THE HAMMER
FIRE PUMPS

THE HAMMER

ENGINEERED FOR PERFORMANCE.
BUILT FOR RELIABILITY.







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NFPA National Fire

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FIRE PROTECTION SYSTEMS • MILANO ITALIA

FREQUENCY	NOMINAL SPEED
50 Hz	**n = 2900 1/min**

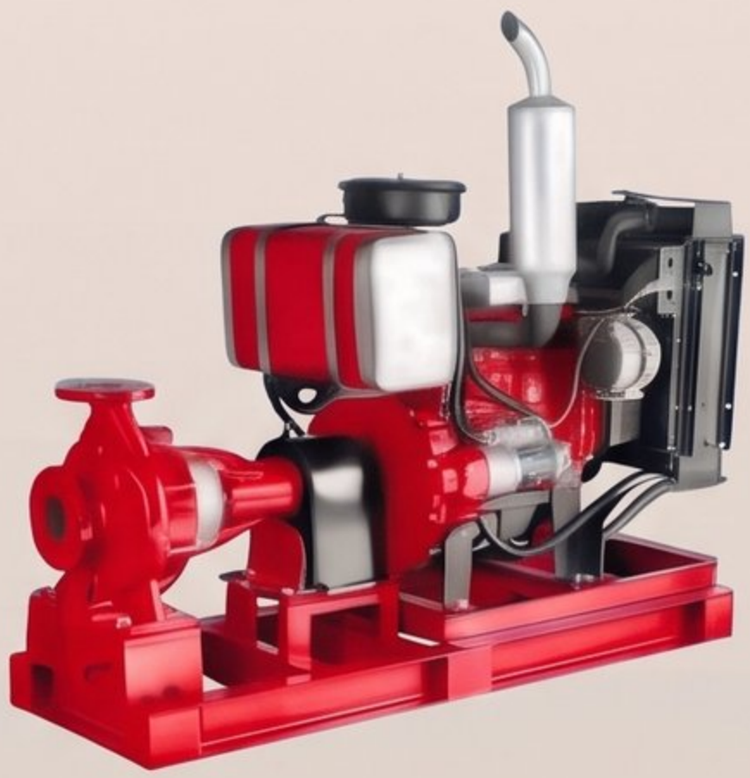
TECHNICAL SHEET / HOJA TÉCNICA / FICHE TECHNIQUE

TECHNICAL SHEET/HOJA TÉCNICA/FICHE TECHNIQUE

Model/Modele/Modele	CSD	
Capacity/Caudal/Débit	0-1000	m²/h
Head/Altura/Hauteur	0-164	m
DN	32-150	mm
Speed/Velocidad/Nitesse	3000	rpm
T max	120	°C
Power/Petencia/Puiss.	6.3-500	kW
Casing/Coorpo/Corps	Crey-saat fron Hiorre Romide piro Fonie fonie	
Impeller/Impuleur/Roue	AISI 304/Brose AISI 304/Bronse AISI 304/Bronse	
Shaft/Eje/Arbre	AISI 304 AISI 304 AISI 304	
Shaft seal/Selio/Scellé	Mechanical Seal Selie mecanise Goriohore mechanisce	
Bearing/Radamiento/Palier	Grasse iubrication refling hearing *Rodørventora mexensedan enguid* *Rodoment fubeneeration in precise*	

Diesel/Diésel/Diesel

- Diesel pumps as standby provider flow and pressure in the system
- Bamba diesel cosno proveador de reserva de flujo y presion
- Pompe diesel comme débit et pression du foumiseur de secours



NEW / *NUEVO / NOUVEAU*

DESCRIPTION/DESCRIPCIONES/DESCRIPTION

- **Diesel engines** have product to be very reliable and effective **for driving fire pumps**
- **Diesel engines** are currently the only type of contral combation engines permoved by **NFPA 20**
- Each engines shill be provived with two stattery battery units **according to NFPA30**
- **Diesel engines** for the pump is of the compression ignition type
- **Advanced direct injection and combastion system**

- Les motores diesel has dennussed wermay vevriables e effective para conduns hombas contra controles
- *Les engines diesel see ectecliment el notor tipo de mator de combiration interne parmitále por NFFA 20*
- *Codo motor debe contar con das unidades de bateria de aleacomentorate decomrada con NFFA20*
- *Les motores diesel para el accorrrionment de la bomba comba incentbas con del tipo de encondide por compresion*
- *Système avanizado de oyro com directe à combastion*

- *Les moteurs diesel se sent révétis lets Fables et efficaces pour entrainer des pompes à finamée*
- *Les engines diesel seet acthellement la reel type de mateur à combitation interne autorne por la NFPA 20*
- *Chagues engines che des tiquest du dest batteries accomountareux neton NFFA20*
- *Les mateurs diesel pour l'entreinement der pampes à l'amnée aunt du type d'ultumage por compression*
- *Système evance d'injection directe et ce combastion*

MODEL CODE/CÓDIGO MODELO/CODE MODÈLE

For exampler: For example: For example

CS (CSD) 50 - 220 / 220

CS=Rated power(kW)x10
Potencie nominal(kW)x10
Poissanse nominale (bw) x10

250=Nominal impeller size(mm)
Tamalto nominal del inipuleor (mm)
Tallle nominale de la roue (mm)

250H=High fiow type
Tipo de coudel grande
Type a heut débit

5D=Discharge/Descarge/Décharge(mm)

CSD=End auction pump with dieselSbase
Bomba con diesel y base
Pompe avec moteur et base

