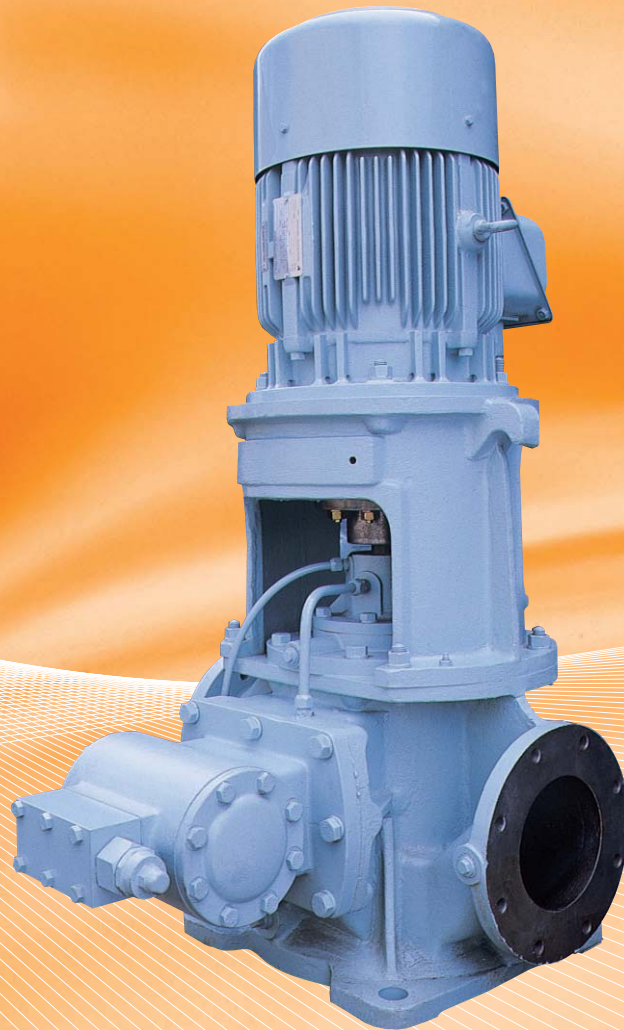




3 SCREW PUMP

**MST
MST-H
MSTE-H**

SCREW



大晃機械工業株式会社
TAIKO KIKAI INDUSTRIES CO., LTD.

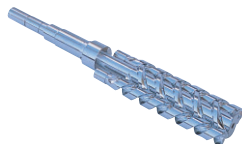
特長

Feature

MSTシリーズは、一般用電動縦形低圧3軸ねじポンプです。

MST series is motor driven vertical low pressure 3 screw pumps.

- ねじ：1本の主ねじとこれに油圧駆動される2本の従ねじの三軸のねじで構成されています。



- This pump is composed of two idler rotors meshed with a power rotor which are cased in a sleeve. The idler rotors are driven by the liquid pressure.

