

EXBLT Motor Starters

EXBLTMS and EXBLTCMS Series
for hazardous locations



Motor Starters

IEC/NEC FVNR Motor Starters

The EXBLTMS & EXBLTCMS Series is offered with the ABB Brand AF contactor / EF electronic overload relay, XT circuit breakers and Motor Circuit Protectors.

Applications

The EXBLTMS & EXBLTCMS series of full voltage motor starter only and combination motor starters. This series is for use in hazardous locations where the flammable vapors, combustible dust and easily ignitable fibers are present. It is suited to locations subject to corrosion, dampness and weather exposure.

Features

- High strength, lighter weight, corrosion resistant Aluminum construction
- Stainless steel metric cover bolts
- Cover O-Ring supplied as standard for TYPE 4X and IP66 applications
- Starters supplied with hinged covers as standard
- Bi-directional bolt on mounting lugs made from a ductile aluminum alloy which will adjust to irregular surfaces without causing damage to the casting
- Starter only supplied as standard with a manual reset button and two future control operator openings (3/4" NPSM) with close up plugs
- Combination starter supplied as standard with a manual reset button, through the door circuit breaker handle and two future control operator openings (3/4" NPSM) with close up plugs
- Each starter comes with three NPT conduit openings in both the top and in the bottom allowing for power, control, and breather/drain openings
- The EXBLTMS & EXBLTCMS can be ordered with custom sizes and quantity of outlets in both NPT and Metric sizes
- Additional control operators can be supplied along with additional future operator openings

Materials

- **Base, Cover & Handle:**
Copper free aluminum
(less than 4/10 of 1%)
- **Finish:** Aluminum lacquer paint – Gray
- **O-Ring gasket material:**
Nitrile (BUNA-N) compound
- Stainless Steel cover bolts
- CB/MCP Handle – With pad lockable provision in the ON or OFF position
- Reset Operator – Thermoplastic polyester button molded onto stainless steel shaft. Aluminum shroud, black anodized.

Electrical Rating Ranges

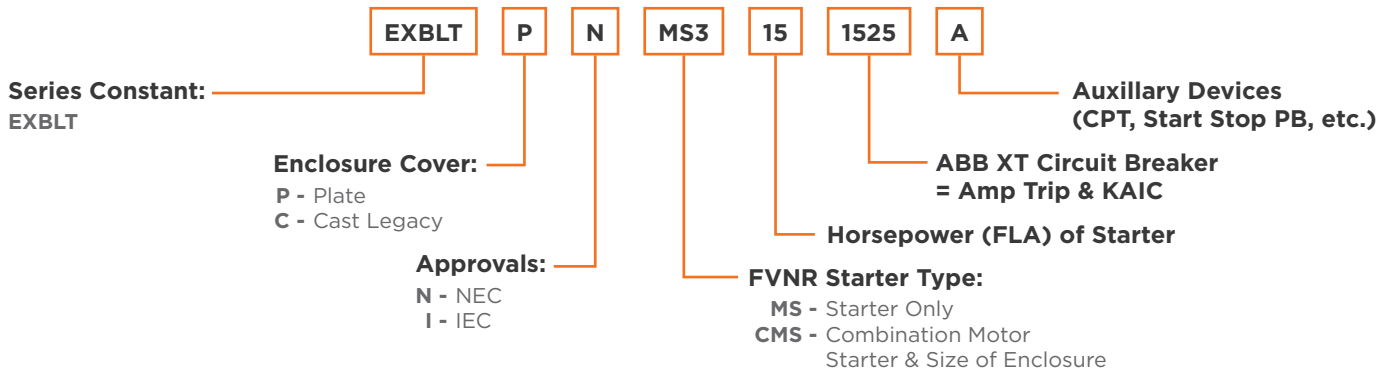
- 120, 240, 380, 480 & 600VAC 3 Phase, 50/60Hz

ATEX & IEC Ex
Ⓢ II 2 G Ex db IIB+H2 T6 Ⓒ 0518
Ⓢ II 2 D Ex tb IIIC T85°C IP66
Ta -50°C to + 70°C
IECEX QPS 17.0013U
IECEX QPS 17.0014
CML17 ATEX (pending)
CML17 ATEX (pending)

North America

Class I, Div. 1 & 2,
Groups B, C, & D;
Class I, Zone 1 & 2,
Groups IIB+H2 IIA;
Class II, Div. 1 & 2,
Groups E, F, & G;
Class III, Encl. Type 4 & 4X
UL Ta = -25°C to +70°C
CSA Ta = -50°C to +70°C
UL Classified File E83969
CSA Certified File LR11716
Type 3, 4, 4X, 7 (B, C, D)
9 (E, F, G)

