

جمهوری اسلامی ایران
سازمان مدیریت و برنامه‌ریزی کشور



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معاونت امور فنی

دفتر امور فنی ، تدوین معیارها و کاهش خطر پذیری ناشی از زلزله

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نشریه شماره ۹-۲۸۷

طراحی بناهای درمانی (۹)

(جلد دوم)

**راهنمای طراحی تاسیسات مکانیکی
خدمات تشخیصی غیرتهاجمی قلب**

نشریه شماره ۹-۲۸۷



ریاست جمهوری

سازمان مدیریت و برنامه‌ریزی کشور
رئیس سازمان

بسمه تعالی

شماره : ۱۰۰/۵۹۲۸۶	بخشنامه به دستگاه‌های اجرایی، مهندسان مشاور و پیمانکاران
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موضوع : طراحی بناهای درمانی ۹

به استناد آیین‌نامه استانداردهای اجرایی طرح‌های عمرانی، موضوع ماده (۲۳) قانون برنامه و بودجه و در چارچوب نظام فنی و اجرایی کشور (مصوبه شماره ۴۲۳۳۹/ت/۳۳۴۹۷ هـ، مورخ ۱۳۸۵/۴/۲۰ هیأت محترم وزیران)، به پیوست نشریه شماره ۹-۲۸۷ دفتر امور فنی، تدوین معیارها و کاهش خطرپذیری ناشی از زلزله این سازمان، با عنوان «طراحی بناهای درمانی ۹» از نوع گروه سوم، در مجموعه سه جلدی با عناوین زیر ابلاغ می‌شود

جلد یکم : راهنمای برنامه‌ریزی و طراحی معماری، خدمات تشخیصی غیرتهاجمی قلب

جلد دوم : راهنمای طراحی تأسیسات مکانیکی، خدمات تشخیصی غیرتهاجمی قلب

جلد سوم : راهنمای طراحی تأسیسات برقی، بخش خدمات تشخیصی غیرتهاجمی قلب

دستگاه‌های اجرایی، مهندسان مشاور، پیمانکاران و عوامل دیگر می‌توانند از این نشریه به عنوان راهنما استفاده کنند در صورتی که روش‌ها، دستورالعمل‌ها و راهنماهای بهتری در اختیار داشته باشند، رعایت مفاد این نشریه الزامی نیست.

عوامل یاد شده باید نسخه‌ای از دستورالعمل‌ها، روش‌ها یا راهنماهای جایگزین را برای دفتر امور فنی، تدوین معیارها و کاهش خطرپذیری ناشی از زلزله، ارسال دارند.

امیر منصوری پرفعی
معاون رئیس جمهور و رئیس سازمان

اصلاح مدارک فنی

خواننده گرامی:

امور نظام فنی سازمان مدیریت و برنامه ریزی کشور، با استفاده از نظر کارشناسان برجسته مبادرت به تهیه این ضابطه نموده و آن را برای استفاده به جامعه مهندسی کشور عرضه نموده است. با وجود تلاش فراوان، این اثر مصون از ایرادهایی نظیر غلط‌های مفهومی، فنی، ابهام، ابهام و اشکالات موضوعی نیست.

از این‌رو، از شما خواننده گرامی صمیمانه تقاضا دارد در صورت مشاهده هرگونه ایراد و اشکال فنی مراتب را به صورت زیر گزارش فرمایید:

- ۱- شماره بند و صفحه موضوع مورد نظر را مشخص کنید.
 - ۲- ایراد مورد نظر را به صورت خلاصه بیان دارید.
 - ۳- در صورت امکان متن اصلاح شده را برای جایگزینی ارسال نمایید.
 - ۴- نشانی خود را برای تماس احتمالی ذکر فرمایید.
- کارشناسان این امور نظرهای دریافتی را به دقت مطالعه نموده و اقدام مقتضی را معمول خواهند داشت. پیشاپیش از همکاری و دقت نظر جنابعالی قدردانی می‌شود.

نشانی برای مکاتبه: تهران، میدان بهارستان، خیابان صفی علی‌شاه، سازمان مدیریت و برنامه ریزی کشور، امور نظام فنی

مرکز تلفن ۳۳۲۷۱

Email: info@nezamfanni.ir

web: nezamfanni.ir

Äü

Y gKŽŮ Äü ØŦØŦ ÜÄü ðg ř Ů Ů Σ σ Ů g ŽŮ QŽΣ ÜÄ ŽŮ g ð Σ Äf Ä
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ð ÊÜ ĞŮ Ů ll ğ Ů ğ ð Ä g Äf Ä ØÄŮg Y ŮŮ Ŧ Σ HŮŮ g Y ð ll ÜŮg Žg
g Y Äg Y Ů zü ΣY ø ʅ Ů g ŽŮ ØÄ ŽŮ l ə
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Ů" f Ä ÄŮg ŮÜ Ů Žʅ Y Ä Y g ð Äf Ä g Ůü nj l j j σ
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ĤĤ - ϕ Kdž

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Ÿ dž H Σ ŮÆf Ä ģ g džŸ Ų dž Ä g ÆŮÆŦŮ Ÿ dž ģ Æ
nj Ų a gŸ žŮg ø Ů dž Ų a Ů dž H ø g Æ Ÿ g Ů ÆĜŮ Ĝ šŮ ø
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(Electrocardiography-ECG) $\text{Ā} \text{ } \text{Ů} \text{ } \text{Y} \text{ } \text{Ů} \text{ } \text{k} \text{ } \text{-}$
 (Exercise Stress Test) $(\text{p} \text{ } \text{t} \text{ } \text{Ů}) \text{ } \text{t} \text{ } \text{q} \text{ } \text{a} \text{ } \text{I} \text{ } \text{Ů} \text{ } \text{I} \text{ } \text{d} \text{ } \text{-}$
 (Transthoracic Echocardiogram) $\text{Ů} \text{ } \text{Ā} \text{ } \text{Ů} \text{ } \text{Y} \text{ } \text{-}$
 (Transesophageal Echocardiography) $\text{K} \text{ } \text{Ů} \text{ } \text{Ā} \text{ } \text{Ů} \text{ } \text{Y} \text{ } \text{-}$
 (Stress Echocardiogram) $\text{I} \text{ } \text{Ů} \text{ } \text{q} \text{ } \text{Ů} \text{ } \text{Y} \text{ } \text{-}$
 (Holter) $\text{t} \text{ } \text{q} \text{ } \text{a} \text{ } \text{k} \text{ } \text{g} \text{ } \text{-}$
 (Pacemaker) $\text{Ů} \text{ } \text{Ů} \text{ } \text{Ů} \text{ } \text{-}$
 (Cardiopulmonary Exercise Test) $(\text{p} \text{ } \text{t} \text{ } \text{Ů}) \text{ } \text{Ā} \text{ } \text{Ů} \text{ } \text{Ā} \text{ } \text{Ů} \text{ } \text{Ā} \text{ } \text{Ů} \text{ } \text{I} \text{ } \text{Ů} \text{ } \text{I} \text{ } \text{d} \text{ } \text{-}$

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(ŮŮ Ĥgğ Ů Ĥgğ ōă Ō) † ſă DždžŮ Ů ōŲ ĀăŮ g žŲ -
ŮŮ Ĥgğ ōă Ō) † ſă DždžŮ Ů ōŲ ĀăŮ Ů ĀăŮ g žŲ -
(ŮŮ Ĥgğg

† Ā

" Ĥk ŮŮ ϱΣ I Ů j g Njə Ā Ÿ
. ōŮ dž Ů " † ſă Ů dž Ů Θ

ϱ ōŮ Ā ō ō ŮĀŮŮ ōŮ ōŲŮ Ů ĀŲ Ā g ōŮ ĀŮ Ů gŸ Ĥk ϱΣ j Ĥ-Ĥ
ōΣ Ů Ā gĀŮŮ Ηυ Ÿ g Ÿ Ÿ Ÿ ĤĀĖž Ů dž II j Ů g žŲ Ů žg
.Ÿ Ÿ ! dž Ů žŲ † ſă ĀĖžΣ Ηυ ōŮ ĀdžŮ Ů Ů g Njə Ÿ Ÿ

Ů ōă ō Ηυ ōg Lj ōŮŮ ŮĀ ō Ů ōŲŮ Ů ĀŲ Ā ĀŮ ϱΣ j Ĥ dž žII ōŲ Ÿ Ĥ-Ĥ
. dž II h Ůă Ů ā Ů gğ Σ dž Ů I Ů j g Njə

(Initial Cost)	0x	g	z	g	-
(Energy Cost)	t U dZ	g	z	g	-
(Operating Cost)	Wg	g	z	g	-
(Redundancy) Y	r Aa lj	g	z	g	-
(Maintenance Cost	Y dz HJ HJ	g	z	g	-

$\bar{Q} Q \bar{a}$ p $\hat{h}-\hat{h}-\hat{h}$

(Ventilation) $\dot{V}_T$ $\dot{V}_E$ $\dot{V}_D$ -
 $\dot{V}_T$ $\dot{V}_E$ $\dot{V}_D$ $\dot{V}_T$ $\dot{V}_E$ -

ǫǧǧǫdžə ʏ ! ǫdžǫ ǫ ʊʏ ʌ ɐ ɸ Ǻ ǧ ǔ ǧ ǔ ǾǾǾ ʏ ǾǾ ǺǾ Ǿž ʏ (ǔ)
 .ʏ ʌǺ ǾǾž Ǻ ǺǔǾǾǾ ʏǾ Ǿʏ Ǻ ǾǺǾǾǾ

q oū Ē ø Ō Ʀ ø Ʈ q oū ŪĒ Ƨǵ Ƴ ǵQōā Ƴ ! dʒʋ ŪĒΣ Ʈ ǵ Σ Ʈ Ƨ-Ƨ-Ƨ-Ƨ
 . Σ σ ǻ ā ĒŪŌ Ū ƧŌ σ ǵ Ƨ ǵ Ūk Ā

$t \check{\rho} \check{\alpha}$ $\check{U}$ $d\check{z} U$ Θ $\check{U}$ $\check{U}$ $\Theta \check{z}$ $t \check{A}$ $\check{f} \check{A}$
 $\check{U} \Theta \check{U} : \rho$ $\check{K} d\check{z}$

