Document Title: **General dimensions (EC360)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

General dimensions (EC360)

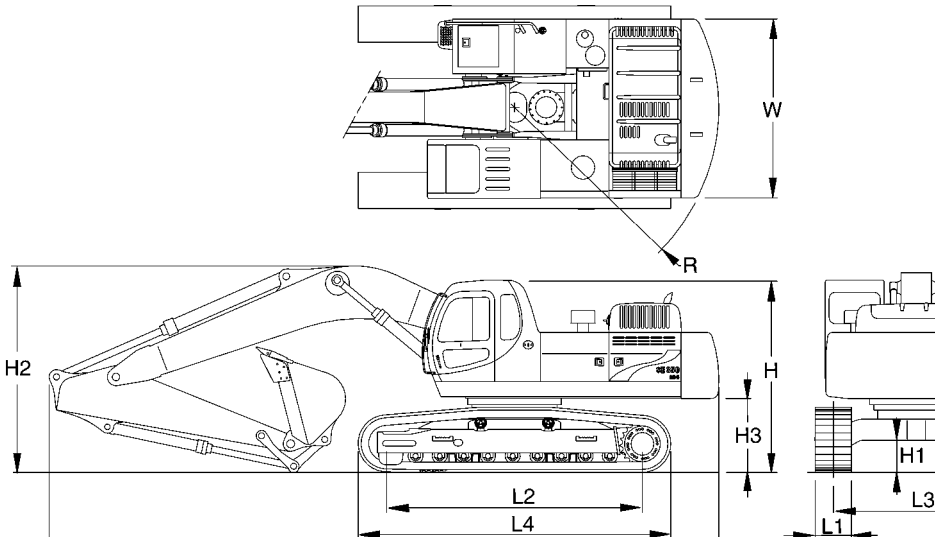

Figure 1
Dimensions of machine (EC360)

Dimensions, whole machine (EC360)

		Symbol	Unit	Standard	Option				Remark
Front digging unit	Boom length	–	m (ft)	6.45 (21′ 2″)			8.5 (27′ 11″)	6.0 (19′ 8″)	
	Arm length	–	m (ft)	3.1 (10′ 2″)	2.6 (8′ 6″)	3.9 (12′ 10″)	5.0 (16′ 5″)	2.6 (8′ 6″)	
Overall height	Cab	H	mm (ft)	3190 (10′ 6″)					
	Boom	H2	mm (ft)	3460 (11′ 4″)	3630 (11′ 11″)	3800 (12′ 6″)	4440 (14′ 7″)	3620 (11′ 11″)	
Ground clearance	Lower frame	H1	mm (ft)	* 500 (1′ 8″)					
	Upper frame	H3	mm (ft)	*1230 (4′)					
Overall length		L	mm (ft)	11090 (36′ 5″)	11160 (36′ 7″)	11130 (36′ 6″)	12970 (42′ 7″)	10710 (35′ 2″)	
Track length on ground		L2	mm (ft)	4240 (13′ 11″)					
Upper structure	Overall width	W	mm (ft)	2970 (9′ 9″)					
	Turning radius	R	mm (ft)	3390 (11′ 1″)					

NOTE!

* : Exclude SHOE GROUSER

Dimensions, whole machine (EC360)

		Symbol	Unit	Standard	Option				Remark
Undercarriage	Shoe width	L1	mm (ft)	600 (2′)	700 (2′ 4″)	800 (2′ 7″)	@900 (3′)		@Swamp shoe
	Track gauge	L3	mm (ft)	2750 (9′)	2750 (9′)	2750 (9′)	2750 (9′)		
	Overall width	B	mm (ft)	3350 (11′)	3450 (11′ 4″)	3550 (11′ 8″)	3650 (12′)		
	Track length	L4	mm (ft)	5180 (17′)	5180 (17′)	5180 (17′)	5180 (17′)		

General specification (EC360)

		Unit	EC360	Remark
Operating weight		kg	36800	
		lb	81129	
Ground contact pressure		kgf / cm²	0.67	
		psi	9.5	
Swing speed	Steady	rpm	9.5	
Travel speed	1 speed	km / h	3.3	
		mph	2.0	
	2 speed	km / h	4.6	
		mph	2.9	
Maximum digging force (Normal / Pressurized)		kg	20000 / 21900	
		lb	44092 / 48281	
Maximum tractive effort		ton	26.2	
Gradeability		%	70	
		deg	35	

Document Title: **General dimensions (EC360)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

General dimensions (EC360)

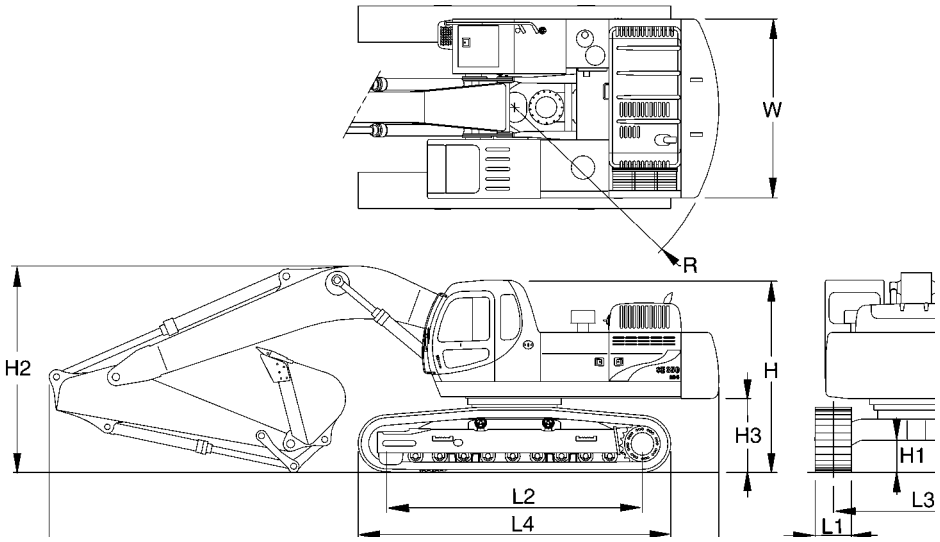

Figure 1
Dimensions of machine (EC360)

Dimensions, whole machine (EC360)

		Symbol	Unit	Standard	Option				Remark
Front digging unit	Boom length	–	m (ft)	6.45 (21′ 2″)			8.5 (27′ 11″)	6.0 (19′ 8″)	
	Arm length	–	m (ft)	3.1 (10′ 2″)	2.6 (8′ 6″)	3.9 (12′ 10″)	5.0 (16′ 5″)	2.6 (8′ 6″)	
Overall height	Cab	H	mm (ft)	3190 (10′ 6″)					
	Boom	H2	mm (ft)	3460 (11′ 4″)	3630 (11′ 11″)	3800 (12′ 6″)	4440 (14′ 7″)	3620 (11′ 11″)	
Ground clearance	Lower frame	H1	mm (ft)	∗ 500 (1′ 8″)					
	Upper frame	H3	mm (ft)	∗1230 (4′)					
Overall length		L	mm (ft)	11090 (36′ 5″)	11160 (36′ 7″)	11130 (36′ 6″)	12970 (42′ 7″)	10710 (35′ 2″)	
Track length on ground		L2	mm (ft)	4240 (13′ 11″)					
Upper structure	Overall width	W	mm (ft)	2970 (9′ 9″)					
	Turning radius	R	mm (ft)	3390 (11′ 1″)					

NOTE!