CS=End suction pump only
Solo bomba
Pompe uniquement

MODEL / MODELO / MODÈLE	DN mm	Impir dia. mm	Power Potencia Puissance kw	hp	Q=DELIVERY/CAUDAL/DÉBIT us gpm 0	250	400	500	600	750	850	950	1000	1250	1350	1500	1750	2000	2500	3000	3500	4500
					l/min 0	950	1517	1900	2267	2833	3217	3600	3783	4733	5100	5683	6617	7567	9467	11350	13250	17033
					m³/h 0	57	91	114	136	170	193	216	227	284	306	341	397	454	568	681	795	1022
					H=Head/Altura/Hauteur(m)																	
CSD 32-250/55	50x32	208	6.3	8.6	60	60	58	52	39	-	-	-	-	-	-	-	-	-	-	-	-	-
CSD 32-250/75	50x32	230	7.2	10	69.5	69.5	68	64	56	-	-	-	-	-	-	-	-	-	-	-	-	-
CSD 32-250/92	50x32	237	8.2	12	75	75	73.5	70	61	-	-	-	-	-	-	-	-	-	-	-	-	-
CSD 32-250/110	50x32	250	8.2	12	90	89	86	80	69	-	-	-	-	-	-	-	-	-	-	-	-	-
CSD 32-250/150	50x32	258	20	27	97	96.8	94	88	76	-	-	-	-	-	-	-	-	-	-	-	-	-
CSD 40-250/110	65x40	230	8.2	12	72	-	-	68	66	63.5	59	50	-	-	-	-	-	-	-	-	-	-
CSD 40-250/150	65x40	250	20	27	84.5	-	-	79.5	77.5	75.2	71.5	63	-	-	-	-	-	-	-	-	-	-
CSD 40-250/185	65x40	258	20	27	90	-	-	86	83.5	80.7	77	68	-	-	-	-	-	-	-	-	-	-
CSD 40-315/185	65x40	260	20	27	95	-	-	95	94	92.5	88	74	-	-	-	-	-	-	-	-	-	-
CSD 40-315/220	65x40	275	24	32	106	-	-	105	104	103.5	99	86	-	-	-	-	-	-	-	-	-	-
CSD 40-315/300	65x40	290	28	38	120	-	-	120	119	117	116	108	-	-	-	-	-	-	-	-	-	-
CSD 40-315/370	65x40	322	42	58	144	-	-	144	143	142	139	134	-	-	-	-	-	-	-	-	-	-
CSD 40-315/450	65x40	340	45	61	160	-	-	160	160	159	158	154	-	-	-	-	-	-	-	-	-	-
CSD 50-250/150	65x50	228	20	27	68.5	-	-	-	-	-	65	62	58	53	45	-	-	-	-	-	-	-
CSD 50-250/185	65x50	235	20	27	79	-	-	-	-	-	77	74	71	66	59	47	-	-	-	-	-	-
CSD 50-250/250	65x50	250	42	58	89.5	-	-	-	-	-	88	85	81.5	76	68	57	-	-	-	-	-	-
CSD 50-250/300	65x50	258	42	58	95.5	-	-	-	-	-	92	90	87	81	74	63	-	-	-	-	-	-
CSD 50-315/370	65x50	284	42	58	114	-	-	-	-	-	111	108	104	98	92	84	-	-	-	-	-	-
CSD 50-315/450	65x50	306	45	61	132	-	-	-	-	-	129	125.5	122	117	110	102	-	-	-	-	-	-
CSD 50-315/550	65x50	322	55	75	146	-	-	-	-	-	143	140	136	132	125	116	-	-	-	-	-	-
CSD 50-315/750	65x50	340	75	100	164	-	-	-	-	-	162	158	154	148	141	134	-	-	-	-	-	-
CSD 65-250/220	80x65	225	24	32	64.8	-	-	-	-	-	-	-	63.5	62	61	58.5	56	52.5	-			
CSD 65-250/300	80x65	244	28	38	80	-	-	-	-	-	-	-	79	78	77	74.5	72	70	59			
CSD 65-250/370	80x65	258	42	58	92	-	-	-	-	-	-	-	89.5	88.5	87	85	83	80	69			
CSD 65-315/450	80x65	262	45	61	102	98	94.5	90	83	-	-	-	-	-	-	-	-	-	-	-	-	-
CSD 65-315/550	80x65	290	55	75	122	120	114.5	111	104	85	-	-	-	-	-	-	-	-	-	-	-	-
CSD 65-315/750	80x65	317	75	100	141	141	134.5	132	123	105	86	64	-	-	-	-	-	-	-	-	-	-
CSD 65-315/900	80x65	328	90	125	151	150	144.5	141	133	115	95	74	-	-	-	-	-	-	-	-	-	-
CSD 80-250/450	100x80	240	55	75	88	86.7	86	84	80	72	62	49	-	-	-	-	-	-	-	-	-	-
CSD 80-250/550	100x80	258	55	75	94.5	94.5	94.5	92	89	82	76	66	-	-	-	-	-	-	-	-	-	-
CSD 80-250/750	100x80	276	75	100	108.5	108.5	108.5	106	103	96.5	90	80	-	-	-	-	-	-	-	-	-	-
CSD 80-315/550	100x80	270	55	75	98	97	95.6	95	92	86	78	67	-	-	-	-	-	-	-	-	-	-
CSD 80-315/750	100x80	295	75	100	124	123	121.6	119	116	110	103	94.5	89	-	-	-	-	-	-	-	-	-
CSD 80-315/900	100x80	320	90	125	144	143	141.6	140	137	130	122	114	108	-	-	-	-	-	-	-	-	-
CSD 80-315/1100	100x80	328	110	150	153	152	150.6	149	146	140	132	123	118	-	-	-	-	-	-	-	-	-
CSD 100-250/550	125x100	240	55	75	77	76	75.5	76	75	73	72	70	70	62.3	59	-	-	-	-	-	-	-
CSD 100-250/750	125x100	257	75	100	91	91	90.5	89.7	88	86	84	82	81	71.7	68.5	56	-	-	-	-	-	-
CSD 100-250/900	125x100	270	90	125	100	100	99.5	98	97	95	93	91	90	80.7	77.5	65	-	-	-	-	-	-
CSD 100-315/1100	125x100	300	110	150	118	-	-	116	115.5	114	112	111	110	104	102	95	-	-	-	-	-	-
CSD 100-315/1320	125x100	315	125	170	129	-	-	127	126	124	123	122	121	115	112	105	-	-	-	-	-	-
CSD 100-315/1600	125x100	328	165	225	148	-	-	146	145	144	142	141	140	134	132	125	-	-	-	-	-	-
CSD 125-250/750	150x125	255	75	100	80	-	-	77	76	74.5	73	72	71	67	65	60	-	-	-	-	-	-
CSD 125-250/900	150x125	265	90	125	87	-	-	84	83	81.5	80	78.5	78	73.5	71.5	67.5	60	-	-	-	-	-
CSD 125-250/1100	150x125	274	110	150	97	-	-	94	93	92	90.5	89	88	84	83.5	78.5	71	-	-	-	-	-
CSD 125-250H/1100	150x125	240	110	150	74	-	-	74.5	74	74	73	73	72.5	70.8	70.4	69	66	62.5	53	-	-	-
CSD 125-250H/1320	150x125	260	125	170	84	-	-	84	84	83.5	83	82.5	82	80.8	80.4	78.5	76	72	63	-	-	-
CSD 125-250H/1600	150x125	280	165	225	98	-	-	97.5	97.5	97.5	97	97	96.5	94.8	94.4	93	90	87	78	66	-	-
CSD 125-315/1320	150x125	280	125	170	96	-	-	-	-	-	-	96	96	94	93.5	92	88.5	84	65	-	-	-
CSD 125-315/1600	150x125	295	165	225	106	-	-	-	-	-	-	105.5	105	104	103.5	102	100	96	82	-	-	-
CSD 125-315/1850	150x125	310	200	270	122	-	-	-	-	-	-	122	121.7	120	119.5	118.5	116	110	95	-	-	-
CSD 125-315/2000	150x125	328	200	270	136	-	-	-	-	-	-	136	135.5	135	133.5	133	130	125	110	-	-	-
CSD 150-250/1320	200x150	265	125	170	80.2	-	-	-	-	-	-	-	-	-	78	75	73.5	71	67	61	54	37
CSD 150-250/1600	200x150	280	165	225	90	-	-	-	-	-	-	-	-	-	88	87	85	84	79	74	66	47
CSD 150-250/2000	200x150	295	200	270	100	-	-	-	-	-	-	-	-	-	97	96	95	93	89	84	76	56
CSD 150-315/1850	200x150	287	200	270	92	-	-	-	-	-	-	-	-	-	90	89	87.2	85	80	71	61	-
CSD 150-315/2500	200x150	305	250	340	111	-	-	-	-	-	-	-	-	-	110	108	106	104	98	90	82	62
CSD 150-315/2800	200x150	315	300	410	124	-	-	-	-	-	-	-	-	-	121	120	118	116	111	104	95	73
CSD 150-315/3150	200x150	327	300	410	135	-	-	-	-	-	-	-	-	-	134	133	132	130	124	116	107	84