Catalog Logic



	Type		Voltage	Coil Voltage	Contractor Amperage	Electronic Overload
EXBLTP	MS	CMS	120VAC - Single Phase UL/CSA	A = 24-60VAC/VDC	9 = 9 Contactor AMPS	E00.32 = E019 0.10 - 0.32 FLA
	MS3	CMS9	240VAC - Single Phase UL/CSA	B = 48-130VAC/VDC	12 = 12 Contactor AMPS	E01.0 = E019 0.30 - 1.0 FLA
	MS4	CMS10	208VAC - Three Phase UL/CSA	C = 100-250VAC/VDC	18 = 18 Contactor AMPS	E02.7 = E019 0.80 - 2.7 FLA
	MS5	CMS11	240VAC - Three Phase UL/CSA	D = 250-500VAC/VDC	26 = 26 Contactor AMPS	E06.3 = E019 1.9 - 6.3 FLA
	MS6	CMS12	480VAC - Three Phase UL/CSA		32 = 32 Contactor AMPS	E018.9 = E019 5.7 - 18.9 FLA
	MS7	CMS13	600VAC - Three Phase UL/CSA		40 = 40 Contactor AMPS	E030.0 = E045 9.0 - 30.0 FLA
		CMS14	220-240VAC - Three Phase IEC		52 = 52 Contactor AMPS	E045.0 = E045 15.0 - 45.0 FLA
			380-400VAC - Three Phase IEC		65 = 65 Contactor AMPS	E056.0 = E056 0.25 - 56.0 FLA
			415VAC - Three Phase IEC		80 = 80 Contactor AMPS	E070.0 = E070 0.25 - 70.0 FLA
			480VAC - Three Phase IEC		96 = 96 Contactor AMPS	E096.0 = E096 0.36 - 100.0 FLA
			500VAC - Three Phase IEC		116 = 116 Contactor AMPS	E096.0 = E096 0.54 - 150.0 FLA
			690VAC - Three Phase IEC		140 = 140 Contactor AMPS	E0146.0 = E096 0.54 - 150.0 FLA
					190 = 190 Contactor AMPS	E0205.0 = E0205 0.63 - 210.0 FLA
					205 = 205 Contactor AMPS	

Contractor Selector

	AF09		AF12		AF16		AF26		AF30		AF40		AF52		AF65		AF96		AF116		AF140	
	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS
120VAC - Single Phase	0.75	13.8	1	16	1.5	20	2	24	2	24	3	34										
240VAC - Single Phase	1.5	10	2	12	3	17	3	17	5	28	7.5	40										
200 - 208VAC Three Phase	2	7.8	3	11	5	17.5	7.5	25.3	10	32.2	10	32.2	15	48.3	20	62.1	30	92	30	92	40	120
220 - 240VAC Three Phase	2	6.8	3	9.6	5	15.2	7.5	28	10	28	15	42	20	54	25	68	30	80	40	104	50	130
440 - 480VAC Three Phase	5	7.6	7.5	11	10	14	15	27	20	27	30	40	40	52	50	65	60	77	75	96	100	124
550 - 600VAC Three Phase	7.5	9	10	11	10	17	20	27	25	27	40	41	50	52	60	62	75	77	100	99	125	125
IEC Ratings																						
220 - 240VAC Three Phase	2.2	9	3	12	4	18	6.5	26	9	33	11	40	15	53	18.5	65	25	96	30	116	37	140
380 - 400VAC Three Phase	4	9	5.5	12	7.5	18	11	26	15	32	18.5	40	22	53	30	65	45	96	55	116	75	140
415VAC Three Phase	4	9	5.5	12	9	18	11	26	15	32	22	40	30	53	37	65	55	96	55	116	75	140
480VAC Three Phase	4	9	5.5	12	9	18	15	26	18.5	32	22	40	30	53	37	65	55	96	75	116	90	140
500VAC Three Phase	5.5	9.5	7.5	12.5	9	15	15	23	18.5	28	22	35	30	45	37	55	55	80	75	110	90	130
690 VAC Three Phase	5.5	7	7.5	9	9	10.5	15	17	18.5	21	22	25	30	35	37	39	55	57	55	65	75	80