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$\check{J} \emptyset$ $\emptyset \gamma$ $d\check{z} \check{D} \check{z}$ $\check{F} \check{D} \check{z}$ $d\check{z} \check{D} \check{z}$ $\rho \check{u}$ $g d\check{z} \check{U}$ $\gamma k U$ $\check{A}$ $\check{A}$ $\check{u}$ g $\check{u}$ $\check{T}$ **($\check{u}$)**
 nj $\emptyset \check{I} \check{z}$ $\gamma \emptyset \check{u}$ $D\check{z}$ $(\gamma \check{K} \check{a} \check{f} \check{R} \check{f})$ $\emptyset$ g (peak) $\check{z}$ nj $\check{I}$ $\check{u}$ $g Nj \check{a}$
 $\gamma \check{A} \check{a} \check{A}$ $d\check{z} \sigma$ γ $\emptyset$ g

$\emptyset \check{A} \check{f} \check{A} nj$ $\emptyset \check{I} "$ $\emptyset \check{u} \check{z} \sigma$ $" \check{h} \check{T} \check{H} d\check{z} \check{J} \check{I}$ γ **(k)**
 nj $\check{I} "$ $g H \check{I}$ $\gamma \check{u} \sigma$ $d\check{z} \check{T}$ $\check{U} \check{u} \check{w} \check{a}$ $H \sigma$ $g Lj$ $\check{u} \sigma \check{u} \check{A}$ $\check{u}$ $\check{z} \check{O} \sigma$ $\check{u}$ $\check{T}$
 $\emptyset g$ $\check{u} \sigma$ $\check{T}$ $\emptyset \check{u} \check{w}$ $\sigma \check{u} \check{A} \check{z}$ $d\check{z} \check{I} \gamma H \check{u} \check{z}$ $\check{O} \check{r}$ $g H \check{I}$ $\check{J}$ $\check{A} \check{z}$ $\check{A} \check{z} \sigma$ $\check{A} \check{f} \check{A}$
 $\gamma \check{O} \check{u}$ $\check{a} \check{A}$ $\check{A}$ $\check{u}$

$\emptyset \check{O} \check{U} \check{A} d\check{z} \check{O} U$ σ $\check{z} \check{I} U$ $\gamma \check{A} \check{U} \check{O} \check{U}$ $\check{z} \check{O} \sigma$ $g \check{z}$ $g \check{I} g$ $\gamma \check{u} \check{A}$ $\check{U}$ $\check{U}$ **H-h-h**
 $\check{I} \check{I}$ $\check{p}$ $\check{t} \check{Q} \check{a} \check{A} \check{z} \check{z} H \sigma$

$\check{u} \check{A}$ σ $\check{A} \sigma$ $\check{u}$ g $\rho \check{e}$ $\check{O} \check{U}$ $\check{I}$ $\check{a}$ $\sigma \gamma \check{I} k U$ $\check{a} \gamma$ $\check{I} U$ $g Nj \check{a}$ $g nj$ $\check{I}$ **H-h-h-h**
 $\gamma \check{I}$ $\check{O} \check{u}$ $\check{Q} \Sigma$ (Cooling Loads) $\check{A}$ g $! d\check{z} \check{O}$

$\check{z} \check{I} \gamma H \check{u} \check{z}$ $\check{O} \check{r} \check{H}$ $d\check{z} \check{J} \check{I}$ $\check{O} \check{r}$ $g \check{g}$ $\Sigma \gamma \check{I} U \check{J}$ $g Nj \check{a}$ $g nj$ $\check{I}$ **($\check{u}$)**

$\check{I} \check{O} U$ $\check{O} \check{z} \check{z}$ $\check{U} \check{U}$ $\check{O} d\check{z} Nj \check{O} \check{A}$ $\emptyset \sigma$ $(\sigma \check{z} \check{O} \sigma)$ $\check{t} \sigma$ $\check{O} \check{K} \sigma$ $\check{Q} D\check{z} \check{a}$ **h-h-h-h**
 $\check{Q} \check{O} D\check{z} \check{a}$ $\check{J}$ $\check{g} \check{A} \check{I}$ $\check{a}$ $\gamma \gamma \check{A} \check{H} \Sigma$ $\sigma \check{K} \check{a}$ $\check{p} \check{t} \check{A} \gamma$ $\gamma d\check{z} \check{a}$ $\gamma \check{U} \check{t} \check{Q} \check{a} \check{A} \check{z} \check{z} H \sigma$ $\check{O} \check{U} D\check{z} \check{O} U$ σ
 $\check{z} \check{I} g \check{I} \check{a}$ $\check{t}$ $\check{U} \check{E} \sigma$ $\check{t} \Sigma$

$\check{t}$ $\check{U} d\check{z}$ $d\check{z}$ **H-h**

$\check{O} \check{p} \sigma$ $\check{t} \check{Q} \check{a} \check{A} \check{z} \check{z} H \sigma$ $\check{O} \check{U} D\check{z} \check{O} U$ σ $\check{I} \check{O} U$ $g Nj \check{a} \check{A} \check{U} \check{O} \check{U}$ $\check{z} \check{O} \sigma$ $\check{t}$ $\check{U} d\check{z}$ $\gamma \check{A} \check{Q}$ $\check{U}$ **H-h-h**
 $\check{z} \check{I} \check{u} \check{u} \check{z} \check{J} \check{U}$ $\check{A}$ $\check{U}$ γ

$\check{z} \check{O}$ $g nj$ $\check{I}$ -
 $\check{K} \check{O} \gamma$ $g nj$ $\check{I}$ -
 $\check{z} \check{O}$ $g \Sigma \check{U}$ -
 $\check{A} \check{U} \check{O} \check{U}$ $\check{z} \check{O} \sigma$ $g \check{Q} \check{z} \check{O}$ -

$\text{f } \check{\text{a}}$ $\check{\text{U}} \text{ d}\check{\text{z}} \text{ U } \Theta$ $\check{\text{U}} \check{\text{U}} \Theta \text{ } \text{f } \check{\text{A}}$ $\text{f } \check{\text{A}}$
 $\check{\text{U}} \Theta \check{\text{U}} : \text{q}$ $\check{\text{K}} \text{d}\check{\text{z}}$

e nj h-h-h
 $\text{t } \emptyset \check{\text{U}} \text{ d}\check{\text{z}} \text{ I } \text{g } \emptyset \text{ Y } \check{\text{U}} \text{d} \text{ } \text{a } \text{t } \check{\text{A}} \text{ Y } \emptyset \text{ Y } \text{d}\check{\text{z}} \check{\text{a}} \text{ } \check{\text{O}} \text{h} \text{ "Q}\check{\text{O}}\check{\text{Q}}\check{\text{a}} \text{ } \text{p} \text{ (h-h-h)" Y } \check{\text{A}} \text{ } \check{\text{U}} \text{ } \text{h-h-h-h}$
 $\text{.Y } \parallel \check{\text{U}} \text{ } \check{\text{O}} \check{\text{U}} \text{ } \check{\text{O}} \text{ } \text{g nj } \parallel \check{\text{A}} \parallel \check{\text{A}} \check{\text{U}} \check{\text{O}} \check{\text{U}} \text{ } \text{t } \check{\text{O}} \text{ } \emptyset$

$\check{\text{K}}$ nj h-h-h
 $\emptyset \text{ } \check{\text{O}}\check{\text{r}} \text{ } \emptyset \text{g}\check{\text{g}} \text{ } \emptyset \Sigma " \text{ Y } \text{f } \check{\text{O}}\check{\text{Q}}\check{\text{a}} \check{\text{A}} \check{\text{Z}} \Sigma \text{ } \check{\text{O}}\check{\text{U}} \text{ D}\check{\text{Z}} \check{\text{O}} \text{U } \emptyset \text{ } \text{I } \emptyset \text{U } \check{\text{U}} \text{q } \text{U } \text{g } \text{Nj}\check{\text{a}} \check{\text{K}} \check{\text{O}} \text{Y } \text{g } \text{nj } \parallel \text{h-h-h-h}$
 $\emptyset \text{g } \text{nj } \emptyset \parallel \text{Y } \emptyset \text{ } \check{\text{O}} \text{ } \text{t } \emptyset \check{\text{U}} \text{ d}\check{\text{z}} \text{ Y } \check{\text{A}} \text{ } \Sigma \text{ } \text{a } \text{D}\check{\text{z}} \text{ } \text{d} \parallel \text{Y } \text{H}\check{\text{O}} \text{ } \check{\text{O}}\check{\text{r}} \text{ "H" } \text{d} \text{ } \check{\text{Z}} \parallel$
 $\text{.Y } \check{\text{O}}\check{\text{U}} \text{ } \check{\text{a}} \text{d} \text{Y } \check{\text{A}} \text{ Y } \text{ } \text{ } \check{\text{A}} \text{ } \text{g } \text{Nj}\check{\text{a}} \text{ } \check{\text{Y}} \text{ } \text{f } \text{g } \text{Y } \text{f } \text{ } \text{d}$

$\emptyset \text{g } \check{\text{O}}\check{\text{K}} \check{\text{U}} \text{a } \check{\text{Y}} \emptyset \text{ } \emptyset \text{ } \check{\text{A}} \text{d}\check{\text{Z}} \check{\text{O}} \text{U } \emptyset \text{ } \check{\text{O}}\check{\text{K}} \check{\text{U}} \text{a } \check{\text{U}} \text{ } \text{f } \text{t } \text{f } \check{\text{U}} \text{I } \text{U } \check{\text{Y}} \check{\text{U}} \text{q } \text{U } \text{g } \text{Nj}\check{\text{a}} \text{ } \check{\text{O}}\check{\text{U}} \check{\text{Z}} \Sigma \text{ Y } \check{\text{U}} \text{ } \text{h-h-h-h}$
 $\text{Y } \emptyset \check{\text{U}} \text{ } \check{\text{O}}\check{\text{U}} \check{\text{Z}} \Sigma \text{ } \text{R } \text{ } \emptyset \text{f } \text{d} \text{Y } \check{\text{A}} \text{ } \check{\text{U}} \text{g } \text{Nj}\check{\text{a}} \text{ } \text{f } \text{g } \check{\text{A}} \text{ } \text{g } \text{ } \text{U } \text{T } \text{Y } \text{ } \check{\text{A}}$
 $\text{d} \text{ } \check{\text{O}}\check{\text{O}} \text{ } \text{f } \check{\text{O}}\check{\text{O}} \text{ } \text{g}\check{\text{O}} \text{t } \check{\text{O}} \text{.Y } \parallel \check{\text{A}} \text{ } \text{t } \check{\text{U}} \text{d}\check{\text{z}} \text{ I } \text{ } \text{a } \text{f } \Sigma \text{ } \text{a } \check{\text{A}} \check{\text{A}} \text{ } \text{d} \text{ } \text{ } \text{" } \text{U}\check{\text{t}}$
 $\text{f } \check{\text{Z}} \text{ } \text{d} \text{ } \check{\text{U}} \text{d} \parallel \text{ } \check{\text{U}} \text{ } \check{\text{r}} \text{ } \text{f } \check{\text{A}} \text{ } \check{\text{Y}} \text{ } \text{d} \parallel \text{Y } \check{\text{a}} \text{ } \text{a } \check{\text{Y}} \check{\text{Z}} \text{Ij } \check{\text{U}} \text{Nj}\check{\text{a}} \text{ } \text{g}$
 $\text{.gY } \text{I } \text{g } \text{ } \text{t } \check{\text{U}} \text{d}\check{\text{z}} \text{ Y } \check{\text{O}} \text{ } \check{\text{A}} \text{ } \check{\text{U}} \text{ } \check{\text{O}}\check{\text{U}} \check{\text{Z}} \Sigma \text{ Y } \check{\text{U}} \text{ } \text{I } \text{g } \text{ } \text{D}\check{\text{z}} \text{ Y } \check{\text{U}} \text{ Y } \check{\text{O}} \text{ } \text{g}\check{\text{g}} \text{ } \text{d}$