仕様

Specification

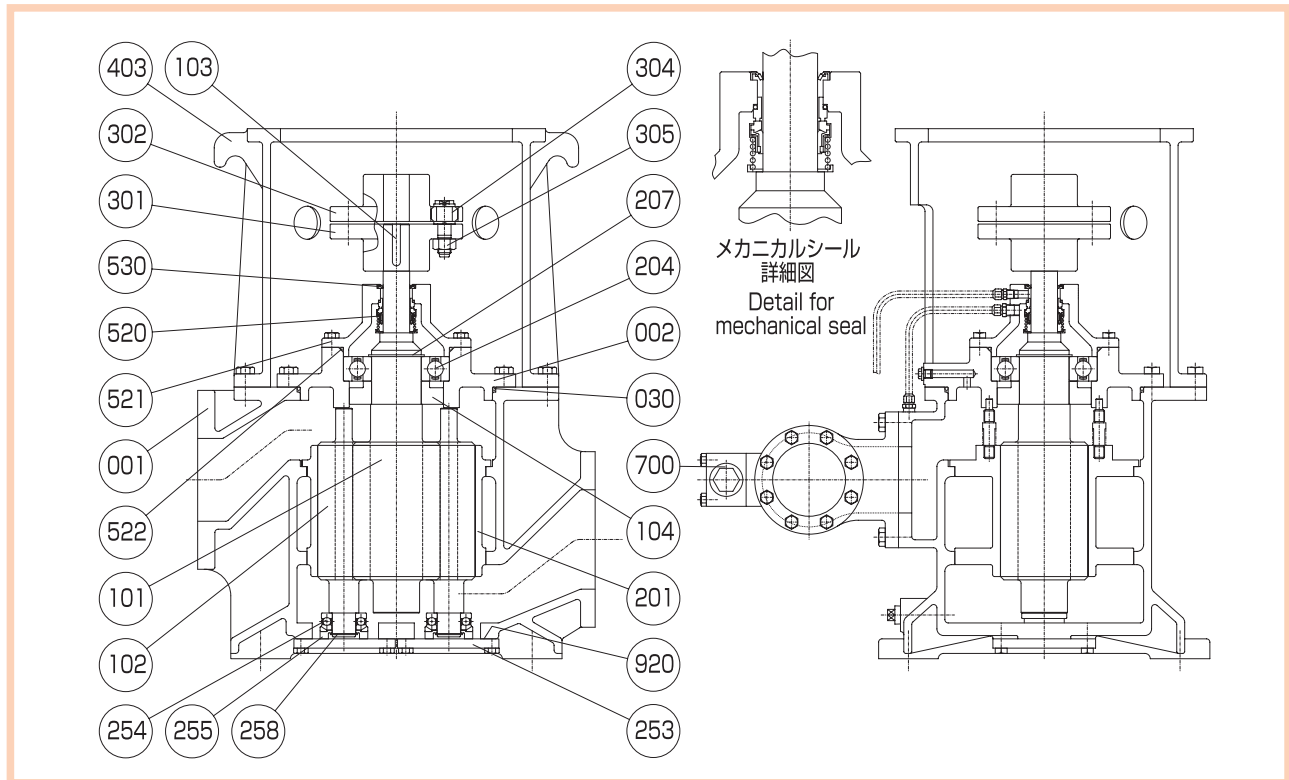
- 温度：取扱い油温は、最高80℃です。
- 軸受：内装軸受式で揚液による自己潤滑方式のため、潤滑性を有する液に適します。
- 軸封：メカニカルシールが標準です。
- フランジ：吸込みJIS5K、吐出しJIS10Kです。
- 軸芯：ポンプと電動機との軸継手の芯振れの許容範囲は、回転速度2000~500min⁻¹において、軸継手側面で0.1mm以下、軸継手端で0.1mm以下です。
- 耐圧試験：計画仕様圧力の2倍が標準です。最高2.00MPaです。
- 吐出し量：吐出し量は、吐出圧力0.80MPa、粘度25.8mm²/sにおける量です。許容吸込圧力範囲は、ポンプ入口において-0.05~0.20MPaです。

- **Temperature** : Maximum handling oil temperature is 80℃.
- **Bearing** : Internal bearing is self-lubricated by pumping liquid which is suitable to serve lubricant fluids.
- **Shaft Seal** : The mechanical seal is our standard.
- **Frang** : Suction is JIS5K and discharge is JIS10K.
- **Centering** : If connecting the pump with the motor, the standard allowable alignment value at the rate of 2000~500min⁻¹ at the shaft coupling side surface should be under 0.1mm and at the shaft coupling end surface should be under 0.1mm.
- **Hydraulic Test** : Twice the value of the designed specification pressure with a maximum value of 2.00MPa.
- **Capacity** : The following capacity shows at viscosity of 25.8mm²/s with discharge pressure of 0.80MPa. The allowable suction pressure range is -0.05~0.20MPa at the pump suction.

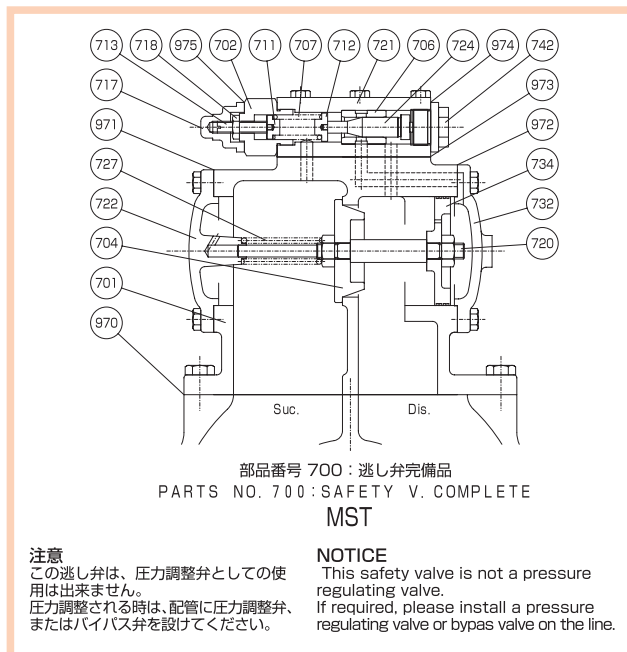
形式 Model No.	口径 Bore (mm) 吸込み×吐出し Suc.× Dis.	吐出し量 Capacity (m ³ /h)			
		60Hz		50Hz	
		1800min ⁻¹	1200min ⁻¹	1500min ⁻¹	1000min ⁻¹
MST- 30T	150×125	30		20	
MST- 40T		40		30	
MST- 50T		50		45	
MST- 65T	150×125	65		55	
MST- 80T		80		65	
MST- 90T		90		75	
MST-100T	200×150	100		85	
MST-110T		110		90	
MST-120T		120		105	
MST-135T	250×200	135	85	115	70
MST-150T		150	95	125	75
MST-165T		165	100	135	80
MST-180T	250×200	180	110	140	90
MST-200T		200	130	160	105
MST-225T		225	150	180	120
MST-250T	300×250	250	160	200	130
MST-270T		270	170	220	140
MST-300T		300	200	250	160

