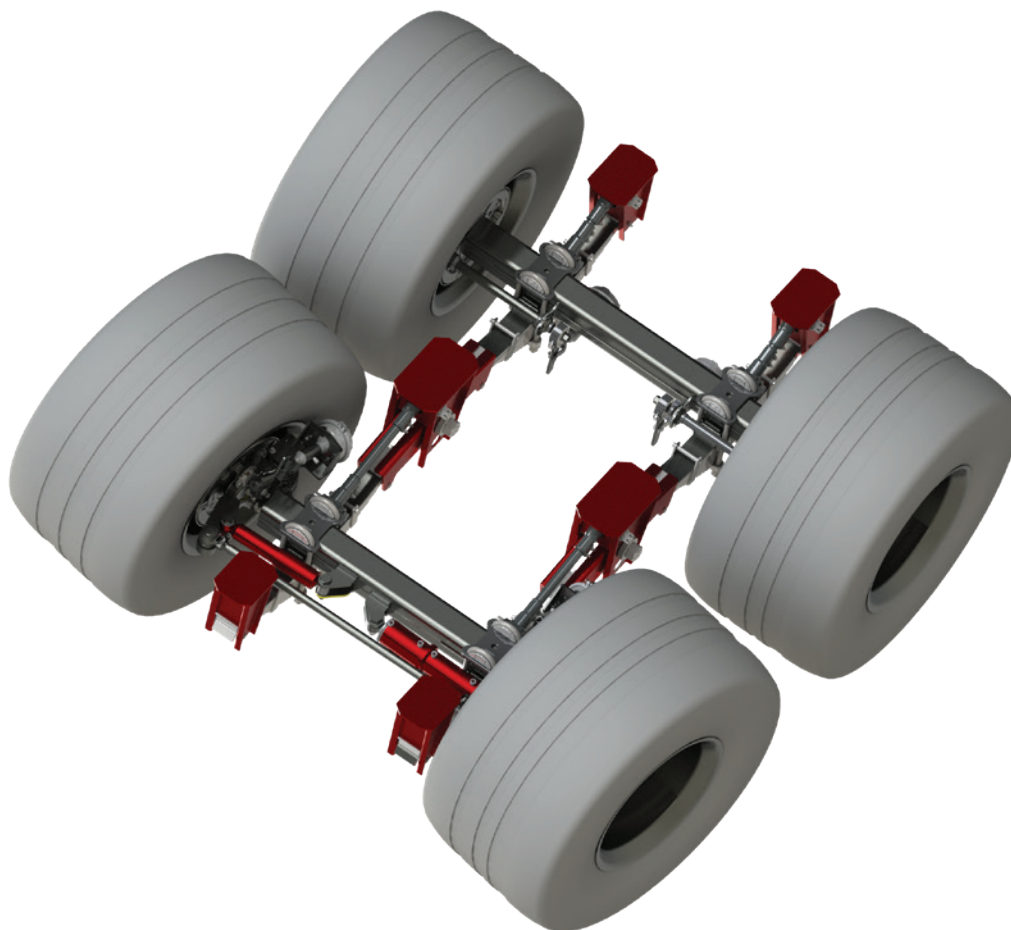
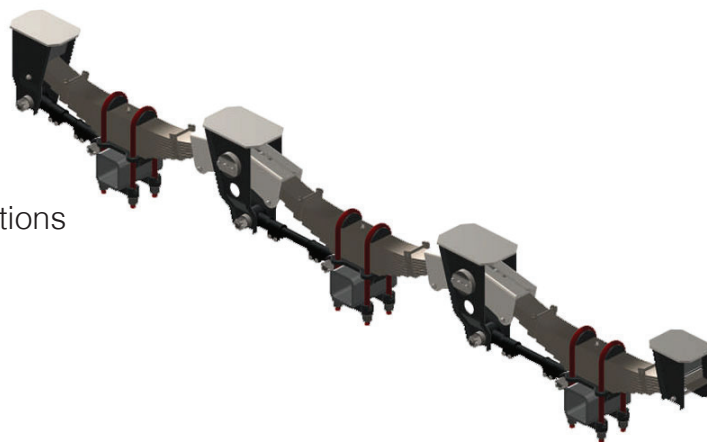


Heavy Duty

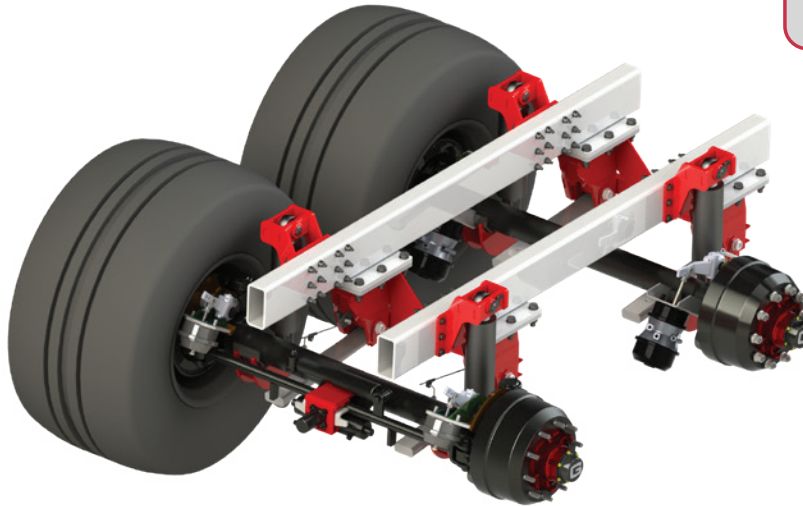
C 22000 Range Suspensions

Suspension Specification

- 9T/12T/14T/16T/20T load per axle options
- 140mm Clamp group
- 100mm wide multileaf springs
- Overslung and Underslung options
- Offset hanger option available



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements



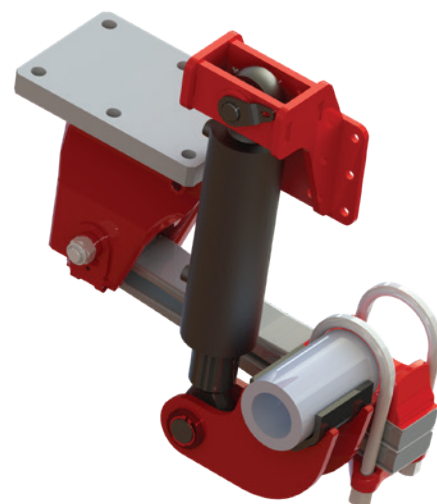
GH Series

Capacity	Suspension travel (min to max)	Ride Height range available	Axle Beam compatible	Axle Type compatibility	Suspension Features
12000kg per axle	300mm	240mm – 440mm	Ø 127mm	Fixed	Dual Acting Rams for Axle Lift (if required)
			□ 120mm	Self-Steer	Dual Acting Rams allow cross piping for added stability
			□ 150mm	Command Steer Axles	Large travel operation for uneven surfaces

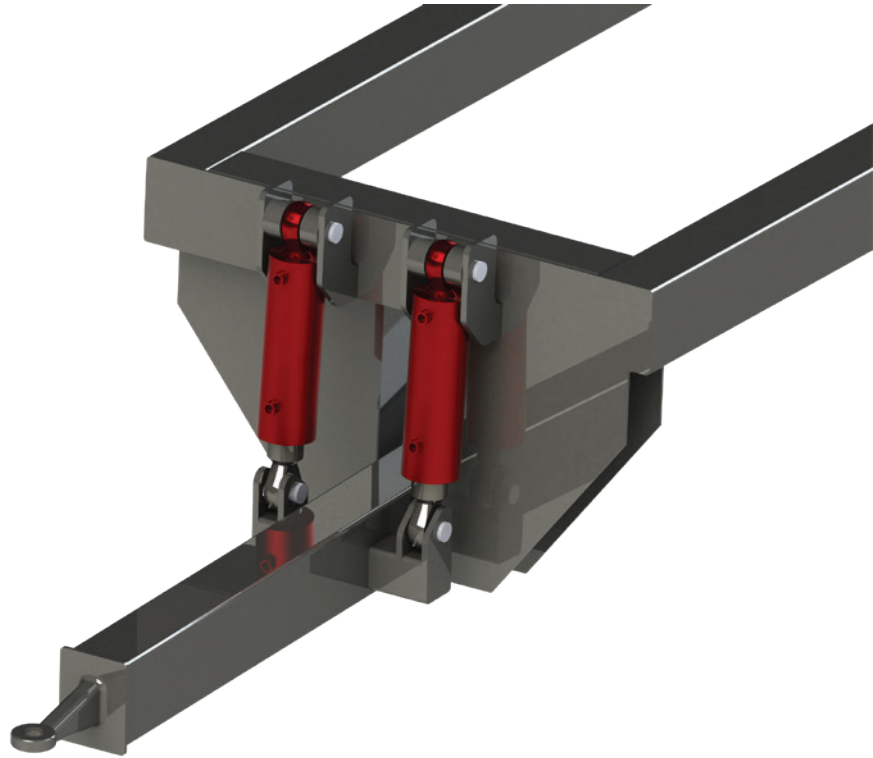
Hydro-Pneumatic Suspension can be supplied with a control system to allow the suspension setup to maintain a constant ride height regardless of the vehicle load. This setup is advantageous to vehicle applications that require a constant working ride height. Hydraulic suspension is very advantageous to the constantly changing loads on agricultural machinery during operation. This suspension setup also provides a more stable and consistent centre of gravity thus improving control of the vehicle at a range of speeds and cornering.

Using dual acting rams in this suspension setup allows for future expansion with developing controls systems capable of “slope control” during off-road operations. This will actively keep the load/trailer body in a vertical position when operating on uneven ground to improve safety and further reduce the risk of vehicle rolling.

The Dual Acting Ram allows an axle to be lifted when the trailer is unladen, this helps in the reduction of tyre wear.

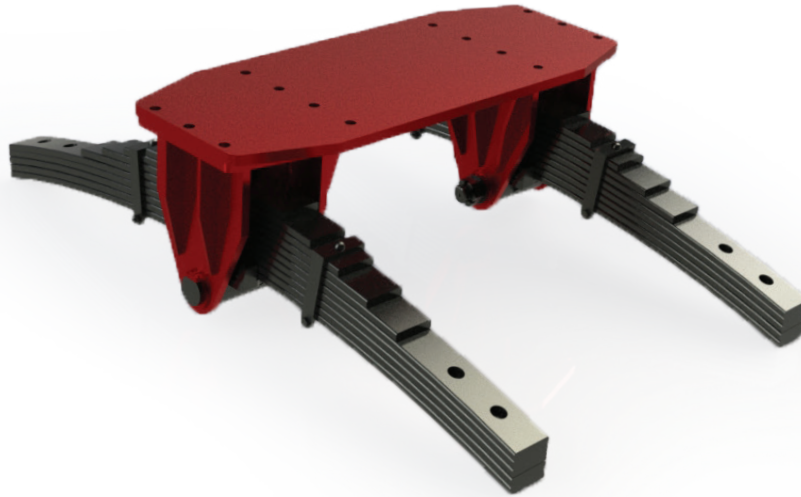


This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements



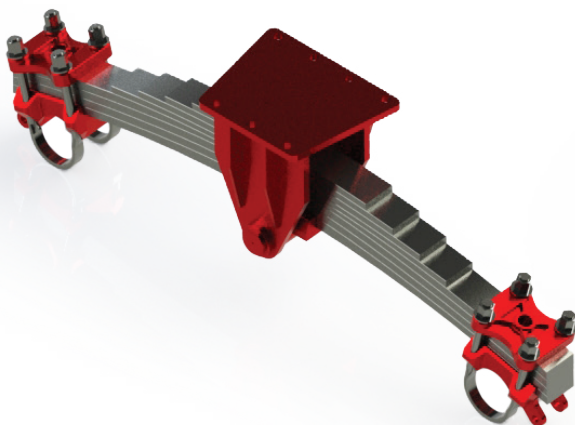
Hydraulic Drawbars can provide many benefits over standard mechanical or rigid drawbars. The hydraulic rams connected to gas accumulators provide a smoother journey with less shock loads. The hydraulic rams provide greater stability in the field and on the road. The drawbar valves enable the drawbar height to be adjusted to transfer weight on the vehicle. There are also valve options to give load compensation to get the best performance from the drawbar laden and unladen.

For further information please contact our sales team.

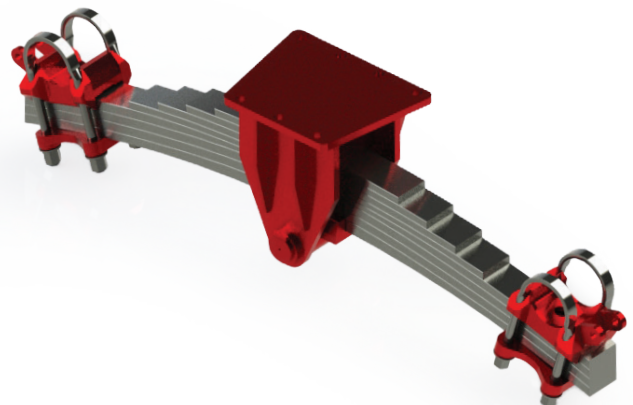


Part No	Beam Type	Suspension Capacity*	Axle Spread	Clamping Style	Spring Type	Ride Height (unladen)
SUSP G 20601	Ø 127mm	11,300kg	1172mm	Overslung	6 Leaf Multi	337mm
SUSP G 20612	□ 120mm	11,300kg	1295mm	Overslung	6 Leaf Multi	348mm
SUSP G 20602	Ø 127mm	11,300kg	1366mm	Underslung	6 Leaf Multi	137mm
SUSP G 20613	□ 120mm	11,300kg	1173mm	Overslung	6 Leaf Multi	334mm
SUSP G 20603	Ø 127mm	11,300kg	1237mm	Underslung	6 Leaf Multi	122mm
SUSP G 20613	Ø 127mm	13,200kg	1173mm	Overslung	7 Leaf Multi	334mm
SUSP G 20889	Ø 127mm	16,200kg	1642mm	Underslung	10 Leaf Multi	257mm

Overslung Type



Underslung Type



This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

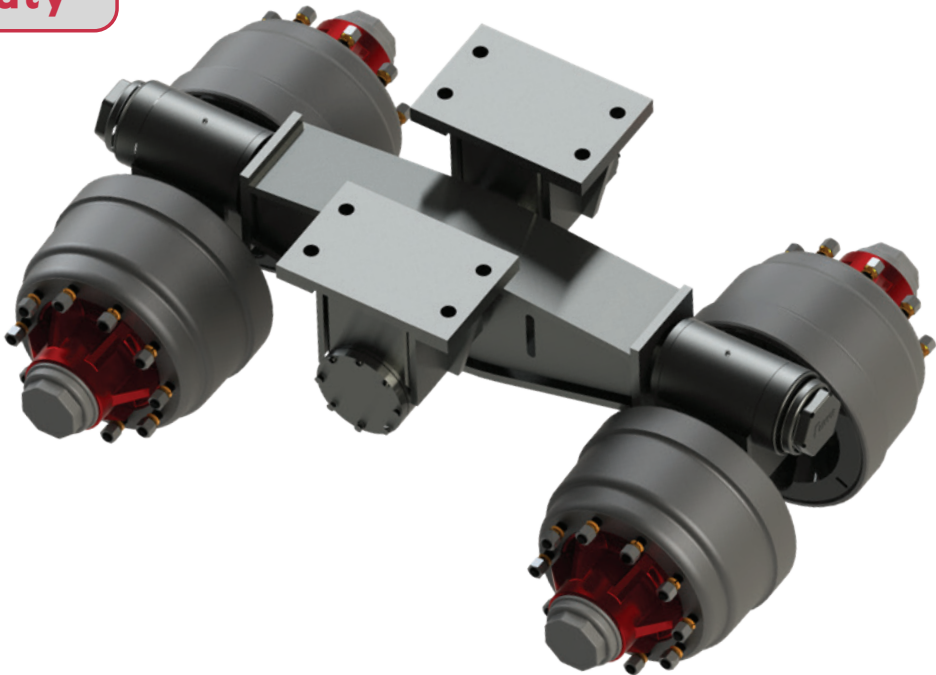
NI

T. +44 (0) 2890 740 055

Argo Bogie Suspension



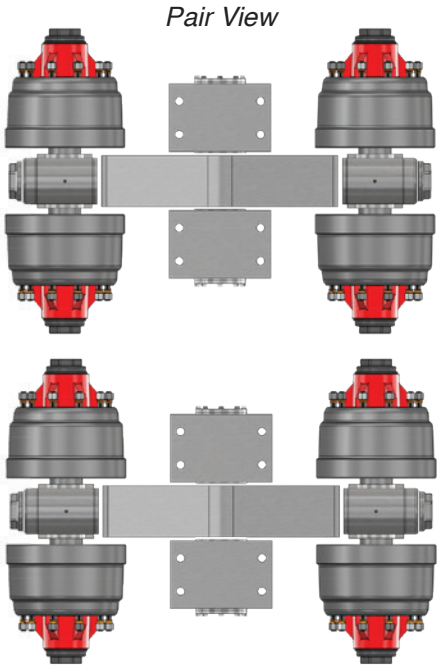
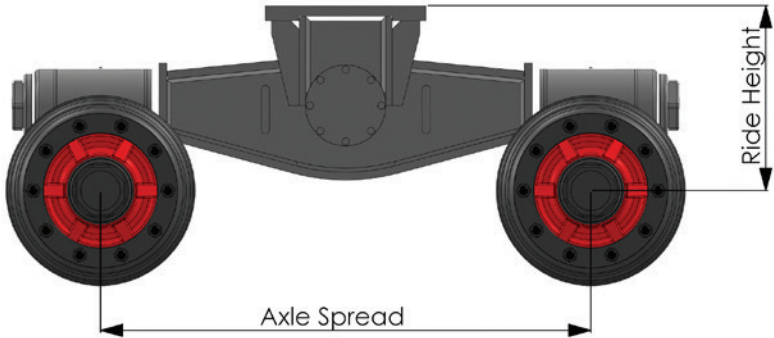
Heavy Duty

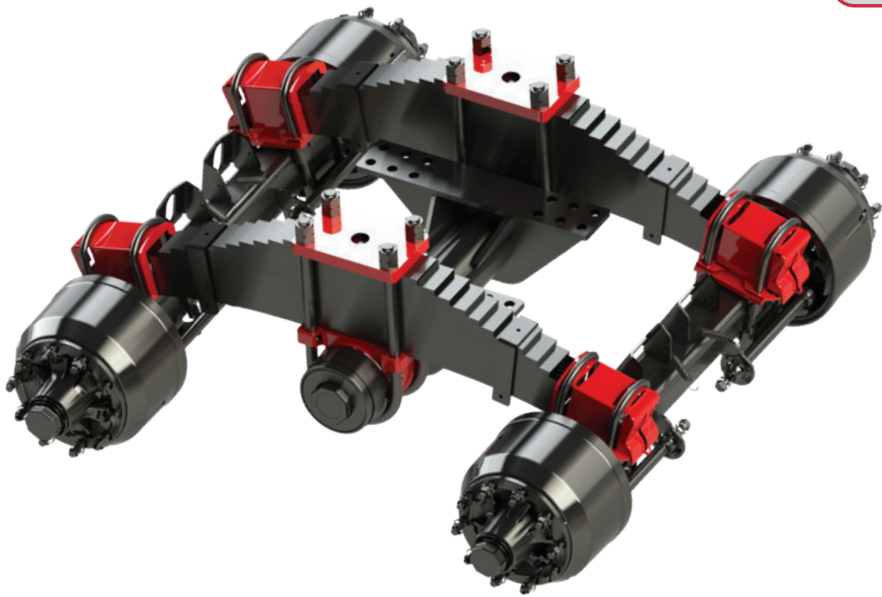


Part No	Beam Type	Capacity* (20km/h)	Axle Spread	Clamping Style	Axle Track	Mounting Height**
FW41-1550	Ø 127mm	40,000kg Pair	1220mm	Overslung	860mm	Variable
FW43-1550	Ø 127mm	80,000kg Pair	1550mm	Overslung	965mm	Variable

* Capacity calculated per pair (as per drawing below) and varies subject to speed.

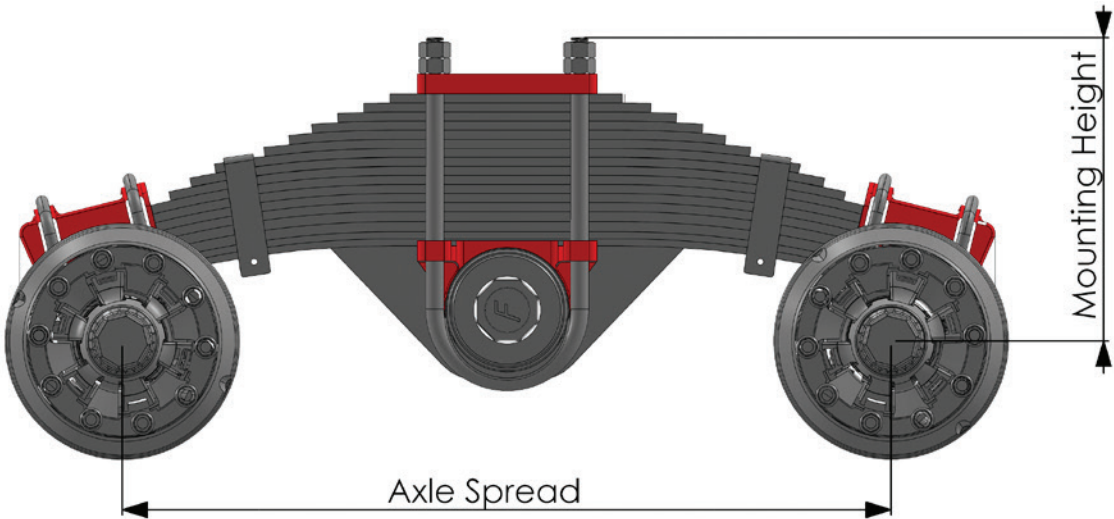
** Mounting Height options available: 335mm; 360mm; 457mm.





Part No	Beam Type	Capacity* (105km/h)	Axle Spread	Clamping Style	Axle Track	Mounting Height
FW31-900/660W	□ 150mm	36,000kg	1550mm	Overslung	1840mm	660mm
FW31-900/660	□ 150mm	40,000kg	1550mm	Overslung	1850mm	660mm

* Capacity calculated per unit and varies subject to speed.





Agri Suspension

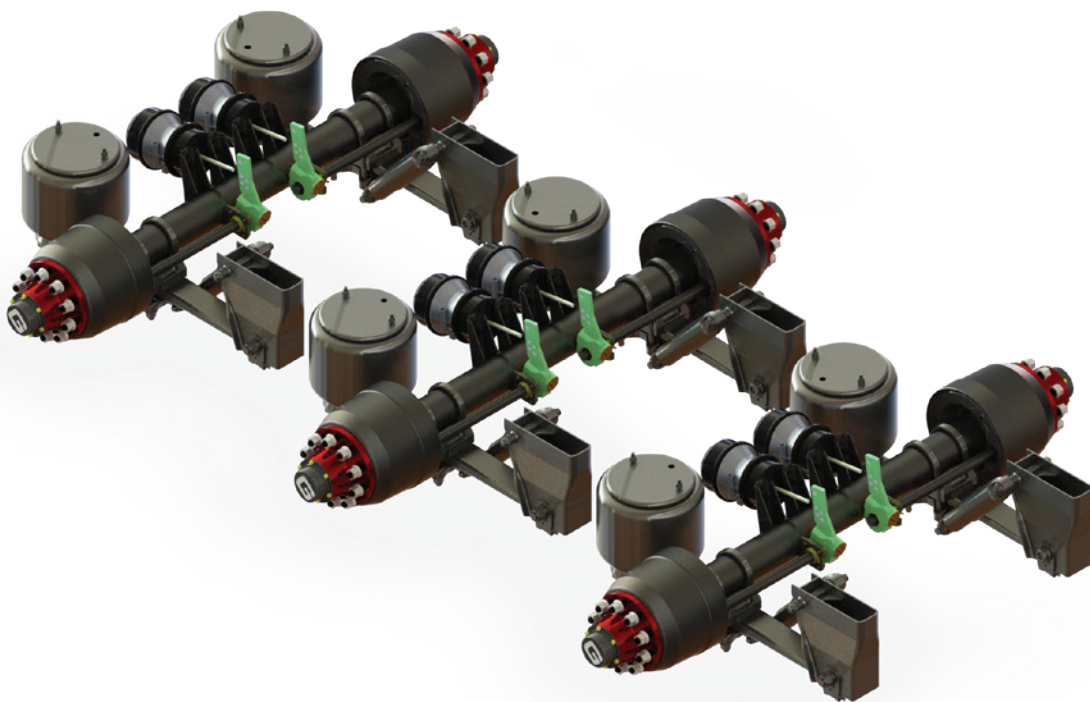
Part No	Beam Type	Suspension Capacity*	Axle Spread	Clamping Style	Number of Axles	Ride Height (unladen)	Spring Type
SUSP G 20541	■ 90mm	8,000kg	1304mm	Overslung	Tandem	371mm	7 Leaf
SUSP G 20860	■ 70mm	5,000kg	1175mm	Overslung	Tandem	363mm	5 Leaf
SUSP G 20870	■ 90mm	5,000kg	1150mm	Overslung	Tandem	358mm	5 Leaf
SUSP G 20841	■ 90mm	8,000kg	N/A	Overslung	Mono	349mm	7 Leaf
SUSP G 20949	Ø 127mm	8,000kg	1222mm	Overslung	Tandem	397mm	7 Leaf
SUSP G 20869	■ 90mm	5,000kg	N/A	Overslung	Mono	358mm	5 Leaf
SUSP G 20845	■ 100mm	8,000kg	1222mm	Underslung	Tandem	133mm	7 Leaf
SUSP G 20677	Ø 127mm	8,000kg	1222mm	Underslung	Tandem	115mm	7 Leaf

* Capacity calculated per Axle & at Max 40Km/h.