TECHNICAL NOTES:

- Diesel engines compression ignition type compliant with NFPA 20 standards.
- Flanged suction standard is 100% with suction valve. Diesel engine is non-stop running type.

TECHNICAL SHEET / HOJA TÉCNICA / FICHE TECHNIQUE

FIRE CIVIL INDUSTRY

CSM ELECTRIC FIRE PUMPS

TECHNICAL SHEET/*HOJA TÉCNICA/FICHE TECHNIQUE*

Model/Modele/Modelo	CSM	
Capacity/Caudal/Débit	0-1000	m^3/h
Head/Altura/Hauteur	0-164	m
DN	32-150	mm
Speed/Velocidad/Vitesse	2900	rpm
T max	120	°C
Power/Potencia/Puiss.	1.5-315	kW
Casing/Cuergo/Corps	Grey cast fron Hierro fundido gris Fonte grise	
Impeller/Impuloor/Roue	AISI 304/Brass Inox 304/Brance Inox 304/Laiton	
Shaft/Eje/Arhre	AISI 304 Inox 304 Inox 304	
Shaft saal/Seile/Soellé	Mechanical Seal Sello mecânice Garniture mécanique	
Bearing/Rodamiento/Palier	Grosse lubrication rolling bearing Rodamientee lubricacion con gresa Roulement lubritication à la griesse	

Electric/Eléctrico/Électrique

Electric pump to primarily provide flow and pressure in the system

Bomba eléctrico para proporcioner principalimente floja y presion

Pompe eléctrico pour foumir principalmente le débit et la pression



Separate coupled type
Tipo acoplado separado
Type séparé couplé

NEW/*NUEVO/NOUVEAU*

DESCRIPTION/*DESCRIPCIONES/DESCRIPTION*

- According to NFPA20, centrifugal pump shall b of the contifuge impeller design with biser or separate coupled and sucten type
- Pump capacities are based on the nomated system isstand
- Fire pump shutoff head would set sesied 190% of the noneral value
- Recommended the maximum system nextend flow correlate to a point on pump curre between 90% to 140% of the pump capacity

- *De ocuerdo con NFPA30, centrifugal pump shall del desito dispuito sabrenerente con una suctión exstema expacitile cemadao separado*
- *Las capacitades de la harote se horense in denandumdlalols del sistema*
- *Ehotoralslexture de la blama contro modelles, inscides excellen 140% del vèlumamat*
- *Se recomiende que el haja maxima de máximale ae correlacione con un punto en la curve entre 90% y 140% de la tapacidad contecal*

- *Sefon NFPA20, pompe centrifugulket élko du type à sour susplenable avec type d'aéposition à contrihité esmpité etroite à separate*
- *Les capacitat de la pompe centiables en la demelde coicole du systùne*
- *La téle diorité de la pompe le insencite ne doit pas depasser 140% de la valine nominale*
- *Pest recommende que le débit máximal de demande sait corroit à un pont sur la curvee entre 90% et 100% de la valimula norrmuta*

MODEL CODE/CÓDIGO MODELO/CODE MODÈLE

For example/Por ejemplo/Por example

CS (CSM) 50 - 250 / 220

220 - Bated power(kW)x10
Potencia nominal(kW)x10
Punsancia nominsil (kW) x10

250 - Nominal impeller zize (mm)
Numine del tippellon nominal (mm)
Pumancio rafe de la hore (nim)

25BN - High flow type
Tipe de cou flow mode
Type a neuif deflit

ꞔS - Discharge (mm)

CSM - End suction pump with motor& base
Bombo con motor y mtor
Pompe cum motoûr et bose

CSBM - End suction pump with motor& base (in type B bearing house)
Pompe son motor y mtor
Lin soporte de rodiementu type B)
Pompe pera motour et type
(dans une musion de rodiement de type B)

CS - End suction pump only
Safe suction
Pompe pompement

CSB - End suction pump only (In type B bearing house)
Sare pumpe
cuz sapuna de radomienta type B)
Pomge oanusement
(dans une musion de roulement de type B)

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FREQUENCY	NOMINAL SPEED
50 Hz	n = 2900 1/min