構造及び材質

Structure and Material



No.	Name	Material		Q' ty	No.	Name	Material		Q' ty
		Symbol	Name of Material				Symbol	Name of Material	
001	Casing	FC200	Cast iron	1	258	Retaining ring	SK5	Carbon tool steel	2
002	Casing cover	FC200	Cast iron	1	301	Coupling	FC200	Cast iron	1
030	O-ring	NBR	Rubber	1	302	Coupling	FC200	Cast iron	1
101	Power rotor	S45C	Carbon steel	1	304	Coupling ring	NBR	Rubber	8
102	Idler rotor	D-5	Ductile cast iron	2	305	Coupling bolt & nut	SS400	Mild steel	8
103	Key	S45C	Carbon steel	1	403	Frame	FC200	Cast iron	1
104	Balancing piston	S45C	Carbon steel	1	520	Mechanical seal	-	Sic & Carbon	1
201	Sleeve	FC200	Cast iron	1	521	Mech.seal cover	FC200	Cast iron	1
204	Ball bearing	SUJ2	Bearing steel	1	522	O-ring	NBR	Rubber	1
207	Retaining ring	SK5	Carbon tool steel	1	530	Oil seal	NBR	Rubber	1
253	Bearing cover	SS400	Mild steel	2	700	Safety valve complete	-	-	1
254	Thrust ball bearing	SUJ2	Bearing steel	2	920	Gasket	-	Paper	2
255	Bearing seat	SS400	Mild steel	2					



No.	Name	Material		Q' ty
		Symbol	Name of Material	
701	Safety valve box	FC200	Cast iron	1
702	Safety valve cover	SS400	Mild steel	1
704	Safety valve	S45C	Carbon steel	1
706	Safety valve seat	CAC402	Bronze	1
707	Safety valve spring	SWPA	Piano wire	1
711	Spring carrier	SS400	Mild steel	1
712	Spring carrier	SS400	Mild steel	1
713	Adjust screw	SS400	Mild steel	1
717	Safety valve cap	FC200	Cast iron	1
718	Lock nut	SS400	Mild steel	1
720	Piston rod	S45C	Carbon steel	1
721	Safety valve box	FC200	Cast iron	1
722	Safety valve cover	FC200	Cast iron	1
724	Safety valve	SUS410	Stainless steel	1
727	Safety valve spring	SWPA	Piano wire	1
732	Safety valve cover	FC200	Cast iron	1
734	Piston valve	S45C	Carbon steel	1
742	Safety valve cover	FC200	Cast iron	1
970	Gasket	-	Paper	1
971	Gasket	-	Paper	1
972	Gasket	-	Paper	1
973	Gasket	-	Paper	1
974	Gasket	-	Paper	2
975	Gasket	-	Paper	1

特長

MST-Hシリーズは、一般用電動縦形中圧3軸ねじポンプです。本ポンプは、クロスヘッド形ディーゼル機関専用のクロスヘッド潤滑油ポンプです。

- **ねじ** : 1本の主ねじとこれに油圧駆動される2本の従ねじの三軸のねじで構成されています。



Feature

MST-H series is motor driven vertical medium pressure 3 screw pumps. THIS pump is a CROSSHEAD LUBE OIL PUMP specialized for the crosshead type diesel engine.

- This pump is composed of two idler rotors meshed with a power rotor which are cased in a sleeve. The idler rotors are driven by the liquid pressure.

仕様

- **温度** : 取扱い油温は、最高80℃です。
- **軸受** : 内装軸受式で揚液による自己潤滑方式のため、潤滑性を有する液に適します。
- **軸封** : メカニカルシール式が標準です。
- **フランジ** : 吸込みJIS5K、吐出しJIS16Kです。
- **軸芯** : ポンプと電動機との軸継手の芯振れの許容範囲は、回転速度2000~500min⁻¹において軸継手側面で0.1mm以下、軸継手端で0.1mm以下です。
- **耐圧試験** : 計画仕様圧力の2倍が標準です。最高3.20MPaです。
- **吐出し量** : 吐出し量は、全圧力1.20MPa、粘度25.8mm²/sにおける量です。許容吸込圧力範囲は、ポンプ入口において-0.05~0.50MPaです。