This is a sample table from our range, other specifications are available. Please contact us if the above does not meet with your requirements

Axle & Suspension Sets

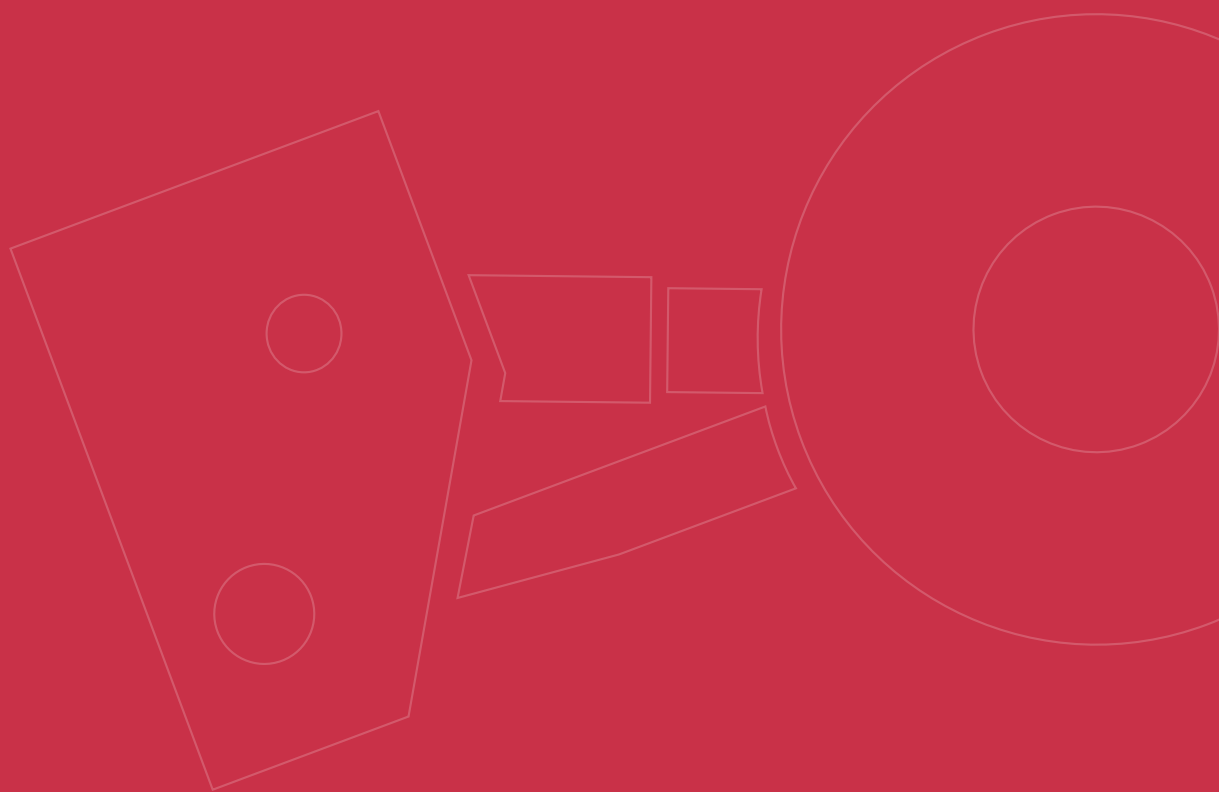
Air & Mechanical Suspension Sets, Case Studies



Axle & Suspension Sets

Contents

Air Suspension & Axle Set	49
Mechanical Suspension & Axle Set	50
Axle & Suspension Set - Case Study 1	51
Axle & Suspension Set - Case Study 2	52
Axle & Suspension Set - Case Study 3	53
Axle & Suspension Set - Case Study 4	54
Axle & Suspension Set - Case Study 5	55





Air Suspension & Axle Set

As per customer specifications, we can provide a full engineering design study on an Air Suspension solution complete with detailed drawings for approval, enabling us to provide a fully assembled Axle and Suspension set.

The approved Suspension set will be delivered fully assembled as per requested chassis centres and ride height. Granning Axles and Suspensions also provide the Air Suspension set with Brake Chambers and Slack Adjusters fitted and tested to meet brake calculation requirements. Once delivered, our customers need only weld the suspension hangers and pedestals to their chassis and finish by bolting the airbag in place thus providing savings in production times and reducing labour costs.

For further information on this service, please refer to our Request Form Section (pages 100-107), visit our website or simply contact our Engineering Department.

Additionally, a member of our team is always available to take your call.

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055



Mechanical Suspension & Axle Set

As per customer specifications, we can provide a full engineering design study on a Mechanical Suspension solution complete with detailed drawings for approval, enabling us to provide a fully assembled Axle and Suspension set.

The approved Suspension set will be delivered fully assembled as per requested chassis centres and ride height. Granning Axles and Suspensions also provide the Mechanical Suspension set with Brake Chambers and Slack Adjusters fitted and tested to meet brake calculation requirements. Once delivered, our customers need only weld the suspension hangers to their chassis and finish by welding bracing between the front and centres in place thus providing savings in production times and reducing labour costs. Granning Axles can also provide the hangers with the bracing pre-welded in place further reducing labour times and costs for our customers.

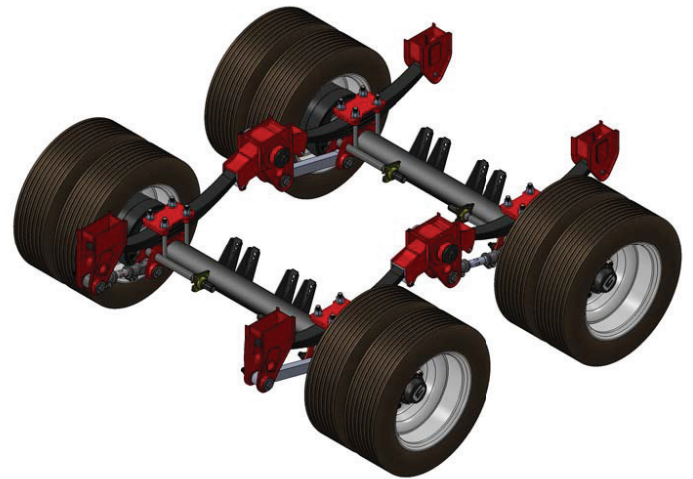
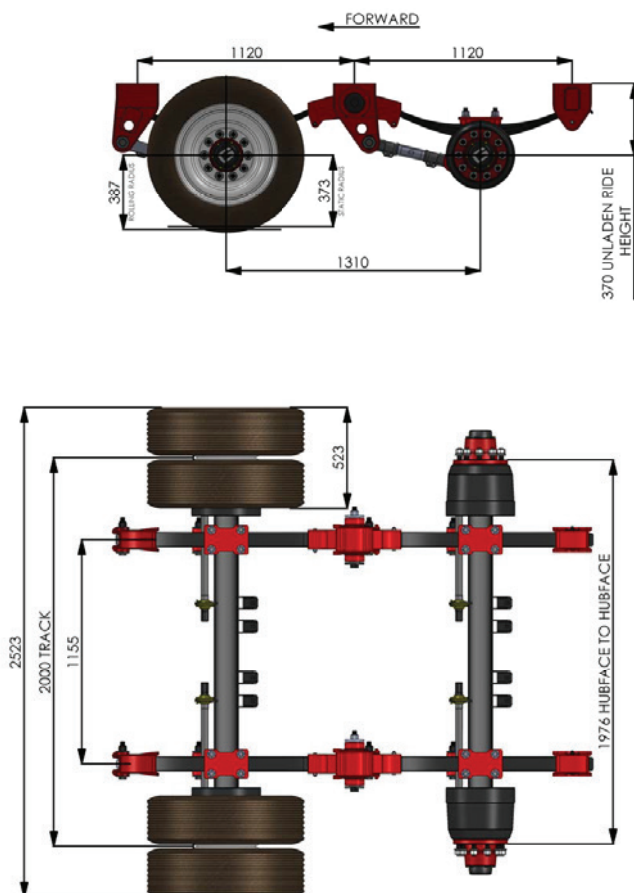
For further information on this service, please refer to our Request Form Section (pages 100-107), visit our website or simply contact our Engineering Department.

Additionally, a member of our team is always available to take your call.

Axle & Suspension Set Case Study 1

- SUSP B 20512 305
Tandem 1310 spread 3 leaf overslung
Unladen ride height 340mm
- 60364F Axle (x2)
300 Series 310x190mm brake, 2000mm track
610mm camshaft, metric twin M22, 10 studs
- Tandem suspension rated to 22000kg.
- Set supplied fitted with manual straight slacks (automatic slacks optional) with a range of brake chambers.
- Axle seats welded to axle, spring fitted, u-bolts torqued.
- Components (except hangers) can be supplied 2 pack painted
- Axles can be supplied with iso or din nuts.

*See mechanical suspension manual for bracing and welding instructions.

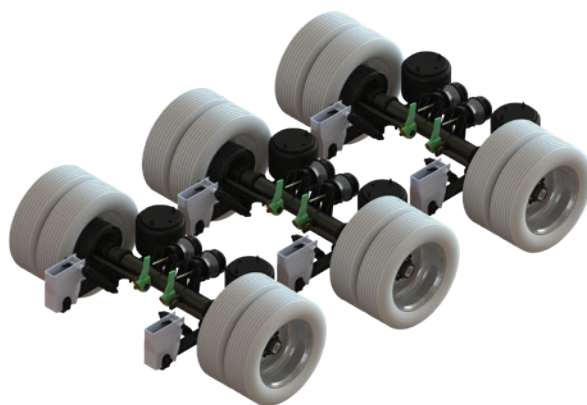
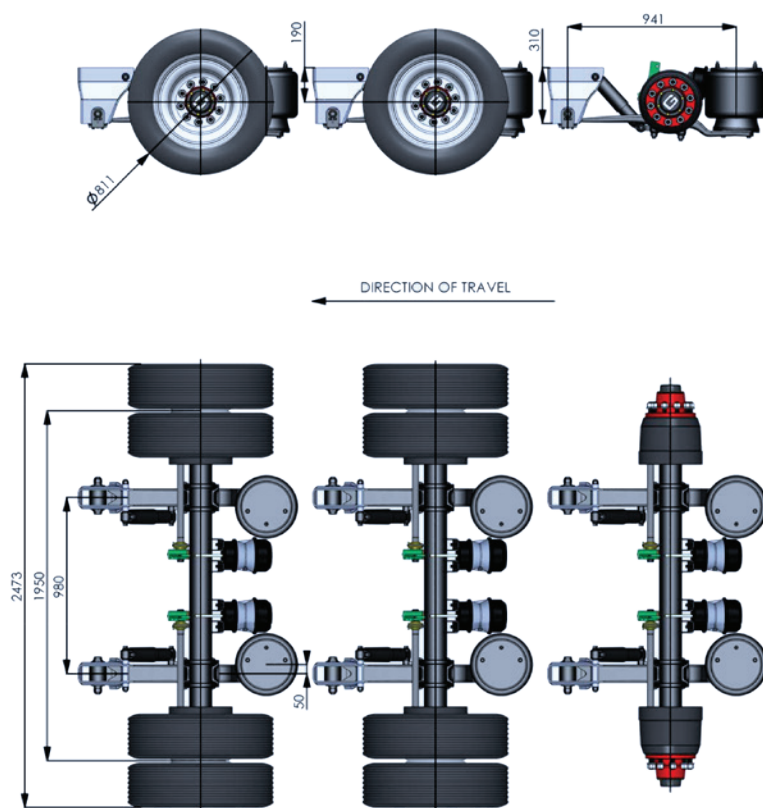




Axle & Suspension Set Case Study 2

- Air Suspension 31501 10 Tonne
Ride Height range 175-210mm
- 60326F Axle (x3)
300 Series 310x190mm brake, 1950mm track
610mm camshaft, metric twin M22, 10 studs
- Set supplied with Type 24/30 Brake Chambers
- Automatic Slack Adjusters
- Axle seat welded to beam and clamp group torqued up
- Tyres shown 235/75 R17.5

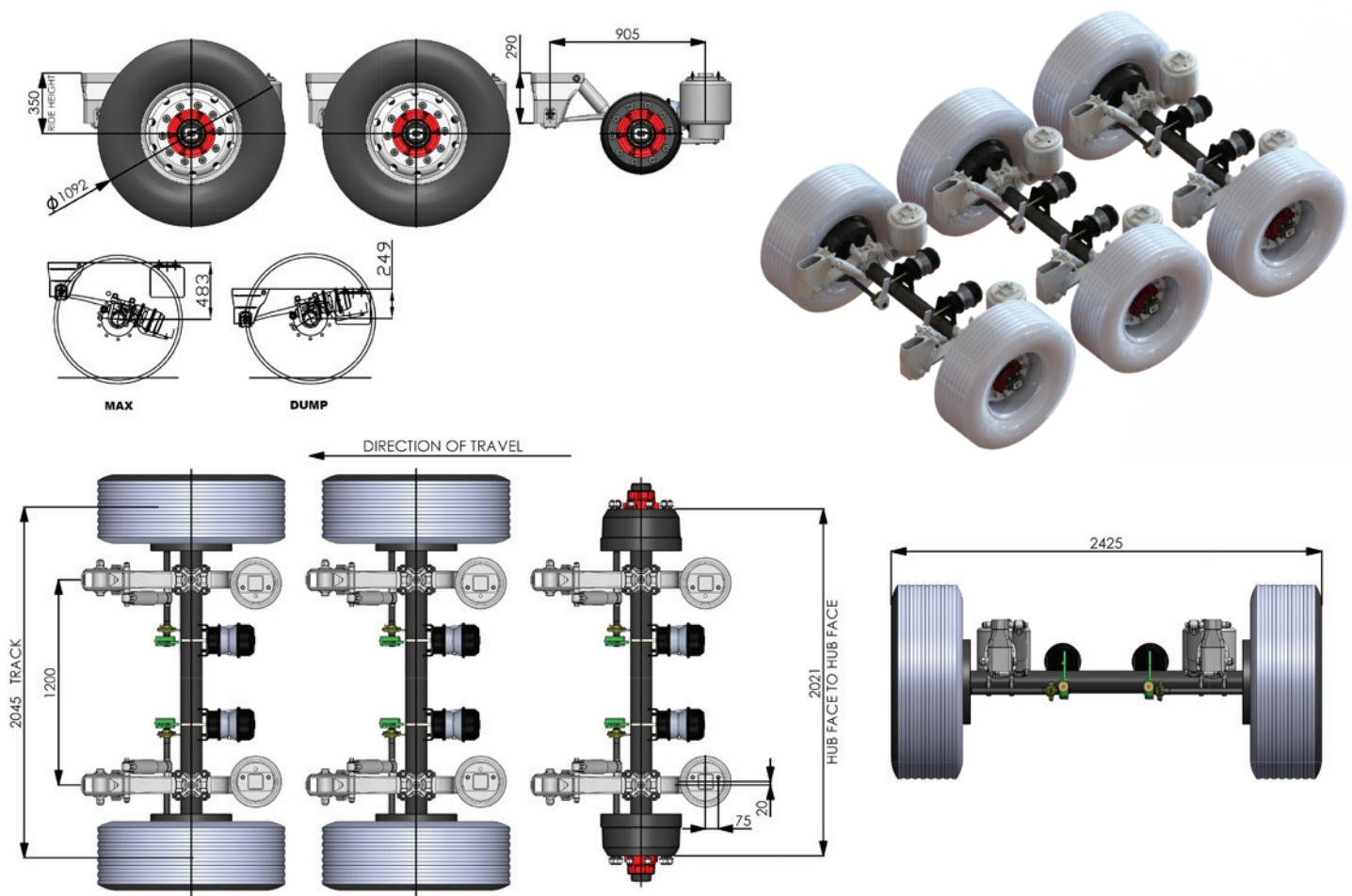
*See air suspension manual for bracing and welding instructions.



Axle & Suspension Set Case Study 3

- Air Suspension 31554, 9 Tonne
Ride Height range 350mm-395mm
20mm Offset Ø300mm Airbag
- 60183F Axle (x3)
100 Series 420x180mm, 2045mm Track
610mm camshaft, metric single M22 Wheel Nut, 10 studs
- Set supplied with Type 24/30 Brake Chambers
- Automatic Slack Adjusters
- Axle seat welded to beam and clamp group torqued up
- Tyres Shown 385/65 R22.5

*See air suspension manual for bracing and welding instructions.



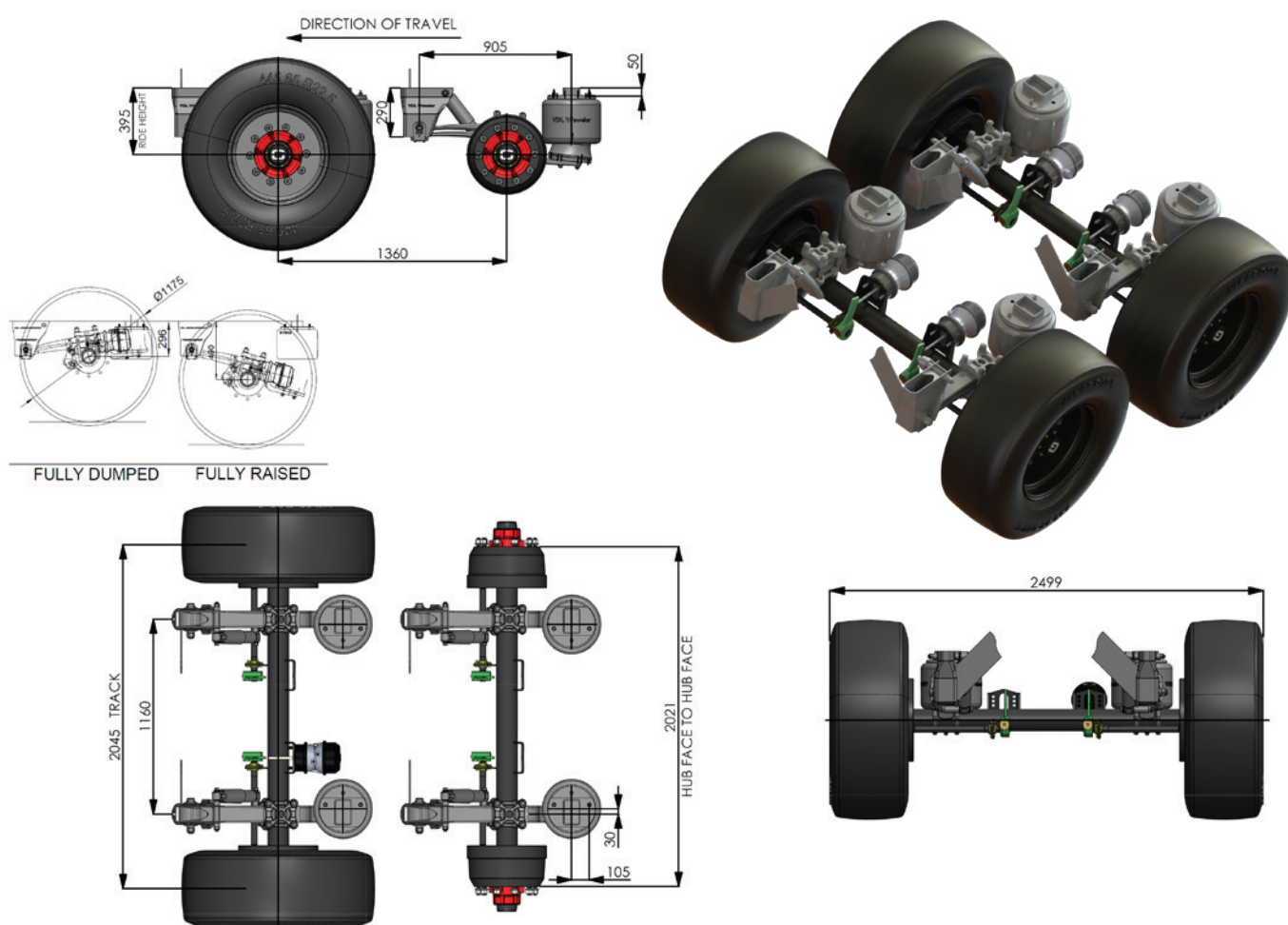


Heavy Duty

Axle & Suspension Set Case Study 4

- Air Suspension 31833, 13 Tonne
Ride Height range 365mm-405mm
30mm Offset, 50mm Pedestal, Ø350mm Airbag
- 60183FW Axle (x3)
100 Series 420x180mm Brake, 2045mm Track, ABS on both Axles
610mm camshaft, metric single M22 Wheel Nut, 10 studs
- Set supplied with Type 24/30 Brake Chambers
- Automatic Slack Adjusters
- Axle seat welded to beam and clamp group torqued up
- Tyres Shown 445/65 R22.5

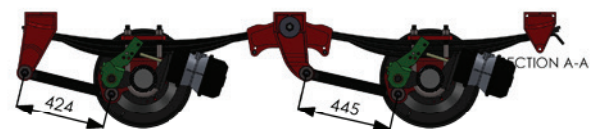
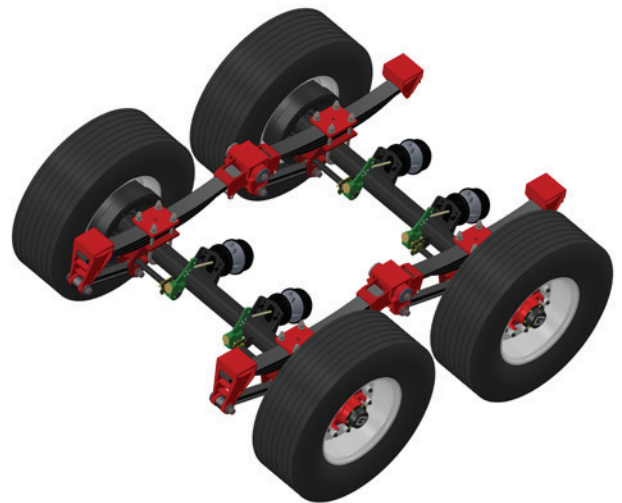
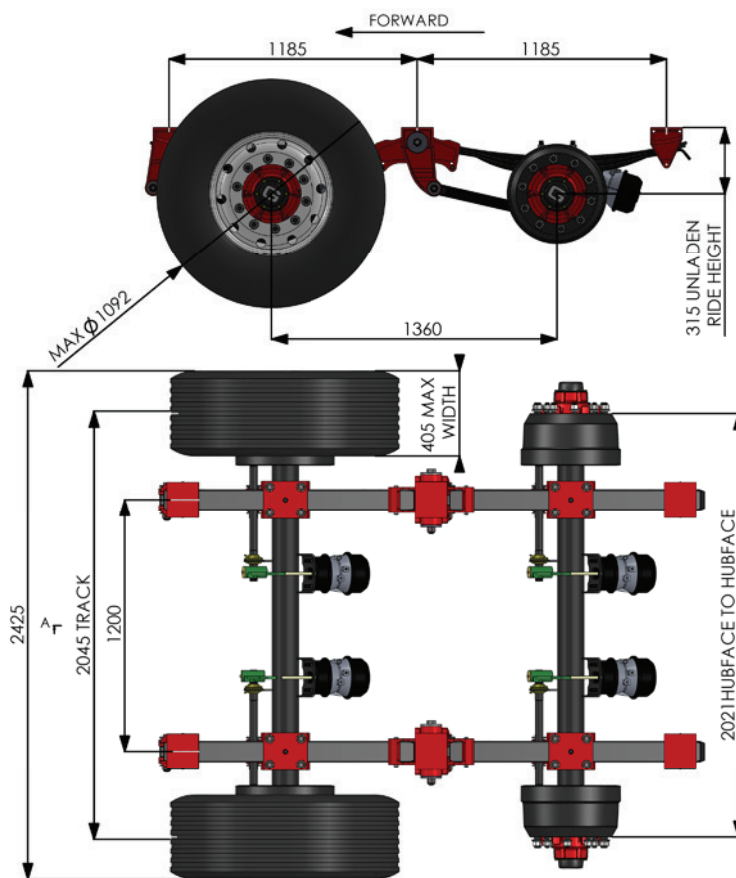
*See air suspension manual for bracing and welding instructions.