h-h-h
 $\text{q } \emptyset \check{\text{U}} \text{ } \check{\text{A}} \text{ } \emptyset \text{ } \check{\text{O}} \text{ } \text{f } \emptyset \text{ } \check{\text{O}} \text{ } \text{q } \emptyset \check{\text{U}} \text{ } \check{\text{U}} \check{\text{A}} \text{ } \emptyset \text{t}\check{\text{g}} \text{ Y } \emptyset \text{ } \text{g}\check{\text{O}}\check{\text{O}}\check{\text{Q}}\check{\text{a}} \text{ Y } \check{\text{U}} \text{ } \check{\text{Z}} \check{\text{O}} \text{ } \check{\text{A}} \Sigma \text{ } \check{\text{O}} \text{ } \text{g } \text{Y } \text{h-h-h-h}$
 $\text{. } \parallel \check{\text{A}} \check{\text{U}} \text{ } \check{\text{U}} \text{K } \check{\text{A}}$

$\check{\text{U}} \check{\text{A}} \text{ } \emptyset \text{t}\check{\text{g}} \text{ Y } \emptyset \text{ } \text{g}\check{\text{O}}\check{\text{O}}\check{\text{Q}}\check{\text{a}} \text{ Y } \text{ } \text{q } \check{\text{e}} \check{\text{U}} \parallel \parallel \text{Y } \text{q } \text{ } \check{\text{O}} \text{ } \text{g } \text{I } \text{U } \check{\text{Y}} \text{ } \check{\text{A}} \text{ } \text{D}\check{\text{z}} \text{ Y } \text{h-h-h-h}$
 $\text{. } \parallel \check{\text{A}} \check{\text{U}} \check{\text{U}} \text{K } \check{\text{A}} \text{ } \text{q } \check{\text{U}} \text{ } \check{\text{A}} \text{ } \check{\text{O}} \text{ } \text{f } \check{\text{O}} \text{ } \text{q } \check{\text{U}}$

$\check{\text{U}} \check{\text{A}} \text{ } \emptyset \text{t}\check{\text{g}} \text{ Y } \emptyset \text{ } \text{g}\check{\text{O}}\check{\text{O}}\check{\text{Q}}\check{\text{a}} \text{ Y } \text{Y } \parallel \text{K } \text{U } (\text{ } \check{\text{U}} \check{\text{g}} \check{\text{A}} \text{ } \check{\text{O}}) \check{\text{U}} \check{\text{E}} \check{\text{O}} \check{\text{Q}} \check{\text{U}} \text{ } \text{g}\check{\text{O}} \text{ } \check{\text{U}} \check{\text{r}} \text{ } \check{\text{O}} \parallel \text{h-h-h-h}$
 $\text{. } \parallel \text{d} \text{ } \Sigma \text{ Y } \check{\text{U}} \text{K } \check{\text{A}} \text{ } \text{q } \check{\text{U}} \text{ } \check{\text{A}} \text{ } \check{\text{O}} \text{ } \text{f } \check{\text{O}} \text{ } \text{q } \check{\text{U}}$

$\text{" } \text{t } \emptyset \check{\text{U}} \text{ d}\check{\text{z}} \text{ Y } \check{\text{A}} \text{ } \Sigma \text{ } \text{a } \text{D}\check{\text{z}} - \check{\text{Q}}\check{\text{g}} \text{Y } \text{" } \text{f } \text{T } \text{U } \text{" } \check{\text{A}} \Sigma \text{ } \check{\text{O}} \text{ } \text{g } \Sigma \text{ } \text{T}\check{\text{K}} \text{d}\check{\text{z}} \text{ } \check{\text{A}} \check{\text{O}}\check{\text{a}} \text{Y } \text{K } \text{U } \text{h-h-h-h}$
 $\text{. } \check{\text{O}} \text{h} \text{d} \text{ } \check{\text{U}} \text{ " } \check{\text{Z}} \check{\text{O}} \text{ } \check{\text{A}} \text{ } \check{\text{A}} \text{ "}$



f Ā **Ů dž U Θ** **Ů Ů Θ ʒ** **f Ā**

Ů Θ Ů :q Kdž

Ů Ů Θ ʒ **Ů ʒ** **Ů-H-h**

øg ɔ øø Y ø øg Lj Ůø Ø I U j NJə g nj ll ġ ɫ ǫɫ Ėø Dž Y **H-Ů-H-h**
 :Y ll Ů ʒ Ů dž Y Ė Σ ə Dž ǫɫ Ů .Y ll k U Ė g Ů ʒ

. ll (Recirculated Air) g Ė Y Ů øĖ Ė g Ů ʒ **(Ů)**

. ll (Free Cooling) Ø g nj ll ɫY Ā Ů Ė g Ů ʒ **(k)**

. ll (Heat Reclamation) ʒ ə Ů g øøUø Ė g Ů ʒ **(r)**

ĖøøŮ Ůø Y njøĖ I U j Ė ʋø ř Y g NJə Ø ĖdžøUø g NJə š **h-Ů-H-h**
 Lj Ůø Ø g nj ll ġ ɫ ǫɫ ĖŮØ Ů ʒøø gŮ ʒ j ɫ ġ Ůə
 Ėø Ůø Y øø Ů ll Hɫ ĖŮØ Ůk ĖŮ Ůk gğ ɫ Y llĖ Ėf Ā g NJə j g
 I g Ů gY øøŮø Y g Ė Y nj ll Y ʋ Ā Ů ʒø ġ Ůə I U
 (Night Set-Back).Y ɔ Ůg ə Ůg ʒ ll Y ! džŮ Ů ʒ Ů dž

(Flexibility) **Ů** **h-h**

øΣ ø Y ø ø zøŮø øăŮ ʒøĖ ĖžΣ øHø øŮ DžøUø I U ĖŮØ Ů ʒøø Ėf Ā Y **H-h-h**
 .Y Y ø Y Ů g zŮøăŮ .Y øŮ ā

ø ř ø Σ g Ø Ė žØ ĖŮll ř øHɫø K Ůø Ø ĖdžøUø g p Y øøŮø **H-H-h-h**
 . ll ŮŮ ř øøŮø j ø ĖŮØ Ů ʒøø Ø I U g g NJə Y øĖ

ġ øf Y ɫ øžg Ů I øU øg g NJə Ø Y nj ll jøø ŮĖŮØ Ů ʒøø gŮ ʒ **h-H-h-h**
 ʒ Uøø øŮ ɫ g Ů øøŮø j Y øŮ dž Ā Ėf Ā. K Ůøø øøŮø
 . ll ŮŮ ř Ů øŮ

Y ø øŮ Ů Y øøø øHø ɫ Y Y øøø ʋ ɫ Y Y øøŮø j Ů ǫɫ **h-h-h**
 :Y ll Ů ʒøĖ ĖžΣ øHø øŮ DžøUø I U ĖŮØ Ů ʒøø Ėf Ā

[illegible]

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ǵ ǝ ə ù øǵ Āø Ă ĀŪ ǧ ɓ ǫɓ ù | U ʝ ǵ Njə É ǵ ʂ ɔ Y Ĥ-ĥ-ĩ-ñ
:Y || ā dz ʒǵ ũdz a Ĥ dz ʒ|| Øř Y Éwǫɔ ɔ ù Øž ɔ ùØR ǵ Njə Éwʂ

$\text{t} \varphi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d} \tilde{\text{z}} \text{U} \text{ } \Theta$ $\tilde{\text{U}} \tilde{\text{U}} \text{ } \Theta \text{ } \text{t}$ $\text{t} \tilde{\text{A}}$
 $\tilde{\text{U}} \Theta \tilde{\text{U}} : \varphi$ $\text{Kd}\tilde{\text{z}}$
 ٢٢

. II $\tilde{\text{A}}\tilde{\text{A}}_{\text{u}}$ $\text{d} \tilde{\text{z}}$ $\tilde{\text{z}}\text{g}$ g a $\tilde{\text{U}}\text{O}$ g NJa Y -
 . II U $\text{d} \tilde{\text{z}}$ $\tilde{\text{z}}\text{g}$ g a $\tilde{\text{O}}\tilde{\text{z}}$ g NJa Y -

: $\text{NJ} \tilde{\text{K}}$ $\tilde{\text{U}} \text{U}$ NJ h-h-t-h

$\text{t} \varphi \tilde{\text{a}} \tilde{\text{A}}\tilde{\text{z}} \Sigma \text{H}$ $\tilde{\text{O}}\tilde{\text{U}} \text{D}\tilde{\text{z}}\text{O}$ σ g NJa -
 Y g NJa -

: $\text{NJ} \tilde{\text{K}}$ $\tilde{\text{U}} \text{U}$ $\tilde{\text{U}} \text{t}$ NJ H-h-t-h

$\tilde{\text{U}}\text{O}$ $\tilde{\text{a}}$ σ -
 a $\tilde{\text{O}} \tilde{\text{a}}$ σ -
 I U $\tilde{\text{k}}$ σ -