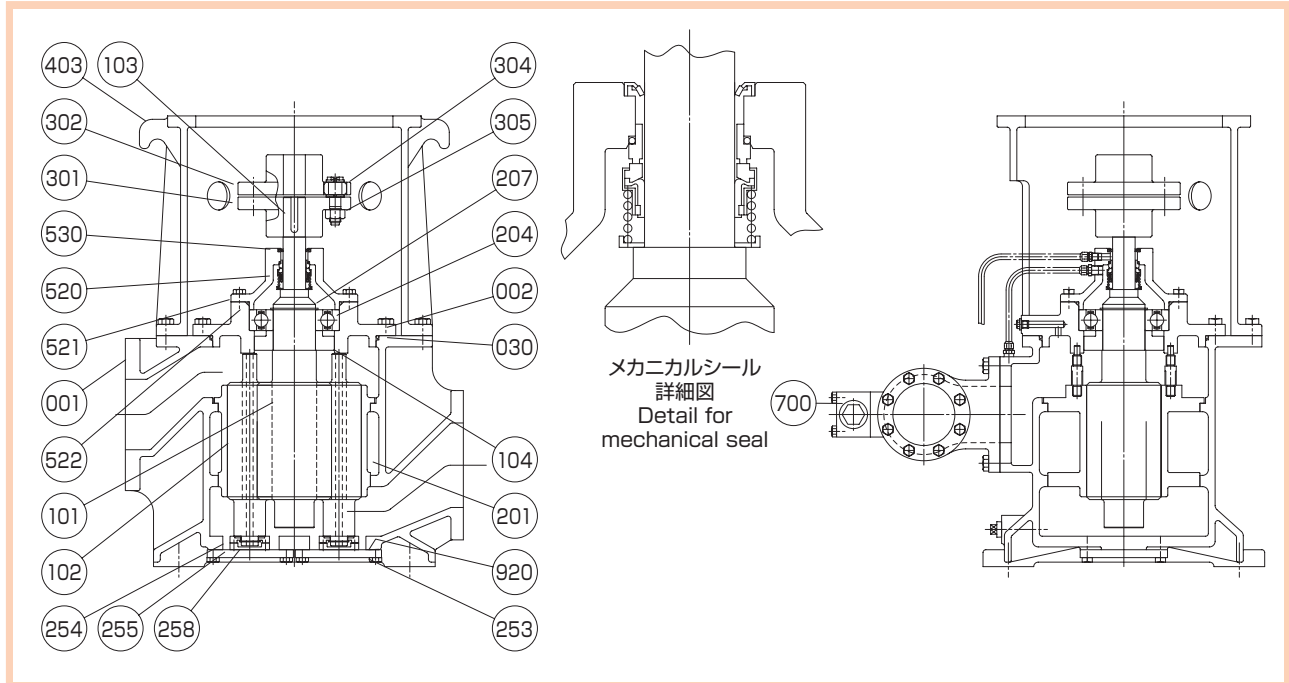
Specification

- **Temperature** : Maximum handling oil temperature is 80℃.
- **Bearing** : Internal bearing is self-lubricated by pumping liquid which is suitable to serve lubricant fluids.
- **Shaft Seal** : The mechanical seal is our standard.
- **Frang** : Both suction is JIS5K and discharge is JIS16K.
- **Centering** : If connecting the pump with the motor, the standard allowable alignment value at the rate of 2000~500min⁻¹ at the shaft coupling side surface should be under 0.1mm and at the shaft coupling end surface should be under 0.1mm.
- **Hydraulic Test** : Twice the value of the designed specification pressure with a maximum value of 3.20MPa.
- **Capacity** : The following capacity shows at viscosity of 25.8mm²/s with total pressure of 1.20MPa. The allowable suction pressure range is -0.05~0.50MPa at the pump suction.

型式 Model No.	口径 Bore (mm) 吸込み×吐出し Suc. × Dis.	吐出し量 Capacity (m ³ /h)	
		1800min ⁻¹	1500min ⁻¹
MST- 30HT	150×125	25	20
MST- 40HT		35	30
MST- 50HT		50	40
MST- 65HT	150×125	60	50
MST- 80HT		75	60
MST- 90HT		85	70
MST- 100HT	200×150	95	75
MST- 110HT		105	85
MST- 120HT		120	95
MST- 135HT	250×200	130	105
MST- 150HT		145	115
MST- 165HT		160	125