Axle & Suspension Set Case Study 5

- Suspension 97632
Tandem 1360mm Spread 3 Leaf 100mm Wide Overslung
Unladen Ride Height 315mm
- 60183 Axles
2045mm Track, 420x180 Brake
618mm camshaft, metric single M22 Wheel Nut, 10 studs
- Tandem Suspension rated to 24000kg
- Type 24/30 Chambers and Automatic Slacks Shown
- Axles can be supplied with ISO, DIN Nuts, Twin Wheels
- Other Tracks, Camshaft lengths, suspension centres available
- Tyres Shown 385/65 R22.5
- Can be supplied loose or fully welded and painted.

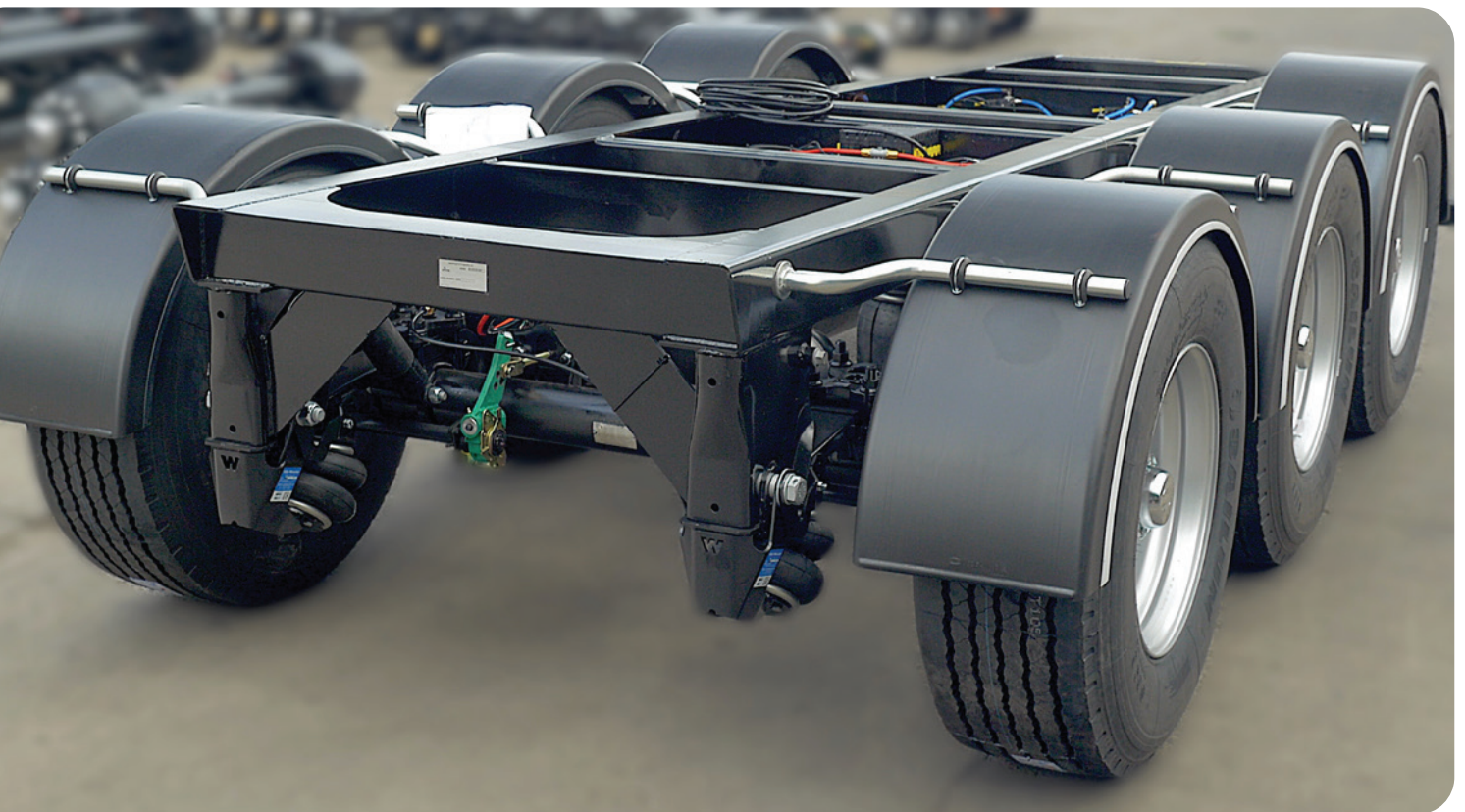
*See mechanical suspension manual for bracing and welding instructions.





Bogies

Types, Specifications & Case Studies



Bogies

Contents

Product Information	57
Bogie Case Study 1	58
Bogie Case Study 2	59
Bogie Case Study 3	60
Bogie Case Study 4	61
Bogie Case Study 5	62
Bogie Case Study 6	63



Product Information

Granning Axles & Suspensions was founded 40 years ago and are the sole axle manufacturer in Ireland and the UK. This gives our team a unique insight and understanding into our customers' requirements and specialises in a fully rounded design and engineered solution for your Plug and Play bogie requirements.

Our experienced sales and engineering departments work closely with you, our customer, to fully understand your machine application and the industry it operates in. Together, we ensure that we deliver a designed solution to best suit your requirements.

Our technical team will work to ensure your vehicle is designed to operate effectively in your desired market. We will also work alongside your team to ensure the finished vehicle meets market regulations etc.

Granning Axles and Suspensions will provide you with a full bespoke sub-chassis that is ready to plug-and-play.

- Pre-prepared for your Type Approval test
- Brake Calculations
- Turning Circle Calculations

Our Bogie solutions can be found in a wide range of markets including Trucks and Trailers, Mining and Quarrying Industries, Asphalt and Bitumen Industries; thus giving us a great knowledge base to work from.

We have an experienced engineering team ready to start on your bogie now...

For further information please see request form on page 116.

Alternatively contact us at sales@granningaxles.ie

Scan QR Code

to view & download Bogie Request Form



BOGIE REQUEST FORM

Customer name: _____
 Bogie for: _____
 Bogie type: _____
 Bogie number: _____

Axis suspension, axle configuration and other details to be defined and completed before any development of the bogie.

BOGIE INFORMATION

Number of axles: _____
 Axle type: _____
 Type of suspension: _____
 Bogie type: _____
 Bogie number: _____
 Bogie description: _____
 Bogie reference: _____
 Bogie drawing: _____

Equipment to be supplied: _____

Customer Details:
 Name of customer: _____
 Address: _____
 Tel: (+353) 45 897 553 / Fax: (+353) 45 897 554
 Email: sales@granningaxles.ie

Please attach a general drawing of the machine (front, side and plan view)

Any Additional Comments: _____

Submit Form

Granning Axles & Suspensions Ltd. is a registered company in Ireland. All rights reserved. No part of this publication may be reproduced without prior written permission. Please refer to our website www.granningaxles.ie

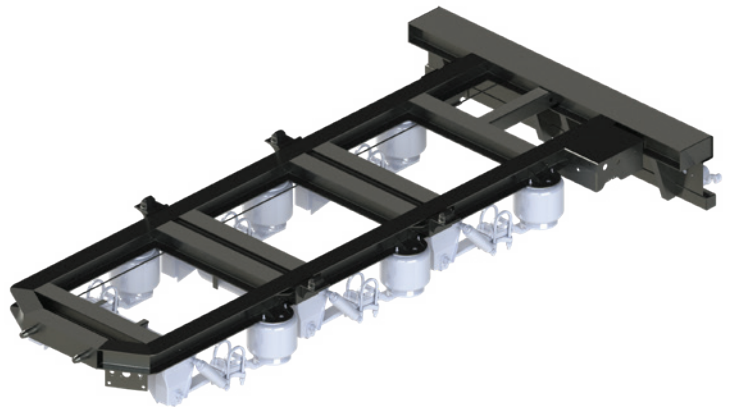
Bogie Case Study 1

Customer requirements

- Easy to fit and remove bogie
- Vehicle to go for individual approval
- Compliant with Turning circle requirements
- Light kit on bogie and machine to be detachable to allow bogie to be rolled out

Bogie Specification

- Tri axle air suspension, allows machine to be raised up and machine prop legs dropped
- TUV axles with rear self steer axle
- European spec light kit with quick release connections allowing lights on machine and bogie to be separate.
- Twist lock connection and front bayonet pins to allow quick machine connection
- TUV compliant rear crash bar
- Brake reaction test done on site
- Turning circle calculation done
- Onsite IVA inspection done



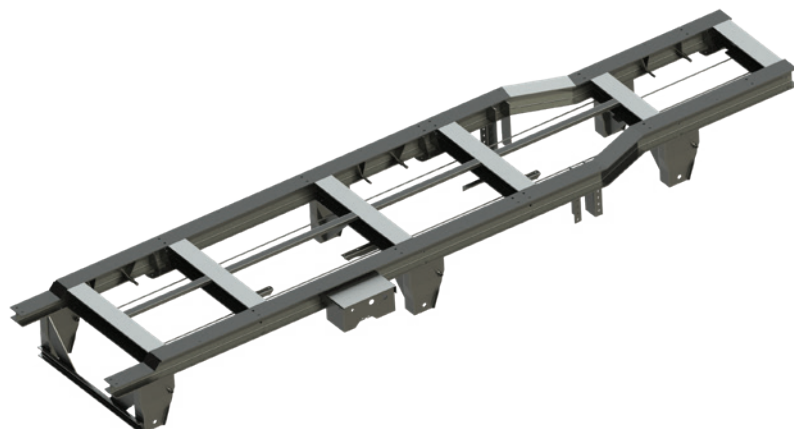
Bogie Case Study 2

Customer requirements

- Bolt on chassis with cranked frame to give maximum steer axle clearance
- Lockable steer axle through reverse light, speed setting and manual button
- Compliant with Turning circle requirements
- Frame to have protection plates to prevent rocks damaging valves.
- Air suspension straps to allow bogie to be raised off the ground without damaging airbags

Bogie Specification

- Quad axle air suspension with self steer rear axle
- Duomatic couplings for northern Europe use
- Mudwings and antispray flaps with customers logo
- Extra chassis clearance for parking brakes on steer axle
- EBS brake kit
- Bogie supplied with jacking legs



Bogie Case Study 3

Customer requirements

- Bolt on chassis as light as possible
- Mechanical suspension
- Options for ABS and non ABS
- Customer requires constant stock of bogie for short turnaround
- Option for mechanical handbrake to be supplied loose

Bogie Specification

- Tandem mechanical suspension 3 leaf overslung
- Low loader axles
- Standard mudwings, slack adjusters and handbrake
- Standard loose kit which can be used on multiple bogies



Bogie Case Study 4

Customer requirements

- Command hydraulic steering on all axles
- Remote control steering from outside of driver cab
- European approved rear underun crash bar
- Complete bogie and machine light kit
- European approved turning circle
- Air suspension raise lower valve to allow easy bogie fitment

Bogie Specification

- Tri axle low loader air suspension
- Hydraulic command steering
- Light kit, markers, wheel chock and holders fitted
- EBS brake kit
- 30mm locking plate receivers fitted to bogie frame



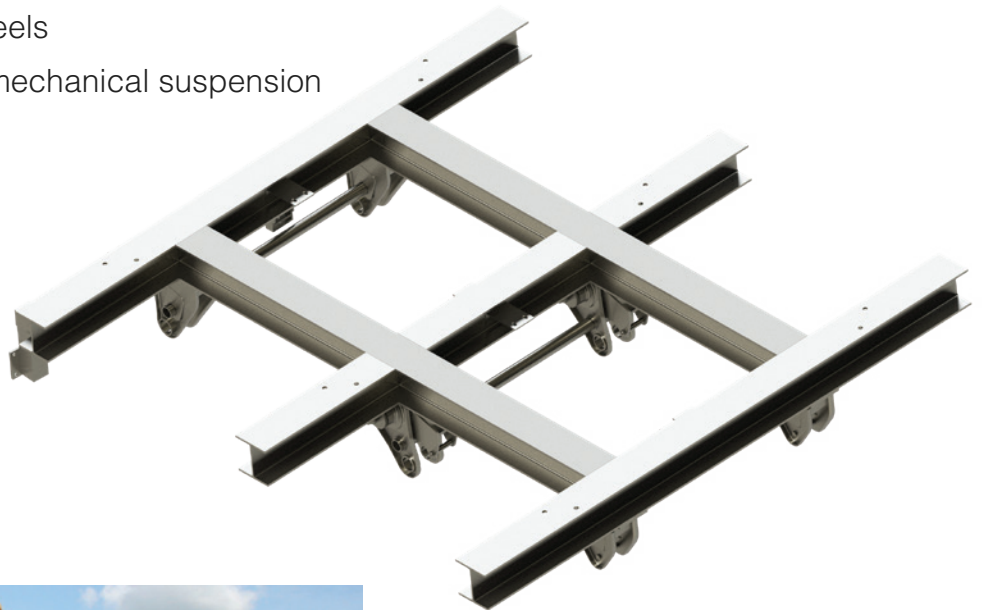
Bogie Case Study 5

Customer requirements

- I beam chassis design which can be bolted in place
- Mechanical handbrake
- Mechanical suspension
- Loose kit supplied
- Landing legs supplied

Bogie Specification

- 15m loose kit supplied
- Standard parts used where possible
- 11R 22.5 Twin wheels
- Overslung 4 leaf mechanical suspension



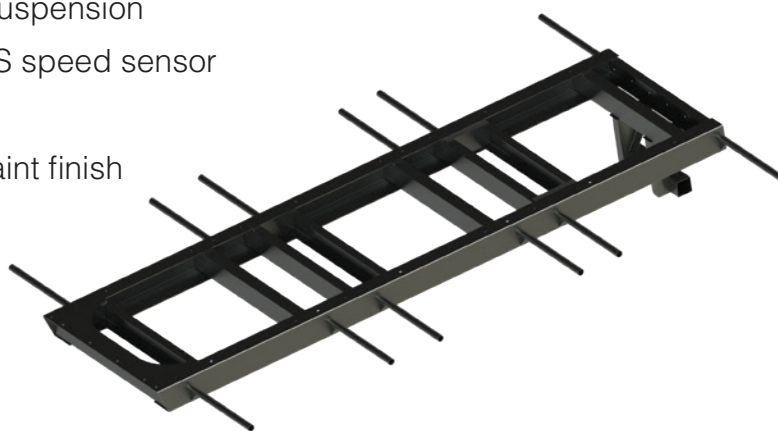
Bogie Case Study 6

Customer requirements

- Disc brake axles
- Aluminium Wheel rims
- Galvanised chassis
- EBS brake kit
- Light frame
- Air suspension
- Rear steer axle

Bogie Specification

- 2045mm Disc brake axle with Unipac bearing
- 385 65 R22.5 Aluminum wheels
- 380mm Weweler single leaf Air Suspension
- Self steer rear axle locked by EBS speed sensor
- Wabco EBS brake kit
- Galvanised frame with custom paint finish





Vehicle Conversions

Drive, Mid, Tag Axle Conversions, Type Approvals, Case Studies



Vehicle Conversions

Contents

Truck Mid Axle Installations	65
Truck Tag Axle Installations	66
Drive Axle Air Suspensions	67
Electronic Braking Conversions	68
Type Approvals	69
Case Study 1	70
Case Study 2	71
Case Study 3	72
Case Study 4	73
Case Study 5	74

Truck Mid Axle Installations

Axles mounted in front of the drive axle to form a close-coupled bogie are termed 'Mid Axles' or 'Pushers'. They have a 'Drop Centre' in the tube to allow clearance to the propeller shaft. Granning offer a wide range of suspensions and axles for this purpose in order to ensure that the additional equipment compliments the original vehicle specification.

Granning can supply Disc or Drum braked axles to carry tyre sizes from 17.5" to 22.5" are available for twin wheel, single offset wheel and single centre knave configuration. The RM (Retro Mid) series of suspensions offers compact space saving design with twin lift assemblies enclosed for maximum protection. These suspensions are compact in order to retain maximum fuel capacity, and are durable and hard working. The suspension operating pressure can be adjusted by clever installation to match that of the drive axle thus often eliminating the necessity to fit reduction valves to perform this task. Popular applications are Tractor unit mid axle taking the tractor from an 18000kg gross vehicle weight to a 23000kg tractor that has the three axle configuration required to operate at 44000kg gross train weight.

The axle is able to lifted when the vehicle is unladen thus saving tyre wear and allowing the drive axle to carry more mass giving greater traction. A number of Car Transporter Drawbars employ Granning 600 series mid axles in order to fit space saving 17.5" tyres which don't encroach into the bodywork yet carry sufficient load to prevent the front axle overloading. This arrangement is also employed on many municipal and refuse vehicles, which again have restrictive space for axle mounting owing to bodywork, lifts and cranes etc.



Mid axle showing Drop Centre Tube to avoid prop shaft



Mid axle installation, axle lifted.



Truck Tag Axle Installations

An additional axle mounted behind the existing vehicle Drive axle to form a close-coupled bogie is termed a Tag or Trailing Axle.

Granning offer a wide range of suspensions and axles for this purpose in order to ensure that the additional equipment compliments the original vehicle specification.

Disc and Drum brake axles to carry tyre sizes from 17.5" to 22.5" are available for twin wheel and for single centre knave and offset wheel configurations.

Our RT (Retro Tag) range of suspensions are usually employed for this style of installation, they offer a practical solution to the vehicle converter for mounting the axle in this position but with twin lift built in saving assembly time and expense. Twin wheeled installations usually form an equally plated bogie where the mass on the Tag axle is the same as that carried by the Drive Axle, Wide track single wheeled configurations are available that offer maximum stability when an asymmetric bogie is required by the operator. These suspensions offer high stability and durability and variety of lifting methods are available should the standard twin lift be unsuitable for your application.



Single Wheel Tag Axle



Twin Wheel Tag Axle

Drive Axle Air Suspensions

Granning have developed many drive axle air suspensions for different vehicles to replace the original mechanically sprung suspension. Air suspension is 'Road Friendly' and Load Friendly giving greater protection to loads and causing less damage to the road surface. Suspensions have been fitted to most sizes of vehicles from 3500kg gross mass to 18,000kg. Air suspension offers constant ride height, superior ride and handling and can be utilised to raise and lower the chassis to assist loading and unloading, ECAS (Electronically Controlled Air Suspension) can be employed to control this. Giving that greater protection to the load, 'Road Friendly' suspension is mandatory in legislation to operate vehicles at particular capacities.

Our drive air suspensions come in two main types, PDL (Primary Drive – Light) and PDH (Primary Drive – Heavy). The PDH suspension can be plated up to 11,500kg, and will fit the majority of 17,000kg & 18,000kg trucks and tractor units.

Our large range of PDL kits are designed for vehicles with a drive axle mass of 1200kg to 6000kg.



Drive axle air suspension

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055



Electronic Braking Conversions

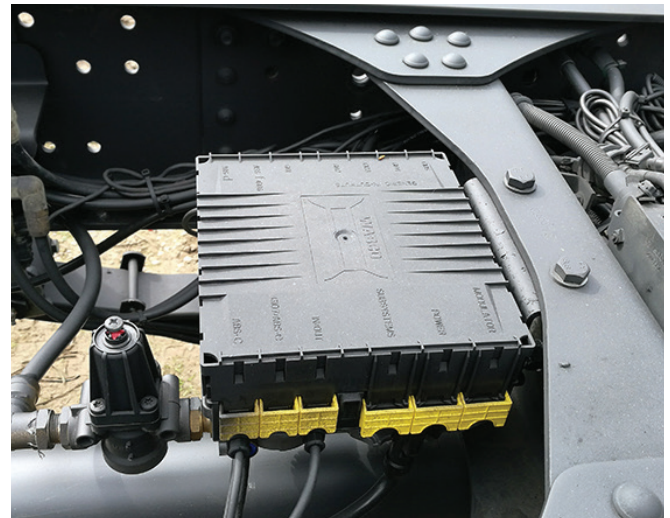
Granning have always been at the forefront of Type Approval for additional axle conversions to Type Approved Vehicles.

Since the introduction of Electronic Brake control on commercial vehicle chassis equipped with disc brakes, our Engineering team have been working closely with the vehicle manufacturers and the UK Driver and Vehicle Standards Agency (DVSA) – Department for Transport to integrate additional axle brakes into the original system.

A declaration from the vehicle manufacturer has to be presented to the DVSA, to satisfy them that the conversion would not adversely effect the operation of the braking system before they will issue plates for a vehicle.

Recently vehicle manufacturers have been allowing less conversion options for their newer chassis due to the complexity of the EBS systems and its integration into the whole truck electronics.

Granning has developed a solution in conjunction with the braking system manufacturers Wabco and Knorr-Bremse, and under the oversight of the Department for Transport and DVSA, to fit an independent EBS system for the additional axle. Allowing the possibility of converting any EBS truck without the need to involve the chassis manufacturer. This system was fully tested and approved at the MIRA testing grounds, to satisfy all requirements set by DVSA and DfT with regard to EBS conversions.



Independent EBS system fitted to truck additional axle

Type Approvals

Modern commercial vehicles must comply with many EC Directives that form the basis of the vehicle Type Approval. Altering or converting a chassis will impact on this approval and the most critical are the braking directives. Granning pioneered the installation of additional axles to trailers and trucks/tractors in the early 1980's. Since then we have developed considerable expertise, and a vast library of conversion Type Approvals in order to satisfy UK National Type Approval requirements ensuring that the necessary regulations are adhered to and that the completed vehicle will be suitable for the intended purpose

We have some of the very latest technology for recording vehicle-braking performance and have written our own brake performance analysis computer software in order to enable us to remain at the very forefront in this area, when re-approval of the braking system is required as a result of a conversion.

Type Approval for Vehicle Conversions

We have an excellent relationship with the UK Driver and Vehicle Standards Agency (DVSA), many Vehicle Manufacturers, Chassis Converters and Trailer Manufacturers and are widely respected in this field. We offer our expert Type Approval Services for

- **Additional Axle Conversions**
- **Wheelbase alteration brake and drawbar calculation**
- **Chassis Re-Plating**
- **EBS truck conversions**
- **Trailer Brake Model Reports**
- **Trailer notifiable alterations**
- **Trailer brake calculations**
- **Trailer conversions**
- **Vehicle & Trailer IVA Applications**





Case Study 1

Scania 6x2 Artic to 8x2 Artic or Rigid

Has been most common conversion for a number of years, removing mid axle and fitting tag axle. In order to conform to DVSA rules on conversions to vehicles registered post Oct 2014 vehicle was converted and taken to VCA for them to conduct tests and produce a brake model report covering as many options as possible. All control equipment for original rear bogie carried onto new rear bogie, independent EBS modulator fitted on second steer axle. The same configuration had already been proved by vehicles registered before Oct 14.



Case Study 2

Caravan Transporter

Made more popular following 2020 lockdown's low height chassis fitted with Granning 600 Series disc braked tag axle for 19.5" tyres in order to allow low height full length body enabling larger caravans to be easily loaded, transported and unloaded. Independent EBS modulator fitted to tag axle brakes, programmed by Granning.