* : Exclude SHOE GROUSER

Dimensions, whole machine (EC360)

		Symbol	Unit	Standard	Option				Remark
Undercarriage	Shoe width	L1	mm (ft)	600 (2′)	700 (2′ 4″)	800 (2′ 7″)	@900 (3′)		@Swamp shoe
	Track gauge	L3	mm (ft)	2750 (9′)	2750 (9′)	2750 (9′)	2750 (9′)		
	Overall width	B	mm (ft)	3350 (11′)	3450 (11′ 4″)	3550 (11′ 8″)	3650 (12′)		
	Track length	L4	mm (ft)	5180 (17′)	5180 (17′)	5180 (17′)	5180 (17′)		

General specification (EC360)

		Unit	EC360	Remark
Operating weight		kg	36800	
		lb	81129	
Ground contact pressure		kgf / cm²	0.67	
		psi	9.5	
Swing speed	Steady	rpm	9.5	
Travel speed	1 speed	km / h	3.3	
		mph	2.0	
	2 speed	km / h	4.6	
		mph	2.9	
Maximum digging force (Normal / Pressurized)		kg	20000 / 21900	
		lb	44092 / 48281	
Maximum tractive effort		ton	26.2	
Gradeability		%	70	
		deg	35	

Document Title: **General dimensions (EC360)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

General dimensions (EC360)

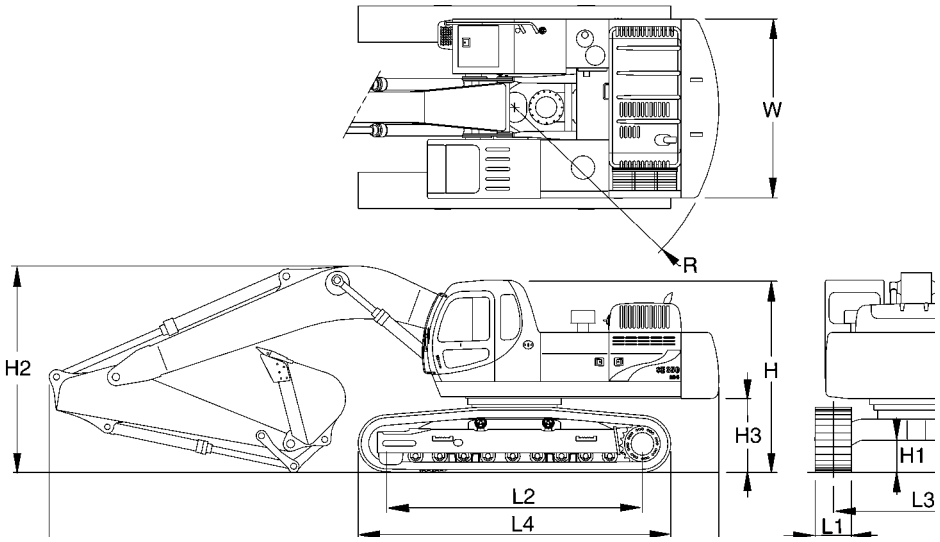

Figure 1
Dimensions of machine (EC360)

Dimensions, whole machine (EC360)

		Symbol	Unit	Standard	Option				Remark
Front digging unit	Boom length	–	m (ft)	6.45 (21′ 2″)			8.5 (27′ 11″)	6.0 (19′ 8″)	
	Arm length	–	m (ft)	3.1 (10′ 2″)	2.6 (8′ 6″)	3.9 (12′ 10″)	5.0 (16′ 5″)	2.6 (8′ 6″)	
Overall height	Cab	H	mm (ft)	3190 (10′ 6″)					
	Boom	H2	mm (ft)	3460 (11′ 4″)	3630 (11′ 11″)	3800 (12′ 6″)	4440 (14′ 7″)	3620 (11′ 11″)	
Ground clearance	Lower frame	H1	mm (ft)	∗ 500 (1′ 8″)					
	Upper frame	H3	mm (ft)	∗1230 (4′)					
Overall length		L	mm (ft)	11090 (36′ 5″)	11160 (36′ 7″)	11130 (36′ 6″)	12970 (42′ 7″)	10710 (35′ 2″)	
Track length on ground		L2	mm (ft)	4240 (13′ 11″)					
Upper structure	Overall width	W	mm (ft)	2970 (9′ 9″)					
	Turning radius	R	mm (ft)	3390 (11′ 1″)					

NOTE!

* : Exclude SHOE GROUSER

Dimensions, whole machine (EC360)

		Symbol	Unit	Standard	Option				Remark
Undercarriage	Shoe width	L1	mm (ft)	600 (2′)	700 (2′ 4″)	800 (2′ 7″)	@900 (3′)		@Swamp shoe
	Track gauge	L3	mm (ft)	2750 (9′)	2750 (9′)	2750 (9′)	2750 (9′)		
	Overall width	B	mm (ft)	3350 (11′)	3450 (11′ 4″)	3550 (11′ 8″)	3650 (12′)		
	Track length	L4	mm (ft)	5180 (17′)	5180 (17′)	5180 (17′)	5180 (17′)		

General specification (EC360)

		Unit	EC360	Remark
Operating weight		kg	36800	
		lb	81129	
Ground contact pressure		kgf / cm²	0.67	
		psi	9.5	
Swing speed	Steady	rpm	9.5	
Travel speed	1 speed	km / h	3.3	
		mph	2.0	
	2 speed	km / h	4.6	
		mph	2.9	
Maximum digging force (Normal / Pressurized)		kg	20000 / 21900	
		lb	44092 / 48281	
Maximum tractive effort		ton	26.2	
Gradeability		%	70	
		deg	35	

Document Title: **General dimensions (EC460)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

General dimensions (EC460)

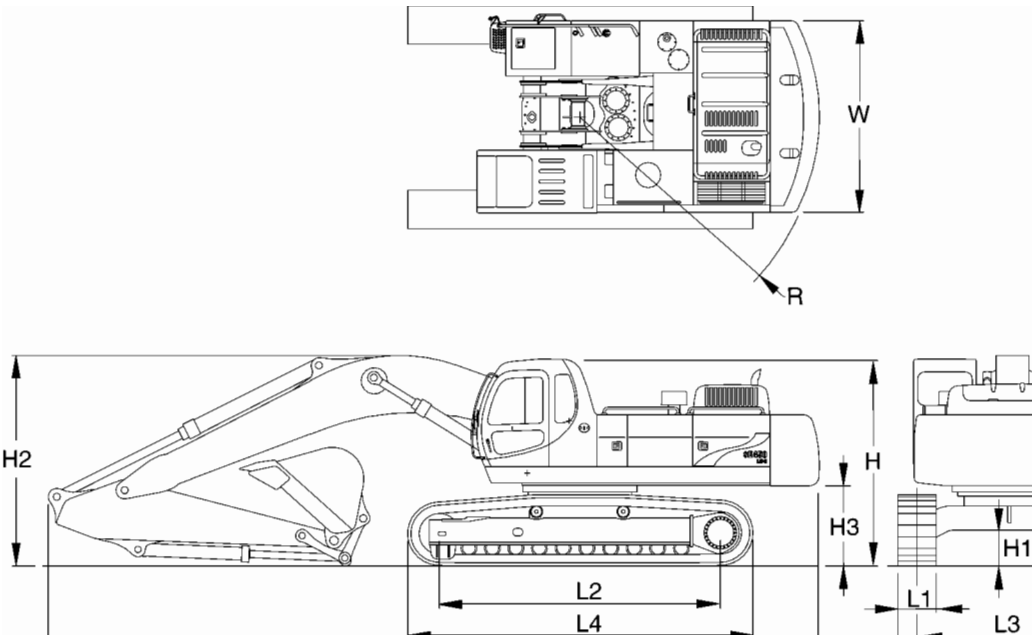

Figure 1
Dimensions of machine (EC460)

Dimensions, whole machine (EC460)

		Symbol	Unit	Standard	Option					Remark
Front digging unit	Boom length	–	m (ft)	7.0 (23′)				6.3 (20′ 8″)	9.0 (29′ 6″)	
	Arm length	–	m (ft)	3.35 (11′)	2.55 (8′ 4″)	3.9 (12′ 10″)	4.8 (15′ 9″)	2.55 (8′ 4″)	5.5 (18′ 1″)	
Overall height	Cab	H	mm (ft)	3230 (10′ 7″)						
	Boom	H2	mm (ft)	3650 (12′)	3980 (13′ 1″)	3860 (12′ 8″)	4790 (12′ 9″)	4200 (13′ 9″)	4970 (16′ 4″)	
Ground clearance	Lower frame	H1	mm (ft)	* 525 (1′ 9″)						
	Upper frame	H3	mm (ft)	*1250 (4′ 1″)						
Overall length		L	mm (ft)	12040 (39′ 6″)	12090 (39′ 8″)	12090 (39′ 8″)	11870 (38′ 11″)	11390 (37′ 4″)	13780 (45′ 3″)	
Track length on ground		L2	mm (ft)	4370 (14′ 4″)						
Upper structure	Overall width	W	mm (ft)	2990 (9′ 10″)						
	Turning radius	R	mm	3730						