. g $\tilde{\text{u}}$ σ $\text{g}\tilde{\text{g}}$ $\tilde{\text{A}}\varphi\text{OY}$ g $\Sigma \tilde{\text{U}}$ $\tilde{\text{A}}\tilde{\text{U}}$ $\tilde{\text{A}}\text{uY}$ ka $\tilde{\text{u}}$ u $\tilde{\text{A}}\tilde{\text{U}}$ h-h-t-h

$\varphi \tilde{\text{e}}$ $\tilde{\text{O}}\tilde{\text{u}}$ $\tilde{\text{Y}}\text{O}$ O .(Duct Cleaning) II $\tilde{\text{O}}\tilde{\text{z}}$ Y $\tilde{\text{A}}$ g $\text{g}\tilde{\text{g}}$ $\tilde{\text{A}}\varphi\text{OY}$ t $\tilde{\text{a}}$ **(u)**
 Y Y O $\tilde{\text{O}}\tilde{\text{z}}$ O t O u $\text{NJ}\tilde{\text{e}}$ $\text{Y}\tilde{\text{A}}$ g T Y $\tilde{\text{U}}$ g $\text{g}\tilde{\text{g}}$ O t $\tilde{\text{A}}$ $\varphi \tilde{\text{U}}\text{g}$
 Y II $\tilde{\text{A}}\tilde{\text{u}}\text{O}$ I $\tilde{\text{O}}\tilde{\text{r}}$ $\text{g}\tilde{\text{g}}$ $\tilde{\text{A}}\varphi\text{OY}$ t $\tilde{\text{a}}$ t II $\varphi \tilde{\text{k}}$ $\text{D}\tilde{\text{z}}$

: $\tilde{\text{U}} \Theta \text{d}\tilde{\text{z}}$ $\Theta \tilde{\text{U}}$ $\tilde{\text{U}}$ $\tilde{\text{U}}$ $\tilde{\text{g}}$ t f K U $\tilde{\text{t-h-t-h}}$

. $\text{t}\tilde{\text{O}}$ I $\tilde{\text{U}}$ I U $\tilde{\text{Y}}$ $\tilde{\text{A}}$ g Y.Y II $\tilde{\text{A}}$ O $\tilde{\text{O}}\text{I}\tilde{\text{O}}$ $\tilde{\text{Y}}\text{Y}$ $\tilde{\text{A}}$ $\text{g}\tilde{\text{g}}$ $\text{d}\tilde{\text{Y}}$ $\tilde{\text{A}}$ **(u)**

$\text{O}\tilde{\text{u}}$) Y O II Y I O U $\tilde{\text{A}}\varphi\text{OY}$ g NJa g d $\tilde{\text{O}}\text{g}$ $\tilde{\text{Y}}\tilde{\text{U}}\tilde{\text{z}}$ a $\tilde{\text{U}}$ $\tilde{\text{O}}\tilde{\text{k}}$ Y $\text{d}\tilde{\text{Y}}$ $\tilde{\text{A}}$ **(k)**
 . $\text{t}\tilde{\text{O}}$ I $\tilde{\text{U}}\tilde{\text{A}}$ $\tilde{\text{g}}$ g Y Y u g $\tilde{\text{U}}$ t a $\tilde{\text{A}}\text{g}$ $\text{U}\text{d}\tilde{\text{Y}}$

$\text{O}\tilde{\text{g}}\tilde{\text{A}}\tilde{\text{u}}\text{O}$ I $\tilde{\text{O}}\tilde{\text{r}}$ (Lining) g $\tilde{\text{u}}$ σ $\text{g}\tilde{\text{g}}$ $\tilde{\text{A}}\varphi\text{OY}$ t $\tilde{\text{a}}$ Y $\text{D}\tilde{\text{z}}$ $\tilde{\text{A}}$ $\tilde{\text{U}}$ $\text{d}\tilde{\text{Y}}$ $\tilde{\text{A}}$ $\text{D}\tilde{\text{z}}$ Y **(r)**
 u II O II z $\tilde{\text{z}}$ g " $\tilde{\text{z}}\tilde{\text{O}}\tilde{\text{e}}$ t $\text{g}\tilde{\text{A}}$ $\tilde{\text{U}}$ $\tilde{\text{Y}}$ $\tilde{\text{A}}\varphi\text{OY}$ t $\tilde{\text{a}}$ $\tilde{\text{A}}$ $\tilde{\text{U}}\text{Y}$ $\tilde{\text{O}}\tilde{\text{u}}$ $\text{D}\tilde{\text{z}}$ $\varphi \tilde{\text{e}}$
 Y II $\tilde{\text{O}}\tilde{\text{u}}$ $\varphi \Sigma$ g $\tilde{\text{u}}$ σ g T Y g $\tilde{\text{A}}$ $\tilde{\text{A}}$ $\tilde{\text{A}}$ $\tilde{\text{U}}$ z $\tilde{\text{g}}$ $\tilde{\text{A}}$ $\tilde{\text{O}}$

$t \phi^{\tilde{a}}$ $\tilde{U} \ d\tilde{z} \ U \ \Theta$ $\tilde{U} \ \tilde{U} \ \Theta \ t$ $t \ \tilde{A}$
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$:$ $k \ U$ $\Theta \ \tilde{U}$ $\tilde{U}$ ∂ $\tilde{u} \ \check{a} \check{K} \check{T}$ $\tilde{u}$ T $\tilde{r}-\hat{h}-\tilde{r}-\hat{h}$

$\cdot \ \mathbb{H} \ \parallel \ \mathbb{H} \ \mathbb{H} \check{U} \check{r}$ $\acute{g} \ \parallel \ \tilde{u} \ \acute{A} \ U$ $\acute{g} \ T \ Y$ $(\tilde{u})$

$\partial \acute{g} \ \partial T \ Y \ t \partial d\check{z} \cdot \ \partial \parallel \ \acute{A} \ \check{A} \tilde{U} \ \partial Ij \ \partial \check{O} \check{z} \circ \ Y \ \check{A} \ \tilde{u} \ \partial \ \acute{g} \ \acute{g} \ T \ Y$ (k)
 $\cdot \ \parallel \ z\check{r} \ \tilde{U} \ \acute{g} \ \partial \ j \ t \ Y \ \tilde{U} \circ \circ \ Y \ \partial \tilde{u} \ D\check{z} \ \phi \partial \ \acute{g} \ k \ \check{s} \ \check{s}$

$\partial \ \partial \ \partial \acute{g} \ \partial \ Y \ \partial \ \partial \check{O} \check{z} \circ \ \partial \ \acute{A} \ \ Y \ Y \ \parallel \ k \ U \ \check{A} \ \tilde{u} \ \partial \ \acute{g} \ T \ Y \ \check{K} \check{T}$ (r)
 $\cdot Y \ \acute{A} \partial d\check{z} \partial \circ \ \acute{g} \ \partial \check{K} \tilde{u} \partial \ Y \ \check{g} \hat{E} \ \partial \ t \Sigma \ \acute{A} \ Y \ j \ \parallel$

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$k \partial \ \partial z \ \partial \partial \tilde{U} \ d\check{z} \ \varphi \ \check{k} \ Y \ \acute{A} \partial \ d\check{z} \ k \partial \ \partial \check{A} \partial \ -$
 $k \partial \ \partial z \ \partial \partial \tilde{U} \ d\check{z} \ \varphi \ \check{k} \ \acute{g} \ \acute{A} \ \check{k} \ \check{k} \ k \hat{E} Ij \partial \ k \partial \ -$

$\check{U} \partial \circ \ (\text{Potable Water}) \ \acute{A} \ \partial \ \partial \parallel \partial \ k \partial \ I \ U \ j \ Y \ \acute{A} \partial \ d\check{z} \ \varphi \ \tilde{u} \ k \partial \ Y \ k \partial \ \acute{A} \ \check{k} \ \check{k}$ $\hat{h}-\mathbb{H}-\tilde{r}-\hat{h}$
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$\partial \tilde{U} \ \partial d\check{z} \ \varphi \ \partial \check{K} \ j \ \partial \ \acute{A} \Sigma \ \partial \ t \ \check{a} \cdot \ \parallel \ \mathbb{W} \ \tilde{u} \ \acute{g} \ Y \ \acute{A} \ \parallel \ \mathbb{H} \ \varphi \ \check{k} \ \partial \ \Sigma \ \Sigma \ \mathbb{H}-\mathbb{H}-\tilde{r}-\hat{h}$
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$\check{K} \partial \partial Y \ \partial \ k \hat{E} Ij \partial \ \acute{A} \partial \ \partial \check{K} \ \check{k} \ \tilde{U} \ \partial \parallel \ \acute{A} \ \partial \parallel \ \mathbb{H} \ \varphi \ \check{k} \ \partial Y \ \check{k} \partial \ \partial \ \acute{g} \ \tilde{u} \ \partial$ $(\tilde{u})$
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///Ā ū H-H

$\text{Θ} \text{ } \text{řt}$ Ĥ-H-H

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[illegible]

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 Ů Āā g ž ʒ Y † qā ĀŽΣ HŮ ŮŮ DŽŮU σ I U Ů Ů HŮ g Lj ŮŮ ŮĀ Ů
 Ůā Āē Y σ (ŮŮ Ĥgǵǵ σŮ ĥǵǵ ŮŮ Ů † qā DŽdžŮŮ Ů σ) ĀŮāā
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σʒ σ Y σ Y σ ŮŮ Y Āē σʒ σ σǵŮ ʒ Ů Ů Y g nj || ŮĀē Ā Ā (Ů
 σŮ ĥǵǵ) q σ Tāσ σǵ σ ž ʒ Y I U j g Njā Ů Ů HŮ g Lj ŮŮ ŮĀ Ů
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ĀŽΣ σHŮ ŮŮŮ DŽŮUσ σ I ŮŮ g Njā Ů Ů HŮ g Lj ŮŮ ŮĀ Ů ʒ σ Āē Ā Y ĥ-ĥ-ĥ-h
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g F Ů Y -
 g k Ā Y -
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σqΣ j σ "Ĥ ā ž|| σ ŮŮ" Y I ŮŮ j g Njā F g Ů Y g nj || Y f (Ů
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$\check{g}$ $\text{ø } \text{U}$ $\text{Y } . \text{U}$ $\text{t } \text{g}$ $\text{ø } \text{g}$ $\check{z} \text{ø}$ $\check{z} \text{ø}$ " $\text{u } \check{K} \text{Ů } \text{Ů } \text{t } \varphi^{\tilde{a}}$ $\text{Æ } \check{z} \Sigma$ $\text{H } \text{U}$ $\text{ø } \text{Ů } \text{D } \check{z} \text{ø } \text{U}$ $\text{ø } \text{I } \text{U}$ $\text{Æ } \varphi \text{D } \check{z}$ $\text{g } \text{NJø } \text{Y}$ **(k)**
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$\text{Ų } \rho^{\tilde{a}}$ ρ H-H-Ĥ-h