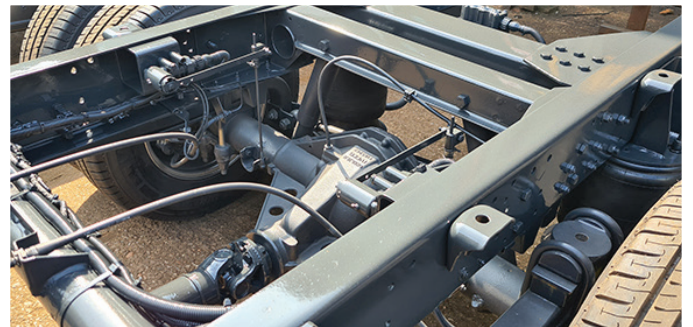
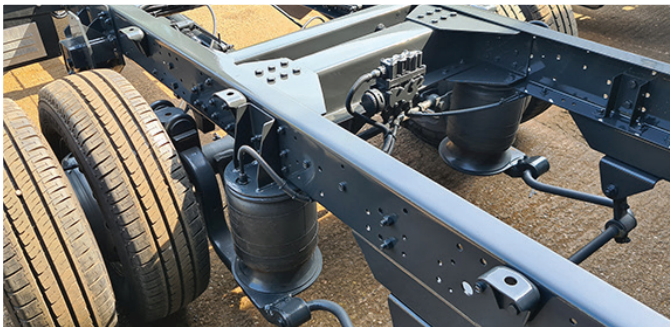


Case Study 3

PDL – Rear Axle Air Suspension for trucks 5000kg to 7500kg GVM

Vehicle manufacturers generally do not offer air suspension on vehicles in this mass range. Granning have air suspension that will fit most vehicles in this class. Popular models are Isuzu NQR, Mitsubishi Canter and Iveco Daily. The air suspension provides a constant ride height whether laden or unladen. Protection for the load

Carried, often these vehicles are used to transport fine art and antiques. ECAS (Electronically Controlled Air Suspension) is an option in order to assist mating the rear of the vehicle with a loading ramp, or to make access to the load area easier.



Easy Study 4

Disc Braked mid axle conversion

Disc brake lifting mid axle for Single 22.5" tyres has been one of the more popular conversions over the last 30 or so years. Formed drop centre axle tube allows clearance from propeller shaft and offers maximum ground clearance when the axle is lifted. Offering a well proven solution and many years of reliable service.





Case Study 5

Tridem Rear Bogie

Popular in Ireland and in UK for volumetric cement mixers and recycling vehicles. Additional axle can either be lifting Mid axle, or lifting, or self-steering tag axle depending on original vehicle configuration and customers' requirements. The result is a 24000kg rear bogie to increase the payload of your 6x2/4 or 8x2/4 that will meet your local regulations allowing a vehicle configuration that manufacturers cannot supply.



check our website for FAQ section...

Engineering Services

Type Approvals, Vehicle Approvals, Vehicle Design Studies



Vehicle
Certification
Agency



Driver & Vehicle
Standards
Agency



Engineering Services

Contents

Approval & Certification Services 75



Accredited with ISO certification ISO 9001:2015, we take pride in offering accurate, cost effective, and professional services. Our combined wealth of experience and knowledge form an accomplished team capable of offering you the following:

- Truck Conversion and chassis-building Type Approval Services
- Commercial Trailer Type Approval Services for IVA and EWVTA
- Agricultural Trailer Type Approval Services for IVA and EWVTA
- Specialist Plant Type Approval Services for IVA and EWVTA
- Full CAD design services, including 3D modelling
- Turning circle calculations and models
- Vehicle Braking Calculations and Analysis
- Vehicle Load Calculations and Analysis
- WABCO and Knorr-Bremse trailer EBS commissioning agents
- WABCO ECAS commissioning agents
- Product Development and testing services



Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

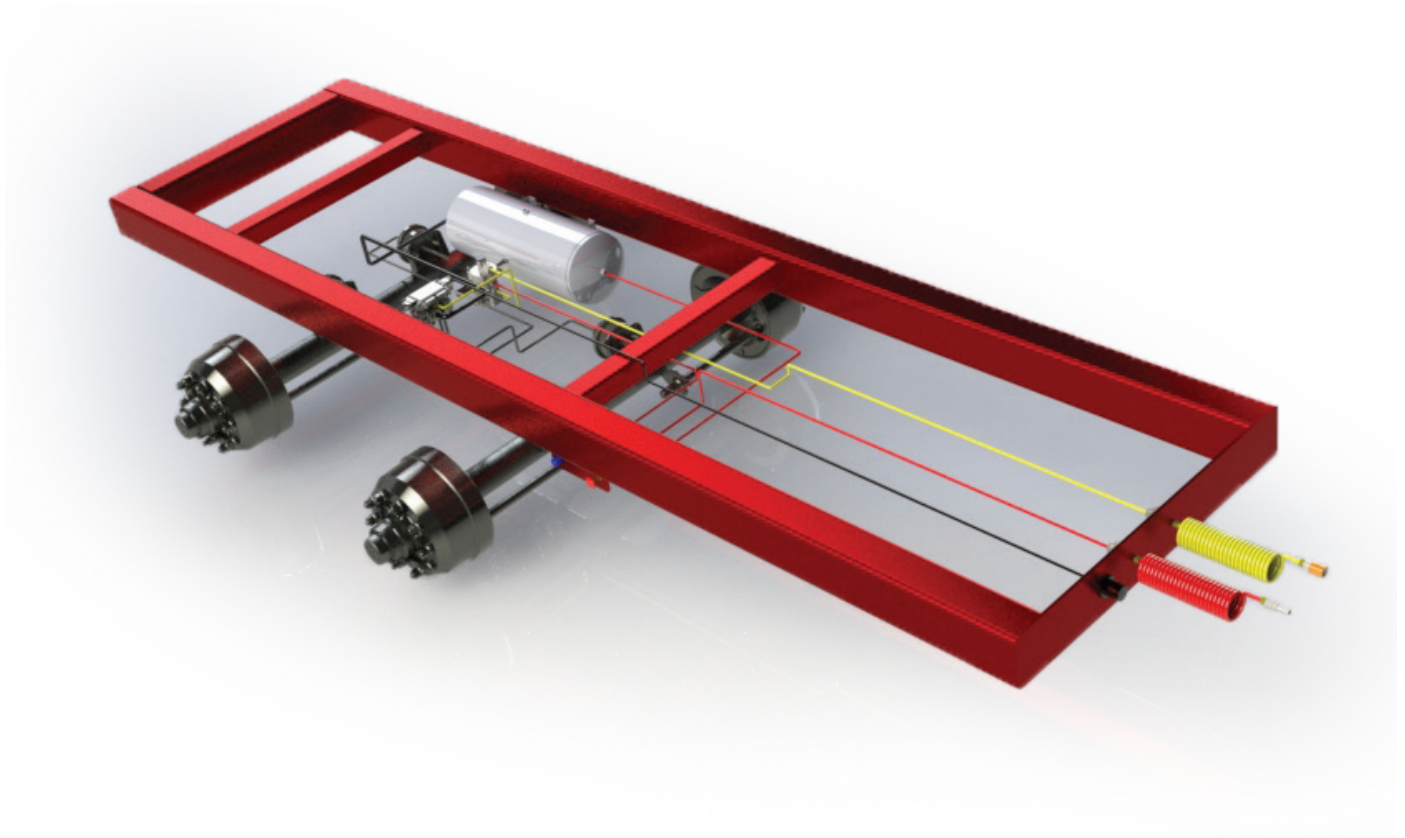
NI

T. +44 (0) 2890 740 055



Braking Systems

EBS Kits, Valve Kits & Fittings, Brake Chambers



Braking Systems

Contents

End of line Programming	77
Brake Kits.....	78
Air/Hydraulic Brake Chambers.....	79
Air Brake Chambers.....	79



End of line Programming

Granning has been providing 'End of Line' programming for vehicles that use EBS systems since it was first introduced to the market. We can offer this service to customers who intend to incorporate an EBS system into their vehicle(s).

Our engineering department are experienced in programming trailers that include additional functions such as:

- Axle Lift Control
- Steer Axle Locking Control
- Ride Height Control
- Traction Control
- Roll Stability

We have regular visits from the leading brake valve manufacturers to ensure our engineering department is trained on the latest braking system updates.

Granning can also provide full brake kits with valves, fittings, air reservoir, piping, and schematics to assist our customers with brake kit installation to suit any trailer setup.

Go to the 'Resource Video' section on our website to see further clarification on each individual valve, its function(s), and installation guide within the brake kit. Go to page 86 for more details.



Brake Kits

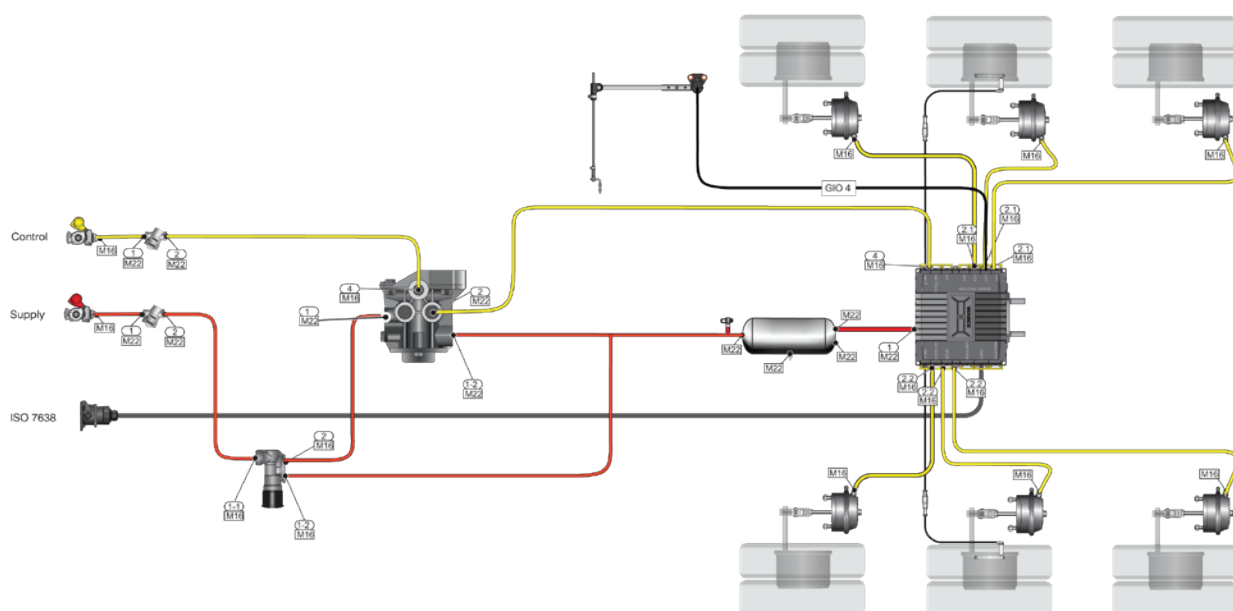
Granning Axles and Suspensions stock an array of brake kits available for purchase. Each brake kit comes supplied with an air reservoir, valves and fittings, piping, and full piping schematics. We can provide brake kits for the following applications:

- 12 Volt & 24 Volt EBS Systems
- 12 Volt & 24 Volt ABS Systems
- Load Sensing solutions
- Lift Axle Control
- Air Suspension Control Solutions
- Steer Axle Locking Control

Our engineering department can also provide brake calculations to accompany each brake kit. A number of input parameters are required in order to perform a complete brake calculation.

See Request Form on page 108 for more info.

Additionally, we can provide mounting brackets for the valves, air reservoir etc. within the brake kit. We also stock optional extras such as: red and yellow suzies, palm and C couplings, manual and auto slacks, service and parking brake chambers etc.



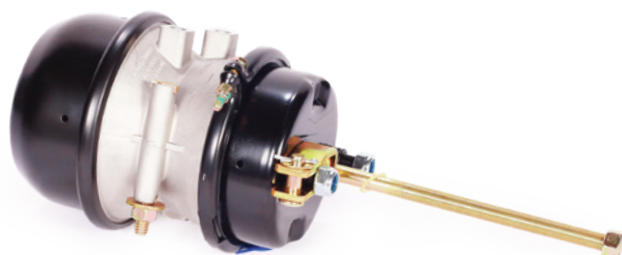


Air/Hydraulic Brake Chambers



Part Number	30244A	30247A	30256A	30257A	30258A
Chamber Size	T20	T24	T20	T24	T24
Chamber Stroke (mm)	75	75	75	75	75
Chamber Pressure (Mpa)	0.7	0.7	0.7	0.7	0.7
Chamber Force (KN)	8.3	9.6	8.3	9.6	9.6
Air Port Size	M16	M16	M16	M16	M16
Hydraulic Piston Size (mm)	25	25	30	30	35
Hydraulic Piston Pressure (Mpa)	10	10	10	10	10
Hydraulic Piston Force (KN)	4.9	4.9	6.7	6.7	9.3
Hydraulic Port Size	G3 / 8	G3 / 8	G3 / 8	G3 / 8	G3 / 8
Chamber Length (mm)	108	108	108	115	115
Actuator Length (mm)	237	237	245	237	250

Air Brake Chambers



Part Number	40040A	30099A	40049A
Air Chamber Size	T24/30	T20	T24
Air Port Size	M16 x 1.5	M16 x 1.5	M16 x 1.5





Valx Commercial Axles

Granning Axles are proud to be a VALX Distributor and Going the Extra Mile



VALX
GOING THE EXTRA MILE

Valx Commercial Axle

Contents

Drum Axle	81
Disc Axle	81
Heavy Duty Axle	82
Heavy Duty Suspension	82
Self Steering Axle	83
E2! Energy Axle	84
Air Suspension	86
Axle Components	87
Disc Brake	88
Drum Brake	89
Landing Leg (eLEG)	90



VALX Drum Axle 420/360



VALX Disc Axle 430/370



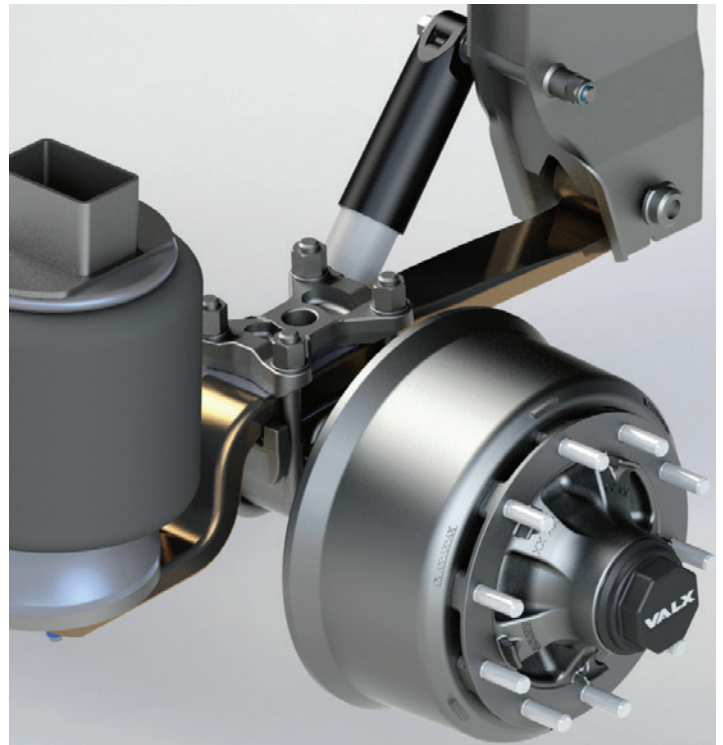
Technical Specifications

BEAM	One piece, extremely strong seamless, cold-drawn beam design. The non-welded beam structure eliminates risks of weakening or material degradation.
HUB	Disc: 120 mm offset and 19.5 or 22.5 inch wheel sizes Drum: 0 mm offset and 19.5 or 22.5 inch wheel sizes
AIR SUSPENSION	The specially developed VDL Weweler air suspensions meet the VALX philosophy of light weight, low component count and minimal maintenance.
DISC BRAKE	Ventilated discs on VALX design ensure excellent brake cooling. The design is optimised for wear and thermal behaviour, including thermal shock.
DRUM BRAKE	The drum brake offers high efficiency, thermal and mechanical stability and low peak stresses, together with consistent and predictable brake performance.
CALIPERS	Wabco's proven reliable single-piston technology has made the PAN range one of the most successful air disc brake ranges.

VALX M-AXL

HD AXLE

- Weld free spindles for extreme endurance
- Thicker axle beam for long life off-road usage
- HD steel hubcap
- Improved S-cam seals

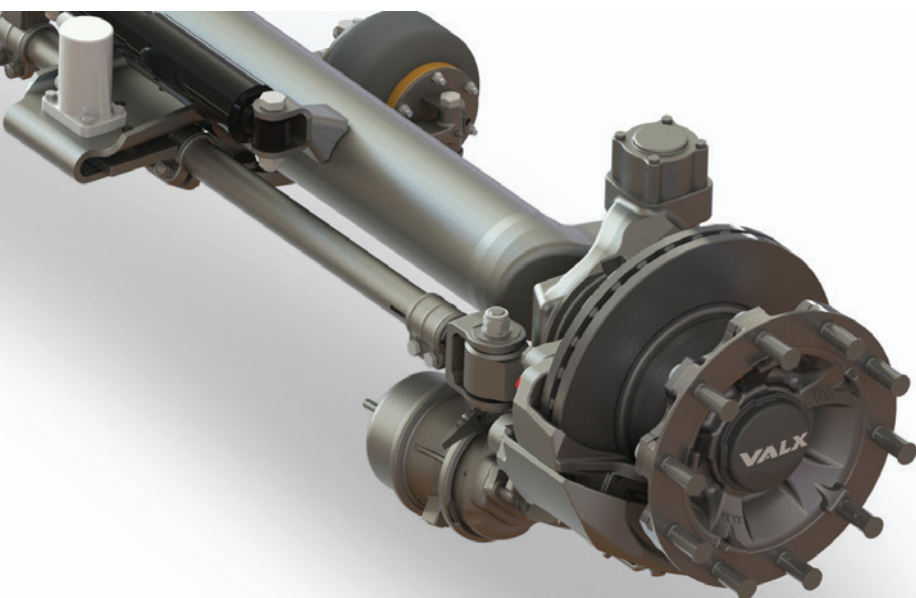


HD SUSPENSION

- HD trailing arms with steel-rubber-steel pivot bushes
- HD closed hanger brackets with special wear plates
- The cast bracing brackets ensure that the side forces are guided into the chassis through the centre of the pivot bolt, preventing an additional bending moment in the hanger brackets
- 350 mm long stroke air springs for increased axle travel with HD steel pistons
- Variable air springs offset 30/50/95 mm
- Cold-formed, high strength M24 U-bolts
- 'Best of both worlds' M-AXL shock absorbers: suitable for a very wide range of temperatures
- Viton® seals for high working temperatures and optimized internals for low ambient temperatures
- Shock absorber acts as the stroke limitation, no need for catch straps or rapid venting

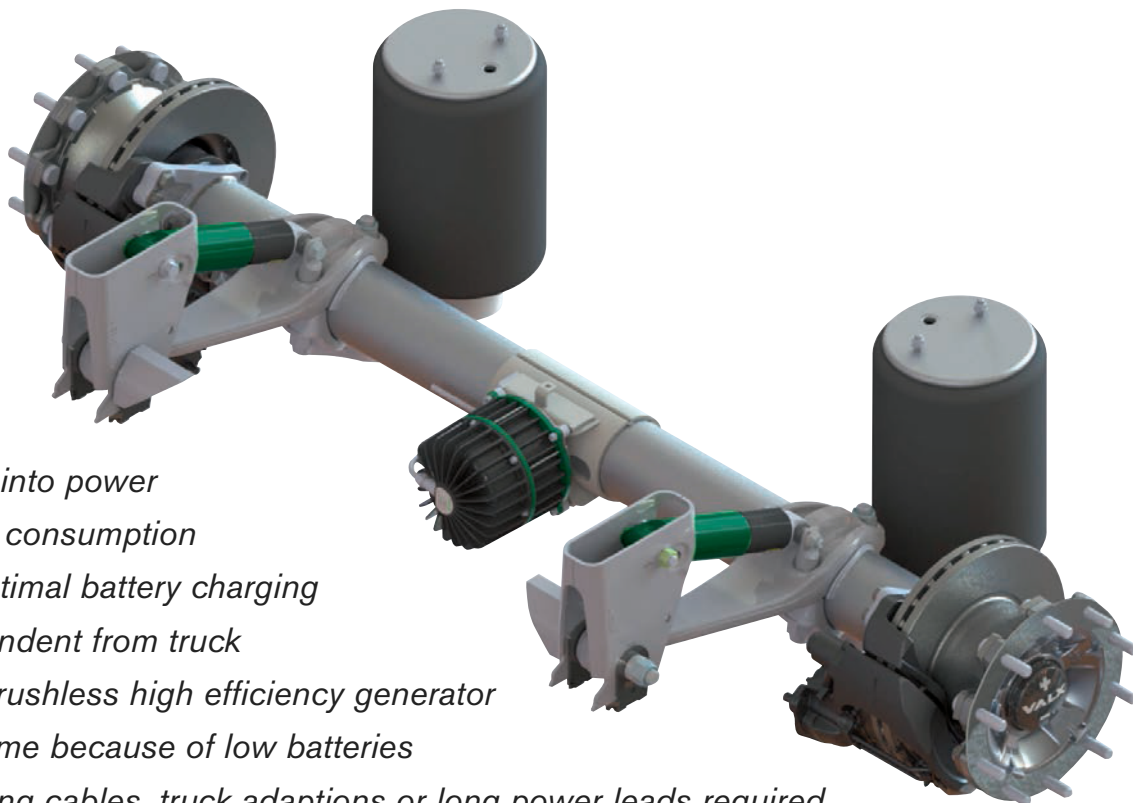
VALX Self Steering Axle

The VALX self steering axle has the same outstanding durability as the well proven rigid axle. Designed, built and tested in Europe and available with disc or drum brakes.



- Reduce tyre wear
- Reduce fuel consumption
- Improve road behaviour
- Reduce wear of trailer components
- Increase manoeuvrability
- Low maintenance
- Long-lasting kingpin bearings
- Heavy Duty locking Mechanism

VALX E2! Energy Axle



- *Turn motion into power*
- *Reduce fuel consumption*
- *20 Amps optimal battery charging*
- *Fully independent from truck*
- *Integrated brushless high efficiency generator*
- *Less downtime because of low batteries*
- *No connecting cables, truck adoptions or long power leads required*
- *No trailer adoptions required*
- *Innovative Battery Charge Indicator Unit*

Specifications

SUITABILITY	When used for charging batteries of a typical tail lift, the following rule of thumb can be used: To compensate the power consumption of one movement of a laden tail lift up and down you will need to drive the distance of about 1.5 km at a speed higher than 20 km/h
CHARGING SYSTEM	Suitable for all flooded lead-acid batteries. Adapted software for other types of batteries are available on request
NOMINAL BATTERY CAPACITY	The E2! system is optimized for lead-acid batteries with a capacity of 120Ah @ 24 Volt. Smaller or larger capacities are allowed, however for charging batteries with a capacity smaller than 70Ah: please consult VALX bv

VALX E2! Energy Axle

Technical Specifications	
NOMINAL CURRENT OUTPUT	20 Amp
INCREASED CURRENT OUTPUT	The nominal current output can be multiplied by adding additional E2! Power Modules in parallel
VOLTAGE	24 Volt nominal. Max. system voltage 28.6 Volt
ALTERNATIVE VOLTAGE	48 Volt nominal (2 E2! Power modules connected in series)
ADDITIONAL WEIGHT	17 kg (excluding cable & indicator box)
MAX. OPERATING SPEED	105 Km/h
OPERATING TEMPERATURES	-20°C to +50°C
DIRECTION OF TRAVEL	Operates in both directions (forward + backward)
APPROVAL	According to BS EN 50498:2010 (UN 10 rev.3)
MAX. POWER INPUT AT FULL LOAD	650W
MAX. POWER INPUT WHEN TRICKLE CHARGING	50W

CHARGING CURRENT IN AMPERE	WHEN EQUIPPED WITH TYRES 435/50R19.5	WHEN EQUIPPED WITH TYRES 385/65R22.5
5 Amp	> 17.0 Km/h	> 19.5 Km/h
10 Amp	> 29.8 Km/h	> 34.1 Km/h
15 Amp	> 42.6 Km/h	> 48.7 Km/h
20 Amp	> 55.4 Km/h	> 63.3 Km/h

VALX Air Suspension

The Valx suspension is clamped around the axle and held in place by a groove in the beam, offering a unique modularity in spring track and ride height. This non-welded construction ensures maximum strength and improves the life of the axle.