Select overload relay from chart

Coil Voltage Code

Section	VAC	VDC
A	24 - 60	24 - 60
B	48 - 130	48 - 130
C	100 - 150	100 - 250
D	250 - 500	250 - 500

3 Phase AC Induction Type
Squirrel Cage and Wound Rotor

Motor Full Load Currents					
HP	115V	200V	230V	460V	575V
0.50	4	2.3	2	1	0.8
0.75	5.6	3.2	2.8	1.4	1.1
1	7.2	4.15	3.6	1.8	1.4
1-1/2	10.4	6	5.2	2.6	2.1
2	13.6	7.8	6.8	3.4	2.7
3		11	9.6	4.8	3.9
5		17.5	15.2	7.6	6.1
7-1/2		25	22	11	9
10		32	28	14	11
15		48	42	21	17
20		62	54	27	22
25		78	68	34	27
30		92	80	40	32
40		120	104	52	41
50		150	130	65	52
60		177	154	77	62
75		221	192	96	77
100		285	248	125	99
125		358	312	156	125
150		415	360	180	144
200		550	480	240	192

Suggested Circuit Breaker Sizing

Line Voltage	Maximum Horsepower	Motor Circuit Protector (MCP) AMP Trip
240 VAC	1	7
	3	15
	7	30
	15	50
	30	100
	50	100
480 VAC	1	3
	3	7
	5	15
	7	15
	10	30
	15	30
	25	50
	30	50
600 VAC	50	100
	100	150
	1	3
	3	7
	5	15
	7	15
	10	30
	20	30
	25	50
	40	50
	50	100
	60	100
	100	150

Circuit Breaker Selection CMS Only

Thermal Magnetic MCCB		Motor Circuit Protector MCP	
Selection	AMP	Selection	AMP
A	15	3	3
B	20	7	7
C	25	15	15
D	30	30	30
E	35	50	50
F	40	70	70
G	50	100	100
H	60	125	125
I	70	150	150
J	80	175	175
K	90	200	200
L	100	225	225
M	110	250	250
N	125		
O	150		
P	175		
Q	200		
R	225		
S	250		

Suggested Circuit Breaker Sizing

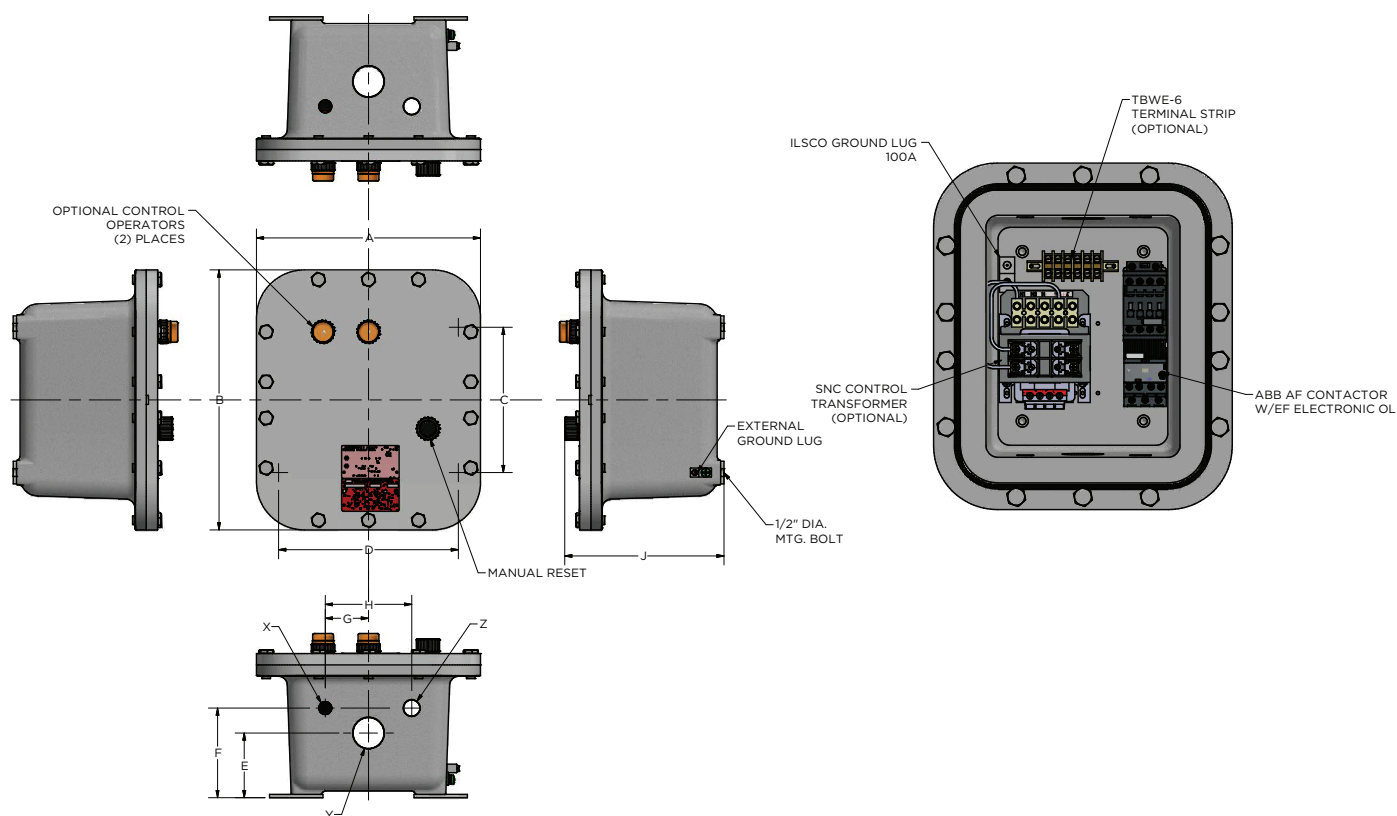
Line Voltage	Maximum Horsepower	Thermal Magnetic AMP Trip
240 VAC	2	15
	3	20
	5	35
	7-1/2	50
	10	50
	15	100
	20	100
	30	125
	50	200
480 VAC	3	15
	5	20
	7-1/2	30
	10	35
	20	50
	25	70
	50	100
	60	125
	75	150
600 VAC	100	200
	5	15
	7-1/2	20
	10	30
	15	40
	25	50
	30	70
	50	100
	75	125
	100	150