$\text{ø } \text{ø } \text{t } \varphi^{\tilde{a}}$ $\text{Æ } \check{z} \Sigma$ $\text{ø } \text{H } \text{U}$ $\text{ø } \text{Ů } \text{D } \check{z} \text{ø } \text{U}$ $\text{ø } \text{I } \text{U}$ $\text{g } \text{NJø } \text{Ų } \text{t } \text{ø}$ $\text{K } \text{U}$ $\text{Æ } \Sigma$ Ų g || T Y **(ŭ)**
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$\text{ø } \text{I } \text{ø } \text{U}$ $\check{y}$ ø $\text{g } \text{ø } \text{NJø}$ $\text{ø } \text{g } \text{nj } \text{ø } \text{||}$ $\text{g } \text{ø}$ $\check{z} \text{ø}$ $\check{z} \text{Ų}$ $\text{ø } \text{f } \check{K} \text{T}$ $\text{Ų } \text{ø } \varphi^{\tilde{a}}$ **(k)**
 $\text{:Y } \text{z } \text{ū } \text{Æ}$

$\text{Æ } \Sigma$ Ų g Σ **(Ĥ)**

$\text{Æ } \Sigma$ Ų $\text{g } \text{ø}$ $\text{Ų } \check{t}$ $\check{a}$ **(ĥ)**

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$\text{I } \text{U}$ $\check{y}$ $\text{g } \text{NJø}$ $\text{g } \text{Lj}$ $\text{ū } \text{ø}$ **(h)**

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Ų ø $\check{z} \text{ø}$ $\check{K} \text{T}$ $\text{Ų } \text{ø } \varphi^{\tilde{a}}$ $\text{t } \text{t } \text{f}$ $\text{||Y } \text{T}$ $\text{Æ } d\check{z} \text{ø } \text{U}$ $\text{g } \text{NJø } \text{||}$ $\text{ø } \text{Ų } \check{r}$ $\text{ø } \text{Y } \check{A}$ **(Ĥ)**
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Æ $\check{g}$ ū $\check{g}$ ū $\text{g } \text{Ų } \text{ø } \varphi^{\tilde{a}}$ Y $\text{Æ } \text{ø } \text{ø}$ $\text{g } \check{K} d\check{z} \text{ø } \text{Y}$ ø $\text{Æ } \check{u} \text{ø } \text{Ų } \check{A}$ $\text{g } \text{Lj}$ $\text{ū } \text{ø}$ $\text{ø } \text{Y } \check{A}$ **(ĥ)**
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$\text{Ē} \text{K} \text{ ø} \text{ž} \text{ f} \text{ Lj} \quad \text{ø} \text{Ů} \quad \text{f} \text{ ø} \text{Ů} \text{ ū} \text{ø} \quad \text{Ů} \text{Q} \text{Ů} \text{Ů} \quad \text{ø} \text{Ů} \quad \text{Ů} \text{K} \text{Z} \quad \text{Ů} \text{Ē} \quad \text{K} \text{ŮY} \text{K} \quad \text{jə} \quad \text{Ē} \quad \text{Y} \quad (\text{h})$
 $\text{.Y} \text{ //} \text{ Ē} \text{Ů} \text{Ů} \quad \text{I} \text{ Ů} \text{ Ē} \quad \text{Y} \quad \text{T} \text{ Y} \text{ K} \text{Z} \quad \text{Ů} \text{Ē} \quad \text{q} \text{ è} \text{ Ů} \text{ d} \quad \text{Ūā} \text{ā}$

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$\text{ø} \text{ Y} \text{ ø} \quad \text{ø} \text{ā} \text{Ē} \text{ Y} \text{ Ūā} \text{σ} \quad \text{Y} \quad \text{f} \text{Ů} \text{ K} \quad \text{jə} \text{ Y} \text{ğ} \text{Ů} \quad \text{σ} \text{ -}$
 $\text{.Y} \text{ //} \text{ f} \text{d} \text{ž} \text{ Ů} \text{Ů} \quad \text{Ĥ} \text{/} \text{T} \text{ Y} \text{ f} \text{ Ů} \text{Ā} \text{σ} \text{ Y} \text{ Ů} \text{ //} \quad \text{ //Y} \quad \text{ā} \text{σ} \text{ nj}$
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 $\text{(Night-Set-Back)} \text{ f} \text{ //} \text{ q} \text{ Ů} \text{ğ} \quad \text{Y} \quad \text{ø} \text{Ů} \text{Ů} \text{ Ů} \quad \text{K} \quad \text{jə} \text{ğ} \text{Ů} \quad \text{Q} \text{š} \text{Ů} \quad \text{-}$
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$\text{d} \quad \text{Y} \text{ ø} \text{Ů} \quad \text{Dž} \text{ğ} \text{Ů} \text{ l} \text{Ů} \quad \text{g} \text{ Y} \quad \text{j} \text{Ů} \text{ž} \quad \text{g} \text{ Lj} \text{ Ů} \text{Ů} \text{ Ē} \quad \text{ğ} \text{ Ů} \quad \text{ğ} \text{ Ů} \text{ Q} \text{Ů} \text{ā} \text{ Y} \quad (\text{Ĥ})$
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$\text{ø} \text{Ů} \text{ Y} \quad \text{g} \quad \text{σ} \text{Ē} \text{ K} \text{ Ā} \quad \text{q} \text{ Ů} \text{ Ē} \text{ Ů} \text{ F} \text{ Ů} \text{ q} \text{ Ů} \text{ Ů} \text{Ē} \text{ šg} \text{ Y} \quad \text{g} \text{Q} \text{Ů} \text{ā} \text{ Y} \quad (\text{ĥ})$
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$\text{.} \text{ } \text{||} \text{ } \text{Ä} \text{ } \text{g} \text{ } \text{K} \text{ } \text{j} \text{ } \text{ø} \text{ } \text{t} \text{ } \text{dž} \text{ } \text{j} \text{ } \text{Ů} \text{ } \text{ž} \text{ } \text{Y} \text{ } \text{ğ} \text{ } \text{dz}$
 (Ä)

$\text{.Y} \text{ } \text{||} \text{ } \text{K} \text{ } \text{U} \text{ } \text{k} \text{ } \text{k} \text{ } \text{Hš} \text{ } \text{K} \text{ } \text{j} \text{ } \text{ø} \text{ } \text{t} \text{ } \text{||} \text{ } \text{Y} \text{ } \text{Y} \text{ } \text{Y} \text{ } \text{Ü} \text{ } \text{ê} \text{ } \text{ö} \text{ } \text{K} \text{ } \text{ö} \text{ } \text{Y}$
 (h)

$\text{zö} \text{ } \text{Ů} \text{ } \text{(} \text{ } \text{||} \text{ } \text{K} \text{ } \text{ž} \text{ } \text{T} \text{ } \text{t} \text{ } \text{ö} \text{ } \text{Y} \text{ } \text{ü} \text{ } \text{Y} \text{ } \text{Ä} \text{ } \text{g} \text{ } \text{Kdž} \text{ } \text{Y} \text{ } \text{Y} \text{ } \text{T} \text{ } \text{Ä} \text{ } \text{Ä} \text{ } \text{ö} \text{ } \text{ö} \text{ } \text{Ä} \text{ } \text{g} \text{ } \text{Lj} \text{ } \text{ü} \text{ } \text{ø}$
 (H)

$t \phi \tilde{a}$ $\tilde{U}$ $d\tilde{z}$ U Θ $\tilde{U}$ $\tilde{U}$ $\Theta \mathfrak{z}$ $t \tilde{A}$
 $\tilde{U} \parallel$ Lj $\tilde{u} \Theta \mathfrak{z}$ $: \phi$ $\tilde{S} \tilde{K} d\tilde{z}$

$k \tilde{A}$ $\phi \tilde{u} \tilde{Q} \tilde{p} \tilde{a}$ $\tilde{u} \tilde{T}$ (Θ)

$\cdot \parallel \tilde{A}$ $\acute{g}$ $\tilde{K}$ $\tilde{y} \mathfrak{a} \dagger d\tilde{z}$ $\tilde{y} \tilde{U} \tilde{z}$ $\gamma \tilde{g} \mathfrak{d}$ $(\hat{H})$

$\cdot \gamma \parallel$ $\gamma \gamma \mathfrak{v} \tilde{A} \tilde{U} \tilde{U} \tilde{A}$ $\acute{g} Lj$ $\tilde{u} \mathfrak{v}$ $(\hat{h})$

$\cdot \gamma \parallel \tilde{A}$ $\mathfrak{v} \tilde{U}$ $\acute{g} Lj$ $\tilde{u} \mathfrak{v}$ $\tilde{U}$ $\tilde{u} \Sigma$ $\acute{g} \tilde{U} \tilde{K}$ $\tilde{y} \mathfrak{a} \dagger d\tilde{z}$ $D\tilde{z} \gamma$ $(\mathfrak{H})$

$\cdot \gamma \parallel \mathfrak{d} \gamma \tilde{A}$ $\phi \mathfrak{a} \mathfrak{d} \tilde{U}$ $\acute{g} \tilde{k} \tilde{k}$ $(\mathfrak{h})$

ϕ $\tilde{A}$ $-$ $\parallel$ Nj $\mathfrak{H}-\mathfrak{h}-\mathfrak{h}-\mathfrak{h}$

$\mathfrak{d} \phi \tilde{e} \tilde{U} \acute{g} \mathfrak{a}$ $\acute{g} nj \parallel \tilde{g} \mathfrak{d}$ $\tilde{U}$ $\mathfrak{d} \tilde{u}$ $\tilde{a} \tilde{A} \tilde{Q} \tilde{v} \gamma$ $\tilde{A} \tilde{a} \mathfrak{d} \gamma$ $\acute{g} Nj \mathfrak{a} \tilde{y}$ $\tilde{A} \mathfrak{v} D\tilde{z} \gamma$ $(\tilde{U})$
 $\cdot \gamma \parallel k U \tilde{A}$ $\acute{g} \tilde{Q} \mathfrak{z} \mathfrak{d}$