MBS

- Modular design from a world suspension leader VDL Weweler
- Lightweight construction with a low component count for a wide range of ride heights of 210 - 460 mm
- External bump stop
- Centre mounted shock absorber with high temperature viton seals providing optimal critical damping
- Realignment and maintenance free
- Shockabsorber works as a check strap
- Optional: bolt on axle lift
- Optional: one type splitter for the MBS range



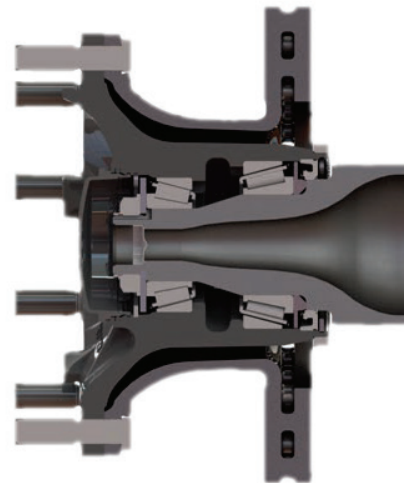
MBSV2

- Customized design from a world suspension leader VDL Weweler
- Available in 75 mm and 95 mm trailing arm widths
- Wide range of ride heights of 245 – 535 mm
- Easier mounting to chassis
- Bump stop in airspring
- Side mounted shockabsorber with high temperature viton seals providing optimal critical damping
- Realignment and maintenance free
- Shockabsorber works as a check strap
- Optional: bolt on axle lift





VALX Hub Assembly



VALX Hub

Highly accurate CNC machining and reduced tolerances ensure accurate bearing pre-setting and an even pressure distribution across the bearing cups. The wide bearing spread minimises bearing loads and maximises bearing life, while reducing sensitivity to brake heat transfer.

- Designed and tested in Europe to accepted European standards
- Bearings and seals are retained in place by circlips when the hub is removed, simplifying service and maintaining the integrity and cleanliness of the hub assembly

VALX Beam

The VALX axle beam has a higher strength-to-weight ratio than any other in Europe, and forms the basis for long-term durability under tough operating conditions.

- Spindle journals have thickened sections, and are induction hardened and ground to increase life and minimise fretting
- Straightened after completion
- Main axle beam assembly is fully E-coated (KTL) for long-lasting corrosion protection
- Standard Ø 146 x 10 mm, optional Ø 146 x 13 mm beams

VALX Disc Brake



WABCO is a leader in heavy commercial vehicle brake solutions offering the optimum combination of weight and performance. Ventilated discs to VALX design ensure excellent brake cooling.

- Available in 430 mm and 370 mm sizes
- Ventilated design optimised for wear and thermal behaviour, including thermal shock
- Excellent performance due to high mechanical efficiency
- Attached to the hub flange to improve thermal behaviour and support the hub
- Maintenance-free design with lifetime lubrication

BRAKE CALIPERS

A compact design based on the patented single piston technology. The universal WABCO/VALX calipers are field-replaceable by other standard components for optimum serviceability. WABCO's PAN 19-1 and PAN 22-1 calliper types are standard fitment.

- Well proven design with long service history
- Corrosion-resistant E-coating (KTL)
- Spare parts widely available through the WABCO and VALX spare parts networks
- Easy to inspect and maintain

VALX Drum Brake



The VALX drum brakes have been developed with the support of brake expert prof. Andrew Day of the University of Bradford, UK. The design is based on tried and proven technology.

- 420 x 180 mm and 360 x 200 mm variants
- Camshaft head and journals hardened
- Large bronze plated cam head bearing with lip seals
- Hardened three-piece cam roller with bronze bush
- Thermally optimised drums
- Friction pairs matched for optimum wear rates
- Forged steel brake spiders with increased stiffness for high stability
- Fully wear and crash tested with TÜV approvals
- Dust cover enclosed in the drum for better protection

FRICTION MATERIAL

Textar T0124 trailer friction material is specially designed and developed for VALX S-Cam foundation brakes.

- Exceptional brake performance across the entire speed, pressure and temperature ranges
- High resistance to wear and good noise performance
- Kind to drums: superior brake drum compatibility

VALX eLEG

THE INTEGRATED POWER LEG

The electric landing leg which will save you time and money.

- *Robust and compact solid aluminium gearbox casing*
- *Low maintenance gearbox with low temperature premium lubricant rated from -20°C to +50°C*
- *Powerful electric drive with two speed gearing and simple push button*
- *Neutral gear position to allow backup manual operation*
- *Self-sufficient maintenance free battery included with built-in battery charger*
- *Available in different lengths and foot types*
- *Fully weather & waterproof*

Specifications

lift capacity	25 Tonnes
static load	60 Tonnes
leg speed	34 cm/min (13.5"/min) on high gear
eLEG kit weight	135 ~ 145 Kg (depending on length and foot configuration)
voltage	24 V
voltage input	9-30 V
charger output	14 V / 2 Amp
battery voltage	12 V

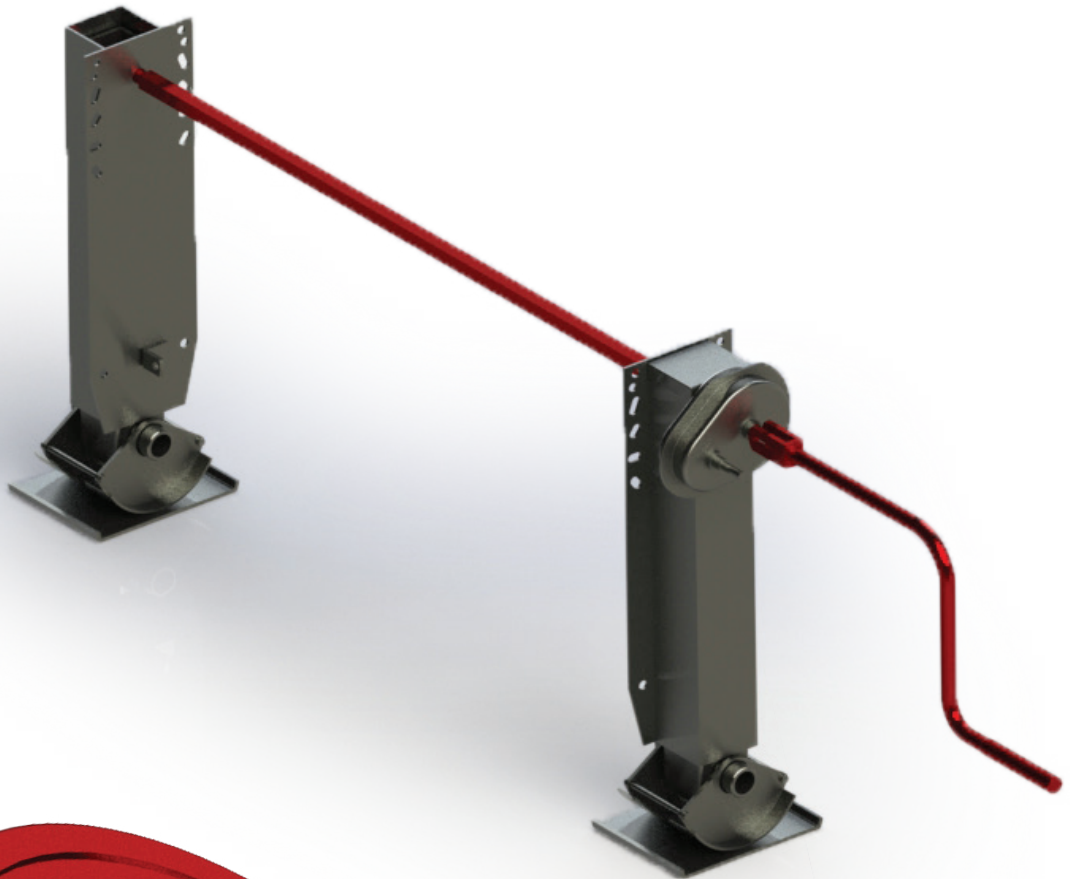
Gear Settings

high gear	to get the legs to the ground fast or to return them to neutral position
low gear	lift or lower a loaded trailer once the legs are on the ground
neutral position	manual wind the leg



Trailer Components

Landing Legs, Fifth Wheels, Drawbar Springs, Lights



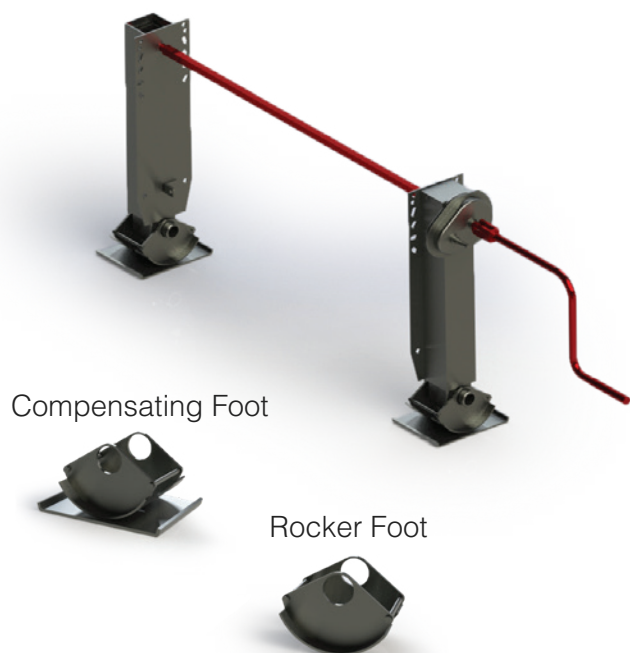
Trailer Components

Contents

Landing Legs	91
Fifth Wheels	91
Drawbar Springs	92
Lights & Looms	92



Landing Legs



Part Number	31441A	31442A
Minimum Height (mm)	873	881
Stroke (mm)	480	480
Low Gear Speed (mm / r)	1	1
High Gear Speed (mm / r)	11	11
Weight (kg)	105	105
Shoe Type	Rocker	Compensating
Crank Force (kg)	35.5	35.5
Capacity (kg / pair)	28,000	28,000
Static Load (kg / pair)	80,000	80,000

Fifth Wheels



Part Number	61100
Jaw Size	2 inch
Mounting Height (mm)	185
Vertical Load (kg)	20,000
D - Value (kN)	152
Oscillation Degrees	18
Weight (kg)	129.9
Max Gross Weight (kg)	65,000

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055



Drawbar Springs



Part Number	51100K	51101K	51102K
Spring Width	120mm	120mm	120mm
Spring Height	154mm	182mm	202mm
Leaf Thickness	14mm	14mm	16 / 14mm
Bush Details ID	45mm	45mm	45mm
No. of Leafs	11	13	13 (heavy)
Overall Length	870mm	870mm	870mm

Lights & Looms



We offer a full range of lights and looms for your lighting requirements.

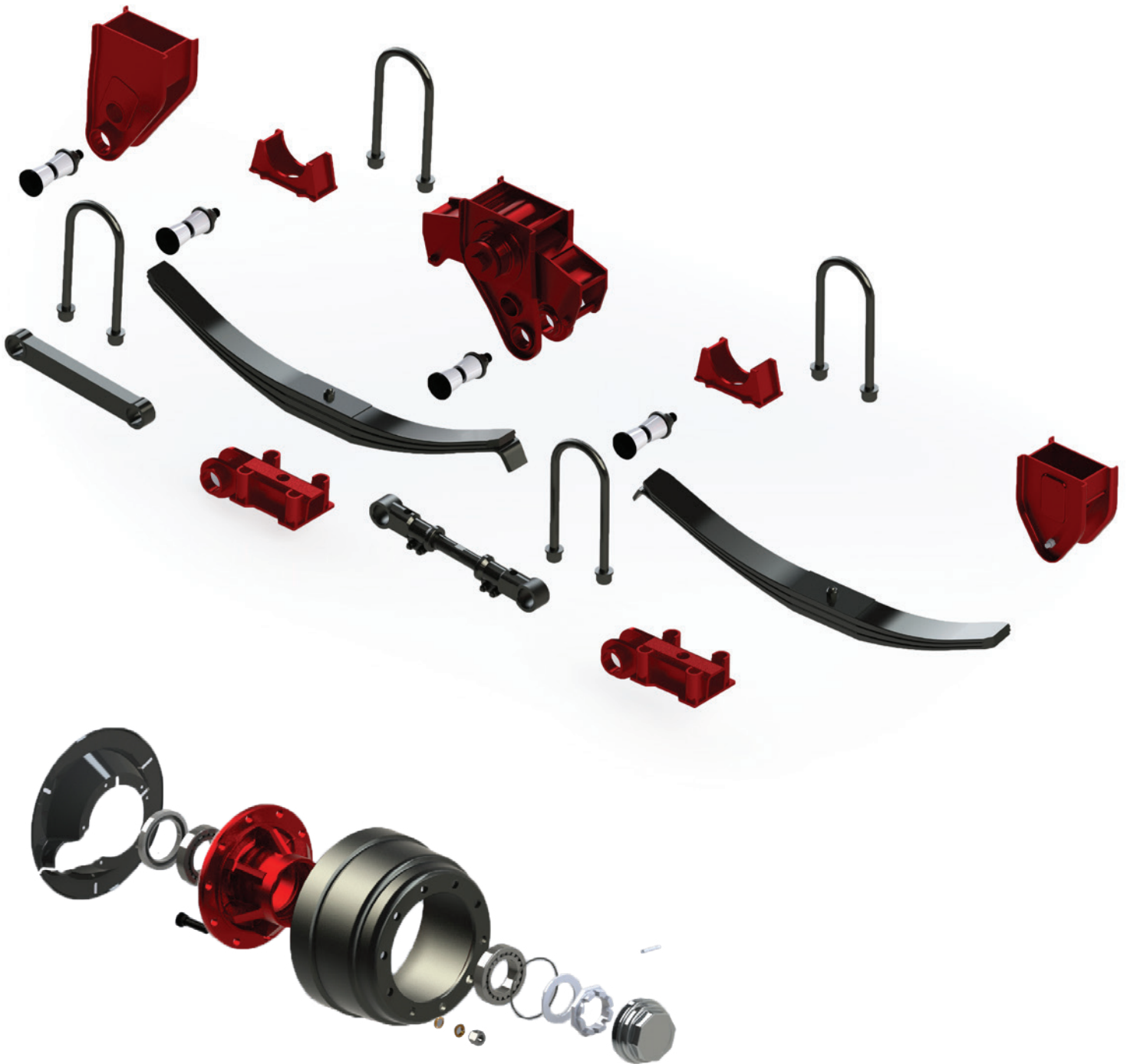
Our team are here to help your market specific requirements.

Additional information available on request.



Spare Parts

Service Manuals, Resources & Components



Spare Parts

Contents

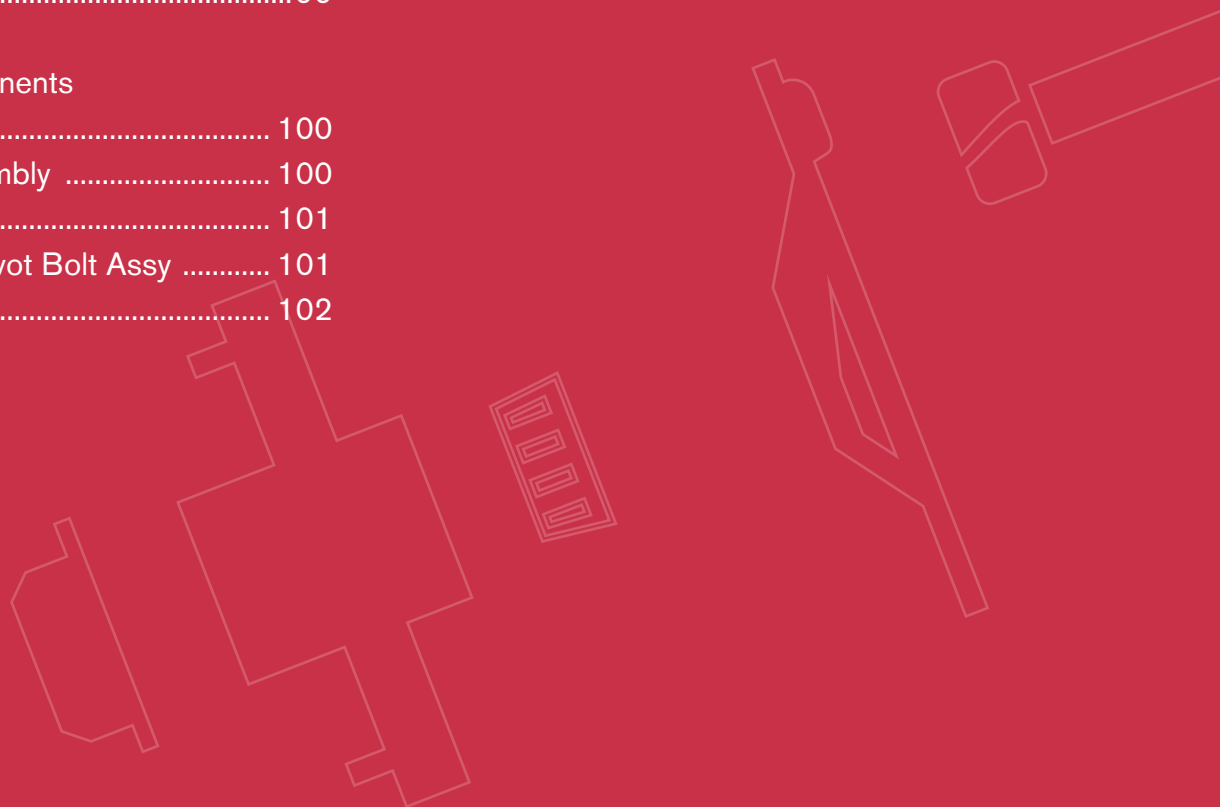
Serial Number Search	93
Support Media / Resource Channel	94
Common Application Repair Kits	95

Axle Components

Hub	96
Drum	97
Brake Shoe Kit	98
Hub & Drum Assembly	99
Camshafts	99

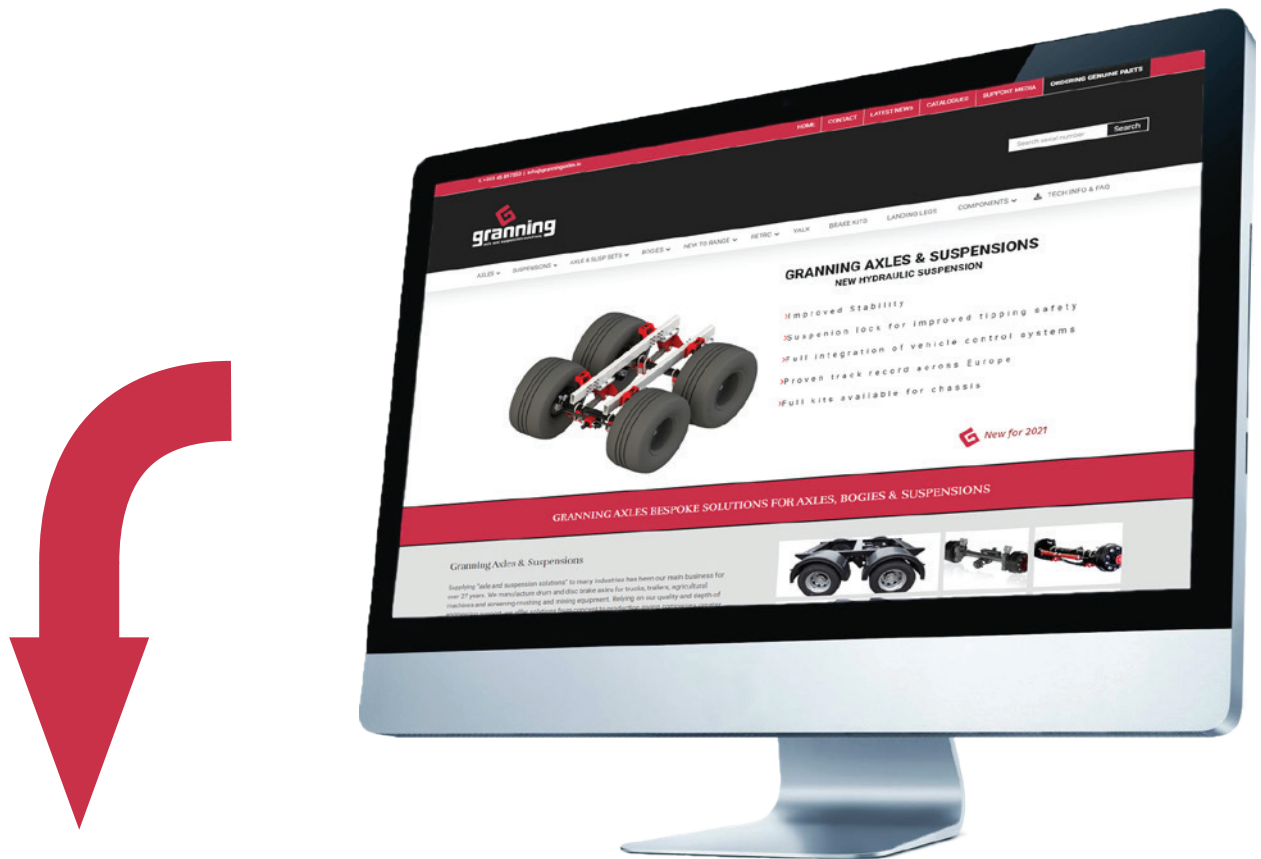
Suspension Components

Balance Beam	100
Torque Arm Assembly	100
Leaf Springs	101
Centre Hanger Pivot Bolt Assy	101
U-Bolts	102

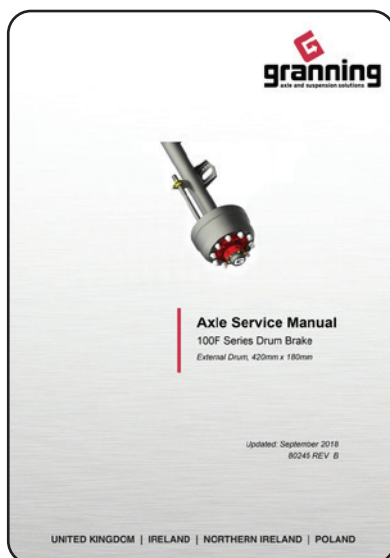


Serial Number Search

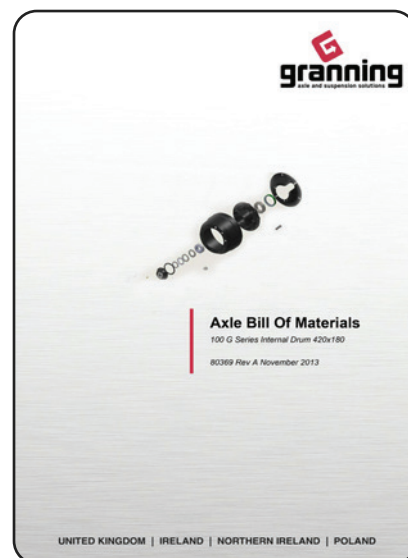
Complete Spare Parts list is now available on our website. Our search function allows our customers to easily identify parts online by using Serial Number stated on your Axle or Suspension plate.