(ft)	(12′ 3″)

NOTE!
∗: Exclude SHOE GROUSER

Dimensions, whole machine (EC460)

		Symbol	Unit	Standard	Option				Remark
Undercarriage	Shoe width	L1	mm (ft)	600 (2′)	700 (2′ 4″)	750 (2′ 6″)	800 (2′ 7″)	@900 (3′)	@Swamp shoe
	Track gauge	L3	mm (ft)	2870 (9′ 5″)	2870 (9′ 5″)	2870 (9′ 5″)	2870 (9′ 5″)		
	Overall width	B	mm (ft)	3470 (11′ 5″)	3570 (11′ 9″)	3620 (11′ 11″)	3670 (12′)	3770 (12′ 4″)	
	Track length	L4	mm (ft)	5370 (17′ 7″)	5370 (17′ 7″)	5370 (17′ 7″)	5370 (17′ 7″)		

Specification, general(EC460)

		Unit	EC460	Remark
Operating weight		kg	44500	
		lb	98104	
Ground contact pressure		kgf / cm²	0.79	
		psi	11.2	
Swing speed	Steady	rpm	8.0	
Travel speed	1 speed	km / h	2.8	
		mph	1.7	
	2 speed	km / h	4.3	
		mph	2.7	
Maximum digging force (Normal / Pressurized)		kg	22300/24400	
		lb	49162/53792	
Maximum tractive effort		ton	33.1	
Gradeability		%	70	
		deg	35	

Document Title: **General dimensions (EC460)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

General dimensions (EC460)

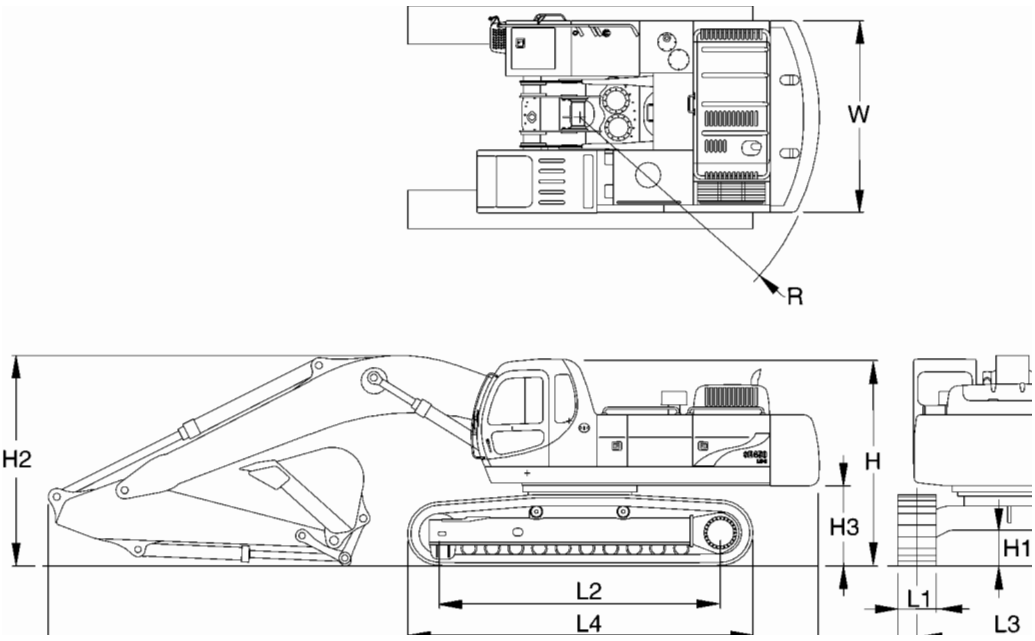

Figure 1
Dimensions of machine (EC460)

Dimensions, whole machine (EC460)

		Symbol	Unit	Standard	Option					Remark
Front digging unit	Boom length	–	m (ft)	7.0 (23′)				6.3 (20′ 8″)	9.0 (29′ 6″)	
	Arm length	–	m (ft)	3.35 (11′)	2.55 (8′ 4″)	3.9 (12′ 10″)	4.8 (15′ 9″)	2.55 (8′ 4″)	5.5 (18′ 1″)	
Overall height	Cab	H	mm (ft)	3230 (10′ 7″)						
	Boom	H2	mm (ft)	3650 (12′)	3980 (13′ 1″)	3860 (12′ 8″)	4790 (12′ 9″)	4200 (13′ 9″)	4970 (16′ 4″)	
Ground clearance	Lower frame	H1	mm (ft)	* 525 (1′ 9″)						
	Upper frame	H3	mm (ft)	*1250 (4′ 1″)						
Overall length		L	mm (ft)	12040 (39′ 6″)	12090 (39′ 8″)	12090 (39′ 8″)	11870 (38′ 11″)	11390 (37′ 4″)	13780 (45′ 3″)	
Track length on ground		L2	mm (ft)	4370 (14′ 4″)						
Upper structure	Overall width	W	mm (ft)	2990 (9′ 10″)						
	Turning radius	R	mm	3730						

(ft)	(12′ 3″)

NOTE!
∗: Exclude SHOE GROUSER

Dimensions, whole machine (EC460)

		Symbol	Unit	Standard	Option				Remark
Undercarriage	Shoe width	L1	mm (ft)	600 (2′)	700 (2′ 4″)	750 (2′ 6″)	800 (2′ 7″)	@900 (3′)	@Swamp shoe
	Track gauge	L3	mm (ft)	2870 (9′ 5″)	2870 (9′ 5″)	2870 (9′ 5″)	2870 (9′ 5″)		
	Overall width	B	mm (ft)	3470 (11′ 5″)	3570 (11′ 9″)	3620 (11′ 11″)	3670 (12′)	3770 (12′ 4″)	
	Track length	L4	mm (ft)	5370 (17′ 7″)	5370 (17′ 7″)	5370 (17′ 7″)	5370 (17′ 7″)		

Specification, general(EC460)

		Unit	EC460	Remark
Operating weight		kg	44500	
		lb	98104	
Ground contact pressure		kgf / cm²	0.79	
		psi	11.2	
Swing speed	Steady	rpm	8.0	
Travel speed	1 speed	km / h	2.8	
		mph	1.7	
	2 speed	km / h	4.3	
		mph	2.7	
Maximum digging force (Normal / Pressurized)		kg	22300/24400	
		lb	49162/53792	
Maximum tractive effort		ton	33.1	
Gradeability		%	70	
		deg	35	

Document Title: **General dimensions (EC460)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

General dimensions (EC460)

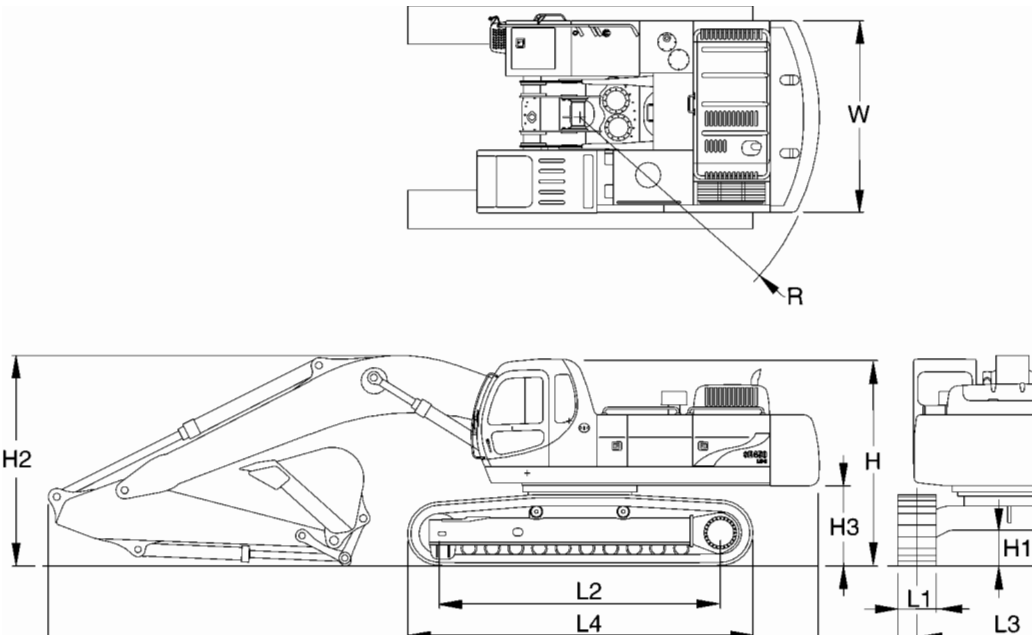

Figure 1
Dimensions of machine (EC460)