Motor Starter Accessories

Catalog Number Factory Installed	Catalog Number Field Installed	Description	Nameplate
PBR	GZ1-RX3	Momentary Pushbutton Red 1 N.O. & 1 N.C. Contact Block	Stop
PBG	GZ1-GX3	Momentary Pushbutton Green 1 N.O. * 1 N.C. Contact Block	Start
PBG/R	GZ2-GR12	Double Momentary Pushbutton Green/Red 1 N.O. & 1 N.C. Contact	Start/Stop
LG23	GZB3-G23	Pilot Light Green Led 120V AC/DC	
LG240	GZB3-G24	Pilot Light Green Led 240V AC	
LG480	GZB3-G48	Pilot Light Green Led 480V AC	
LR23	RZB3-R23	Pilot Light Red Led 120V AC/DC	
LR240	RZB3-R24	Pilot Light Red Led 240V AC	
LR480	RZB3-R48	Pilot Light Red Led 480V AC	
SS2	GZ5-2A3	Selector Switch 2 Position One Pole Double Throw	On/Off
SS22	GZ5-2A6	Selector Switch 2 Position Two Pole Double Throw	
SS3	GZ5-3C3	Selector Switch 3 Position One Pole No off 1 N.C.	HOA
X11A	YOABBCAL4-11	Auxillary Contacts 1 N.O. & 1 N.C. (1 to 30 HP)	
X22A	YOABBCAL511	Auxillary Contacts 2 N.O. & 2 N.C. (40 to 150 HP)	
BD4X	KB1-4X	Breather & Drain Fittings Type 4X Alluminum	
BD4XS	KB1-4XS6	Breather & Drain Fittings Type 4X Stainless Steel	
TB6	TBWE-6	Terminal Block 6 Point	
TB9	TBWE-9	Terminal Block 9 Point	
TB12	TBWE-12	Terminal Block 12 Point	
CPT100	YOSNCP24433F3	Transformer Multi-Voltage 100VA	
CPT150	YOSNCP24434F3	Transformer Multi-Voltage 150VA	
CPT250	YOSNCP24435F3	Transformer Multi-Voltage 250VA	
CPT350	YOSNCP24436F3	Transformer Multi-Voltage 350VA	
IGL	KIT-251	Ground Lug Internal	
SH12	16965CAAB	Space Heater 50 Watt 120VAC 2 X 5"	
SH24	16965DAAB	Space Heater 50 Watt 240VAC 2 X 5"	
PA		Paint, Aluminum Lacquer - Grey Exterior	
PAI		Paint, Aluminum Lacquer - Grey Interior	
PAB		Paint, Aluminum Lacquer - Grey Interior & Exterior	
PE		Paint, Epoxy Powder - Grey Exterior	
PEI		Paint, Epoxy Powder - Grey Interior	
PEB		Paint, Epoxy Powder - Grey Interior & Exterior	
PEL		Paint, Epoxy Powder Interior & Aluminum Lacquer Exterior	
NP13	22870AAAB	Nameplate, Lamacoid 1 X 3" Engraved Black Letters White Surface	