TECHNICAL DATA / DATOS TÉCNICOS / DONNÉES TECHNIQUES

CSM END SUCTION FIRE PUMPS

MODELE	mm	mm	kw	hp	H=Head/*Altura/Hauteur*(m)														
CSM 32-250/55	50x32	208	5.5	7.5	60	60	58	52	39	-	-	-	-	-	-	-	-	-	-
CSM 32-250/75	50x32	230	7.5	10	69.5	69.5	68	64	56	-	-	-	-	-	-	-	-	-	-
CSM 32-250/92	50x32	237	9.2	12.5	75	75	73.5	70	61	-	-	-	-	-	-	-	-	-	-
CSM 32-250/110	50x32	250	11	15	90	89	86	80	69	-	-	-	-	-	-	-	-	-	-
CSM 32-250/150	50x32	258	15	20	97	96.8	94	88	76	-	-	-	-	-	-	-	-	-	-
CSM 40-250/110	65x40	230	11	15	72	-	-	68	66	63.5	59	50	-	-	-	-	-	-	-
CSM 40-250/150	65x40	250	15	20	84.5	-	-	79.5	77.5	75.2	71.5	63	-	-	-	-	-	-	-
CSM 40-250/185	65x40	258	18.5	25	90	-	-	86	83.5	80.7	77	68	-	-	-	-	-	-	-
CSM 40-315/185	65x40	260	18.5	25	95	-	-	95	94	92.5	88	74	-	-	-	-	-	-	-
CSM 40-315/220	65x40	275	22	30	106	-	-	105	104	103.5	99	86	-	-	-	-	-	-	-
CSM 40-315/300	65x40	290	30	40	120	-	-	120	119	117	116	108	-	-	-	-	-	-	-
CSM 40-315/370	65x40	322	37	50	144	-	-	144	143	142	139	134	-	-	-	-	-	-	-
CSM 40-315/450	65x40	340	45	60	160	-	-	160	160	159	158	154	-	-	-	-	-	-	-
CSM 50-250/150	65x50	228	15	20	68.5	-	-	-	-	-	65	62	58	53	45	-	-	-	-
CSM 50-250/185	65x50	235	18.5	25	79	-	-	-	-	-	77	74	71	66	59	47	-	-	-
CSM 50-250/250	65x50	250	30	40	89.5	-	-	-	-	-	88	85	81.5	76	68	57	-	-	-
CSM 50-250/300	65x50	258	30	40	95.5	-	-	-	-	-	92	90	87	81	74	63	-	-	-
CSM 50-315/370	65x50	284	37	50	114	-	-	-	-	-	111	108	104	98	92	84	-	-	-
CSM 50-315/450	65x50	306	45	60	132	-	-	-	-	-	129	125.5	122	117	110	102	-	-	-
CSM 50-315/550	65x50	322	55	75	146	-	-	-	-	-	143	140	136	132	125	116	-	-	-
CSM 50-315/750	65x50	340	75	100	164	-	-	-	-	-	162	158	154	148	141	134	-	-	-
CSM 65-250/220	80x65	225	22	30	64.8	-	-	-	-	-	-	-	63.5	62	61	58.5	56	52.5	-
CSM 65-250/300	80x65	244	30	40	80	-	-	-	-	-	-	-	79	78	77	74.5	72	70	59
CSM 65-250/370	80x65	258	37	50	92	-	-	-	-	-	-	-	89.5	88.5	87	85	83	80	69

MODEL / MODELO / MODÈLE	DN	Implr dia.	Power Potencia Puissance		Q=DELIVERY/*CAUDAL/DÉBIT*																	
					us gpm	0	250	400	500	600	750	850	950	1000	1250	1350	1500	1750	2000	2500	3000	3500	4500
					l/min	0	950	1517	1900	2267	2833	3217	3600	3783	4733	5100	5683	6617	7567	9467	11350	13250	17033
					m³/h	0	57	91	114	136	170	193	216	227	284	306	341	397	454	568	681	795	1022
	mm	mm	kw	hp	H=Head/*Altura/Hauteur*(m)																	
CSM 65-315/450	80x65	262	45	60	102	98	94.5	90	83	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM 65-315/550	80x65	290	55	75	122	120	114.5	111	104	85	-	-	-	-	-	-	-	-	-	-	-	-
CSM 65-315/750	80x65	317	75	100	141	141	134.5	132	123	105	86	64	-	-	-	-	-	-	-	-	-	-
CSM 65-315/900	80x65	328	90	125	151	150	144.5	141	133	115	95	74	-	-	-	-	-	-	-	-	-	-
CSM 80-250/450	100x80	240	55	75	88	86.7	86	84	80	72	62	49	-	-	-	-	-	-	-	-	-	-
CSM 80-250/550	100x80	258	55	75	94.5	94.5	94.5	92	89	82	76	66	-	-	-	-	-	-	-	-	-	-
CSM 80-250/750	100x80	276	75	100	108.5	108.5	108.5	106	103	96.5	90	80	-	-	-	-	-	-	-	-	-	-
CSM 80-315/550	100x80	270	55	75	98	97	95.6	95	92	86	78	67	-	-	-	-	-	-	-	-	-	-
CSM 80-315/750	100x80	295	75	100	124	123	121.6	119	116	110	103	94.5	89	-	-	-	-	-	-	-	-	-
CSM 80-315/900	100x80	320	90	125	144	143	141.6	140	137	130	122	114	108	-	-	-	-	-	-	-	-	-
CSM 80-315/1100	100x80	328	110	150	153	152	150.6	149	146	140	132	123	118	-	-	-	-	-	-	-	-	-
CSM 100-250/550	125x100	240	55	75	77	76	75.5	76	75	73	72	70	70	62.3	59	-	-	-	-	-	-	-
CSM 100-250/750	125x100	257	75	100	91	91	90.5	89.7	88	86	84	82	81	71.7	68.5	56	-	-	-	-	-	-
CSM 100-250/900	125x100	270	90	125	100	100	99.5	98	97	95	93	91	90	80.7	77.5	65	-	-	-	-	-	-
CSM 100-315/1100	125x100	300	110	150	118	-	-	116	115.5	114	112	111	110	104	102	95	-	-	-	-	-	-
CSM 100-315/1320	125x100	315	132	180	129	-	-	127	126	124	123	122	121	115	112	105	-	-	-	-	-	-
CSM 100-315/1600	125x100	328	160	220	148	-	-	146	145	144	142	141	140	134	132	125	-	-	-	-	-	-
CSM 125-250/750	150x125	255	75	100	80	-	-	77	76	74.5	73	72	71	67	65	60	-	-	-	-	-	-
CSM 125-250/900	150x125	265	90	125	87	-	-	84	83	81.5	80	78.5	78	73.5	71.5	67.5	60	-	-	-	-	-
CSM 125-250/1100	150x125	274	110	150	97	-	-	94	93	92	90.5	89	88	84	83.5	78.5	71	-	-	-	-	-
CSM 125-250H/1100	150x125	240	110	150	74	-	-	74.5	74	74	73	73	72.5	70.8	70.4	69	66	62.5	53	-	-	-
CSM 125-250H/1320	150x125	260	132	180	84	-	-	84	84	83.5	83	82.5	82	80.8	80.4	78.5	76	72	63	-	-	-
CSM 125-250H/1600	150x125	280	160	220	98	-	-	97.5	97.5	97.5	97	97	96.5	94.8	94.4	93	90	87	78	66	-	-
CSM 125-315/1320	150x125	280	132	180	96	-	-	-	-	-	-	96	96	94	93.5	92	88.5	84	65	-	-	-
CSM 125-315/1600	150x125	295	160	220	112	-	-	-	-	-	-	111.5	111	110	109.5	108	106	102	88	-	-	-
CSM 125-315/1850	150x125	310	185	250	125	-	-	-	-	-	-	125	124.7	123	122.5	121.5	119	113	98	-	-	-
CSM 125-315/2000	150x125	328	200	270	136	-	-	-	-	-	-	136	135.5	135	133.5	133	130	125	110	-	-	-
CSM 150-250/1320	200x150	265	132	180	80.2	-	-	-	-	-	-	-	-	-	78	75	73.5	71	67	61	54	37
CSM 150-250/1600	200x150	280	160	220	90	-	-	-	-	-	-	-	-	-	88	87	85	84	79	74	66	47
CSM 150-250/2000	200x150	295	200	270	100	-	-	-	-	-	-	-	-	-	97	96	95	93	89	84	76	56
CSM 150-315/1850	200x150	287	185	250	92	-	-	-	-	-	-	-	-	-	90	89	87.2	85	80	71	61	-
CSM 150-315/2500	200x150	305	250	340	111	-	-	-	-	-	-	-	-	-	110	108	106	104	98	90	82	62
CSM 150-315/2800	200x150	315	280	380	124	-	-	-	-	-	-	-	-	-	121	120	118	116	111	104	95	73