Dimensions, whole machine (EC460)

		Symbol	Unit	Standard	Option					Remark
Front digging unit	Boom length	–	m (ft)	7.0 (23′)				6.3 (20′ 8″)	9.0 (29′ 6″)	
	Arm length	–	m (ft)	3.35 (11′)	2.55 (8′ 4″)	3.9 (12′ 10″)	4.8 (15′ 9″)	2.55 (8′ 4″)	5.5 (18′ 1″)	
Overall height	Cab	H	mm (ft)	3230 (10′ 7″)						
	Boom	H2	mm (ft)	3650 (12′)	3980 (13′ 1″)	3860 (12′ 8″)	4790 (12′ 9″)	4200 (13′ 9″)	4970 (16′ 4″)	
Ground clearance	Lower frame	H1	mm (ft)	* 525 (1′ 9″)						
	Upper frame	H3	mm (ft)	*1250 (4′ 1″)						
Overall length		L	mm (ft)	12040 (39′ 6″)	12090 (39′ 8″)	12090 (39′ 8″)	11870 (38′ 11″)	11390 (37′ 4″)	13780 (45′ 3″)	
Track length on ground		L2	mm (ft)	4370 (14′ 4″)						
Upper structure	Overall width	W	mm (ft)	2990 (9′ 10″)						
	Turning radius	R	mm	3730						

(ft)	(12′ 3″)

NOTE!
∗: Exclude SHOE GROUSER

Dimensions, whole machine (EC460)

		Symbol	Unit	Standard	Option				Remark
Undercarriage	Shoe width	L1	mm (ft)	600 (2′)	700 (2′ 4″)	750 (2′ 6″)	800 (2′ 7″)	@900 (3′)	@Swamp shoe
	Track gauge	L3	mm (ft)	2870 (9′ 5″)	2870 (9′ 5″)	2870 (9′ 5″)	2870 (9′ 5″)		
	Overall width	B	mm (ft)	3470 (11′ 5″)	3570 (11′ 9″)	3620 (11′ 11″)	3670 (12′)	3770 (12′ 4″)	
	Track length	L4	mm (ft)	5370 (17′ 7″)	5370 (17′ 7″)	5370 (17′ 7″)	5370 (17′ 7″)		

Specification, general(EC460)

		Unit	EC460	Remark
Operating weight		kg	44500	
		lb	98104	
Ground contact pressure		kgf / cm²	0.79	
		psi	11.2	
Swing speed	Steady	rpm	8.0	
Travel speed	1 speed	km / h	2.8	
		mph	1.7	
	2 speed	km / h	4.3	
		mph	2.7	
Maximum digging force (Normal / Pressurized)		kg	22300/24400	
		lb	49162/53792	
Maximum tractive effort		ton	33.1	
Gradeability		%	70	
		deg	35	

Document Title: **Location of components (EC460)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

Location of components (EC460)

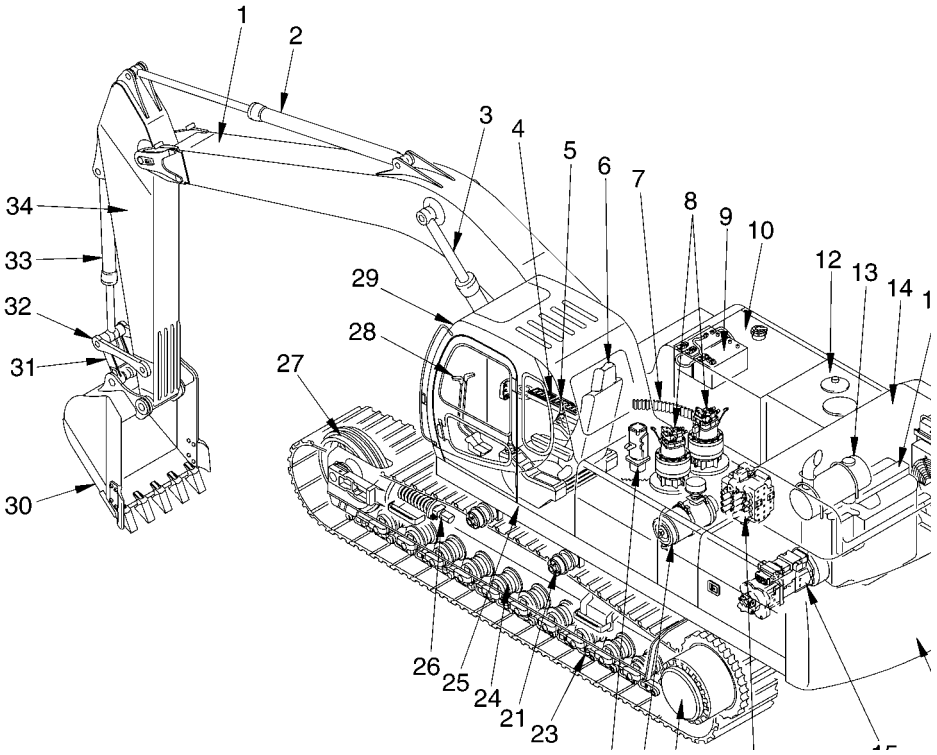

Figure 1
Location of components (EC460)

1	Boom	13	Muffler	25	Bottom frame
2	Arm cylinder	14	Cowl	26	Recoil spring
3	Boom cylinder	15	Hydraulic pump	27	Idler
4	Switch board	16	Counterweight	28	Travel lever
5	Control lever	17	Track motor and gearbox	29	Operator cab
6	Operator seat	18	Radiator and oil cooler	30	Bucket
7	Swing gear	19	Main control valve	31	Connecting rod
8	Swing motor and gearbox	20	Turning joint	32	Link
9	Battery	21	Top roller	33	Bucket cylinder
10	Fuel tank	22	Air cleaner	34	Arm
11	Engine	23	Track link		
12	Hydraulic tank	24	Bottom roller		

Document Title: **Location of components (EC460)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

Location of components (EC460)

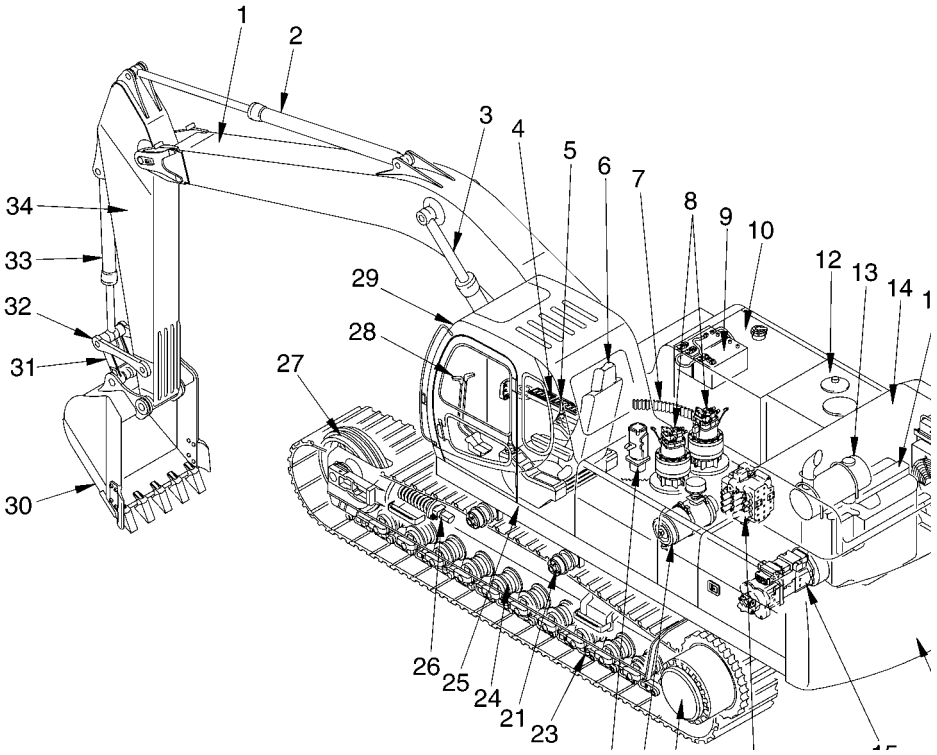

Figure 1
Location of components (EC460)