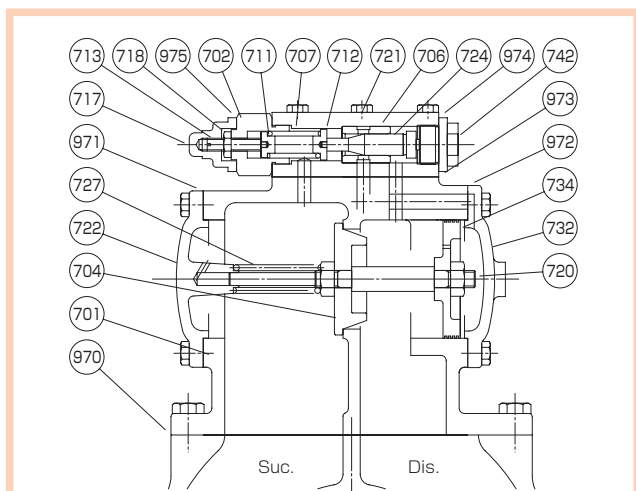
構造及び材質

Structure and Material



No.	Name	Material		Q'ty
		Symbol	Name of Material	
001	Casing	FC200	Cast iron	1
002	Casing cover	FC200	Cast iron	1
030	O-ring	NBR	Rubber	1
101	Power rotor	S45C	Carbon steel	1
102	Idler rotor	D-5	Ductile cast iron	2
103	Key	S45C	Carbon steel	1
104	Balancing piston	S45C	Carbon steel	1
201	Sleeve	FC200	Cast iron	1
204	Ball bearing	SUJ2	Bearing steel	1
207	Retaining ring	SK5	Carbon tool steel	1
253	Bearing cover	SS400	Mild steel	2
254	Thrust bearing	CAC603	Lead bronze	2
255	Bearing seat	SS400	Mild steel	2

No.	Name	Material		Q'ty
		Symbol	Name of Material	
258	Retaining ring	SK5	Carbon tool steel	2
301	Coupling	FC200	Cast iron	1
302	Coupling	FC200	Cast iron	1
304	Coupling ring	NBR	Rubber	8
305	Coupling bolt & nut	SS400	Mild steel	8
403	Frame	FC200	Cast iron	1
520	Mechanical seal	—	Sic & Carbon	1
521	Mech. seal cover	FC200	Cast iron	1
522	O-Ring	NBR	Rubber	1
530	Oil seal	NBR	Rubber	1
700	Safety valve complete	—	—	1
920	Gasket	—	Paper	2



部品番号 700 : 逃し弁完備品
PARTS NO. 700 : SAFETY V. COMPLETE

MST-H

注意

この逃し弁は、圧力調整弁としての使用はできません。
圧力調整される時は、配管に圧力調整弁、またはバイパス弁を設けてください。

NOTICE

This safety valve is not a pressure regulating valve.
If required, please install a pressure regulating valve or bypass valve on the line.

No.	Name	Material		Q'ty
		Symbol	Name of Material	
701	Safety valve box	FC200	Cast iron	1
702	Safety valve cover	SS400	Mild steel	1
704	Safety valve	S45C	Carbon steel	1
706	Safety valve seat	CAC402	Bronze	1
707	Safety valve spring	SWPA	Piano wire	1
711	Spring carrier	SS400	Mild steel	1
712	Spring carrier	SS400	Mild steel	1
713	Adjust screw	SS400	Mild steel	1
717	Safety valve cap	FC200	Cast iron	1
718	Lock nut	SS400	Mild steel	1
720	Piston rod	S45C	Carbon steel	1
721	Safety valve box	FC200	Cast iron	1
722	Safety valve cover	FC200	Cast iron	1
724	Safety valve	SUS410	Stainless steel	1
727	Safety valve spring	SWPA	Piano wire	1
732	Safety valve cover	FC200	Cast iron	1
734	Piston valve	S45C	Carbon steel	1
742	Safety valve cover	FC200	Cast iron	1
970	Gasket	—	Paper	1
971	Gasket	—	Paper	1
972	Gasket	—	Paper	1
973	Gasket	—	Paper	1
974	Gasket	—	Paper	2
975	Gasket	—	Paper	1

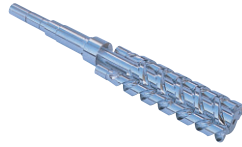
特長

Feature

MSTEシリーズは、一般用電動縦型低粘度用3軸ねじポンプです。

MSTE series is motor driven vertical 3 screw pumps suitable for low viscous oil

- **ねじ** : 1本の主ねじとこれに油圧駆動される2本の従ねじの三軸のねじで構成されています。



- This pump is composed of two idler rotors meshed with a power rotor which are cased in a sleeve. The idler rotors are driven by the liquid pressure.