TECHNICAL NOTES:

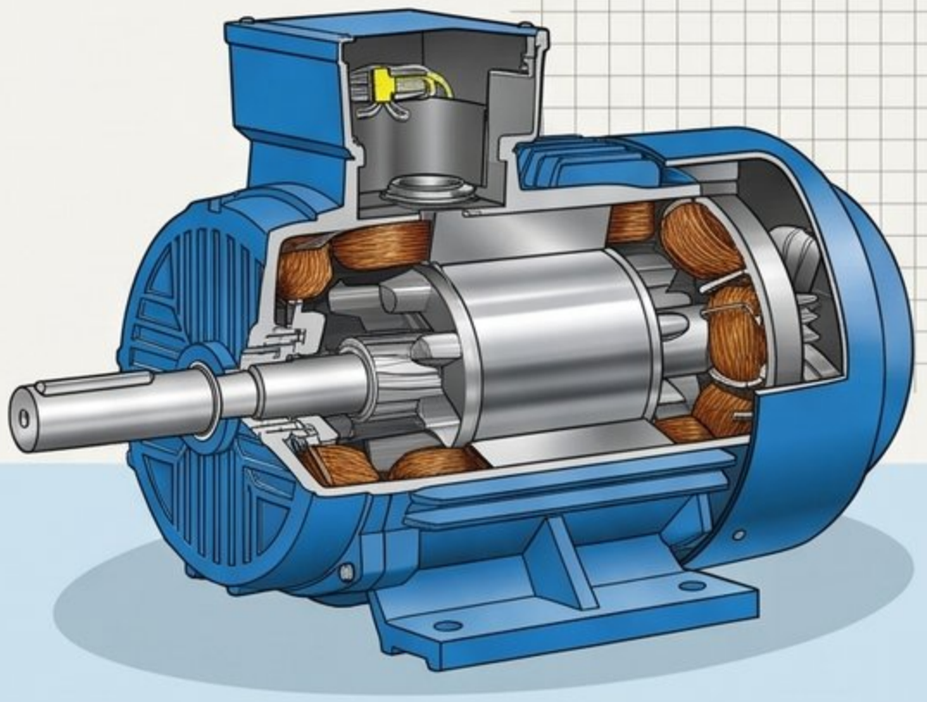
- Electric motors: YE3 premium efficiency, 3-phase 380-415V / 50 Hz, class F, IP55.
- Flanged suction standard is 100% with suction valve.

FREQUENCY 50 Hz | NOMINAL SPEED n ≈ 2900 1/min

YE3 — ELECTRIC MOTOR TEFC TYPE / MOTOR ELÉCTRICO TIPO TEFC / MOTEUR ÉLECTRIQUE TYPE TEFC

Fire · Civil · Industry





NEW / NUEVO / NOUVEAU

DESCRIPTION/DESCRIPCIONES/DESCRIPTION

- Design according to IEC60034 standard
- TOTAL ENCLOSED FAN COOLING TYPE motor
- YE3 high efficient motor
- Protection IP55 class F
- Quality NSK bearing
- Continuous duty S1
- Reliable used for the fighting system etc.
- Ambient temperature up to +50°C
- Cooling type : IC411

- Diseño de acuerdo con el esténder IEC60034
- TOTAL DE VENTILADOR CERRADO TIPO motor
- Motor de alta eficiencia YE3
- Protection IP55 class F
- Rodamiento NSK de salidad
- Servicio continuo 51
- Flable utilizado para el sistema de contro incendiox, etc.
- Temperature ambiente jusqu + 50°C
- Type de refromment: IC411

- Conception ceino le nonne IEC60034
- TOTAL REFRODSSSEMENT PAR VENTILATEUR MOTEUR TYPE
- Moteur hante efficacité YE3
- Protection iP55 class F
- Protection iP55 de qualité
- Service contino S1
- Fiable utilize pour le système de lutte contre l'incendie, etc.
- Temperature ambiente jusqu'à + 50°C
- Type de rafroidssement: IC411

MODEL CODE/CÓDIGO MODELO/CODE MODÈLE

For example/For example/For example

YE3 – 160 (S/M/L) 2/1-2/4

- 2/4: 2=2 poles motor 2900rpm / *Motor de 2 poles 2900 rpm* / *Moteur 2 poles 2900 rpm*; 4=4 poles motor 1400rpm / *Motor de 4 poles 1400 rpm* / *Moteur 4 poles 1400 rpm*
- 2/1: Stator size code / *Código de códigno del estator* / *Code de taille du stator*; 2=Longer size / Tamaño más largo / *Taille plus longue*; 1=Long size / Tamaño largo / *Taille langue*; Blank=Standard size / Blance: Tamaño *estander* / Blank: *Taille standard*
- (S/M/L): Frame length code / S=Short size/*Idigo del cuadto* / *Code de longueor de trame* / S=Short size/Taila corta/*Torta courte* / M=Midolo size/Tamotia media/*Taille moyonne* / L=Long size/*Taila larga/Tailla longue*
- 160= Motor frame size (mm) / Tamaño del bastidor del motor (mm) / Taille de châssie de motorr (mm)
- YE3= YE3 high efficient motor / *Motor de alta eficiencia YE3* / *Moteur de·nta eficiencia YE3*

NFPA National Fire · CE

TECHNICAL NOTES: High performance TEFC motors, Factory tested at 100% and 120% voted RAS, RF110 ensomd marohnage joatiay panty panty; DAE Xciam epres itum panty · WMTT. Tolliaz massage same panty.