Axle Manual



Bill of Materials



Ireland

T. +353 (0) 45 897 553

UK

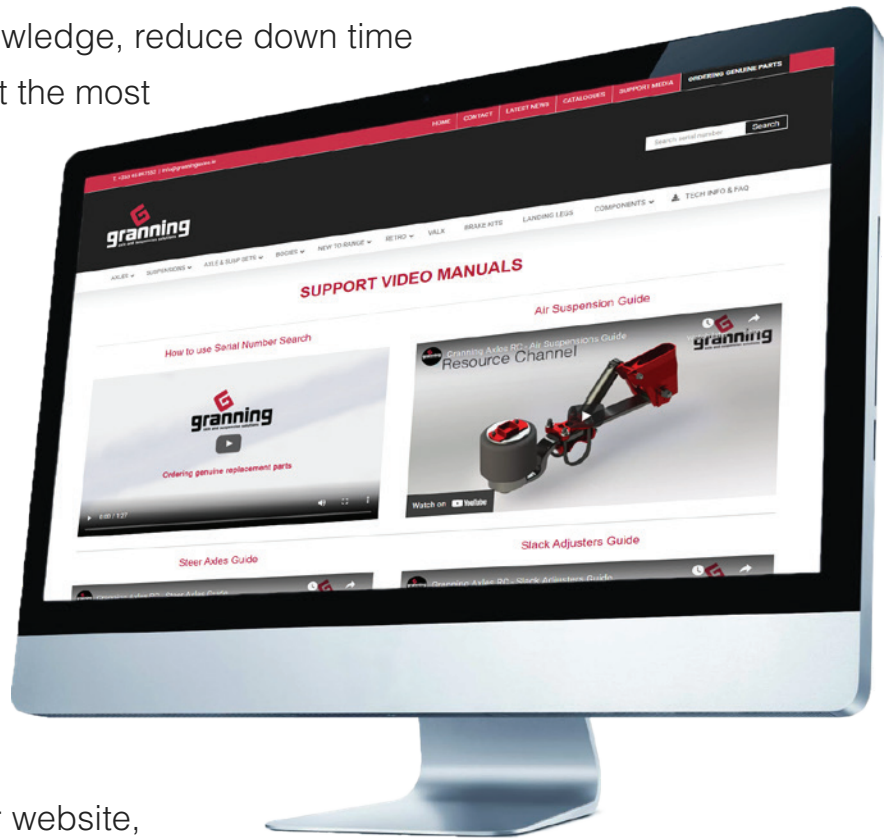
T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055

Support Media / Resource Channel

The Granning Support Media & Resource Channel are designed to help answer our customers frequently asked question with clear professionally shot video's. The videos are designed to improve product knowledge, reduce down time and make sure our customers get the most out of the products we provide.



Visit **Support Media page** on our website, or subscribe to our **Resource Channel** on Youtube to stay up-to-date with useful information we provide.



Scan QR Code
for Youtube channel



Common Application Repair Kits

AK101

Spindle Nut Kit



AK200

Camshaft Kit
100, 300, 860 series



AK201

Camshaft Kit
950 series



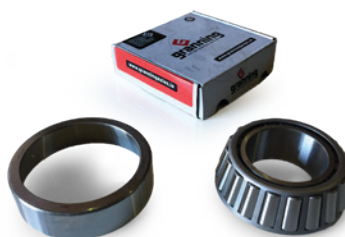
61260K

Inner Bearing
100, 300, 860 series



61270K

Outer Bearing
100, 300, 860 series



61282K

Grease Seal
100, 300, 860 series



61390FK

Dust Cover
100 series



61386K

Wheel Bolt Kit
100F series



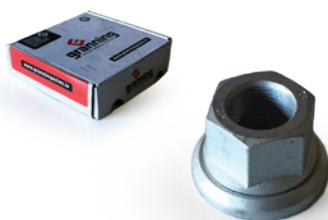
61388K

Wheel Stud 86mm



61381K

M22 ISO Nut



SK100

Steer Axle King Pin Kit



SK200

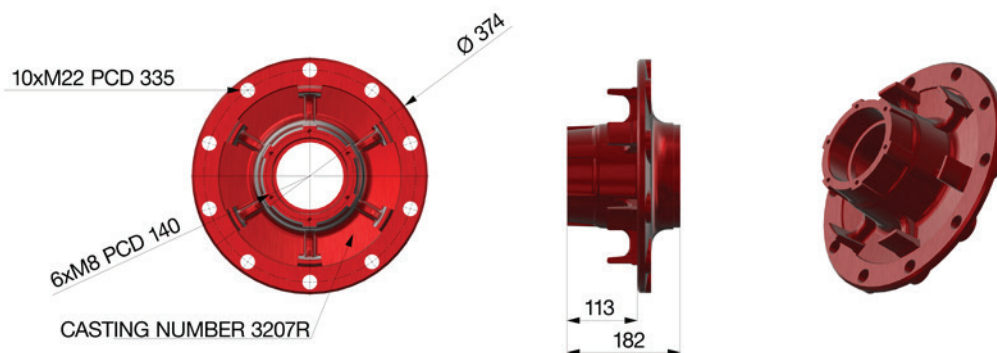
Steer Axle Track Rod
Bush Kit



Axle Components

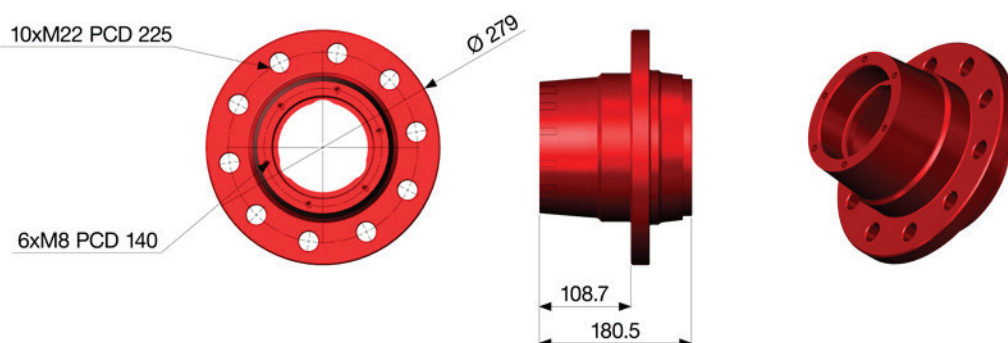
61253F

Hub
100 series



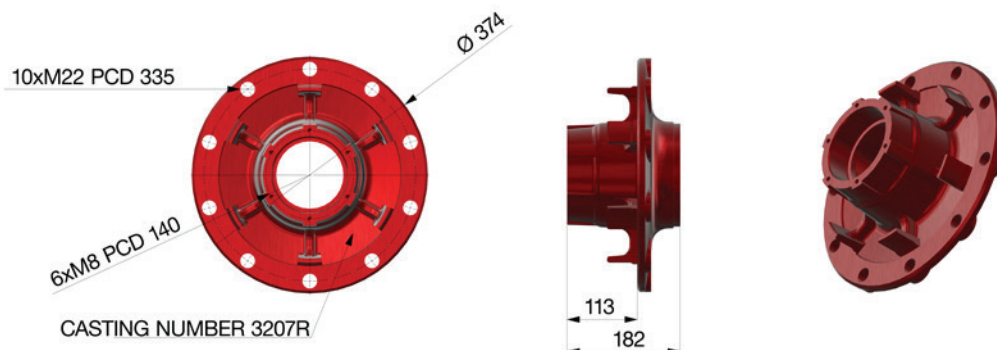
61520F

Hub
300 series



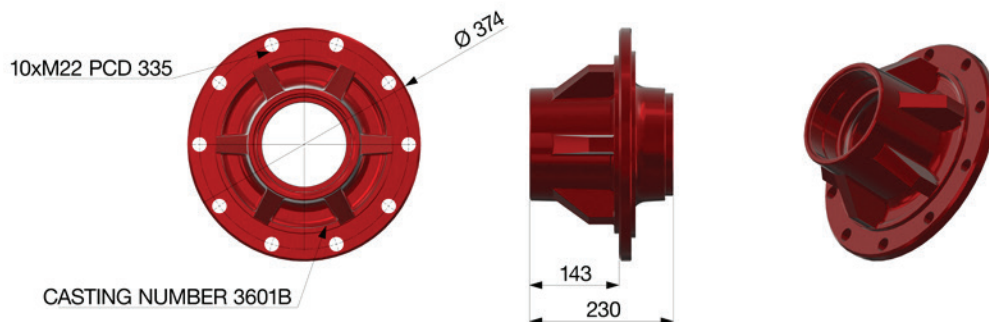
61253F

Hub
860 series



20010

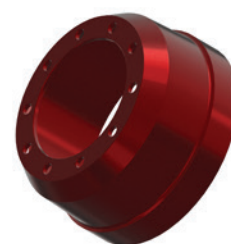
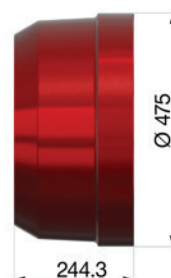
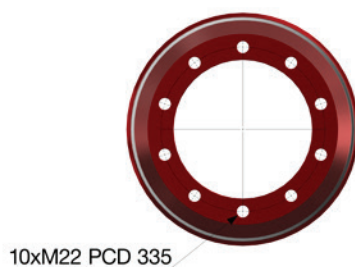
Hub
950 series



Axle Components

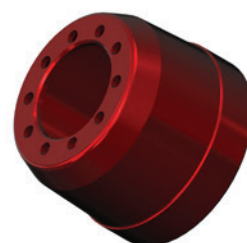
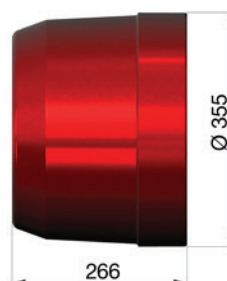
61243F

Drum
100 series



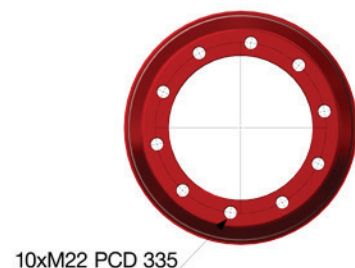
61530F

Drum
300 series



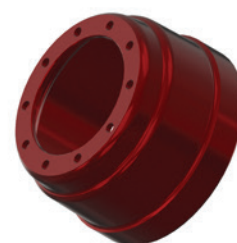
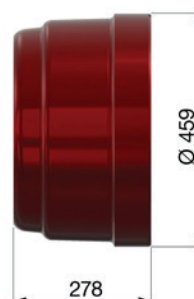
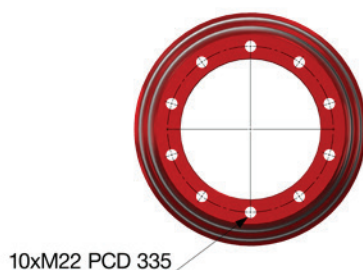
61550F

Drum
860 series



20008

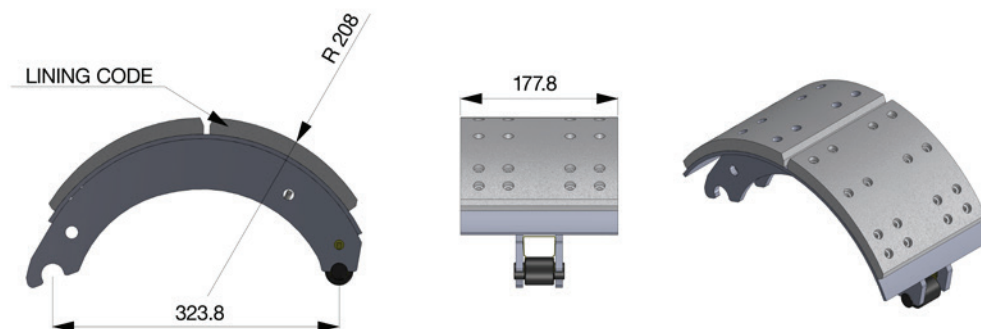
Drum
950 series



Axle Components

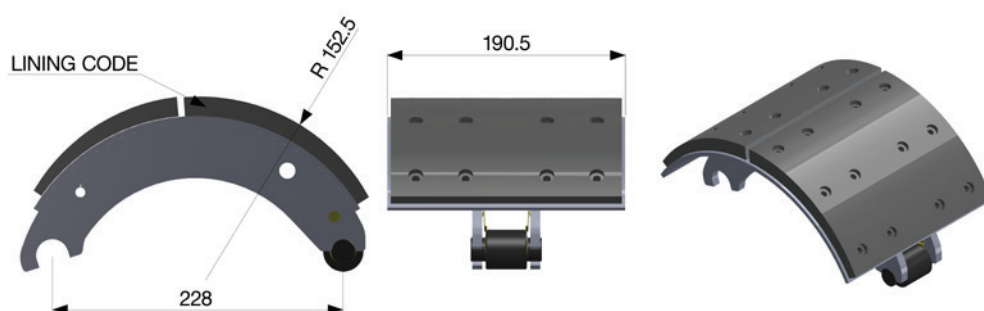
61157FA

Brake Shoe
100 series



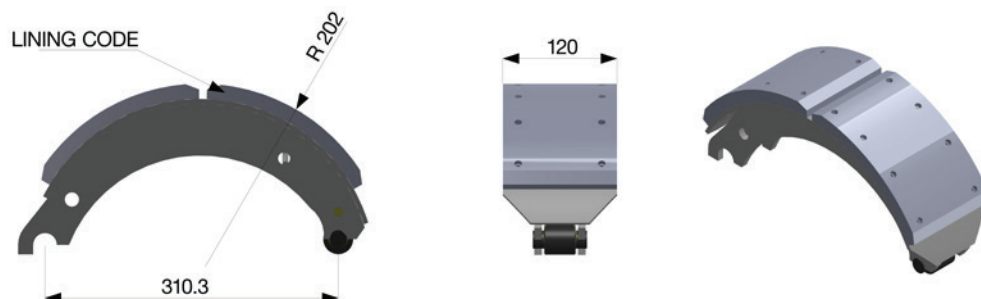
61542FA

Brake Shoe
300 series



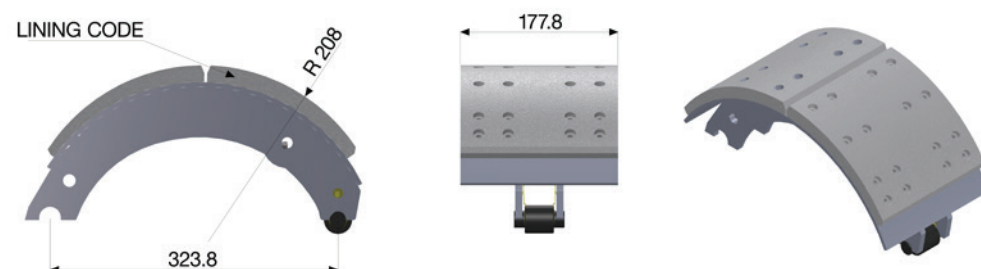
61159FA

Brake Shoe
860 series



20024FA

Brake Shoe
950 series



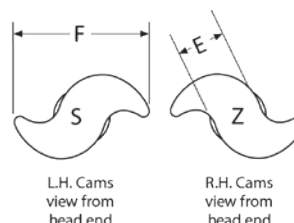
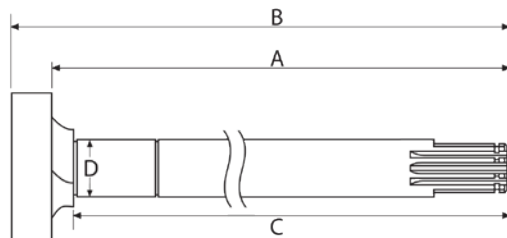
Axle Components

Hub & Drum Assembly



Granning Part No	Parts in Assembly
71000	300 Series Hub and Drum, Bearings, Seal, Twin Wheel Stud, ISO nut
71000W	300 Series Hub and Drum, Bearings, Seal, Twin Wheel Stud, ISO nut, Pole Wheel
71001	100 Series Hub and Drum, Bearings, Seal, Single Wheel Stud, ISO nut
71001W	100 Series Hub and Drum, Bearings, Seal, Single Wheel Stud, ISO nut, Pole Wheel
71002	950 Series Hub and Drum, Bearings, Seal, Twin Wheel Stud, DIN nut
71003	300 Series Hub and Drum, Bearings, Seal, Single Wheel Stud, ISO nut
71003W	300 Series Hub and Drum, Bearings, Seal, Single Wheel Stud, ISO nut, Pole Wheel
71004	100 Series Hub and Drum, Bearings, Seal, Twin Wheel Stud, ISO nut
71004W	100 Series Hub and Drum, Bearings, Seal, Twin Wheel Stud, ISO nut, Pole Wheel

Camshafts

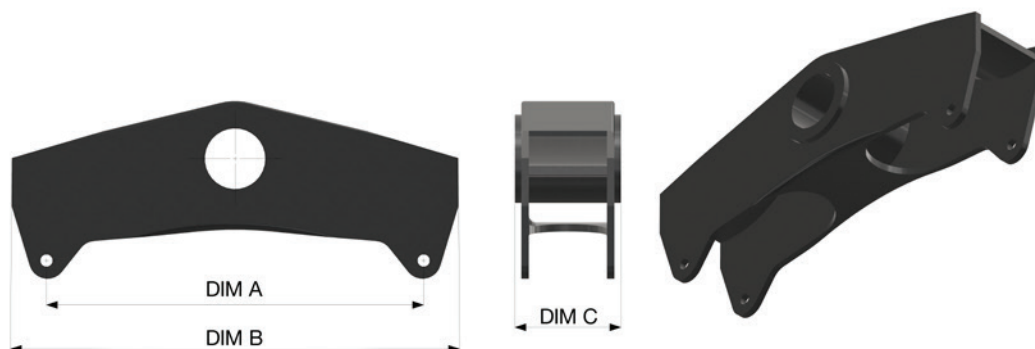


All Camshafts Heads, Journals & Splines are Hardened

Granning Part No	Application	Dimensions (mm)						Spline	Drum Size (mm)	Side
		A	B	C	D	E	F			
61065	100 Series Axle (Large Head)	540	569	524	38	35	100	10	406 / 420	Left
61075	100 Series Axle (Large Head)	540	569	524	38	35	100	10	406 / 420	Right
61067	100 Series Axle (Large Head)	639	668	623	38	35	100	10	406 / 420	Left
61077	100 Series Axle (Large Head)	639	668	623	38	35	100	10	406 / 420	Right
61595	300 Series Axle (Small Head)	541	568.5	524	38	26	83	10	310	Left
61605	300 Series Axle (Small Head)	541	568.5	524	38	26	83	10	310	Right
61596	300 Series Axle (Small Head)	632	659.5	615	38	26	83	10	310	Left
61606	300 Series Axle (Small Head)	632	659.5	615	38	26	83	10	310	Right

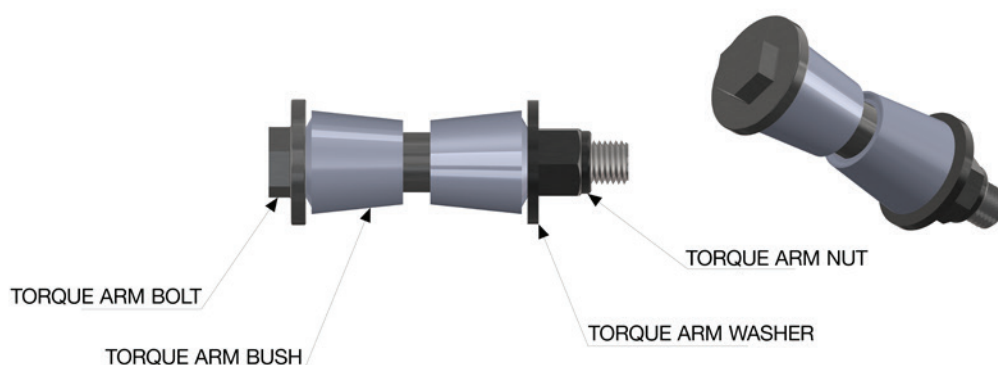
Suspension Components

Balance Beam



Granning Part No	Dim A	Dim B	Dim C
36039	400mm	480mm	108mm
36006	500mm	580mm	108mm
36009	577mm	720mm	108mm

Torque Arm Assembly



Granning Part No	Description
36061	76mm wide spring suspension torque arm assembly
36065	Torque arm bush only
97710	100mm wide spring suspension torque arm assembly
97737	Torque arm bush only

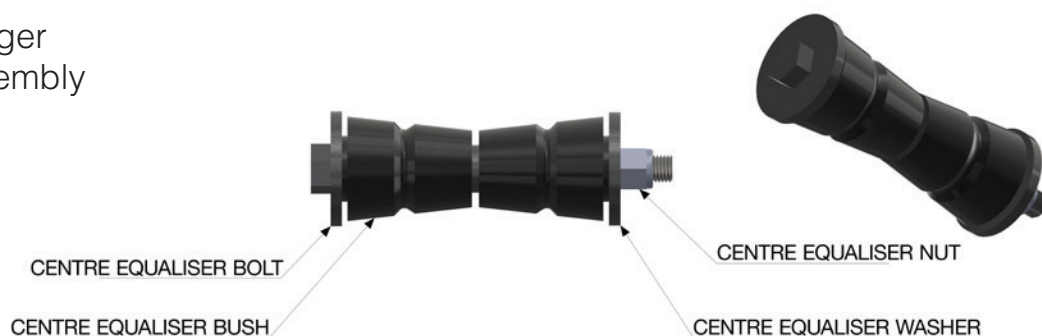
Suspension Components

Leaf Springs



Part Number	Description	DIM A	DIM B	DIM C	DIM D
36032	3 Leaf Parabolic spring 76mm	76	1120	128	70
36099	4 Leaf Parabolic spring 76mm	76	1120	128	94
97746	3 Leaf Parabolic low camber spring 100mm	100	1190	67	81
97703	4 Leaf Parabolic spring 100mm	100	1195	145	92

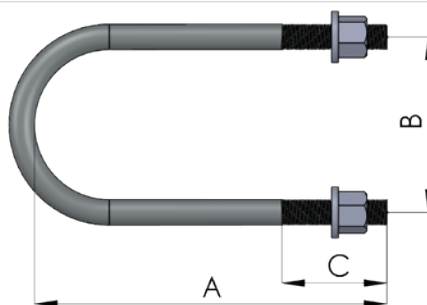
Centre Hanger Pivot Bolt Assembly



Granning Part No	Description
76mm wide spring	
36040	Centre Equaliser Bolt
36041	Centre Equaliser Nut
36042	Centre Equaliser Washer
36043	Centre Equaliser Bush
100mm wide spring	
97736	Centre Equaliser Bolt / Washer / Nut
97735	Centre Equaliser Bush

Suspension Components

U-Bolts



Granning Part No	Dim A	Dim B	Dim C
97706	318	151	105 x M22
36025	377	152	90 x M22
36066	300	152	90 x M22
36072	330	152	90 x M22
36081	357	152	90 x M22
36095	245	152	90 x M22

This is a sample table of u-bolts in our range.