$\tilde{A} \mathfrak{u} \mathfrak{d} \tilde{y}$ γ $\acute{g} Nj \mathfrak{a} \gamma$ $\gamma \tilde{U} \mathfrak{d} \mathfrak{a} \tilde{A} \tilde{Q} \tilde{v} \gamma$ $\tilde{A} \tilde{a} \mathfrak{d} - \tilde{A} \tilde{Q} D\tilde{z}$ $\acute{g} Nj \mathfrak{a} (\mathfrak{H}-\mathfrak{h}-\mathfrak{h})"$ γ $\tilde{A} \mathfrak{v} \tilde{U}$ (k)
 $\cdot \gamma \parallel \tilde{U} \tilde{U} \mathfrak{d} \tilde{u} \tilde{A}$ $\tilde{a} \tilde{A} \tilde{Q} \tilde{v} \gamma$ $\tilde{A} \tilde{a} \mathfrak{d} \gamma$ $\tilde{U} \tilde{Q} \acute{g}$

$\tilde{U}$ Nj $\tilde{T}-\mathfrak{h}-\mathfrak{h}$

$:$ $\acute{g} \tilde{a} \mathfrak{v} \tilde{K} \parallel \tilde{U} \mathfrak{d} \parallel \tilde{A} \tilde{Q} \mathfrak{d} \mid \mathfrak{d} \tilde{y} \mid U \tilde{y} \gamma$ $\tilde{U} \gamma$ $\acute{g} Nj \mathfrak{a}$ $\hat{H}-\tilde{T}-\mathfrak{h}-\mathfrak{h}$

$\tilde{A} \parallel \mathfrak{H}$ $\acute{g} \mathfrak{z}$ $-$
 $\mathfrak{a} \mathfrak{d} \tilde{a} \mathfrak{v}$ $-$
 $\acute{g} \tilde{y} \tilde{U} \mathfrak{v}$ $-$
 $\tilde{U} \mathfrak{d} \mathfrak{R}$ $\tilde{a} \mathfrak{v}$ $-$

$\cdot \gamma \parallel \tilde{A} \tilde{Q} \mathfrak{d} \mid \mathfrak{d} \tilde{y} \mid \acute{g} \mathfrak{d} \mathfrak{U} \mathfrak{v} \tilde{Q} \mathfrak{z} \mathfrak{d}$ $\acute{g} Nj \mathfrak{a} \tilde{y} \gamma$ $\hat{h}-\tilde{T}-\mathfrak{h}-\mathfrak{h}$

$\cdot \gamma \parallel \tilde{U}$ $\tilde{U} \acute{g} Nj \mathfrak{a} \tilde{y}$ $\acute{g} \mathfrak{d} \mathfrak{U} \mathfrak{v} \tilde{Q} \mathfrak{z} \mathfrak{d} \tilde{A} \mathfrak{f} \tilde{A} \gamma$ $\mathfrak{H}-\tilde{T}-\mathfrak{h}-\mathfrak{h}$

$\mathfrak{d} D\tilde{z} \tilde{A} \tilde{U} \mathfrak{d} \mathfrak{d} \tilde{U}$ $\mathfrak{d} \acute{g} \mathfrak{d} \mathfrak{d} \tilde{U}$ $\mathfrak{Q} \tilde{z} \Sigma$ $\tilde{U} \tilde{A} \tilde{U} \mathfrak{d} \tilde{U}$ $\acute{g} p$ $\acute{g} Nj \mathfrak{a} \tilde{y}$ $\acute{g} \mathfrak{d} \mathfrak{U} \mathfrak{v}$ $(\tilde{U})$
 $\cdot \gamma \mathfrak{d} \tilde{u}$

$f \phi \tilde{a}$ $\check{U}$ $d\check{z}$ U Θ $\tilde{U}$ $\tilde{U}$ Θ $\mathfrak{s}$ $f \check{A}$ $f \check{A}$
 $\check{U} \parallel$ Lj $\bar{u} \Theta \mathfrak{s}$ $: \varphi$ $\check{s} \check{K} d \check{z}$

øNjə ø øğ Y ll † dʒ ũq " TðΣ σ ũ ğ Njə j z ʊ γ ğ øQʊσ γ (K
 . ɔ ğ žʊ z ʊ

øŠ ɖ I 0ø 0 ø Y ɖ Dž Y ʎ k U Ā g 00Uø Y ʎ dž KŦ (H)
Y 0ø 0 ɖ ʎ ũ I U ʎ Ā0Dž g Njə k 0ă Dž Tă

I ɒU ʃθ ÆʈθDʒ ɡ θNʒə Y ɡ θNʒə ʃ t' ɬ ɬY ʈa ɡ ʈu ʈS ʈɬ (h)
 ÆθŨ ʈ ʈS θ Y ʈ Æf ʈ ũ Y ʈ ɡ Nʒə ʃ ɡ ɬ ɬŨ ʈ è ɬ Y ʈ
 .Y ʈ ɬ Ũ Y ʈ ʈ ʈ Ũ Y ʈ ɬ ɬŨ Y ʈ ɡ ɬ

. II Ė Ń ĩ ā á ǵ Ǿ Uσ gǧ ʊ k Ǻ ɔ ū Ę ǧ ŭ Q̄00ā Y

ø ʏ øř ə́ə ə̃ ʏ Ä Ä) ɿ ɡ Njə jũž ɡ Njə j ɤ ɡ ɡ ʏ (θ
 . ll (Transfer Grille) ʏ zū ɡ ɡ T ʏ

[illegible]

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 .Υ 0Y Ǻ Ĥ 0 Ǻ 0 0ř

 $\frac{dz}{dt} \ddot{U}$ $\tilde{I}-\hbar$

. Ø Υ Æ á û á ö ù ù I U ħ γ Â-ĩ-ñ

(Internal Zone) $\begin{matrix} \emptyset & \text{dz} & \sigma & \acute{g} \text{ \AA} & \sigma & \acute{g} \text{ Lj} & \tilde{u}\sigma \\ \acute{E}\eta\sigma Y & \acute{E}\tilde{a}\tilde{u} & \acute{g} \text{ Nj\AA} & \acute{g} \text{ nj} & \text{ll} & \tilde{g} & \text{Dz} \\ \acute{E}\eta\text{D}\tilde{z} & \acute{g} \text{ Nj\AA} & \acute{g} \text{ nj} & \text{ll} & \tilde{\text{A}}\tilde{o}\tilde{a}\tilde{y} & \tilde{q} & \text{Dz} \end{matrix}$

[illegible]

[illegible]

$t \varphi \tilde{a}$ $\tilde{U}$ $d\tilde{z} U$ Θ $\tilde{U}$ $\tilde{U}$ $\Theta \mathfrak{s}$ $f \tilde{A}$
 $\tilde{U} \parallel$ Lj $\tilde{u} \Theta \mathfrak{s}$ $: \varphi$ $\check{S} \check{K} d\check{z}$

oo

T $\tilde{r}-\tilde{r}-h$

$\emptyset R \tilde{U}_o$ $\check{z}_o \check{K} T$ $Y \parallel k U$ $\tilde{A} \tilde{U}$ $\tilde{A} \emptyset D \check{z}$ $\acute{g} Nj \emptyset$ $Y \acute{g} T Y$ $\check{r}$ $\acute{g} \acute{S} Y$ $\acute{g} T Y$ $\hat{H}-\tilde{r}-\tilde{r}-h$
 $. \parallel \parallel$

$\tilde{A} \emptyset \mathfrak{a} \emptyset \emptyset \acute{g} \mathfrak{a}$ $Y \tilde{A} \emptyset \tilde{A} \tilde{U}$ lj Y $\emptyset \check{z}_o \emptyset \parallel \parallel$ $\tilde{A}$ $Y \check{K} \tilde{a}$ $\acute{g} \check{K} T$ $Y \acute{g} T Y$ $\hat{h}-\tilde{r}-\tilde{r}-h$
 $. \parallel$ $z\check{r} \tilde{U}$

$.Y \parallel k U$ $\tilde{A} \emptyset \emptyset \emptyset \tilde{a} \tilde{U}$ $\acute{g} T Y$ $H-\tilde{r}-\tilde{r}-h$

$\tilde{A} \parallel \tilde{A}$ $\acute{g}$ $\Sigma \tilde{A} \parallel \mathfrak{s}$ $\acute{g}$ $\mathfrak{a}$ $Y \parallel k U$ $\tilde{A}$ $\acute{g}$ $\emptyset \emptyset U_o$ $\mathfrak{a}$ $\acute{g} T Y$ $t d\check{z} \check{K} T$ $h-\tilde{r}-\tilde{r}-h$
 $. \parallel$ $"\hat{H} \mathfrak{a} \check{z} \check{z} \parallel$ $\emptyset \check{r}"$ $\acute{g} \check{g} \Sigma$

$\emptyset$ $\tilde{U}_o \emptyset \acute{U} Y \parallel$ $t d\check{z}$ $\acute{g} Nj \emptyset \tilde{A} \emptyset \emptyset Y$ $t \tilde{a}$ $Y \tilde{A} \mathfrak{s}$ $\varphi \emptyset$ $\acute{g} k \check{s}$ $H \check{s}$ $\acute{g}$ $\acute{g} T Y$ $\tilde{r}-\tilde{r}-\tilde{r}-h$
 $.Y \emptyset \tilde{u} \varphi \mathfrak{l}$ $\check{k} H$ $\tilde{U} Y$ $\tilde{A} \tilde{A} \tilde{U}$ lj $\emptyset \check{z}_o$ $Y \acute{g} \mathfrak{a} Y$ $\mathfrak{s}$

θ \$

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q è ù gódz Ddz Û dż zűş őđ Û † qǎ ÉǾΣ Huv 0Ů DŽ0U σ I U Y É || H ʒ0 σ Ĥ-Ĥ-Ŧ

:Y || Éf Ĥ

q è Ě š ɔ gŏ š ů (Ĥ-Ĥ-Ť) ʏ dz ʱ ɦə ɡdz ɔ̯ Ů dž zŭš ɔ̯ ĥ ĥ-Ĥ-Ť
:ʏ ʱ Ě š Ĥ

[illegible]

I 0U 03Σ 0 0 30 300 00 09 I U 3g KÊIj ə ŭəY 0Ādž0 0 03Σ (K
 . 0ŭĖ ā g I U Ĩ 2 0 Y 0 † 0ā Ė3Σ H0 0Ű Dž0U 0