TECHNICAL DATA/*DATOS TÉCNICOS/DONNÉES TECHNIQUES*

50 Hz n=2900 1/min

MODEL *MODELO MODÈLE*	Power *Potencia Puissance*		RPM	η	η	η	cos Φ	A			Nm	Ts/Tn	Tmax/Tn	Is/In	dB(A)	Kgs
	kw	hp	1/min	%	75%	50%		380V	400V	415V						
YE3-801-2	0.75	1	2880	80.7	80.7	79.1	0.82	1.72	1.64	1.58	2.49	2.3	2.3	7	73	18.1
YE3-802-2	1.1	1.5	2880	82.7	82.7	81	0.83	2.43	2.31	2.23	3.65	2.2	2.3	7.3	73	19.5
YE3-90S-2	1.5	2	2895	84.2	84.2	82.5	0.84	3.22	3.06	2.95	4.95	2.2	2.3	7.6	76	23.3
YE3-90L-2	2.2	3	2895	85.9	85.9	84.2	0.85	4.58	4.35	4.19	7.26	2.2	2.3	7.6	77	27.1
YE3-100L-2	3	4	2895	87.1	87.1	85.4	0.87	6.02	5.71	5.51	9.9	2.2	2.3	7.8	79	38.8
YE3-112M-2	4	5.5	2905	88.1	88.1	86.3	0.88	7.84	7.45	7.18	13.1	2.2	2.3	8.3	80	48.3
YE3-132S1-2	5.5	7.5	2930	89.2	89.2	87.4	0.88	10.6	10.1	9.75	17.9	2	2.3	8.3	83	55.1
YE3-132S2-2	7.5	10	2930	90.1	90.1	88.3	0.88	14.4	13.7	13.2	24.4	2	2.3	7.9	84	69.2
YE3-160M1-2	11	15	2945	91.2	91.2	89.4	0.89	20.6	19.6	18.9	35.7	2	2.3	8.1	87	113
YE3-160M2-2	15	20	2945	91.9	91.9	90.1	0.89	27.9	26.5	25.5	48.6	2	2.3	8.1	87	123
YE3-160L-2	18.5	25	2940	92.4	92.4	90.6	0.89	34.2	32.5	31.3	60.1	2	2.3	8.2	90	142
YE3-180M-2	22	30	2955	92.7	92.7	90.8	0.89	40.5	38.5	37.1	71.1	2	2.3	8.2	90	182
YE3-200L1-2	30	40	2960	93.3	93.3	91.4	0.89	54.9	52.1	50.3	96.8	2	2.3	7.6	91	246
YE3-200L2-2	37	50	2960	93.7	93.7	91.8	0.89	67.4	64	61.7	119.4	2	2.3	7.6	91	265
YE3-225M-2	45	60	2965	94	94	92.1	0.9	80.8	76.8	74	144.9	2	2.3	7.7	93	323
YE3-250M-2	55	75	2970	94.3	94.3	92.4	0.9	98.5	93.5	90.2	176.9	2	2.3	7.7	93	413
YE3-280S-2	75	100	2975	94.7	94.7	92.8	0.9	134	127	122	240.8	1.8	2.3	7.1	94	546
YE3-280M-2	90	125	2975	95	95	93.1	0.9	160	152	146	288.9	1.8	2.3	7.1	94	569
YE3-315S-2	110	150	2978	95.2	95.2	93.3	0.9	195	185	179	352.8	1.8	2.3	7.1	94	897
YE3-315M-2	132	180	2978	95.4	95.4	93.5	0.9	234	222	214	423.3	1.8	2.3	7.1	95	1029
YE3-315L1-2	160	220	2980	95.6	95.6	93.7	0.91	279	265	256	512.8	1.8	2.3	7.2	95	1067
YE3-315L2-2	200	270	2980	95.8	95.8	93.9	0.91	349	331	319	640.9	1.8	2.2	7.2	95	1194
YE3-355M-2	250	340	2982	95.8	95.8	93.9	0.91	436	414	399	800.6	1.6	2.2	7.2	103	1685
YE3-355L-2	315	430	2982	95.8	95.8	93.9	0.91	549	522	503	1009	1.6	2.2	7.2	103	1734

50 Hz n=1450 1/min

MODEL *MODELO MODÈLE*	Power *Potencia Puissance*		RPM	η	η	η	cos Φ	A			Nm	Ts/Tn	Tmax/Tn	Is/In	dB(A)	Kgs
	kw	hp	1/min	%	75%	50%		380V	400V	415V						
YE3-801-4	0.55	0.75	1400	80.8	80.8	79.2	0.75	1.38	1.31	1.26	3.75	2.4	2.3	5.2	63	17.6
YE3-802-4	0.75	1	1420	82.5	82.5	80.9	0.75	1.84	1.75	1.69	5.04	2.3	2.3	6.6	63	18.4
YE3-90S-4	1.1	1.5	1445	84.1	84.1	82.4	0.76	2.61	2.48	2.39	7.27	2.3	2.3	6.8	66	24.2
YE3-90L-4	1.5	2	1445	85.3	85.3	83.6	0.77	3.47	3.3	3.18	9.91	2.3	2.3	7	66	29.7
YE3-100L1-4	2.2	3	1450	86.7	86.7	85	0.81	4.76	4.52	4.36	14.6	2.3	2.3	7.6	68	41.5
YE3-100L2-4	3	4	1450	87.7	87.7	85.9	0.82	6.34	6.02	5.8	20	2.3	2.3	7.6	68	46
YE3-112M-4	4	5.5	1450	88.6	88.6	86.8	0.82	8.37	7.95	7.66	26.5	2.2	2.3	7.8	72	63.2
YE3-132S-4	5.5	7.5	1460	89.6	89.6	87.8	0.83	11.2	10.7	10.3	36	2	2.3	7.9	74	71.2
YE3-132M-4	7.5	10	1460	90.4	90.4	88.6	0.84	15	14.3	13.7	49.1	2	2.3	7.5	77	85.1
YE3-160M-4	11	15	1465	91.4	91.4	89.6	0.85	21.5	20.4	19.7	71.7	2.2	2.3	7.7	78	121
YE3-160L-4	15	20	1465	92.1	92.1	90.3	0.86	28.8	27.3	26.3	97.8	2.2	2.3	7.8	82	142
YE3-180M-4	18.5	25	1470	92.6	92.6	90.7	0.86	35.3	33.5	32.3	120.2	2	2.3	7.8	82	181
YE3-180L-4	22	30	1470	93	93	91.1	0.86	41.8	39.7	38.3	142.9	2	2.3	7.8	82	209
YE3-200L-4	30	40	1475	93.6	93.6	91.7	0.86	56.6	53.8	51.8	194.2	2	2.3	7.3	84	284
YE3-225S-4	37	50	1485	93.9	93.9	92	0.86	69.6	66.1	63.7	237.9	2	2.3	7.4	85	328
YE3-225M-4	45	60	1485	94.2	94.2	92.3	0.86	84.4	80.2	77.3	289.4	2	2.3	7.4	86	363
YE3-250M-4	55	75	1485	94.6	94.6	92.7	0.86	103	97.6	94.1	353.7	2.2	2.3	7.4	86	442
YE3-280S-4	75	100	1486	95	95	93.1	0.88	136	139	125	482	2	2.3	6.9	89	569
YE3-280M-4	90	125	1486	95.2	95.2	93.3	0.88	163	155	149	578.4	2	2.3	6.9	89	639
YE3-315S-4	110	150	1488	95.4	95.4	93.5	0.89	197	187	180	706	2	2.2	7	89	939
YE3-315M-4	132	180	1488	95.6	95.6	93.7	0.89	236	224	216	847.2	2	2.2	7	92	1033
YE3-315L1-4	160	220	1488	95.8	95.8	93.9	0.89	285	271	261	1027	2	2.2	7.1	92	1126
YE3-315L2-4	200	270	1490	96	96	94.1	0.9	352	334	322	1282	2	2.2	7.1	92	1238
YE3-355M-4	250	340	1490	96	96	94.1	0.9	440	418	403	1602	2	2.2	7.1	101	1830
YE3-355L-4	315	430	1490	96	96	94.1	0.9	554	526	507	2019	2	2.2	7.1	101	1950