1	Boom	13	Muffler	25	Bottom frame
2	Arm cylinder	14	Cowl	26	Recoil spring
3	Boom cylinder	15	Hydraulic pump	27	Idler
4	Switch board	16	Counterweight	28	Travel lever
5	Control lever	17	Track motor and gearbox	29	Operator cab
6	Operator seat	18	Radiator and oil cooler	30	Bucket
7	Swing gear	19	Main control valve	31	Connecting rod
8	Swing motor and gearbox	20	Turning joint	32	Link
9	Battery	21	Top roller	33	Bucket cylinder
10	Fuel tank	22	Air cleaner	34	Arm
11	Engine	23	Track link		
12	Hydraulic tank	24	Bottom roller		

Document Title: **Location of components (EC460)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

Location of components (EC460)

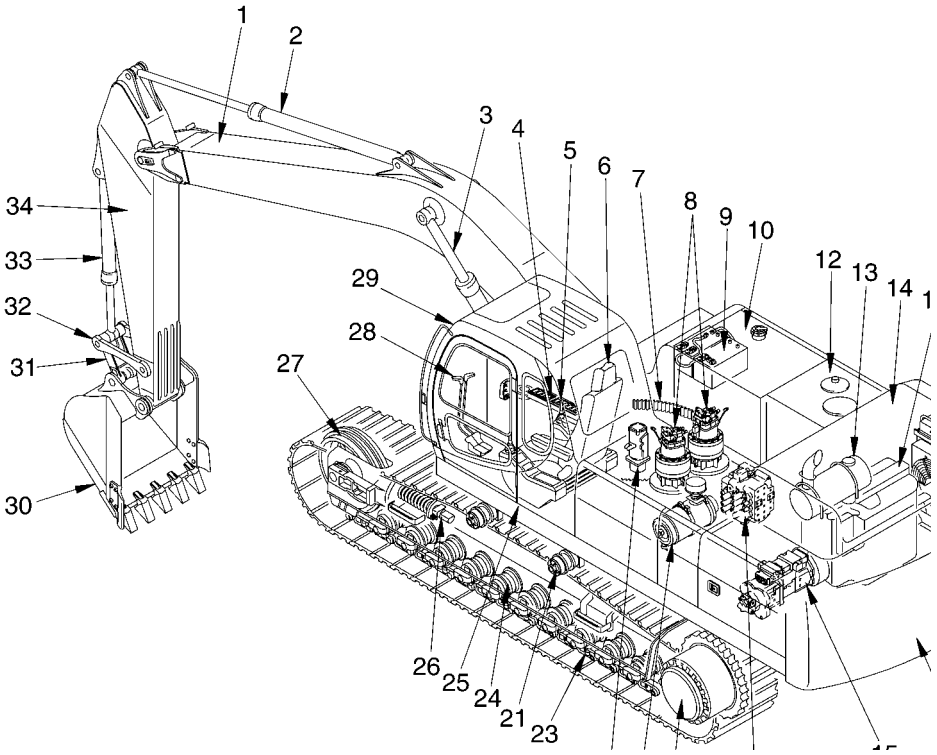

Figure 1
Location of components (EC460)

1	Boom	13	Muffler	25	Bottom frame
2	Arm cylinder	14	Cowl	26	Recoil spring
3	Boom cylinder	15	Hydraulic pump	27	Idler
4	Switch board	16	Counterweight	28	Travel lever
5	Control lever	17	Track motor and gearbox	29	Operator cab
6	Operator seat	18	Radiator and oil cooler	30	Bucket
7	Swing gear	19	Main control valve	31	Connecting rod
8	Swing motor and gearbox	20	Turning joint	32	Link
9	Battery	21	Top roller	33	Bucket cylinder
10	Fuel tank	22	Air cleaner	34	Arm
11	Engine	23	Track link		
12	Hydraulic tank	24	Bottom roller		

Document Title: **Location of components (EC360)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

Location of components (EC360)

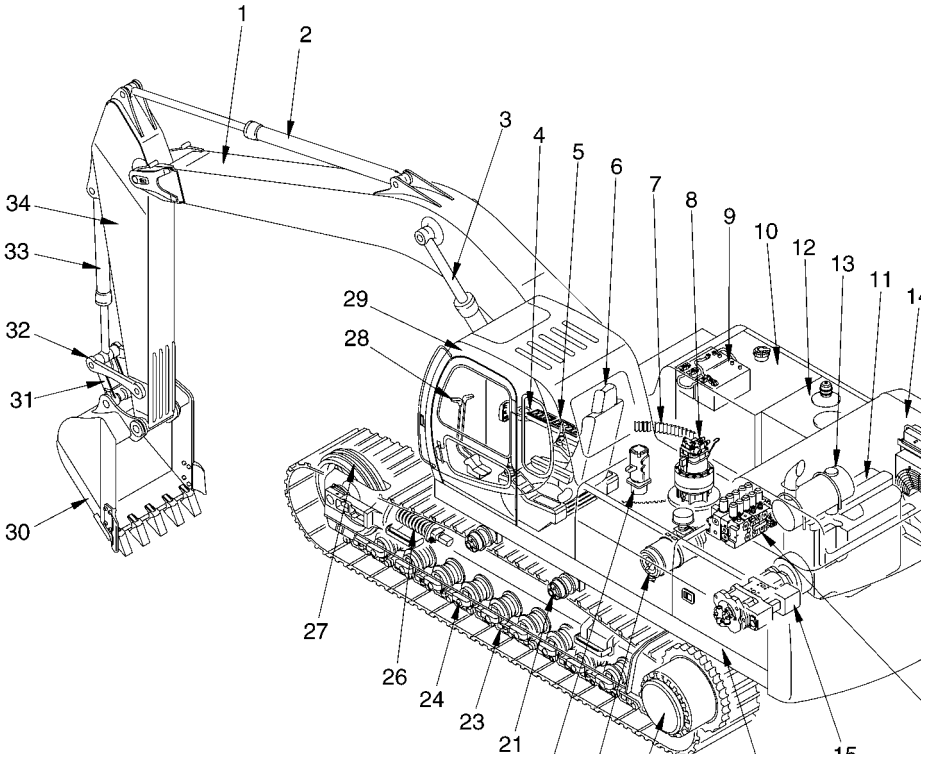

Figure 1
Location of components (EC360)

1	Boom	13	Muffler	25	Bottom frame
2	Arm cylinder	14	Cowl	26	Recoil spring
3	Boom cylinder	15	Hydraulic pump	27	Idler
4	Switch board	16	Counterweight	28	Travel lever
5	Control lever	17	Track motor and gearbox	29	Operator cab
6	Operator seat	18	Radiator and oil cooler	30	Bucket
7	Swing gear	19	Main control valve	31	Connecting rod
8	Swing motor and gearbox	20	Turning joint	32	Link
9	Battery	21	Top roller	33	Bucket cylinder
10	Fuel tank	22	Air cleaner	34	Arm
11	Engine	23	Track link		
12	Hydraulic tank	24	Bottom roller		

Document Title: **Location of components (EC360)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
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Location of components (EC360)