[illegible]

o v

ø Ů Ě

† q̃ā ÉǺΣ Hw ØŦ DŽØU σ I U Y Æə dž q ü kđ γ kđ Æ k k ĥ-ĥ-ĥ-tĩ

:γ || Σ Æf Ä

$\text{f} \text{ } \text{f} \text{ } \text{f}$ $\text{Ů} \text{ } \text{dž} \text{ } \text{U} \text{ } \text{O}$ $\text{Ů} \text{ } \text{Ů} \text{ } \text{O} \text{ } \text{š}$ $\text{f} \text{ } \text{Ā}$
 $\text{O} \text{ } \text{š}$ $:\text{Q} \text{ } \text{Kdž}$

oA

Nj šĚ o Y o II I o U Y oăĚ F Ėə dž q ū kă Y kă g k k Y IIĖ ōDž o (ŭ)
 jōŮž ņš g ū ĀĀ j ūĖ ū (Riser System) Qh ā g k k wŮ. Y Ů dž
 a o Y o IIĖōž ōDž o KĕY . II II Y Ů dž NjĖ o oă o g ōš
 :Y II ōg ř

o žō oŮY o g I o U è žŭ ū I U è jō ř ĀĀ Qh ā g k k wŮ (Ĥ)
 . ūĖ ū Y U Y Y ŭ Y l q o š ŮY Y ! dž Ő

ūĖ ū Y Y ŭ g U Y l ū I oă Ėăŭ F g I U j F g š (ĥ)
 . ņ Ė ūōŮlj I oă Ėăŭ g g Σ ū g k k Qh ā wŮ

kă Y o kă ŭ o o g o k k Y Y TŌΣ o I U g g Njə Y zřŮăŭ ō (H)
 .Y ōŭ ā I U a KŐY Y I U g Ėə dž q ū

ū o ĖĖĖ g k k wŮ. I U j kZ ūĖ Y ĖĖĖ g k k wŮ ōš j o t ņ (K
 kZ ū KŐY Njə j II Y ņ Ů ĀŮ Ů ōž o .Y IIĖž ōDž o I U kZ
 . II Y ŮY Y Y ŭ g Y ĝ f g

g k k j ū jŮž o ū Y II k U Ā I U kZ ūĖ Y ĖĖĖ g k k wŮ ōš (Ĥ)
 . ņŮ wŮ ĖdžŌU o ĖQDž g Njə kZ ūĖ

Ů o dž q o o ō ū kZ ūĖ KŐY Y ĖĖĖ ĖQDž g k k ū kă g k k k ū (r
 jō ř o è o ū o Y oă ū o o F o Y "è ožŭ Ėə dž q ū kă Y kă ņŭ
 oDž o o w I U ĖQDž g Njə ū q U NjĖ Y ū Qh ā g k k j . II (Down Feed)
 . II t dž () ŮĬa

Lj oŭ o ožŭ ĖĖ ož f I g ōŭ ū Q "è žŭ k ū g k k j Ė āā š (Ĥ)
 o " Y o Ėŭŭ o) l F ō Êř o g k k oĖ ū Y ņ H ņ Y Y g a
 .Y ņ Y Ā (ņ II Y ž Ő Σ Y jəY ! džU DžU "ĤĤ-Ĥ

Ėŭŭ I ōř Kdž ŭăă g ō II ū I U j Ėə dž q ū kă Y kă ĖQDž g k k Y Y (q
 .Y II k U a Ė Y Ů g ō II j t dž KŤ .Y II

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QΣ Υ *Æ* *ú* *o* ù | U ý ù *o* U *g* Njə Y ù kɛ *g* *dz* *dz* ù *dʒ* ù Y *Æ* || H *o* ḳ *H-h-h-ĩ*

Ā ē ā ġ ā ÆΣ Ů ŧ ā γ őž ʒ || || Ą Ę || Һ q ĩ KŮ|| ɔ
Kø ā øǾ øHøř ø ů øó øğ øwķ ġ || ū Ę || Һ q ĩ Ʀ Šǵ . || zř Ů
. || || Ę γ

(r)

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KõõY ø Æə ødž q øū kǎ ū Σ žg Ėə dž Y kǎ Ė k k Ö Äf öü (Ĥ)
.Y II øū oΣ Ėə dž Y kǎ ÜwII

$t \rho \tilde{a}$ $\tilde{U}$ $d\tilde{z}U$ Θ $\tilde{U}$ $\tilde{U}$ $\Theta \mathfrak{s}$ $f \tilde{A}$ $f \tilde{A}$
 $\Theta \mathfrak{s}$ $: \tilde{Q} \mathfrak{l}$ $\check{K}d\check{z}$

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$\emptyset \parallel \acute{E} \emptyset$ $\check{K}d\check{z}$ $\tilde{Q} \acute{g}$ $\tilde{u}$ $\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ Y $K \mathfrak{a}$ $\acute{E} \parallel$ H q $\check{k}$ $\acute{E} \mathfrak{U}$ Y $\acute{E} \emptyset$ $D\check{z}$ Y (h)
 $\emptyset \Sigma$ $\emptyset$ $\tilde{u}$ $\tilde{u}$ $\emptyset$ $\acute{E} \mathfrak{a}$ $\emptyset d\check{z}$ Y $\emptyset$ $K \mathfrak{a}$ $K \tilde{u}$ $\emptyset \check{k}$ $\emptyset$ (Nj $\emptyset \mathfrak{U}$ $\acute{g}$ $\emptyset \parallel$ $\emptyset$)
 $.Y \parallel \mathfrak{t} d\check{z}$ (Backflow Preventer)

$\emptyset \acute{E}$ " $\acute{E} \emptyset \parallel$ H $\mathfrak{s} \emptyset$ $\sigma - \tilde{Q} \acute{g} Y$ $\parallel \mathfrak{P} \mathfrak{T} \mathfrak{U}$ " $\check{k}$ Σ $\tilde{u}$ $\tilde{u}$ $\tilde{U}$ $K U$ (H)
 $. \parallel$ $\parallel Y$ $\acute{E}$ $\check{a}$ " $\check{z} \mathfrak{U}$ $\acute{E} \mathfrak{Q}$

$\acute{E}$ $\check{k}$ $\check{k}$ h-ĩ-h-ĩ

Y $\emptyset$ $K \mathfrak{a}$ $\check{u} \emptyset$ σ $\acute{E} \emptyset$ $\emptyset \check{k}$ $\check{k}$ $\emptyset \mathfrak{s}$ $\emptyset$ I $\emptyset U$ $\check{K} \mathfrak{O} Y$ Y $\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ $\check{u}$ σ $\acute{E}$ $\check{k}$ $\check{k}$ $\emptyset \mathfrak{s}$ (ù
 $. \mathfrak{a}$ $\emptyset \tilde{u} \emptyset \sigma$ $\acute{E} \mathfrak{a}$ $d\check{z}$

$. \quad KZ$ $\grave{u} \acute{E}$ $\check{K} \mathfrak{O} Y$ $N \mathfrak{J} \mathfrak{a}$ $\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ $\acute{E} \acute{E} \mathfrak{a}$ $\acute{E}$ $\check{k}$ $\check{k}$ $\mathfrak{t} d\check{z}$ $\check{K} \mathfrak{T}$ $\mathfrak{y}$ $\sigma \mathfrak{t}$ $\mathfrak{a}$ (â)

$. \parallel$ (Down-Feed) $\mathfrak{y} \acute{O}$ $\mathfrak{r}$ $\grave{e}$ $\acute{g} \mathfrak{a}$ $\mathfrak{a}$ $\grave{U}$ $d\check{z}$ $\mathfrak{F}$ $\acute{g}$ $\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ $K \tilde{u}$ (h)

$.Y \parallel \acute{E} \mathfrak{a} \mathfrak{O}$ I $\mathfrak{O} \mathfrak{r}$ $\check{K}d\check{z}$ $\check{u} \check{a} \check{a}$ $\acute{g}$ $\emptyset \parallel$ I U $\mathfrak{y}$ $\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ $\acute{g}$ $\check{k}$ $\check{k} Y$ Y (K

$\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ Y H-ĩ-h-ĩ

$. \quad Y$ $\tilde{u} \acute{E}$ Σ Y $\mathfrak{y} \mathfrak{t} \mathfrak{t} \tilde{U}$ $\mathfrak{a}$ $\emptyset \check{k}$ σ $\check{K} \mathfrak{T}$ Y $\tilde{u} \acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ Y $\mathfrak{R}$ $\mathfrak{f}$ (ù

$\mathfrak{P} \emptyset \mathfrak{T} \mathfrak{U}$ " Y $\emptyset$ Y $\emptyset \mathfrak{f}$ Y $\emptyset$ $\acute{E} \emptyset \parallel$ H q $\emptyset \check{k}$ $\mathfrak{F} \emptyset$ $\acute{g}$ $\check{g}$ $d\check{z} \sigma$ Y $\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ Y (K
 $.Y \parallel \tilde{Q} \acute{O} \mathfrak{O} \mathfrak{a}$ $\tilde{U} \mathfrak{a}$ $\parallel$ $\acute{E}$ $\acute{E}$ " $\acute{E} \parallel$ H $\mathfrak{s} \emptyset$ $\sigma - \tilde{Q} \acute{g} Y$ $\parallel$

$\tilde{u} \acute{E} \parallel$ H q $\check{k}$ $\mathfrak{F}$ $\acute{g}$ $\tilde{U}$ Y $\check{g}$ $\mathfrak{a}$ Y $\mathfrak{O}$ $\acute{g}$ $\emptyset \parallel$ $\acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ Y $\tilde{Q} \acute{O} \mathfrak{O} \mathfrak{a}$ (â)
 $.Y \parallel \acute{E} \mathfrak{a} \mathfrak{O}$ I $\mathfrak{O} \mathfrak{r}$ $\tilde{u} \acute{E}$ Y $\tilde{U}$ $\tilde{U}$ $\mathfrak{a}$ $\mathfrak{F}$ Y

q $\grave{e}$ $\tilde{u} \acute{E} \mathfrak{a}$ $d\check{z}$ q $\tilde{u}$ $K \mathfrak{a}$ $\acute{E}$ $\check{k}$ $\check{k}$ $\acute{E} \Sigma$ $\mathfrak{O}$ $\mathfrak{t}$ $\check{a}$ $\acute{E} \parallel$ $\acute{E}$ $\tilde{u}$ $\mathfrak{t}$ $\tilde{U} \acute{E} \sigma$ $\acute{E}$ I $\acute{g}$ $\emptyset \mathfrak{a}$ (r
" $\check{z} \mathfrak{U}$ $\acute{E} \mathfrak{Q}$ $\acute{E}$ " $\acute{E} \parallel$ H $\mathfrak{s} \emptyset$ $\sigma - \tilde{Q} \acute{g} Y$ $\parallel \mathfrak{P} \mathfrak{T} \mathfrak{U}$ " Y $\acute{E} \mathfrak{a} \mathfrak{O} \sigma$ $\acute{g}$ $\check{k}$ $\mathfrak{y}$
 $. \parallel \check{A}$ $\tilde{U}$ $\tilde{U} \mathfrak{a}$ $\parallel$ $\acute{E}$