仕様

Specification

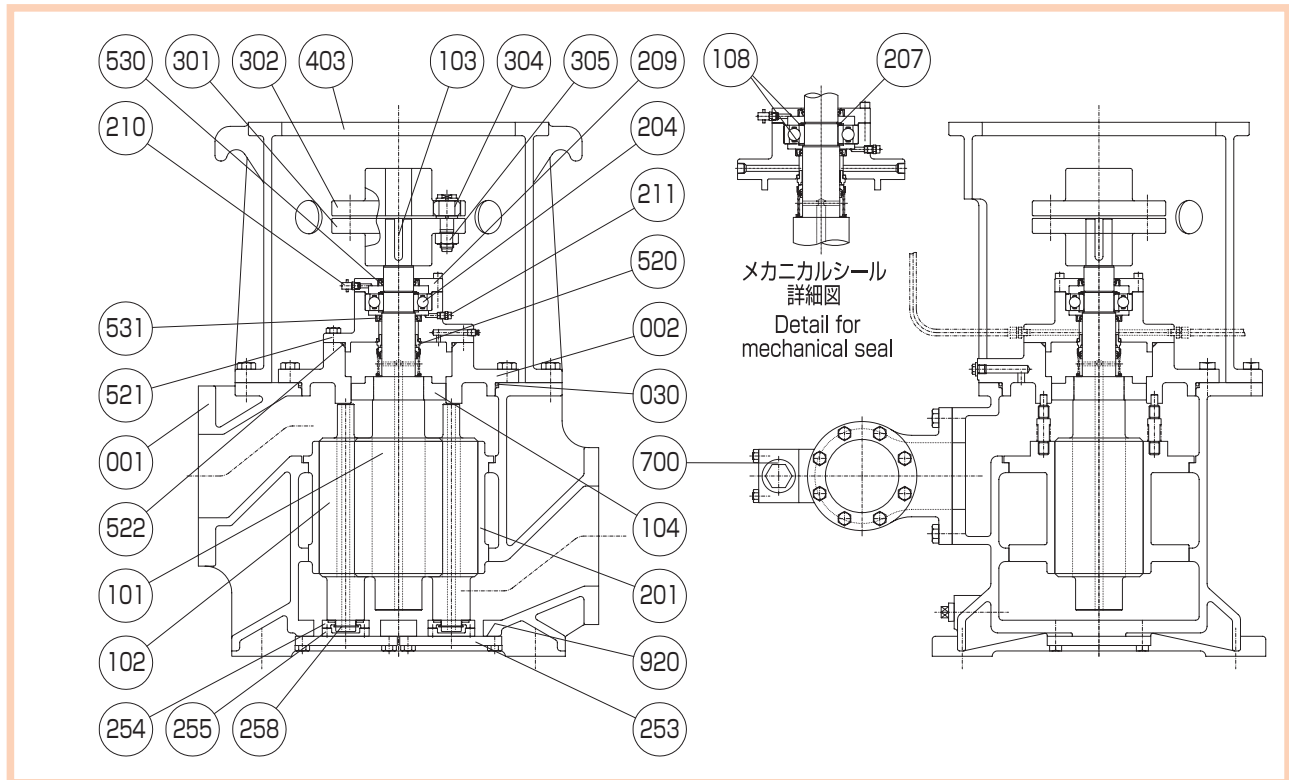
- **温度** : 取扱い油温は、最高80℃です。
- **軸受** : 外装軸受式となっており、燃料油(MGO)の低粘度液に対応しております。
- **軸封** : メカニカルシールが標準です。
- **フランジ** : 吸込みJIS5K、吐出しJIS16Kです。
- **軸芯** : ポンプと電動機との軸継手の芯振れの許容範囲は、回転速度2000~500min⁻¹において、軸継手側面で0.1mm以下、軸継手端で0.1mm以下です。
- **耐圧試験** : 計画仕様圧力の2倍が標準です。最高2.00MPaです。
- **吐出し量** : 吐出し量は、吐出圧力0.80MPa、粘度25.8mm²/sにおける量です。許容吸込圧力範囲は、ポンプ入口において-0.05~0.20MPaです。

- **Temperature** : Maximum handling oil temperature is 80°C.
- **Bearing** : External bearing is adopted in order to handle low viscous oil (MGO).
- **Shaft Seal** : The mechanical seal is our standard.
- **Frang** : Suction is JIS5K and discharge is JIS16K.
- **Centering** : If connecting the pump with the motor, the standard allowable alignment value at the rate of 2000~500min⁻¹ at the shaft coupling side surface should be under 0.1mm and at the shaft coupling end surface should be under 0.1mm.
- **Hydraulic Test** : Twice the value of the designed specification pressure with a maximum value of 2.00MPa.
- **Capacity** : The following capacity shows at viscosity of 25.8mm²/s with discharge pressure of 0.80MPa. The allowable suction pressure range is -0.05~0.20MPa at the pump suction.

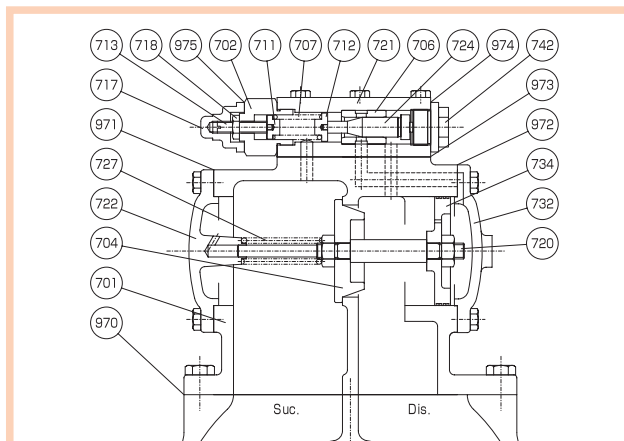
型式 Model No.	口径 Bore(mm) 吸込み×吐出し Suc. × Dis.	吐出し量 Capacity(m ³ /h)	
		60Hz	50Hz
		1800min ⁻¹	1500min ⁻¹
MSTE- 30HA	150 × 125	30	20
MSTE- 40HA		40	30
MSTE- 50HA		50	45
MSTE- 65HA		65	55
MSTE- 80HA	150 × 125	80	65
MSTE- 90HA		90	75
MSTE-100HA		100	85
MSTE-110HA	200 × 150	110	90
MSTE-120HA		120	105