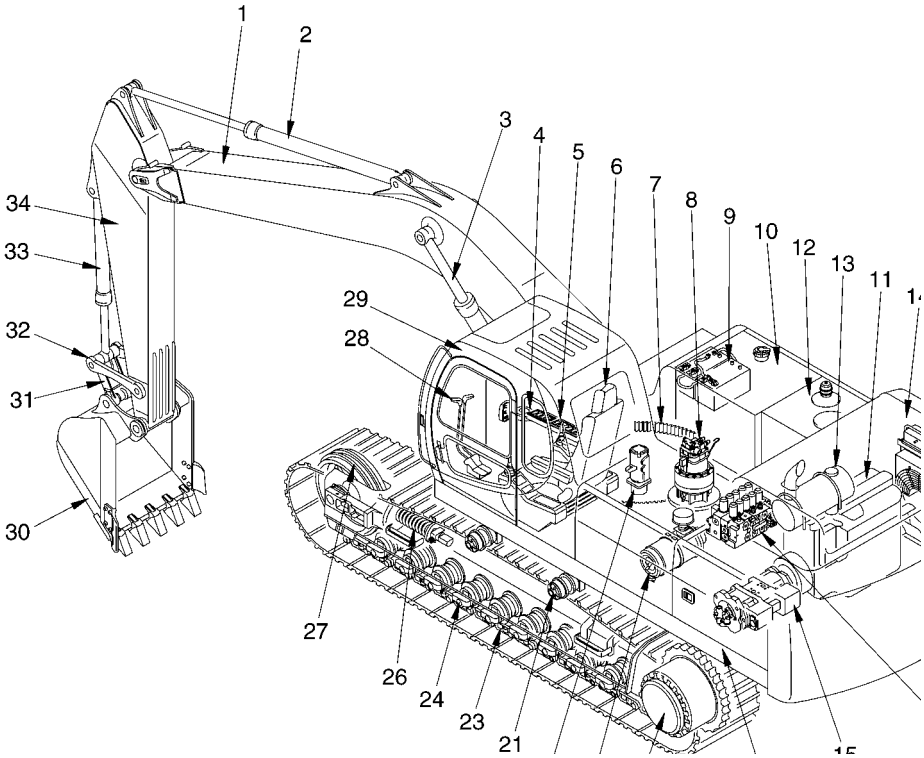

Figure 1
Location of components (EC360)

1	Boom	13	Muffler	25	Bottom frame
2	Arm cylinder	14	Cowl	26	Recoil spring
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4	Switch board	16	Counterweight	28	Travel lever
5	Control lever	17	Track motor and gearbox	29	Operator cab
6	Operator seat	18	Radiator and oil cooler	30	Bucket
7	Swing gear	19	Main control valve	31	Connecting rod
8	Swing motor and gearbox	20	Turning joint	32	Link
9	Battery	21	Top roller	33	Bucket cylinder
10	Fuel tank	22	Air cleaner	34	Arm
11	Engine	23	Track link		
12	Hydraulic tank	24	Bottom roller		

Document Title: **Location of components (EC360)**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

Location of components (EC360)

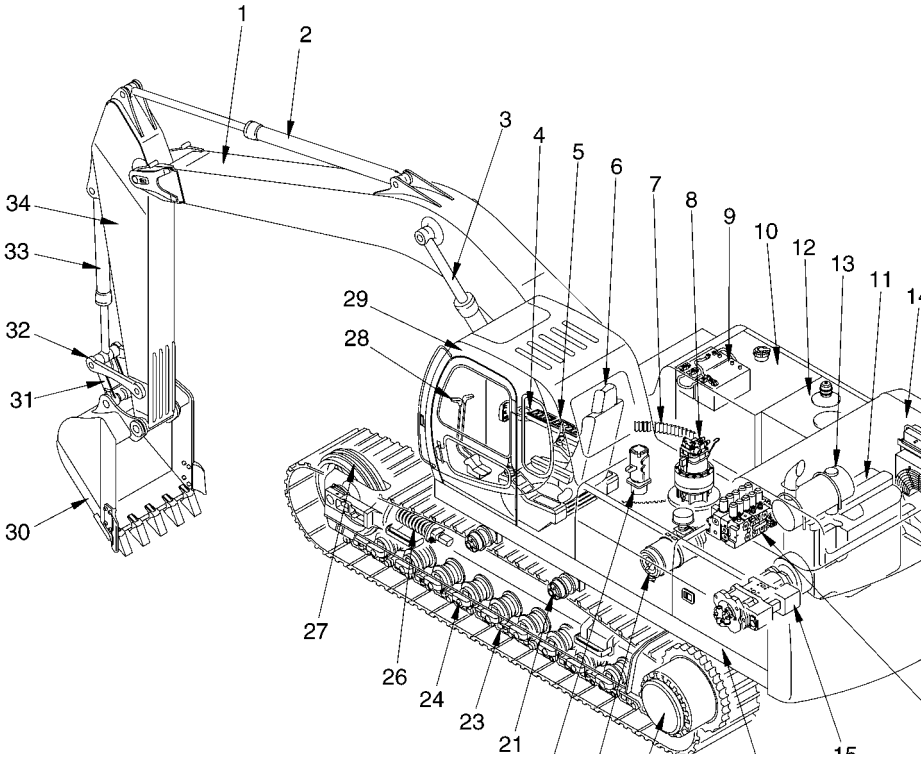

Figure 1
Location of components (EC360)

1	Boom	13	Muffler	25	Bottom frame
2	Arm cylinder	14	Cowl	26	Recoil spring
3	Boom cylinder	15	Hydraulic pump	27	Idler
4	Switch board	16	Counterweight	28	Travel lever
5	Control lever	17	Track motor and gearbox	29	Operator cab
6	Operator seat	18	Radiator and oil cooler	30	Bucket
7	Swing gear	19	Main control valve	31	Connecting rod
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12	Hydraulic tank	24	Bottom roller		

Document Title: **Measurement conversion tables**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

Measurement conversion tables

Length

Unit	cm	m	km	in	ft	yd	mile
cm	1	0.01	0.00001	0.3937	0.03281	0.01094	0.000006
m	100	1	0.001	39.37	3.2808	1.0936	0.00062
km	100000	1000	1	39370.7	3280.8	1093.6	0.62137
in	2.54	0.0254	0.000025	1	0.08333	0.02777	0.000015
ft	30.48	0.3048	0.000304	12	1	0.3333	0.000189
yd	91.44	0.9144	0.000914	36	3	1	0.000568
mile	160930	1609.3	1.6093	63360	5280	1760	1
1 mm = 0.1 cm, 1 mm = 0.001 m							

Area

Unit	cm^2	m^2	km^2	a	ft^2	yd^2	in^2
cm^2	1	0.0001	-	0.000001	0.001076	0.000012	0.155000
m^2	10000	1	0.000001	0.01	10.764	1.1958	1550.000
km^2	-	1000000	1	10000	1076400	1195800	-
a	0.01	100	0.0001	1	1076.4	119.58	-
ft^2	-	0.092903	-	0.000929	1	0.1111	144.000
yd^2	-	0.83613	-	0.008361	9	1	1296.00
in^2	6.4516	0.000645	-	-	0.006943	0.000771	1
1 ha = 100 a, 1 $mile^2$ = 259 ha = 2.59 km^2							

Volume

Unit	cm^3 = cc	m^3	Liter	in^3	ft^3	yd^3
cm^3 = m liter	1	0.000001	0.001	0.061024	0.000035	0.000001
m^3	1000000	1	1000	61024	35.315	1.30796
Liter	1000	0.001	1	61.024	0.035315	0.001308
in^3	16.387	0.000016	0.01638	1	0.000578	0.000021
ft^3	28316.8	0.028317	28.317	1728	1	0.03704
yd^3	764529.8	0.76453	764.53	46656	27	1
1 gal (US) = 3785.41 cm^3 = 231 in^3 = 0.83267 gal (US)						

Weight

Unit	g	kg	t	oz	lb
g	1	0.001	0.000001	0.03527	0.0022
kg	1000	1	0.001	35.273	2.20459
t	1000000	1000	1	35273	2204.59

oz	28.3495	0.02835	0.000028	1	0.0625
lb	453.592	0.45359	0.000454	16	1
1 tonne (metric) = 1.1023 ton (US) = 0.9842 ton (UK)					