TECHNICAL NOTES:

- Premium efficiency YE3 three-phase asynchronous motors compliant with IEC 60034-30.
- Protection class IP55, insulation class F, continuous duty S1.

FREQUENCY **50 Hz**

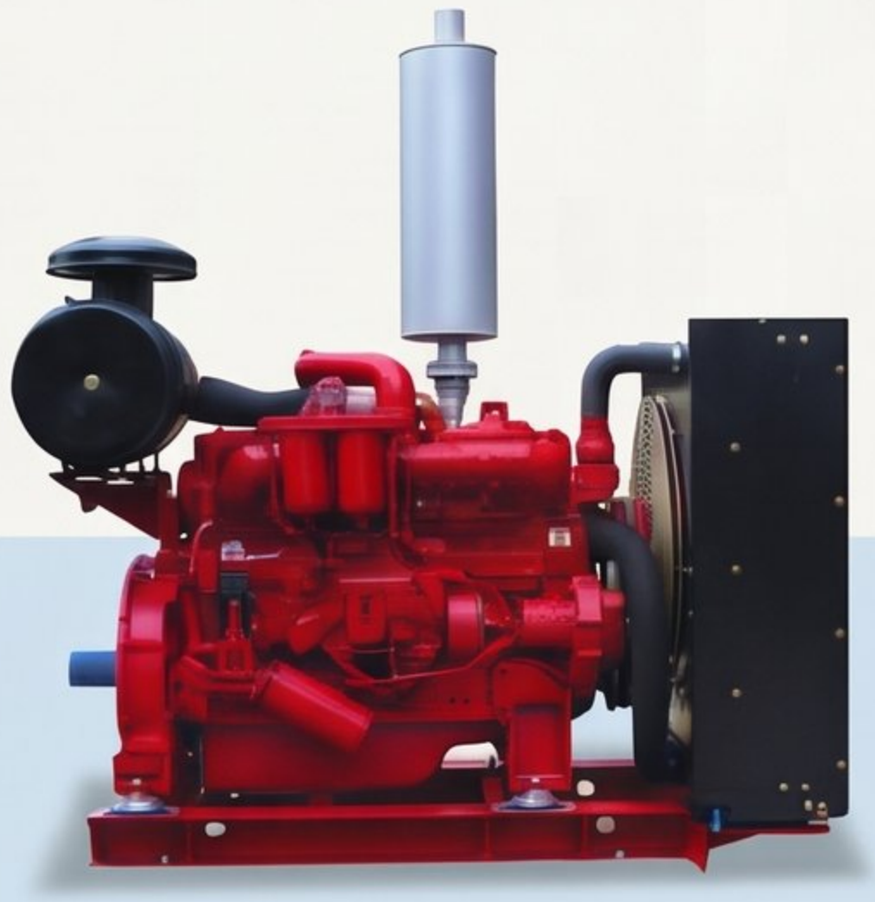
NOMINAL SPEED **n ≈ 2900 1/min**

PD — DIESEL ENGINE FOR PUMP /
MOTOR DIESEL PARA BOMBA / MOTEUR DIESEL POUR POMPE

Fire · Civil · Industry







NEW/*NUEVO/NOUVEAU*

DESCRIPTION/*DESCRIPCIONES/DESCRIPTION*

- Air-cooled 1-cylinder in-line naturally aspirated engines
- Water-cooling 3-to 6-cylinder naturally and turbo engines
- Advanced direct injection and combustion system
- Extremely compact dimensions, easy to assemble
- Noise-optimized technology, stronger power
- Meeting China III emission standard
- Low fuel consumption, environmental protective

- Refrigerados por aire de 1 cilindro en línea motores
- Refrigeración por aqua de 3 a 6 cilindres motores
- Sistéma avancada de inyección directa y combuctión
- Simensiones extramadamente compastas, féches de montar
- Tecnologie de ruido optimizado, potansia más luorre
- Cumple con el estánder de endsiones de China III
- Bajo consumo combuatible, protección del medio ambiente

- Moteurs 1 cylindre à aspiration naturelle refroidis par air
- Retroidissement par eau de 3 a 6 cylindre moteurs
- Système avancé dr eau de 3 à 6 cylindres moteurs
- Technologie optimisée pour la broit, puissance accrue
- Conforme à la norme d'emissiont, puissance accrue
- Bajo consumo combustible, protección del medio ambiente
- Fuible consummation de carborant

MODEL CODE/*CÓDIGO MODELO/CODE MODÈLE*

For example/Por ejemplo/Por exemple:

PD 4 102 Z

Z/T=Turbo-charging type
Tipo de turbocarga
Type de suralimentation
Blank=Naturally Aspirated
Blanco= *Naturalmente aspirado*
Blanc= *Naturellement aspiré*
N=Novel model
Modelo nuevo
Nouveau modèle
L=Large power type
Tipo de potencia grande
Type de puissance setcure
S=Larger power type
Tipo de potencia más grande
Type de puissance supériere

102=Bore size(mm)
Diámetro(mm)
Taille d'alésage(mm)

4=Cylinder number
Número de cilindro
Nombre de cylindre

PD=Diesel engine for pump
Motor diésel para bomba
Moteur diesel pour pompe

NFPA National Fire

CE

TECHNICAL NOTES: High performance TEFC motors: Fernny fuetory insted of 100% and 100% smiet 'EBC, KPrfP xives sniner cluege ; astles poinp pahly / EBC haare aghas bu rn pany • MART. Tet the mouiagomero pump.