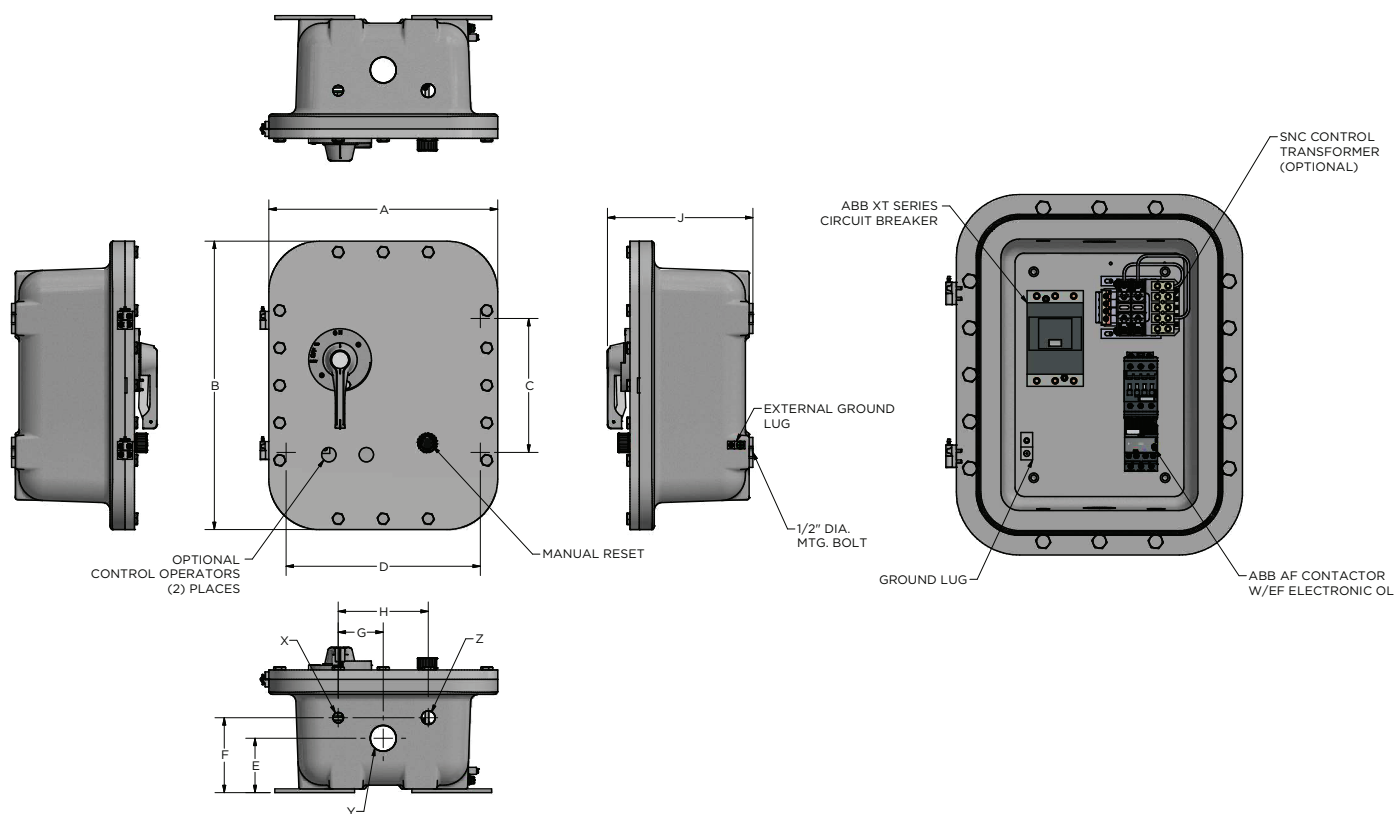
EXBLTP-MS Dimensions

Catalog Number	EXB Size	Type	A	B	C	D	E	F	G	H	J	Optional Conduit Available		
												X	Y	Z
EXBLTP-MS3 (PLATE COVER)	EXBLTP-8106	Starter only	12.31 (312mm)	14.31 (363mm)	8 (203mm)	9.88 (250mm)	3.56 (90mm)	4.94 (125mm)	2.38 (60mm)	4.75 (120mm)	8.75 (222mm)	1/2" NPT or M20	1-1/2" NPT or M50	3/4" NPT M25
EXBLTP-MS4 (PLATE COVER)	EXBLT-10146	Starter only	15.25 (387mm)	19.25 (488mm)	8.94 (227mm)	12.94 (328mm)	3.63 (92mm)	5 (127mm)	3 (76mm)	6 (152mm)	9 (228mm)	1/2" NPT or M20	2" NPT or M63	3/4" NPT or M25
EXBLTP-MS5 (PLATE COVER)	EXBLTP-12186	Starter only	16.38 (416mm)	22.38 (568mm)	12.88 (327mm)	14.94 (379mm)	3.75 (95mm)	4.75 (120mm)	3 (76mm)	6 (152mm)	9.25 (234mm)	1/2" NPT or M20	2" NPT or M63	3/4" NPT or M25
EXBLTP-MS6 (PLATE COVER)	EXBLTP-12248	Starter only	16.38 (416mm)	28.38 (720mm)	18.88 (479mm)	14.94 (379mm)	4.75 (120mm)	6.25 (158mm)	3.5 (88mm)	7 (177mm)	10.56 (268mm)	1/2" NPT or M20	3" NPT or M75	3/4" NPT or M25
EXB-MS7 (CAST COVER)	EXB-12368	Starter only	17.25 (438mm)	41.25 (1047mm)	31 (787mm)	15 (381mm)	4.75 (120mm)	7 (177mm)	4 (101mm)	8 (203mm)	12.22 (310mm)	1/2" NPT or M20	3-1/2" NPT or M75	3/4" NPT or M25



EXBLTP-CMS Dimensions

Catalog Number	EXB Size	Type	A	B	C	D	E	F	G	H	Optional Conduit Available			
											J	X	Y	Z