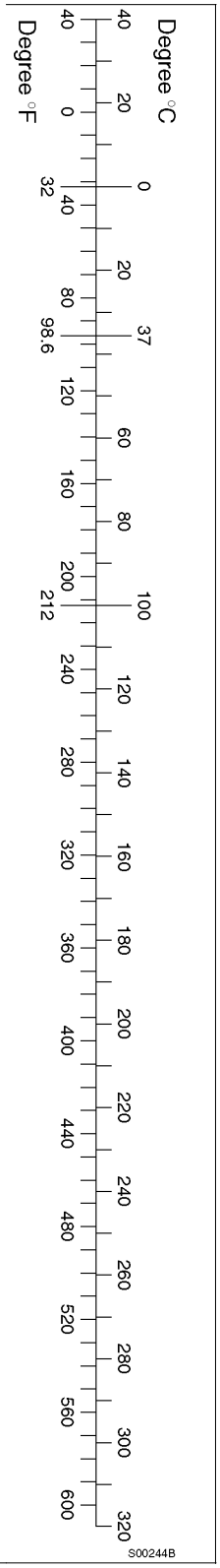
Pressure

Unit	**kgf/cm²**	**bar**	**Pa=N/m²**	**kPa**	**lbf / in²**	**lbf / ft²**
kgf / cm²	1	0.98067	98066.5	98.0665	14.2233	2048.16
bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N / m²	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
lbf / in²	0.07032	0.0689	6894.76	6.89476	1	144
lbf / ft²	0.00047	0.00047	47.88028	0.04788	0.00694	1
1 kgf / cm² = 735.56 Torr (mmHg) = 0.96784 atm						

Approximate conversions

SI Unit	Conversion Factor	Non-SI Unit	Conversion Factor	SI Unit
Torque				
newton meter (N·m)	x 10.2	= kgf·cm	x 0.8664	= (lbf·in)
newton meter (N·m)	x 0.74	= lb·ft	x 1.36	= N·m
newton meter (N·m)	x 0.102	= kgf·m	x 7.22	= (lbf·ft)
Pressure (Pa = N / m²)				
kilopascal (kPa)	x 4.0	= in. H_2O	x 0.249	= kPa
kilopascal (kPa)	x 0.30	= in. Hg	x 3.38	= kPa
kilopascal (kPa)	x 0.145	= psi	x 6.89	= kPa
(bar)	x 14.5	= psi	x 0.069	= (bar)
(kgf / cm²)	x 14.22	= psi	x 0.070	= (kgf / cm²)
(newton / mm²)	x 145.04	= psi	x 0.069	= (bar)
megapascal (MPa)	x 145	= psi	x 0.00689	= MPa
Power (W = J / s)				
kilowatt (kW)	x 1.36	= PS (cv)	x 0.736	= kW
kilowatt (kW)	x 1.34	= HP	x 0.746	= kW
kilowatt (kW)	x 0.948	= Btu / s	x 1.055	= kW
watt (W)	x 0.74	= ft·lb / s	x 1.36	= W
Energy (J = N·m)				
kilojoule (kJ)	x 0.948	= Btu	x 1.055	= kJ
joule (J)	x 0.239	= calorie	x 4.19	= J
Velocity and Acceleration				
meter per sec² (m / s²)	x 3.28	= ft / s²	x 0.305	= m / s²
meter per sec (m / s)	x 3.28	= ft / s	x 0.305	= m / s
kilometer per hour (km / h)	x 0.62	= mph	x 1.61	= km / h
Horse power /torque				
BHP x 5252 rpm = TQ (lb·ft)			TQ x rpm 5252 = B.H.P.	
Temperature				
°C = (°F - 32) /1.8	°F = (°C x 1.8) + 32			
Flow Rate				
liter / min (dm³ / min)	x 0.264	= US gal / min	x 3.785	= liter / min

Note : ( ) non-si unit



Document Title: **Measurement conversion tables**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

Measurement conversion tables

Length

Unit	cm	m	km	in	ft	yd	mile
cm	1	0.01	0.00001	0.3937	0.03281	0.01094	0.000006
m	100	1	0.001	39.37	3.2808	1.0936	0.00062
km	100000	1000	1	39370.7	3280.8	1093.6	0.62137
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mile	160930	1609.3	1.6093	63360	5280	1760	1
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Area

Unit	cm^2	m^2	km^2	a	ft^2	yd^2	in^2
cm^2	1	0.0001	-	0.000001	0.001076	0.000012	0.155000
m^2	10000	1	0.000001	0.01	10.764	1.1958	1550.000
km^2	-	1000000	1	10000	1076400	1195800	-
a	0.01	100	0.0001	1	1076.4	119.58	-
ft^2	-	0.092903	-	0.000929	1	0.1111	144.000
yd^2	-	0.83613	-	0.008361	9	1	1296.00
in^2	6.4516	0.000645	-	-	0.006943	0.000771	1
1 ha = 100 a, 1 $mile^2$ = 259 ha = 2.59 km^2							

Volume

Unit	cm^3 = cc	m^3	Liter	in^3	ft^3	yd^3
cm^3 = m liter	1	0.000001	0.001	0.061024	0.000035	0.000001
m^3	1000000	1	1000	61024	35.315	1.30796
Liter	1000	0.001	1	61.024	0.035315	0.001308
in^3	16.387	0.000016	0.01638	1	0.000578	0.000021
ft^3	28316.8	0.028317	28.317	1728	1	0.03704
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1 gal (US) = 3785.41 cm^3 = 231 in^3 = 0.83267 gal (US)						

Weight

Unit	g	kg	t	oz	lb
g	1	0.001	0.000001	0.03527	0.0022
kg	1000	1	0.001	35.273	2.20459
t	1000000	1000	1	35273	2204.59

oz	28.3495	0.02835	0.000028	1	0.0625
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Unit	**kgf/cm²**	**bar**	**Pa=N/m²**	**kPa**	**lbf / in²**	**lbf / ft²**
kgf / cm²	1	0.98067	98066.5	98.0665	14.2233	2048.16
bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N / m²	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
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1 kgf / cm² = 735.56 Torr (mmHg) = 0.96784 atm						

Approximate conversions

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Power (W = J / s)				
kilowatt (kW)	x 1.36	= PS (cv)	x 0.736	= kW
kilowatt (kW)	x 1.34	= HP	x 0.746	= kW
kilowatt (kW)	x 0.948	= Btu / s	x 1.055	= kW
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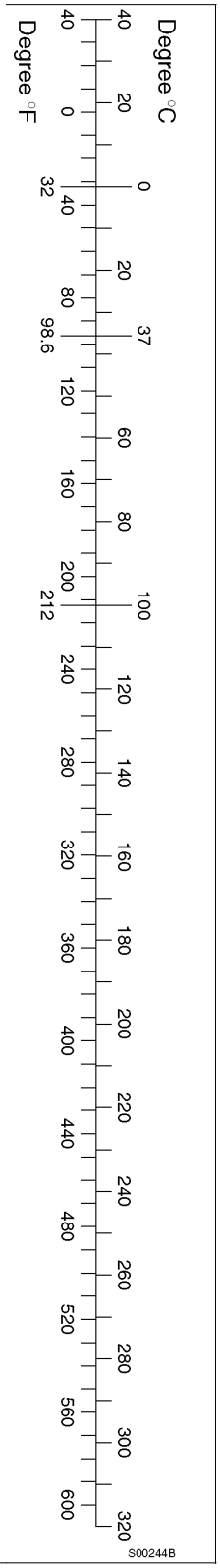

Document Title: **Measurement conversion tables**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

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kilowatt (kW)	x 1.34	= HP	x 0.746	= kW
kilowatt (kW)	x 0.948	= Btu / s	x 1.055	= kW
watt (W)	x 0.74	= ft·lb / s	x 1.36	= W
Energy (J = N·m)				
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BHP x 5252 rpm = TQ (lb·ft)			TQ x rpm 5252 = B.H.P.	
Temperature				
°C = (°F - 32) /1.8	°F = (°C x 1.8) + 32			
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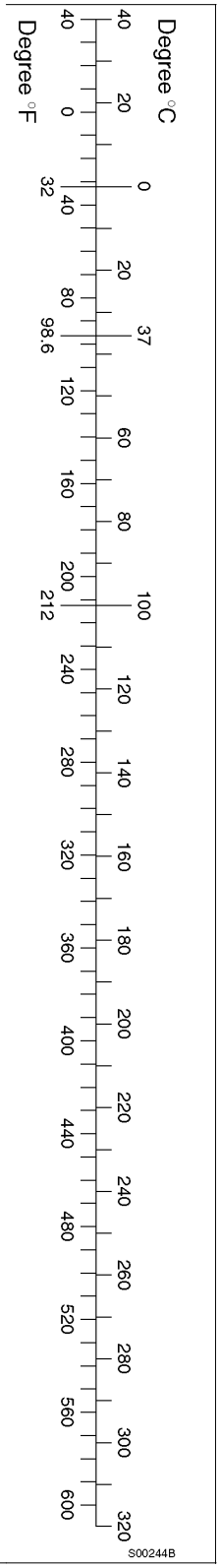
Note : ( ) non-si unit



Document Title: **Standard tightening torque**	Function Group: **030**	Information Type: **Service Information**	Date: **3/13/2026**
Profile:			

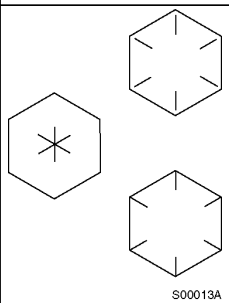
Standard tightening torque

The following charts give the standard tightening torques of capscrews and nuts.
Exceptions are given in each sections of "disassembly and assembly".