構造及び材質

Structure and Material



No.	Name	Material		Q' ty	No.	Name	Material		Q' ty
		Symbol	Name of Material				Symbol	Name of Material	
001	Casing	FC200	Cast iron	1	254	Thrust bearing	CAC603	Lead bronze	2
002	Casing cover	FC200	Cast iron	1	255	Bearing seat	SS400	Mild steel	2
030	O-ring	FPM	Rubber	1	258	Retaining ring	SK5	Carbon tool steel	2
101	Power rotor	S45C	Carbon steel	1	301	Coupling	FC200	Cast iron	1
102	Idler rotor	D-5	Ductile cast iron	2	302	Coupling	FC200	Cast iron	1
103	Key	S45C	Carbon steel	1	304	Coupling ring	NBR	Rubber	8
104	Balancing piston	S45C	Carbon steel	1	305	Coupling bolt & nut	SS400	Mild steel	8
108	Spacer	SS400	Mild steel	2	403	Frame	FC200	Cast iron	1
201	Sleeve	FC200	Cast iron	1	520	Mechanical seal	-	Sic & Carbon	1
204	Ball Bearing	SUJ2	Bearing steel	1	521	Mech. seal cover	FCD400	Ductile cast iron	1
207	Retaining ring	SK5	Carbon tool steel	1	522	O-ring	FPM	Rubber	1
209	Bearing cover	SS400	Mild steel	1	530	Oil seal	NBR	Rubber	1
210	Grease nipple	C3602	Brass	1	531	Oil seal	NBR	Rubber	1
211	Grease fitting	C3602	Brass	1	700	Safety valve complete	-	-	1
253	Bearing cover	SS400	Mild steel	2	920	Gasket	-	Paper	2



部品番号 700 : 逃し弁完備品
PARTS NO. 700 : SAFETY V. COMPLETE
MSTE

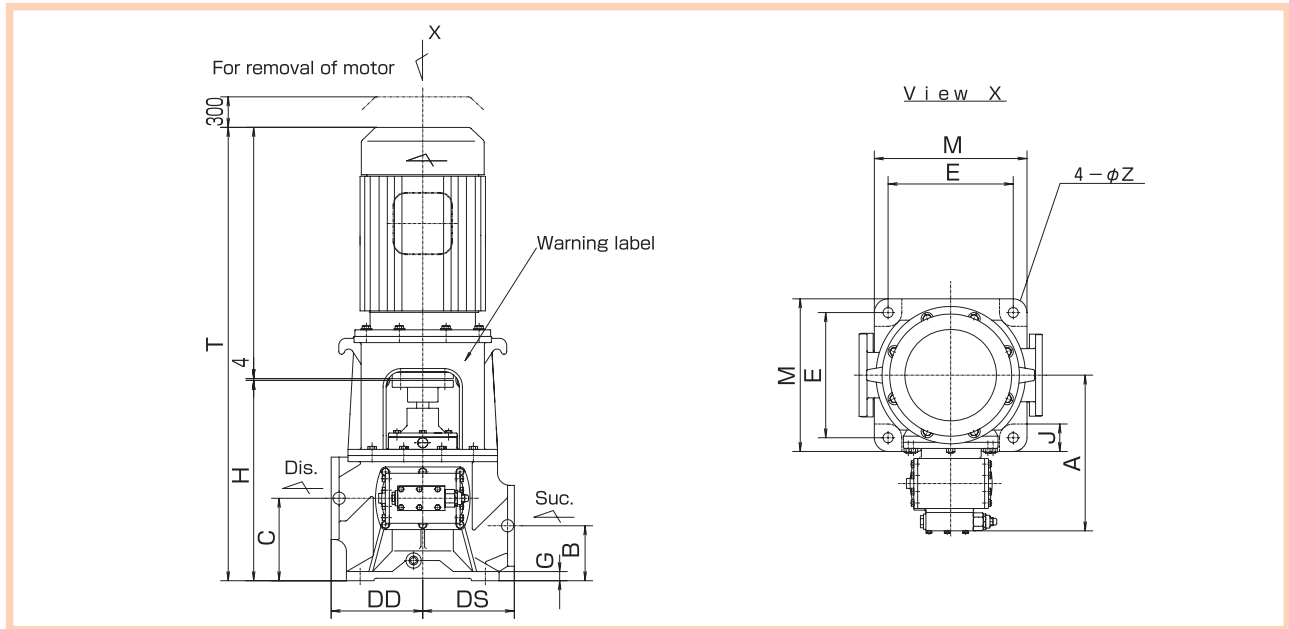
注意
この逃し弁は、圧力調整弁としての使用は出来ません。
圧力調整される時は、配管に圧力調整弁、またはバイパス弁を設けてください。

NOTICE
This safety valve is not a pressure regulating valve.
If required, please install a pressure regulating valve or bypass valve on the line.