For complete list of Granning Axle & Suspensions Spare Parts please visit Downloads section on our website www.granningaxles.ie

Technical Support & Forms

TURNING-CIRCLE-CALCULATION REQUEST FORM

Company name: _____
Vehicle type: _____
Date: _____
Contact name: _____
Email: _____

Full length: _____
Width: _____
King pin to first axle: _____
Distance between each axle: _____

First axle: _____
Second axle: _____
Third axle: _____
Fourth axle: _____
Fifth axle: _____

Type of truck: _____
Truck layout and model: _____
Front to first axle: _____
First axle to second axle: _____
Second axle to third axle: _____
Third axle to fourth axle: _____

First axle: _____
Second axle: _____
Third axle: _____
Fourth axle: _____
*40 / 60 / 64...
*14 tonnes

TRUCK DIMENSIONS

WHL size: _____
Straight: _____

TRAILER DIMENSIONS

WHL size: _____
Straight: _____

AXLE REQUEST FORM

Customer name: _____
Vehicle type: _____
Date: _____
Contact name: _____
Email: _____

Brake size: _____
*Size drum brakes (mm): _____
*Size disc brakes: _____
Brake chamber size: _____
Air hydraulic disk: _____
Brake adjuster length (mm): _____
Type size: _____
ABS/Pump: _____
Application/Use: _____
Axle load: _____
Max Speed: _____
Track (mm): _____
Wheels (mm): Single/Twin
Construction: Steel/Aluminum
Wheel hub type: ISO/DIN/other
Suspension type: (non/mechanical/hydraulic/other)
Suspension centre: _____
*14 axle blank unless specified or already fitted
Any other comments: _____

AXLE EQUIPMENT DATA

1st axle: _____
2nd axle: _____
3rd axle: _____
4th axle: _____
5th axle: _____
6th axle: _____
7th axle: _____
8th axle: _____
9th axle: _____
10th axle: _____
11th axle: _____
12th axle: _____
13th axle: _____
14th axle: _____
15th axle: _____
16th axle: _____
17th axle: _____
18th axle: _____
19th axle: _____
20th axle: _____
21st axle: _____
22nd axle: _____
23rd axle: _____
24th axle: _____
25th axle: _____
26th axle: _____
27th axle: _____
28th axle: _____
29th axle: _____
30th axle: _____
31st axle: _____
32nd axle: _____
33rd axle: _____
34th axle: _____
35th axle: _____
36th axle: _____
37th axle: _____
38th axle: _____
39th axle: _____
40th axle: _____
41st axle: _____
42nd axle: _____
43rd axle: _____
44th axle: _____
45th axle: _____
46th axle: _____
47th axle: _____
48th axle: _____
49th axle: _____
50th axle: _____
51st axle: _____
52nd axle: _____
53rd axle: _____
54th axle: _____
55th axle: _____
56th axle: _____
57th axle: _____
58th axle: _____
59th axle: _____
60th axle: _____
61st axle: _____
62nd axle: _____
63rd axle: _____
64th axle: _____
65th axle: _____
66th axle: _____
67th axle: _____
68th axle: _____
69th axle: _____
70th axle: _____
71st axle: _____
72nd axle: _____
73rd axle: _____
74th axle: _____
75th axle: _____
76th axle: _____
77th axle: _____
78th axle: _____
79th axle: _____
80th axle: _____
81st axle: _____
82nd axle: _____
83rd axle: _____
84th axle: _____
85th axle: _____
86th axle: _____
87th axle: _____
88th axle: _____
89th axle: _____
90th axle: _____
91st axle: _____
92nd axle: _____
93rd axle: _____
94th axle: _____
95th axle: _____
96th axle: _____
97th axle: _____
98th axle: _____
99th axle: _____
100th axle: _____

Original information with us (fill in by Granning engineering) (Do not mark outside of printed table)
Tel: (+353) 45 897553 / Fax: (+353) 45 894386
Please send to: info@granning.ie

Cost of engineering time: £20 an hour

Tel: (+353) 45 897553 / Fax: (+353) 45 894386
Please return all completed forms to: info@granning.ie

Turning circle calculation won't be performed if information are omitted
Please return all completed forms to: info@granning.ie

Submit Form

Submit Form

Submit Form

Submit Form

Technical Support & Forms

Contents

Technical Information

Catalogue Product Information	103
Brake Capacity	103
Axle Beam Capacity	103
Wheel Studs & Wheel Nuts	104
Axle Track	105
Axle Beam Welding	105
Ride Height	105
Steer Axles	106
Self Steer Axles	106
Forced Steering System	107
Command Steering	107

Request Forms

Axles	108
Axle & Mechanical Suspension	109
Axle & Air Suspension	110
Replacement Axle	111
Steer Axle	112
Suspension	113
Brake Calculation	114
Turning Circle	115
Bogies	116
Retrofit Conversion	117
Brake Kit	118
Hydraulic Drawbar	119
Hydraulic Suspension	120



Catalogue Product Information

The best axle and suspension setup to suit your vehicle depends on a number of factors. Here at Granning, we look at all your vehicle requirements to help you find the best solution. The previous pages outline some of the products available from Granning, but in order to choose the most suitable product please read through the following information. If you have any further questions please contact Granning.

Brake Capacity

Axle brakes are dynamically tested on special test rigs to certify their performance under cold braking, hot braking, and prolonged braking. The brake certificate outlines the maximum load the axle can carry whilst still achieving effective braking performance. The Brake Certificate also includes the range of tyres that is covered under the certificate.

Axle Beam Capacity

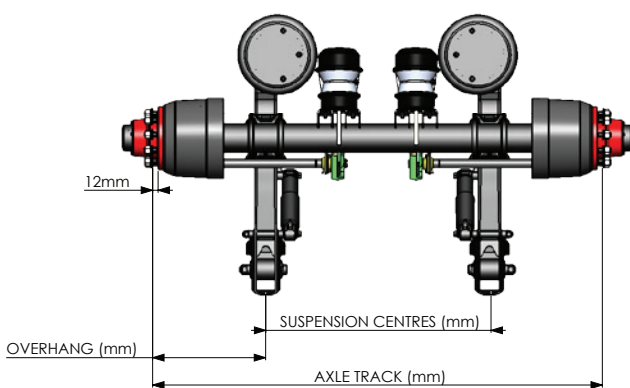
There are a number of factors which affect the maximum axle beam capacity.

Overhang is the distance from the centre of the tyre to the centre of the suspension clamp group, as this distance increases the axle beam capacity decreases.

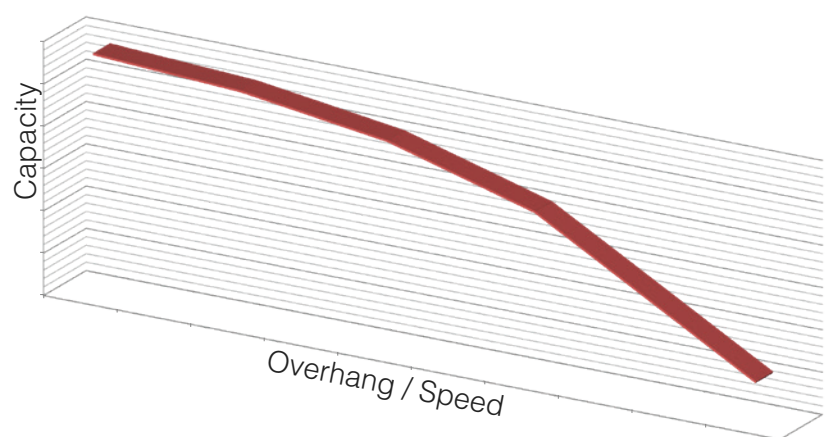
Speed of the vehicle affects axle beam capacity; in certain applications if the speed of the vehicle is restricted the beam capacity can be increased.

Beam Dimensions are another factor. Granning have a large range of axle beam types; from solid square beams to 150mm hollow square beams. We also have a range of different axle beam wall thickness $\varnothing 127\text{mm}$ round beams, and we can help you select the best beam type for your vehicle axle load.

Overhang Explanation



Axle Capacity Chart





The maximum load your vehicle can carry is determined by one of the following:



Axle Brake Capacity

Axle Beam Capacity

Tyre Capacity

Suspension Capacity

For example:

If your axle beam is rated to 13,000Kg, your brake is tested up to 11,000Kg, your suspension is rated to 10,000Kg, and your tyres are rated to 9000kg then the maximum capacity of your setup is limited to 9000Kg.

At Granning we can provide you with the full service of: a brake calculation, drawing clearance checks, turning circle calculations, and performance calculations to ensure your axle and suspension setup meets your load requirements.

Wheel Studs and Wheel Nuts

Granning have a wide range of different wheel stud and nut combinations. It is important to use the correct wheel nut and wheel stud combination for your application. On commercial axles the wheels are normally centred on the axles by the hub spigots and use ISO nuts. Wheel studs can be:

MST - Metric Single wheel Ten stud

MTT - Metric Twin wheel Ten Stud

MSE - Metric Single wheel Eight stud

MTE - Metric Twin wheel Eight stud

Agricultural axles can have ISO nuts but if the wheel rim is designed to be centred by the wheel nuts it must use DIN nut and cone washers.

DST - DIN Nut with an outer washer and stud length for single wheels

DTT - DIN with inner and outer washer and stud length for twin wheel

The position of the splines on the wheel studs differ depending on the drum mounting type on the axle be it internal or external. Aluminium wheel rims are generally twice the thickness of steel rims and an MST wheel stud will not work with a single aluminium wheel rim.

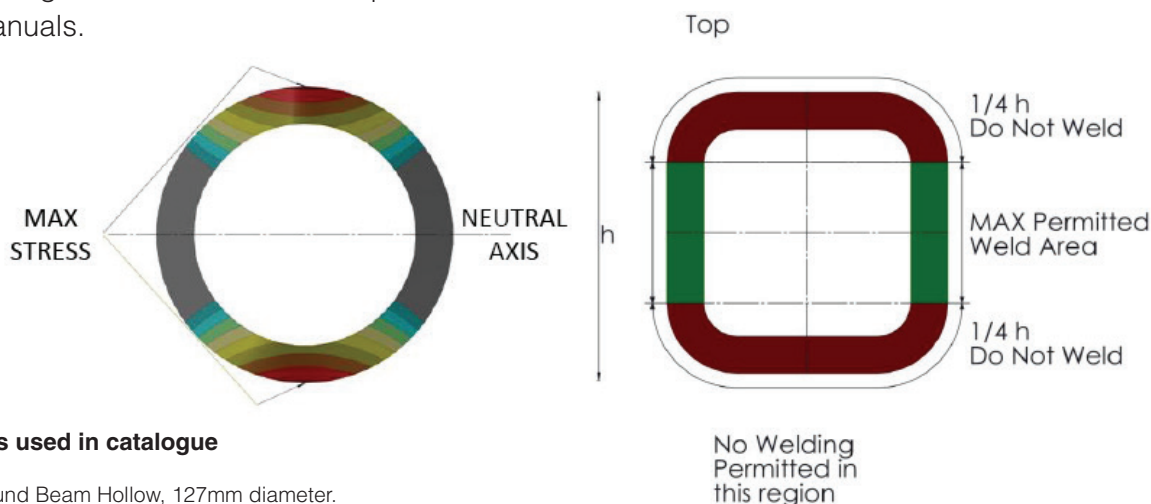
Contact Granning for any further queries.

Axle Track

This is the length of the axle. On commercial axles it is measured 12mm out from the wheel mounting face. On agricultural axles the length of the axle is measured from the wheel mounting face.

Axle Beam Welding

Welding is only permitted in certain areas along the axle beam. Any welding on the areas of the axle beam highlighted in red on the diagrams below will result in axle beam performance issues and possible failure. Full details can be found in the axle manuals. There are also important guidelines to be followed when welding mechanical and air suspensions to the axles. Further information can be found in the suspension manuals.



Types of Axle Beams used in catalogue

- Ø 127mm Round Beam Hollow, 127mm diameter.
- 90mm Square Beam Solid, 90mm side width.
- 150mm Square Beam Hollow, 150mm side width.

Ride Height

This is the distance from the centre of the axle beam to the top of the suspension hangers. For Mechanical Suspensions the ride height is different when the suspension is laden and un-laden. The number of leaves, spring type, and the grade of steel used in the spring all influence the deflection curves of Mechanical springs. On air suspensions, it can be important to know the ride height of the air suspension when the air is dumped for clearance checks.



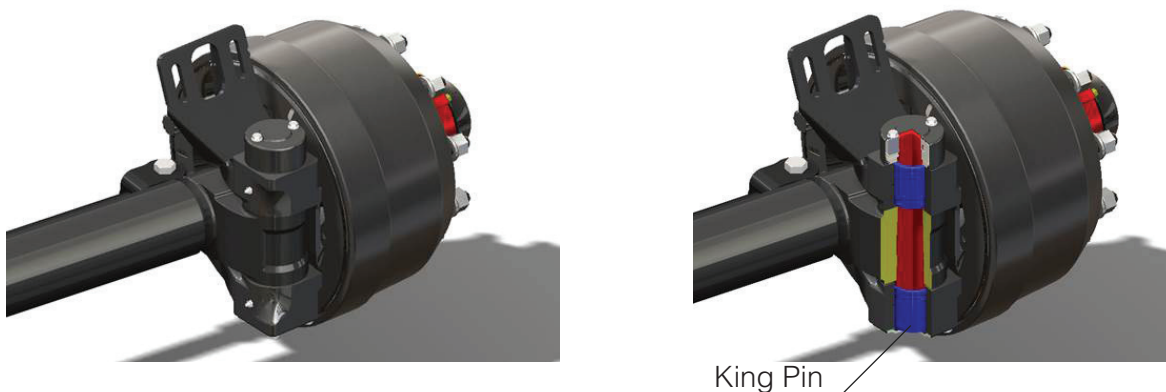


Steer Axles

Granning has a wide range of different steer axle options available. We have developed a diverse range of steer axle models to meet our customers' requirements. The list of variations available on our steer axle models include:

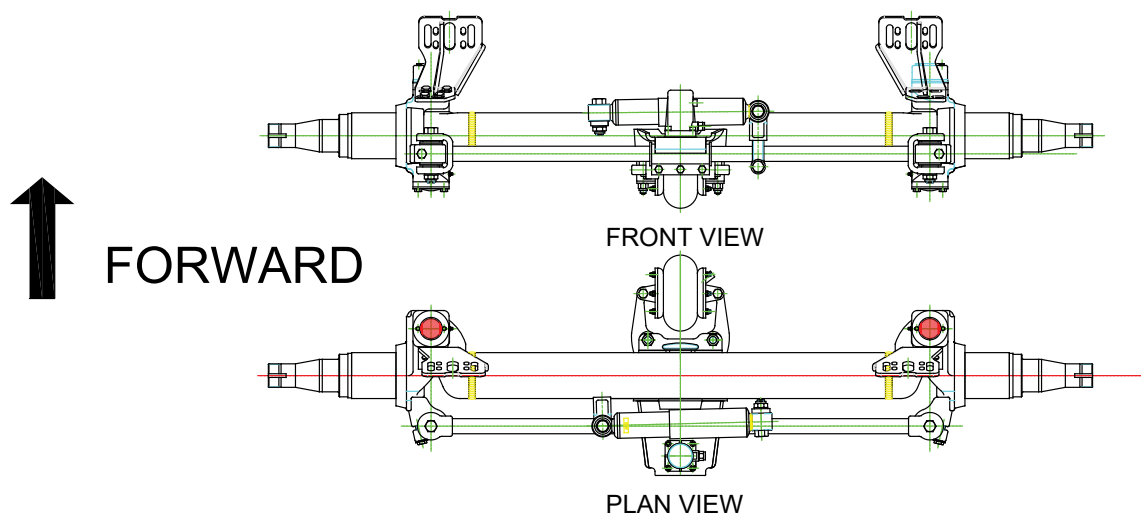
- A range of camshaft lengths for better brake chamber clearance and slack adjuster options.
- Offset Air Chamber Brackets for greater tyre and chassis clearance.
- Options to have the Air Chamber Bracket above the axle beam or below.
- Options to lock the steer axle by air or by hydraulic pressure.

We also can provide Self-Steer, Command-Steer, or Closed-Circuit-Forced-Steer options on our steer axles. The main differences between each steer axle model are outlined below.



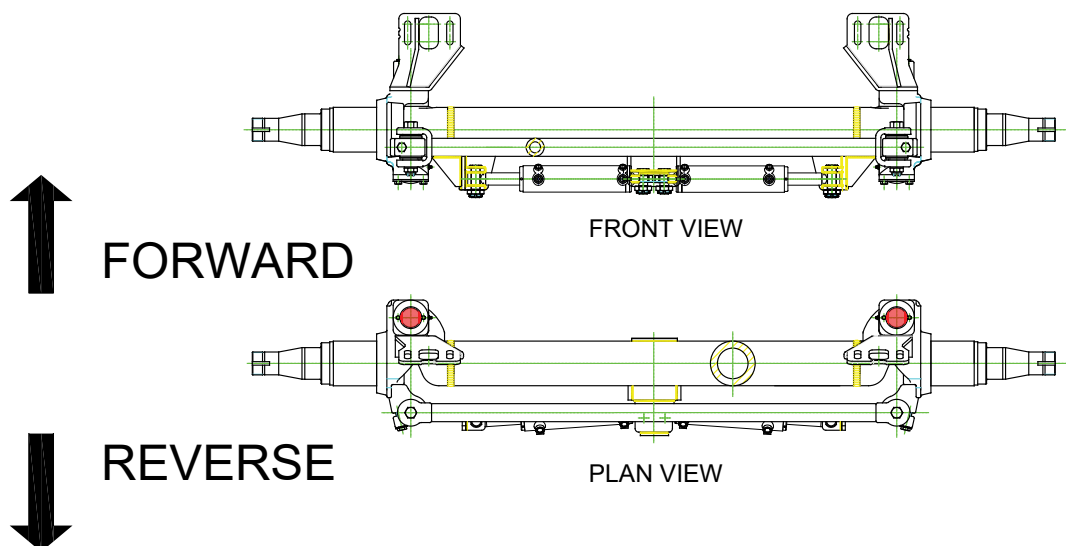
Self Steer Axles

These turn due to the vehicle weight and need to be locked in reverse.



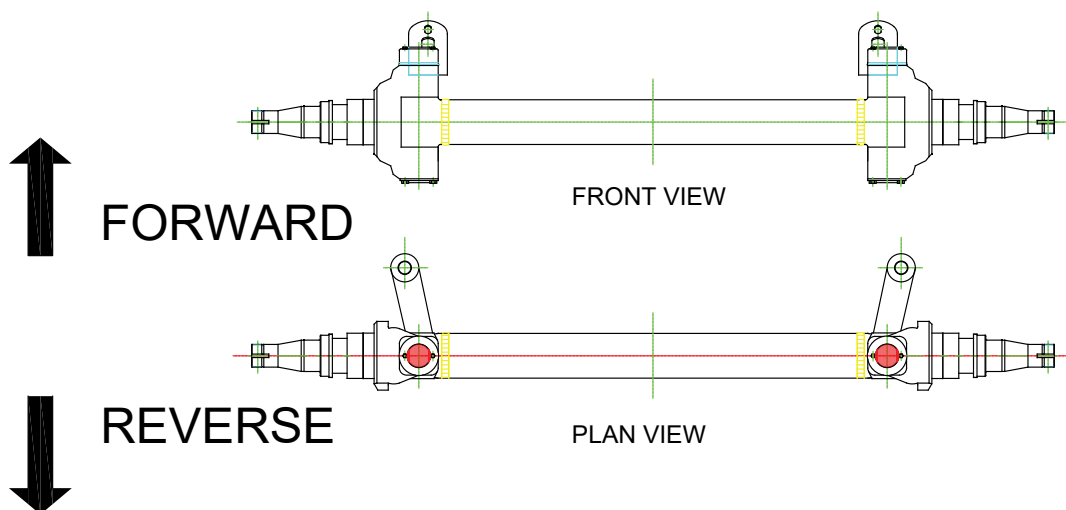
Forced Steering Closed System

Steering forward and reverse through movement of hydraulic ram on drawbar.



Command Steering

Larger steering angle due to centered kingpin. Generally forward and reverse steering controlled by sensors and computer.





Axles

Scan QR Code

to view & download
document online



AXLE REQUEST FORM



Company name:
Contact name:
E-Mail:

		Date:	
		Tel:	



Trailer Type (please select)

Centre Axle Trailer
Rigid Drawbar Trailer

Semi Trailer

Drawbar Trailer

Trailer use

Commercial

Agricultural

Engineering Plant

Fixed Load

Trailer Body Type

Number of axles

Suspension Type

Max Design Speed

 kph

Air/Mechanical/Hydraulic/None

Axle Data (If all axles are the same only complete Axle 1 column)

Brake Size

Drum Brakes

Axle 1	Axle 2	Axle 3	Axle 4
420 x 220 (150 Series), 420 x 180 (200 Series), 420 x 180 (100 Series), 406 x 120 (860 Series) 335 x 210 (900 Series), 310 x 190 (400 Series), 310 x 190 (300 Series), 300 x 135 (750 Series) 420 x 180 (950 Series), 420 x 180 (980 Series)			

Agricultural Brakes

400 x 80 (974 Series), 400 x 80 (973 Series), 300 x 135 (750 Series), 300 x 90 (97050 Series)
300 x 60 (971 Series), 350 x 60 (972 Series)

Heavy Duty Brakes

420 x 220 (13500kg), 420 x 200 (18000kg), 420 x 180 (16000kg), 420 x 200 (32000kg @ 10 kph)

Disc Brakes

430mm Disc (700 Series), 380mm Disc (600 Series)

Tyre Size

Single / Twin

Rim Fitment (Centre/Offset)

Rim Material (Steel/Aluminium)

Wheel Nut (ISO/DIN/Other)

Axle 1	Axle 2	Axle 3	Axle 4

Brake Chamber Size

Brake Actuation (Air/Hydraulic/Dual)

Load Per axle

Wheel speed Sensors (ABS)

Axle Track Dimension*

Steer axle**

kg	kg	kg	kg
mm	mm	mm	mm

** If yes please complete Steer Axle Form

Slack Adjusters (Automatic/Manual)

Supply of slack adjusters (Fitted/Loose)

Chambers / Actuators (Fitted/Loose)

Saddle Supply (Fitted/Loose)



* Axle Track Dimension

Any other comments

Omitted information will be filled in by Granning Axles & Suspensions Ltd. to meet its standards and product stocks

Tel: +353 (0) 45 897 553 / Fax: +353 (0) 45 848 638

Please send back to: info@granningaxles.ie

Please, complete and return to: eds@granningaxles.ie

Part No. 80301 Rev B Apr 2021

www.granningaxles.ie

Axle & Mechanical Suspension

Scan QR Code

to view & download
document online

Mechanical Suspension & Axle Set Form



Company name:

Contact name: Date:

E-Mail: Tel:



Trailer Type (please select) Centre Axle Trailer / Rigid Drawbar Trailer Semi Trailer Drawbar Trailer

Trailer use Commercial Agricultural Engineering Plant Fixed Load

Trailer Body Type Number of axles

Max Design Speed kph

Axle Data

	Axle 1	Axle 2	Axle 3	Axle 4
(If all axles same just complete for axle 1)				
Brake Size				
Drum Brakes	420 x 220 (150 Series), 420 x 180 (200 Series), 420 x 180 (100 Series), 406 x 120 (860 Series) 335 x 210 (900 Series), 310 x 190 (400 Series), 310 x 190 (300 Series), 300 x 135 (750 Series) 420 x 180 (950 Series), 420 x 180 (980 Series)			
Agricultural Brakes	400 x 80 (974 Series), 400 x 80 (973 Series), 300 x 135 (750 Series), 300 x 90 (97050 Series) 300 x 60 (971 Series), 350 x 60 (972 Series)			
Heavy Duty Brakes	420 x 220 (13500kg), 420 x 200 (18000kg), 420 x 180 (16000kg), 420 x 200 (32000kg @10 kph)			
Disc Brakes	430mm Disc (700 Series), 380mm Disc (600 Series)			
Load Per axle	kg	kg	kg	kg
Tyre Size				
Single / Twin				
Rim Fitment				
Rim Material				
Wheel Nut				
Brake Chamber Size*				
Brake Actuation				
* If not known complete Brake Calc form				
Wheel speed Sensors (ABS)				
Axle Track Dimension**	mm	mm	mm	mm
Steer axle***				

*** If yes please complete Steer Axle Form

Suspension Data

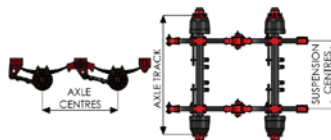
	mm	mm	mm	mm
Ride Height				
Suspension Spring Centres				
Axle Centres / Bogie Spread				
Spring (No. of leaves and width)				
Configuration****				

**** Overslung, Underslung, Ultra-Underslung, Balance Beam

Slack Adjusters

Supply of slack adjusters

Chambers / Actuators

Any other comments **** Axle Track Dimension**

Omitted information will be completed by Granning to meet its standards and product stocks

Tel: (+353) 45 897553

Please, complete and return to: eds@granningaxles.ie

Part No. 80319 Rev A May 2021

www.granningaxles.ie

Axle & Air Suspension

Scan QR Code

to view & download
document online



Air Suspension & Axle Set Form



Company name:

Contact name: Date:

E-Mail: Tel:



Trailer Type (please select) Centre Axle Trailer / Rigid Drawbar Trailer Semi Trailer Drawbar Trailer