Tightening torque (meter)

Classification	**4T, 5T**	**10T**
Capscrew type	 S00010A	 S00011A
Capscrew size	Tightening torque kgf·m (lbf·ft)	Tightening torque kgf·m (lbf·ft)
M4	0.2 ± 0.02 (1.4 ± 0.1)	0.4 ± 0.04 (2.9 ± 0.3)
M5	0.3 ± 0.03 (2.2 ± 0.2)	0.8 ± 0.08 (5.8 ± 0.6)
M6	0.5 ± 0.05 (3.6 ± 0.4)	1.4 ± 0.14 (10.1 ± 1.0)
M8	1.2 ± 0.12 (8.7 ± 0.9)	3.3 ± 0.3 (23.8 ± 2.2)
M10	2.3 ± 0.23 (16.6 ± 1.7)	6.5 ± 0.7 (47 ± 5)
M12	4.0 ± 0.4 (29 ± 3)	11.3 ± 1.1 (82 ± 8)
<M14>	6.4 ± 0.6 (46 ± 4)	17.9 ± 1.8 (129 ± 13)
M16	9.5 ± 0.9 (69 ± 6)	26.7 ± 2.7 (193 ± 19)
<M18>	13.5 ± 1.4 (97 ± 10)	38.0 ± 3.8 (274 ± 27)
M20	18.6 ± 1.9 (134 ± 14)	52.2 ± 5.2 (377 ± 38)
<M22>	24.7 ± 2.5 (178 ± 18)	69.4 ± 6.9 (500 ± 50)
M24	32.1 ± 3.2 (232 ± 23)	90.2 ± 9.0 (650 ± 65)
M30	62.6 ± 6.3 (452 ± 45)	176.1 ± 17.6 (1270 ± 127)
M36	108.2 ± 10.8 (781 ± 78)	304.3 ± 30.4 (2200 ± 220)
M42	171.8 ± 17.2 (1240 ± 124)	483.2 ± 48.3 (3500 ± 350)
M45	211.3 ± 21.1 (1525 ± 152)	594.3 ± 50.4 (4300 ± 430)

Tightening torque (inch)

Classification	**4T, 5T**	**10T**
Capscrew type	 S00010A	 S00013A
Capscrew size	Tightening torque kgf·m (lbf·ft)	Tightening torque kgf·m (lbf·ft)
1/4	0.6 ± 0.06 (4.3 ± 0.4)	1.7 ± 0.2 (12.2 ± 1.2)
5/16	1.2 ± 0.12 (8.7 ± 0.8)	3.0 ± 0.3 (21.7 ± 2.2)
3/8	2.0 ± 0.20 (14.4 ± 1.4)	5.6 ± 0.5 (40 ± 4)
7/16	3.2 ± 0.32 (23 ± 2)	8.9 ± 0.9 (64 ± 6)
1/2	4.7 ± 0.47 (34 ± 3)	13.4 ± 1.3 (97 ± 10)
9/16	6.8 ± 0.68 (50 ± 5)	19.0 ± 1.9 (137 ± 14)
5/8	9.3 ± 0.93 (67 ± 7)	26.1 ± 2.6 (190 ± 19)
3/4	16.0 ± 1.60 (115 ± 15)	45.1 ± 4.5 (325 ± 33)
7/8	25.5 ± 2.55 (185 ± 19)	71.6 ± 7.2 (520 ± 52)

1	38.0 ± 3.80 (275 ± 27)	106.9 ± 10.7 (770 ± 77)
1-1/8	54.1 ± 5.41 (390 ± 39)	152.2 ± 15.2 (1100 ± 110)
1-1/4	74.2 ± 7.42 (535 ± 54)	208.9 ± 20.9 (1510 ± 151)
1-3/4	98.8 ± 9.88 (710 ± 71)	277.8 ± 27.8 (2000 ± 200)
1-1/2	128.2 ± 12.82 (925 ± 93)	360.7 ± 36.1 (2600 ± 260)

NOTE!
This torque table does not apply to capscrews with nylon packings or where nonferrous metal washers are to be used, or which require tightening to a different specified torque, or tightening procedure.

NOTE!
N·m (Newton meter) : 1 N·m ≅ 0.1 kgf·m

Tightening torque of split flange capscrews
Use these torques for split flange capscrews.

Tightening torque (split flange capscrews)

Thread diameter of capscrew (mm)	Width across flats (mm)	Tightening torque	
		kgf·m (lbf·ft)	N·m
10 12 16	14 17 22	6.7 ± 0.7 (48.4 ± 5) 11.5 ± 1 (83 ± 8) 28.5 ± 3 (206 ± 20)	65.7 ± 6.8 112 ± 9.8 279 ± 29

Tightening torque for hydraulic plugs with O-ring

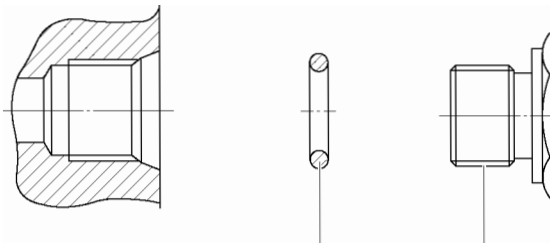


Figure 1
Hydraulic plugs with O-ring

1. O-ring
2. Plug

Pf thread
Tightening torque (hydraulic plugs)

Thread	Plug part No.	Tightening torque, kgf·m (lbf·ft)
1 / 8	9415–11012	2.5 ± 0.2 (18 ± 1.4)
1 / 4	9415–11022	5.0 ± 0.5 (36 ± 3.6)
3 / 8	9415–11032	7.5 ± 0.5 (54 ± 3.6)
1 / 2	9415–11042	11.0 ± 1.0 (79 ± 7)
3 / 4	9415–11052	18.0 ± 1.0 (130 ± 7)
1	9415–11062	21.0 ± 2.0 (152 ± 14)

Tightening torque for swivel nut fitting with O-ring

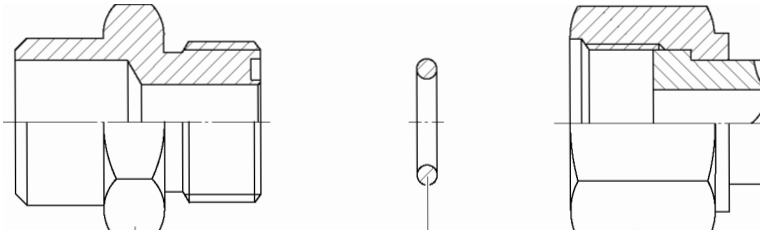


Figure 2
Swivel nut fitting with O-ring

1. Connector
2. O-ring
3. Swivel nut
4. Hose

Tightening torque for swivel nut fitting

Tube outer diameter (in)	Thread size (in)	Tightening torque, kgf·m (lbf·ft)
1 / 2	UN 1 3 / 16 – 16	9.5 ± 0.95 (69 ± 7)
3 / 4	UN 1 3 / 16 – 12	18 ± 1.8 (130 ± 13)
1	UN 1 7 / 16 – 12	21 ± 2.1 (152 ± 15)