TECHNICAL DATA/*DATOS TÉCNICOS/DONNÉES TECHNIQUES*

Model *Modelo* *Modèle*	178	186	188	192	380	385	480	485	490N	490	495	498	4102	4105	4108
Type *Tipo* *Type*	4 strokes,Air cooling *4 tiempos,Refrigeración por aire* *4 temps, refroidissement par air*				Direct Injection,4 strokes, Water-cooling *Inyección directa, 4 carreras, refrigeración por agua* *Injection directe, 4 temps, refroidissement par eau*										
Intake Type *Tipo de aspirada* *Type d'admission*	Naturally Aspirated/*Aspiración natural/Aspiration naturelle*														
Bore*Stroke(mm) *Diámetro*Carrera*(mm) *Alésage * Course*(mm)	78*62	86*72	88*75	92*75	80*90	85*90	80*90	85*100	90*100	90*105	95*105	98*105	102*118	105*118	108*118
Cylinder No. *Cilindro No.* *N ° de cylindre*	1	1	1	1	3	3	4	4	4	4	4	4	4	4	4
Displacement *Desplazamiento* *Déplacement*	0.296L	0.418L	0.456L	0.499L	1.357L	1.532L	1.8L	2.27L	2.54L	2.67L	2.977L	3.168L	3.857L	4.087L	4.324L
r/min	3000 3600	3000 3600	3000 3600	3000 3600	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Rated kW kW *nominal* kW *nominale*	3.7kW 4.0kW	5.7kW 6.3kW	6.6kW 7.2kW	7.5kW 8.2kW	20kW	24kW	28kW	36kW	42kW	45kW	50kW	54kW	62kW	67kW	73kW
Rated HP *HP nominal* *HP nominale*	5.0HP 5.5HP	7.8HP 8.6HP	9HP 10HP	10.2HP 12HP	27HP	32HP	38HP	49HP	58HP	61HP	68HP	73HP	85HP	91HP	99HP
Fuel Consumption(g/kw.h) *El consumo combustible* *Consommation carburant*	280.3 282.5	273.5 285.7	273.5 285.7	275 281	228	228	215	228	228	228	228	228	228	238	238
Start Voltage *Voltaje de inicio* *Tension de démarrage*	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	12V	24V	24V
Speed regulation type *Tipo regulación* *Type régulation vitesse*	Mechanical/*Mecánico/Mécanique*														
Including *Incluso* *Comprenant*	Radiator, Fan, Starter, charge alternator, Air filter, Muffler, Stop Solenoid, PTO shaft, Fuel Tank, Meter Panel *Radiador, ventilador, arrancadora, alternador carga, filtro aire, silenciador, Solenoide parada, eje toma fuerza, tanque combustible, panel medidor* *Radiateur, ventilateur, démarreur, alternateur charge, filtre air, silencieux, solénoïde d'arrêt, arbre prise force, réservoir carburant, panneau compteur*														

Model *Modelo* *Modèle*	485Z	490NZ	498Z	4102Z	4105Z	4108Z	490T	4108T	4108TL	6102NT	6102T	6102TL	6126T	6126TL	6126TS
Type *Tipo* *Type*	Direct Injection,4 strokes, Water-cooling *Inyección directa, 4 carreras, refrigeración por agua* *Injection directe, 4 temps, refroidissement par eau*														
Intake Type *Tipo de aspirada* *Type d'admission*	Turbo-charging/*Turbocarga/Turbo-charge*									Naturally	Turbo-charging/*Turbocarga/Turbo-charge*				
Bore*Stroke(mm) *Diámetro*Carrera*(mm) *Alésage * Course*(mm)	85*100	90*100	98*105	102*118	105*118	108*118	90*102	108*125	108*125	102*118	102*118	102*118	126*130	126*130	126*155
Cylinder No. *Cilindro No.* *N ° de cylindre*	4	4	4	4	4	4	4	4	4	6	6	6	6	6	6
Displacement *Desplazamiento* *Déplacement*	2.27L	2.54L	3.168L	3.857L	4.087L	4.324L	2.6L	3.8L	3.8L	5.78L	5.78L	5.78L	9.726L	9.726L	9.726L
r/min	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Rated kW kW *nominal* kW *nominale*	44KW	50KW	60KW	73KW	75KW	83KW	55KW	75KW	90KW	110KW	125KW	165KW	200KW	250KW	300KW
Rated HP *HP nominal* *HP nominale*	60HP	68HP	81HP	99HP	102HP	113HP	75HP	100HP	125HP	150HP	170HP	225HP	270HP	340HP	410HP
Fuel Consumption(g/kw.h) *El consumo combustible* *Consommation carburant*	228	228	228	238	238	238	228	218	218	229	229	229	250	250	250
Start Voltage *Voltaje de inicio* *Tension de démarrage*	12V	12V	12V	24V	24V	24V	12V	24V	24V	24V	24V	24V	24V	24V	24V
Speed regulation type *Tipo regulación* *Type régulation vitesse*	Mechanical/*Mecánico/Mécanique*												Electronic *Electrónico* *Électronique*		
Including *Incluso* *Comprenant*	Radiator, Fan, Starter, charge alternator, Air filter, Muffler, Stop Solenoid, PTO shaft, Fuel Tank, Meter Panel *Radiador, ventilador, arrancadora, alternador carga, filtro aire, silenciador, Solenoide parada, eje toma fuerza, tanque combustible, panel medidor* *Radiateur, ventilateur, démarreur, alternateur charge, filtre air, silencieux, solénoïde d'arrêt, arbre prise force, réservoir carburant, panneau compteur*														

TECHNICAL NOTES:
- Industrial diesel engines specifically configured for stationary fire pump service.
- Direct fuel injection, water cooled, 12V / 24V electric start.

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