No.	Name	Material		Q' ty
		Symbol	Name of Material	
701	Safety valve box	FC200	Cast iron	1
702	Safety valve cover	SS400	Mild steel	1
704	Safety valve	S45C	Carbon steel	1
706	Safety valve seat	CAC402	Bronze	1
707	Safety valve spring	SWPA	Piano wire	1
711	Spring carrier	SS400	Mild steel	1
712	Spring carrier	SS400	Mild steel	1
713	Adjust screw	SS400	Mild steel	1
717	Safety valve cap	FC200	Cast iron	1
718	Lock nut	SS400	Mild steel	1
720	Piston rod	S45C	Carbon steel	1
721	Safety valve box	FC200	Cast iron	1
722	Safety valve cover	FC200	Cast iron	1
724	Safety valve	SUS410	Stainless steel	1
727	Safety valve spring	SWPA	Piano wire	1
732	Safety valve cover	FC200	Cast iron	1
734	Piston valve	S45C	Carbon steel	1
742	Safety valve cover	FC200	Cast iron	1
970	Gasket	-	Paper	1
971	Gasket	-	Paper	1
972	Gasket	-	Paper	1
973	Gasket	-	Paper	1
974	Gasket	-	Paper	2
975	Gasket	-	Paper	1

寸法

Dimension



形式 Model No.	口径 Bore 吸込み×吐出し Suc.×Dis.	寸法 Dimension(mm)													ポンプ質量 Pump Weight (kg)
		A	B	C	DS	DD	E	G	H	J	M	T	Z		
MST MST-H MSTE	30	150×125	500	180	215	270	270	330	25	571	75	400	1250	33	310
	40														
	50														
	65														
	80	150×125	500	180	270	300	300	410	30	656	90	500	1535	33	
	90														
	100														
	110														
MST- MST-H	120	200×150	550	210	260	310	310	450	30	670	100	550	1670	33	400
	135														
	150														
MST- MST-H	165	250×200	570	250	310	340	350	450	35	786	100	550	1785	33	470
	180														
	200														
MST-	225	200×150	550	210	260	310	310	450	30	670	100	550	2070	33	560
	250														
	270														
MST-	300	250×200	570	250	310	340	350	450	35	786	100	550	2190	39	660

※注意：T高さはモーターメーカーにより異なります。 ※電動機メーカー及び形番によりT高さ及び質量は異なります。
 Depend on motor manufacturer and model, measurement of T and weight maybe changed.

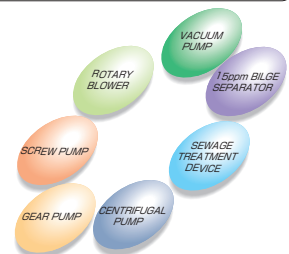
大晃機械工業株式会社 TAIKO KIKAI INDUSTRIES CO., LTD.

URL <http://www.taiko-kk.com>

- 本社・工場 〒742-1598 山口県熊毛郡田布施町大字下田布施209-1
TEL: (0820)52-3113~4 FAX: (0820)53-1001 E-mail: business@taiko-kk.com
- 東京支店 〒101-0061 東京都千代田区三崎町3-4-9 水道橋MSビル4階
TEL: (03)3221-8551 FAX: (03)3221-8555 E-mail: tokyo-br@taiko-kk.com
- 大阪支店 〒541-0048 大阪市中央区瓦町3-4-7 KCビル8階
TEL: (06)6231-6241 FAX: (06)6222-3295 E-mail: osaka-br@taiko-kk.com

北京駐在事務所・上海駐在事務所・韓国大晃

- Head Office & Factory 209-1 Shimotabuse, Tabuse-cho, Kumage-gun, Yamaguchi Pref. 742-1598 Japan
TEL: 81-820-52-3113~4 FAX: 81-820-53-1001 E-mail: business@taiko-kk.com
 - Tokyo Branch 4th floor, Suidobashi MS Building, 3-4-9 Misaki-cho, Chiyoda-ku, Tokyo 101-0061 Japan
TEL: 81-3-3221-8551 FAX: 81-3-3221-8555 E-mail: tokyo-br@taiko-kk.com
 - Osaka Branch 8th floor, KC Building, 3-4-7 Kawara-machi, Chuo-ku, Osaka 541-0048 Japan
TEL: 81-6-6231-6241 FAX: 81-6-6222-3295 E-mail: osaka-br@taiko-kk.com
- Beijing Office・Shanghai Office・Taiko Korea



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- The sizes and specifications of the products in this catalog are subject to improvement.