Trailer use Commercial Agricultural Engineering Plant Fixed Load

Trailer Body Type Number of axles

Max Design Speed kph

Axle Data

	Axle 1	Axle 2	Axle 3	Axle 4
(If all axles same just complete for axle 1)				
Brake Size	<input type="text"/>			
Drum Brakes	420 x 220 (150 Series), 420 x 180 (200 Series), 420 x 180 (100 Series), 406 x 120 (860 Series) 335 x 210 (900 Series), 310 x 190 (400 Series), 310 x 190 (300 Series), 300 x 135 (750 Series) 420 x 180 (950 Series), 420 x 180 (980 Series)			
Agricultural Brakes	400 x 80 (974 Series), 400 x 80 (973 Series), 300 x 135 (750 Series), 300 x 90 (97050 Series) 300 x 60 (971 Series), 350 x 60 (972 Series)			
Heavy Duty Brakes	420 x 220 (13500kg), 420 x 200 (18000kg), 420 x 180 (16000kg), 420 x 200 (32000kg @10 kph)			
Disc Brakes	430mm Disc (700 Series), 380mm Disc (600 Series)			
Load Per axle	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg
Tyre Size	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Single / Twin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Rim Fitment	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Rim Material	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Wheel Nut	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Brake Chamber Size*	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Brake Actuation	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
* If not known complete Brake Calc form				
Wheel speed Sensors (ABS)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Axle Track Dimension**	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm
Steer axle***	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
*** If yes please complete Steer Axle Form				

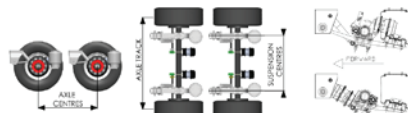
Suspension Data

Ride Height	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm
Suspension Spring Centres	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm
Brake Chamber Location	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Air Spring Pedestal Required	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Airspring Offset	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm	<input type="text"/> mm
Lift Option	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Slack Adjusters

Supply of slack adjusters

Chambers / Actuators



Any other comments

Omitted information will be completed by Granning to meet its standards and product stocks

Tel: (+353) 45 897553

Please, complete and return to: eds@granningaxles.ie

Part No. 80319 Rev A May 2021

www.granningaxles.ie

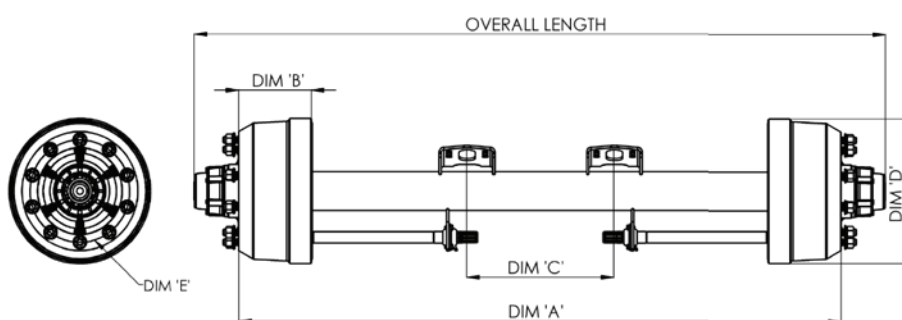
Replacement Axle

Scan QR Code

to view & download
document online

**Replacement Axle Request Form**

Company Name: _____
 Contact Name: _____
 Contact Email: _____
 Contact Phone Number: _____
 Date and Signature: _____



Required axle is = Disc Drum
 Axle fitment is to = Truck Trailer
 Dimension 'A' = _____ mm (Wheel mounting face to wheel mounting face)
 Dimension 'B' = _____ mm (Wheel mounting face to dust cover face)
 Dimension 'C' = _____ mm (Distance between brake lever centres)
 Dimension 'D' = _____ mm (Brake band diameter)
 Axle capacity as per vehicle plate = _____ Kg
 Single or twin wheels = Single Twin If single are they Centre Offset
 Number of wheel stud fixings = 8 10
 Dimension 'E' wheel bolt PCD = _____ mm
 Type of wheel fixing = ISO DIN
 Drum configuration – Does wheel mount against = Drum Hub
 Caliper fitted with Pad wear sensors = Yes No
 Make of caliper fitted (if applicable) = Wabco Knorr Bremse Other
 Drop centre axles - Drop amount = _____ mm (centre of axle beam to centre of drop)
 Drop centre offset towards right hand side = _____ mm (centre of axle to centre of drop)
 Does the axle need to have ABS = Yes No

Omitted information will be filled in by Granning Axles and Suspensions Ltd to meet its standards and product stocks
 Tel: +353 (0) 45 897 553/Fax: +353(0) 45 848 638
 Please send back to : info@granningaxles.ie

80313 REV A Feb 2021

www.granningaxles.ie



Steer Axle

Scan QR Code

to view & download
document online



STEER AXLE REQUEST FORM



Company name:
Contact name:
E-Mail:

		Date:
		Tel:



Trailer Type (please select)

Centre Axle Trailer
Rigid Drawbar Trailer

Semi Trailer

Drawbar Trailer

Trailer use

Commercial Agricultural Engineering Plant Fixed Load

Trailer Body Type

Number of axles

Suspension Type

Max Design Speed

 kph

Axle Data

Steer Axle

Brake Size

Drum Brakes

420 x 220 (150 Series), 420 x 180 (200 Series), 420 x 180 (100 Series), 406 x 120 (860 Series)
335 x 210 (900 Series), 310 x 190 (400 Series), 310 x 190 (300 Series), 300 x 135 (750 Series)
420 x 180 (950 Series), 420 x 180 (980 Series)

Agricultural Brakes

400 x 80 (974 Series), 400 x 80 (973 Series), 300 x 135 (750 Series), 300 x 90 (97050 Series)
300 x 60 (971 Series), 350 x 60 (972 Series)

Heavy Duty Brakes

420 x 220 (13500kg), 420 x 200 (18000kg), 420 x 180 (16000kg), 420 x 200 (32000kg @10 kph)

Disc Brakes

430mm Disc (700 Series), 380mm Disc (600 Series)

Steer Axle

Tyre Size

Single / Twin

Rim Fitment

Rim Material

Wheel Nut

Steer Axle locking system

Locking System if Air

Suspension Configuration

Air Chamber Bracket Position

Slack Adjusters

Slack Adjuster Offset

Supply of slack adjusters

Chambers / Actuators

Saddle Supply

** Standard & Recommended

Brake Chamber Size

Brake Actuation

Load Per axle

 kg

Wheel speed Sensors (ABS)

Axle Track Dimension*

 mm

Track Dimension



* Axle Track Dimension

Steer System Type

Steer System Required

Chassis details for steering clearance & Any other comments

Omitted information will be completed by Granning to meet its standards and product stocks

Tel: (+353) 45 897553

Please, complete and return to: eds@granningaxles.ie

Part No. 80302 Rev C May 2021

www.granningaxles.ie

Suspension

Scan QR Code

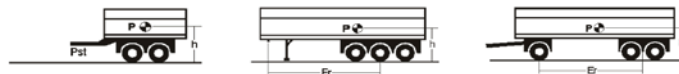
to view & download
document online



SUSPENSION REQUEST FORM



Company name:
Contact name: Date:
E-Mail: Tel:



Trailer Type (please select) ☐ Centre Axle Trailer ☐ Semi Trailer ☐ Drawbar Trailer

Trailer use ☐ Commercial ☐ Agricultural ☐ Engineering Plant ☐ Fixed Load

Trailer Body Type **Number of axles**

Chassis Structure / Cross Section **Max Design Speed** kph

Air Suspension (If all axles are the same only complete Axle 1 Column)

	Axle 1	Axle 2	Axle 3	Axle 4
Axle model / Reference*	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Axle Beam Shape & Size*	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Load Per axle	kg <input type="text"/>	kg <input type="text"/>	kg <input type="text"/>	kg <input type="text"/>
Ride Height	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>
Suspension Spring Centres	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>
Tyre Size	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Single / Twin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Brake Chamber Size**	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Brake Chamber Location	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Air Spring Pedestal Required	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Airspring Offset***	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>
Lift Option	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Mechanical Suspension (If all axles are the same only complete Axle 1 Column)

	Axle 1	Axle 2	Axle 3	Axle 4
Axle model / Reference*	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Axle Beam Shape & Size*	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Load Per axle	kg <input type="text"/>	kg <input type="text"/>	kg <input type="text"/>	kg <input type="text"/>
Ride Height	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>
Suspension Spring Centres	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>
Axle Centres / Bogie Spread	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>
Spring (No. of leaves and width)	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>	mm <input type="text"/>
Configuration****	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tyre Size	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Single / Twin	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

* If not known, please complete Axle Request Form
** If not known, please complete Brake Calculation Request Form
*** The range of offsets depend on type of suspension
**** Overslung, Underslung, Ultra-Underslung, Balance Beam

Any other comments

Omitted information will be completed by Granning to meet its standards and product stocks

Tel: (+353) 45 897553

Please, complete and return to: eds@granningaxles.ie

Part No. 80303 Rev C May 2021

www.granningaxles.ie



Brake Calculation

Scan QR Code

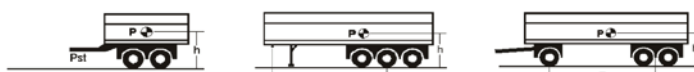
to view & download
document online



BRAKE CALCULATION REQUEST FORM



Company name:
Contact name: Date:
E-Mail: Tel:



Trailer Type (please select) ☐ Centre Axle Trailer ☐ Semi Trailer ☐ Drawbar Trailer
☐ Rigid Drawbar Trailer

Trailer use ☐ Commercial ☐ Agricultural ☐ Engineering Plant ☐ Fixed Load

Trailer Body Type

Number of axles **Max Design Speed** kph

Intended Country of Registration **Brake Regulation/Homologation**

Brake Actuation ☐ Air ☐ Hydraulic ☐ Both

	Axle 1	Axle 2	Axle 3	Axle 4
Foundation Brake Size / Axle Series	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Service Brake Chamber Size	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Park Brake	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Brake Chamber Part number if known
Slack Adjuster Length mm mm mm mm

Modulation ☐ ABS ☐ EBS ☐ ABS WITH LSV ☐ LSV ONLY ☐ None

Manufacturer ☐ Wabco ☐ Knorr Bremse ☐ Haldex ☐ other

Suspension Type ☐ Air ☐ Mechanical ☐ Hydraulic ☐ Suspension Model

Masses and Dimensions (If all axles are the same only complete Axle 1 column)

	Axle 1	Axle 2	Axle 3	Axle 4
Max Design Axle Load	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg
Laden Axle Load	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg
Unladen Axle Load	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg

Tyre Size

Max Design Kingpin / Drawbar Load kg

Laden Kingpin / Drawbar Load kg **Centre of Gravity Height Laden "h"** m

Unladen Kingpin / Drawbar Load kg **Centre of Gravity Height Unladen "h"** m

Kingpin / Drawbar to bogie Centre "Er" m

Any other comments (eg. range of tyres, range of wheelbase)

Omitted information will be completed by Granning to meet its standards and product stocks

Tel: (+353) 45 897553

Please, complete and return to: eds@granningaxles.ie or

Part No. 80304 Rev C May 2021

www.granningaxles.ie

Turning Circle

Scan QR Code

to view & download
document online



TURNING CIRCLE CALCULATION REQUEST FORM



Company name:
Vehicle type:
Date:
Contact name:
Email:

TRAILER DIMENSIONS

Full length :
Width :
King pin to rear :
King pin to first axle :
Distance between each axle :

First axle :
Second axle :
Third axle :
Fourth axle :
Fifth axle :

Straight	Self steer	Command steer	To be confirmed

TRUCK DIMENSIONS

Type of truck* :
Truck brand and model** :
Front to king pin :
Front to first axle :
First axle to second axle :
Second axle to third axle :
Third axle to fourth axle :

First axle :
Second axle :
Third axle :
Fourth axle :

Straight	Steering

*4x2 / 6x2 / 6x4...
** If known

Turning circle calculation won't be performed if information are omitted

Tel: (+353) 45 897553 / Fax: (+353) 45 894306
Please return all completed forms to eds@granningaxles.ie

Part No. 80305 Rev A November 2018

www.granningaxles.ie

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055



Bogies

Scan QR Code

to view & download
document online



BOGIE REQUEST FORM



Company name:
Vehicle type:
Date:
Contact name:
Email:

Axle, suspension, brake calculation and valves must be defined and validated before any development of the frame

BOGIE INFORMATION

Number of axles:
Load on the bogie:
Wheels:
Type of Suspension (Air/Mech)
ABS, EBS or without?:
Mudwings needed?:
Handbrake needed?:
Other options wanted:
(Crashbar, lighboard...)

Equipment to be supply loose:

Destination Country
Special requirements (Roll in Bogie, detachable, Lift etc)
Certification/Homologation requirements
Turning Circle Calculation Required

Please attach a general drawing of the machine (front, side and plan view)

Any Additional Comments

--

Tel: (+353) 45 897553 / Fax: (+353) 45 894306 Please return all completed forms to eds@granningaxles.ie

Part No. 80306 Rev A November 2018

www.granningaxles.ie

Retrofit Conversion

Scan QR Code

to view & download
document online

**RETROFIT CONVERSION DATA**

Date: _____ Customer: _____

Telephone number: _____ Fax number: _____

VEHICLE DETAILS

Manufacturer: _____ Model: _____

Chassis number: _____

Function: **Tractor** **Rigid** **Rigid-Drawbar** Body type: _____

Wheelbase: _____ m Chassis Frame Width: _____ m

Drive Axle Suspension: **Air** **Mechanical** Year of Manufacturer: _____

Does the Vehicle have Electronic Brakes fitted? **Yes** **No**

Please attach complete details from Brake Load Sensing Valve Setting Plate if applicable

CONVERSION REQUIREMENTS

Position: **Mid** **Tag** Bogie Spread: _____ m

Revised Gross Vehicle Mass: _____ kg

Capacity of Additional Axle: _____ kg

Control: **Lift** **Non Lift** Air Kit Required: **Yes** **No**

Height from the underside of the chassis to ground at position of additional Axle:

Laden: _____ m Unladen: _____ m

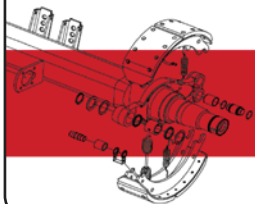
Additional axle tyre size to be fitted: _____ **Single** **Twin**

If twin tyres to be fitted state required track: _____ m

If Mid Axle is to be fitted is the propeller shaft offset? **Yes** **No**

Requested Axle Type: **Drum** **Disc**

Special Notes:



www.granningaxles.ie

Rev B May 2021
Part No 80307



Brake Kit

Scan QR Code

to view & download
document online



BRAKE KIT REQUEST FORM



Company name:
Contact name:
E-Mail

		Date:
		Tel:



Trailer Type (please select)

Centre Axle Trailer
Rigid Drawbar Trailer

Semi Trailer

Drawbar Trailer

Trailer use

Commercial

Agricultural

Engineering Plant

Fixed Load

Number of axles

Intended Country of Registration

Brake Regulation

Brake Actuation

Air

Hydraulic

Both

Suspension Type

Air

Mechanical

Hydraulic

Brake Chamber Axle 1
Brake Chamber Axle 2
Brake Chamber Axle 3
Brake Chamber Axle 4
Brake Chamber Axle 5

Specify Size and Type (eg. Air 24/30, Dual air hydraulic 16/25mm)

If unknown please complete Brake Calculation form 80304

Slack adjuster

Automatic

Manual

Modulation

ABS

EBS

LSV

None

Operating Voltage

12V

24V

Other

Manufacturer

Wabco

Knorr Bremse

Haldex

Other

Length of Power Cable Required

12m

15m

18m

Other

Manual Handbrake required

Yes

No

Air Reservoir Volume Required if known

Steer axle lock control required

Cab

Side of trailer

EBS

Reversing light

Coupling Connectors

C Couplings

Palm Couplings

Specify other if required

Coupling Suzies Required

Yes

No

Air Suspension Control

Lift Axle Control

Manual valve

EBS Automatic

Control box Automatic

Leveling Valve

None

Standard

With height limitation

Raise Lower Valve

Standard Manual

Automatic Return To Ride Height

Air Suspension Dump Valve

Yes

No

Any other comments

Omitted information will be completed by Granning to meet its standards and product stocks

Tel: (+353) 45 897553

Please, send back to: eds@granningaxles.ie

Part No. 80311 REV D Jun 2021

www.granningaxles.ie

Hydraulic Drawbar

Scan QR Code

to view & download
document online



Hydraulic Drawbar Request Form

Company Name:

Trailer Body Type:

Date:

Contact Name:

e-mail:

Trailer Loading

Number of Axles:

Load on Bogie: (kg)

Suspension Type

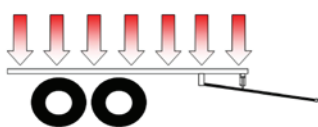
Max Load on Drawbar eye: (kg)

Min Load on Drawbar eye: (kg)**

Manual Raise / Lower required

Air	Mechanical	Hydraulic	Rubber
Yes	No		

** Consider all loading conditions, can be negative with some trailer types and loading conditions, see below



Positive Drawbar load



Negative drawbar load

Proposed Cylinder Information

Is Trailer builder supplying rams ?

Yes No

Cylinder Bore Diameter: (mm)

Min Cylinder Length: (mm)

Max Cylinder Length: (mm)

Min load on cylinder: (kg)

Max load on Cylinder: (kg)

Notes:

80309 REV B May 2021

Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055



Hydraulic Suspension

Scan QR Code

to view & download
document online



Hydraulic Suspension Request Form

Company Name:
Contact Name:
Contact Email:
Contact Phone Number:
Date:

Vehicle Information

Load on Axles (Kg):

Number of axles:

Steer axle required

Tyre Size and any offset:

Vehicle type (tanker/grain trailer/flatbed)

Speed of vehicle (kph):

Chassis type and centres*

Ride height (mm):

Brake type **

Parking brake

Laden :

Unladen:

--

Yes No Locking Type: Air Hydraulic

Air only Air/Hydraulic Hydraulic only

Parking brake chamber Handbrake

*Ideally a basic outline drawing of the chassis should be provided showing the main dimension where the suspension will mount.

**Brake Calculation form will need to be completed.

Hydraulic System Information

Is suspension lock option required:

Yes No

Is a lift axle required

Yes No

Is a hydraulic suspension interface panel required:

Yes No

Does tractor have load sensing:

Yes No

Are there other hydraulic devices that need

Yes No

linking to the suspension interface:

Yes No

Notes:

Omitted information will be filled in by Granning Axles and Suspensions Ltd to meet its standards and product stocks

Tel: +353 (0) 45 897 553/Fax: +353(0) 45 848 638

Please send back to : info@granningaxles.ie

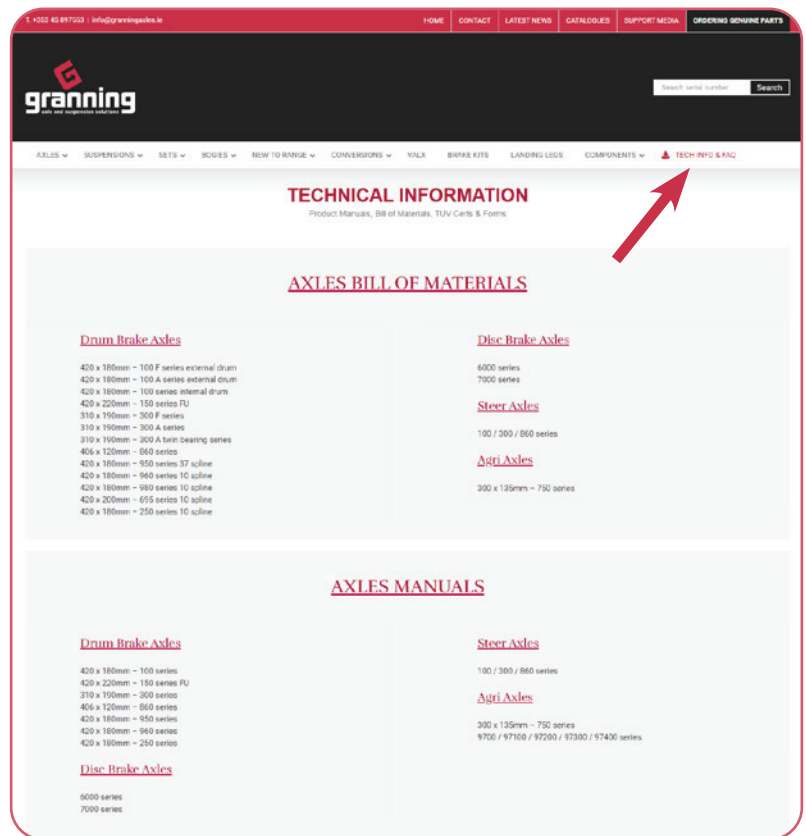
80312 REV B May 2021

www.granningaxles.ie

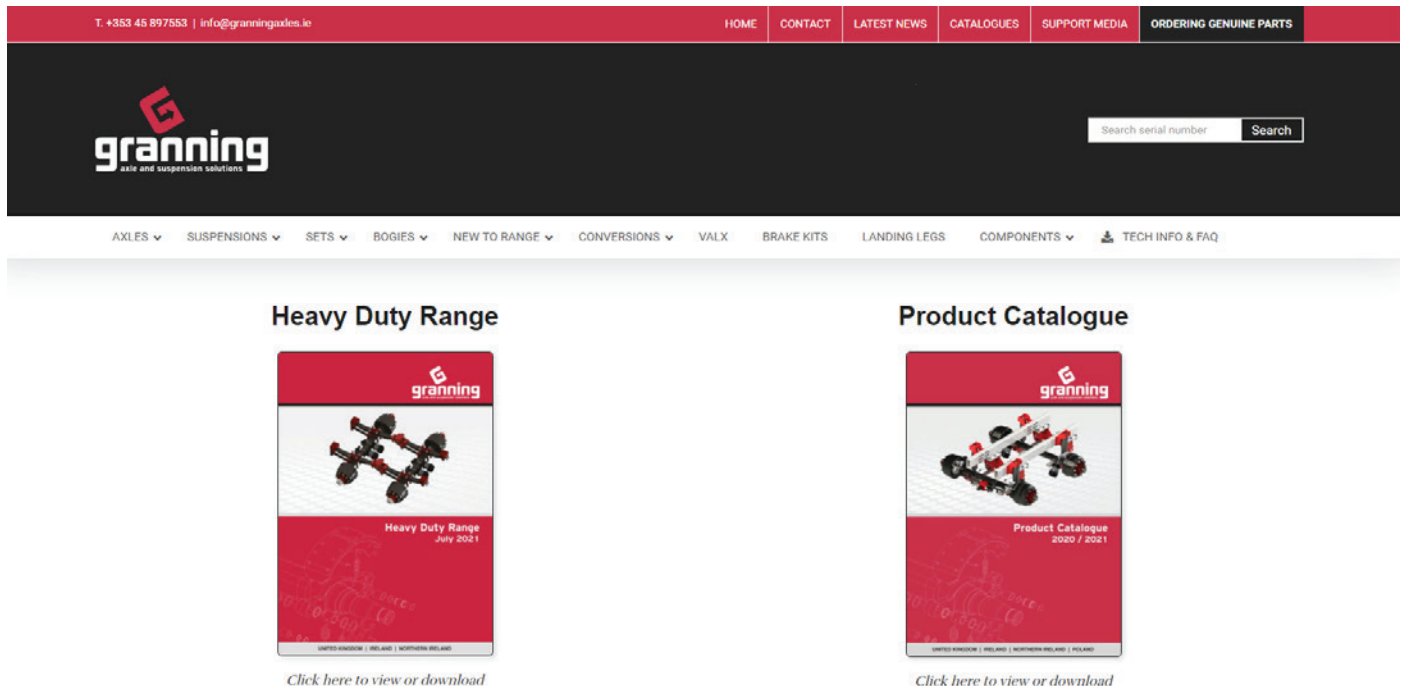
Available Online..

Visit Tech Info & FAQ Section on our web to download more documents in PDF:

- **Axles Bill of Materials**
- **Axles Manuals**
- **TUV Certificates**
- **Request Forms**
- **Suspension Manuals & Parts**



Get digital copy of our Catalogues



Ireland

T. +353 (0) 45 897 553

UK

T. +44 (0) 1925 817 689

NI

T. +44 (0) 2890 740 055



Handwriting practice area with 20 sets of dotted lines on a white background.



Contact Us

Granning Axles & Suspensions Ltd.

(Head Quarters)
Naas Industrial Estate
Naas, Co.Kildare
W91 YH30

Office Tel: +353 (0) 45 897 553

Granning UK Ltd.

Unit 1, Westway 21,
Chesford Grange,
Woolston, Warrington
WA1 4SZ

Office Tel: +44 (0) 1925 817 689

Granning Lynx (NI) Ltd.

201 York Road
Belfast
Northern Ireland
BT15 3HB

Office Tel: +44 (0) 2890 740 055