EXBLTP-CMS9 (Plate Cover)	EXBLT-10146	Combo Starter	15.25 (387mm)	19.25 (488mm)	8.94 (227mm)	12.94 (328mm)	3.63 (92mm)	5 (127mm)	3 (76mm)	6 (152mm)	9.70 (246mm)	1/2" NPT or M20	1-1/2" NPT or M50	3/4" NPT M25
EXBLTP-CMS10 (Plate Cover)	EXBLT-10146	Combo Starter	15.25 (387mm)	(488mm)	8.94 (227mm)	12.94 (328mm)	3.63 (92mm)	5 (127mm)	3 (76mm)	6 (152mm)	9.70 (246mm)	1/2" NPT or M20	2" NPT or M63	3/4" NPT or M25
EXBLTP-CMS11 (Plate Cover)	EXBLT-12186	Combo Starter	16.38 (416mm)	22.38 (568mm)	12.88 (327mm)	14.94 (379mm)	3.75 (95mm)	5 (127mm)	3.25 (82mm)	6.5 (165mm)	9.95 (252mm)	1/2" NPT or M20	2" NPT or M63	3/4" NPT or M25
EXBLTP-CMS12 (Plate Cover)	EXBLT-12186	Combo Starter	16.38 (416mm)	22.38 (568mm)	12.88 (327mm)	14.94 (379mm)	3.75 (95mm)	5 (127mm)	3.5 (88mm)	7 (177mm)	9.95 (252mm)	1/2" NPT or M20	2" NPT or M63	3/4" NPT or M25
EXBLTP-CMS13 (Plate Cover)	EXBLT-12248	Combo Starter	16.38 (416mm)	28.38 (720mm)	18.88 (479mm)	14.94 (379mm)	4.75 (120mm)	6.25 (158mm)	3.5 (88mm)	7 (177mm)	12.07 (306mm)	1/2" NPT or M20	3" NPT or M75	3/4" NPT or M25
EXB-CMS14	EXB-18368	Combo Starter	22.38 (568mm)	40.38 (1025mm)	31.5 (800mm)	21.25 (539mm)	4.5 (114mm)	7 (177mm)	5.5 (139mm)	11 (279mm)	13.85 (351mm)	1/2" NPT or M20	3-1/2" NPT or M100	3/4" NPT or M25



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