$t \phi \tilde{a}$ $\tilde{U} \ d\tilde{z} \ U \ \Theta$ $\tilde{U} \ \tilde{U} \ \Theta \ \mathfrak{z}$ $\mathfrak{f} \ \tilde{A}$
 $\Theta \ \mathfrak{z} \ : \ \tilde{Q} \mathfrak{l} \ \check{K}d\check{z}$

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$\Upsilon \ \emptyset \ \Upsilon \ \mathfrak{l} \ \acute{g} \ \emptyset$ $\acute{g} \ \mathfrak{p}$ $\acute{A}\tilde{U}$ $\mathfrak{q} \ \grave{e} \ \acute{A}\mathfrak{e} \ d\check{z} \ \mathfrak{q} \ \bar{u} \ \mathfrak{k} \grave{a}$ $\Upsilon \ \check{y} \ \parallel \ \Upsilon d\check{z} \ \tilde{U}$ $\mathfrak{p}$ (Θ)
 $: \Upsilon \ \parallel \ \emptyset \bar{u} \ \mathfrak{q} \Sigma \ \acute{g} \ \check{k} \ \check{k}$

$. \ \parallel \ \parallel \ \Upsilon \text{ (Recirculation)} \ \acute{A} \ \Upsilon \ \bar{u} \ \mathfrak{n} \mathfrak{j} \bar{\mathfrak{O}} \ \acute{A}\mathfrak{e} \ d\check{z} \ \mathfrak{q} \ \bar{u} \ \mathfrak{k} \grave{a} \ \acute{A}$ $\check{k} \ \check{k}$ $(\hat{H})$

$\bar{U} \ \mathfrak{k} \grave{a} \ \emptyset \ \Upsilon \ \bar{U} \ \acute{A}\mathfrak{e} \ \emptyset d\check{z} \ \mathfrak{q} \ \emptyset \bar{u} \ \mathfrak{k} \grave{a}$ $\emptyset \acute{g} \ \emptyset \check{k} \ \acute{A} \Sigma \ \emptyset \bar{\mathfrak{O}} \ \mathfrak{t} \ \check{a}$ $d\check{z} \ \emptyset \bar{u} \ \mathfrak{q} \ \bar{u} \ \acute{A}\tilde{U} \ \bar{U} \check{k}$ $\acute{g}$ $\mathfrak{t} \ d\check{z}$ $(\hat{h})$
 $. \Upsilon \ \parallel \ \check{g} \ \bar{u} \ \bar{\mathfrak{O}} \ \Upsilon \ \Upsilon \ \mathfrak{f} \ \Upsilon \bar{U} \ \Upsilon \ \bar{\mathfrak{O}} \ \check{A}$

$\mathfrak{k} \ \mathfrak{l} \mathfrak{j} \ \check{y}$ $\mathfrak{H}-\tilde{\mathfrak{T}}$

$\Theta \ \not\neq$ $\hat{\mathfrak{H}}-\mathfrak{H}-\tilde{\mathfrak{T}}$

$\check{y} \ \emptyset \check{r} \ \check{A} \ \check{A} \ " \grave{e} \ \check{z} \bar{u} \ \mathfrak{l} \ \bar{U} \ \check{y} \ \mathfrak{k} \grave{a}$ $\acute{g} d\check{z} \ \emptyset \bar{u} \ d\check{z} \ \check{y} \ \Upsilon \ \acute{A} \ \parallel \ \mathfrak{H} \ \mathfrak{q} \ \check{k} \ \acute{A} \Sigma \ \bar{\mathfrak{O}} \ \mathfrak{k} \hat{\mathfrak{E}} \mathfrak{l} \mathfrak{j} \ \mathfrak{a}$ $\hat{\mathfrak{H}}-\hat{\mathfrak{H}}-\mathfrak{H}-\tilde{\mathfrak{T}}$
 $\acute{g} \ \check{z} \bar{\mathfrak{O}} \ \check{K} \ \mathfrak{k} \hat{\mathfrak{E}} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \check{u} \mathfrak{a} \Upsilon$ $\bar{U} \ \check{z} \bar{\mathfrak{O}} \ \check{z} \bar{\mathfrak{O}} \ \mathfrak{k} \hat{\mathfrak{E}} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \check{u} \mathfrak{a} \Upsilon \ \acute{A}$ $\check{k} \ \check{k} \ \bar{U} \parallel \parallel$
 $. \Upsilon \ \parallel \ \acute{A}$

$\mathfrak{l} \ \emptyset \bar{U} \ \Upsilon \ \bar{U} \ \mathfrak{k} \grave{a}$ $\emptyset \acute{g} d\check{z} \ \emptyset \bar{u} \ d\check{z} \ \emptyset \bar{U} \ \Upsilon \ \acute{A} \ \emptyset \parallel \ \mathfrak{H} \ \mathfrak{q} \ \check{k} \ \acute{A} \Sigma \ \bar{\mathfrak{O}} \ \mathfrak{k} \hat{\mathfrak{E}} \mathfrak{l} \mathfrak{j} \ \mathfrak{a}$ $\acute{g}$ $\mathfrak{a} \check{u} \check{z} \Sigma$ $\hat{\mathfrak{H}}-\hat{\mathfrak{H}}-\mathfrak{H}-\tilde{\mathfrak{T}}$
 $: \Upsilon \ \emptyset \bar{u} \ \mathfrak{D} \check{z} \ \bar{Q} \mathfrak{H} \ \bar{U} \ \bar{U} \ \bar{U} \ \mathfrak{t} \ \bar{Q} \check{a} \ \acute{A} \check{z} \Sigma \ \mathfrak{H} \emptyset \ \emptyset \bar{U} \ \mathfrak{D} \check{z} \bar{\mathfrak{O}} \ \emptyset$

$. \Upsilon \ \mathfrak{d} \mathfrak{z} \ \check{a} \ \bar{U} \ \acute{g} d\check{z} \ \check{y} \ \check{g} \ d\check{z} \emptyset$ $\acute{g} \ \check{k} \ \check{k} \ \mathfrak{k} \hat{\mathfrak{E}} \mathfrak{l} \mathfrak{j} \ \mathfrak{a}$ $\mathfrak{p}$ $\bar{U} \ \mathfrak{l} \ \bar{U} \ \Upsilon \ \bar{u} \ \mathfrak{t} \ \check{a}$ $(\bar{u})$

$" \hat{\mathfrak{E}} \ \emptyset \ \mathfrak{l} \ \emptyset \bar{U} \ \acute{g} \ \mathfrak{N} \mathfrak{J} \check{a} \ \check{K} \bar{\mathfrak{O}} \ \Upsilon \ \mathfrak{k} \hat{\mathfrak{E}} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A}$ $\check{k} \ \check{k} \ \bar{U} \parallel \parallel \ \mathfrak{a}$ $\acute{g} \ \bar{u} \ \mathfrak{d} \mathfrak{z} \ \check{a} \ \acute{g} \ \mathfrak{z} \ \check{A}$ $(\mathfrak{k})$
 $. \Upsilon \ \parallel \ \emptyset \bar{u} \ \mathfrak{q} \Sigma$

$(\text{Cross Connection}) \ \Upsilon \ \check{g} \ d\check{z} \emptyset \ \mathfrak{p} \ \bar{U} \ \check{a} \check{e} \ \check{S} \acute{\mathfrak{O}} \acute{g} \ \Upsilon \ \bar{U} \ \acute{A} \mathfrak{e} \ d\check{z} \ \mathfrak{q} \ \bar{u} \ \mathfrak{k} \grave{a} \ \Upsilon \ \mathfrak{k} \grave{a} \ \acute{A}$ $\check{k} \ \check{k}$ $(\mathfrak{r})$
 $. \Upsilon \ \mathfrak{d} \mathfrak{z} \ \check{a} \ \mathfrak{k} \hat{\mathfrak{E}} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \ \check{k} \ \check{k} \ \bar{U} \parallel \parallel$

$\mathfrak{k} \ \mathfrak{l} \mathfrak{j} \ \mathfrak{t}$ $\hat{\mathfrak{H}}-\mathfrak{H}-\tilde{\mathfrak{T}}$

$\mathfrak{P} \emptyset \mathfrak{T} \parallel " \ \Upsilon \ \mathfrak{z} \ \emptyset \bar{u} \ \emptyset \ \check{k} \ \emptyset \ \bar{U} \ \emptyset \ \emptyset \ \bar{U} d\check{z} \ \emptyset \bar{\mathfrak{O}} \ \mathfrak{z} \ \bar{U} \ \emptyset \parallel \bar{U} \ \bar{\mathfrak{O}} \ \emptyset \ \bar{u} \ \check{k} \ \check{K} \ \parallel \ \bar{U} \mathfrak{T} \check{k} \ d\check{z} \ \mathfrak{k} \ \bar{U}$ $\hat{\mathfrak{H}}-\hat{\mathfrak{H}}-\mathfrak{H}-\tilde{\mathfrak{T}}$
 $. \Upsilon \ \emptyset \bar{u} \ \mathfrak{D} \check{z} " \ \check{z} \bar{\mathfrak{O}} \ \acute{A} \mathfrak{Q} \ \acute{A} " \ " \acute{A} \ \parallel \ \mathfrak{H} \ \mathfrak{z} \bar{\mathfrak{O}} \ \emptyset \ - \bar{Q} \acute{g} \Upsilon \ \parallel$

Ū ōǵ ǫĭ ĩ Æĭ ǿǰ f ÆøŬ ə ŭ Ůøə Y ðṽ ŪkÊlj ə ǵ ħ ħ wŬ ǫṡ Y Æσ Dz Y (θ
 ǻǻ † qǻ ÆǰΣ Hσ ǾŬ DǰǾU σ ǵ NǶə Y w ǵ Ṳ Y ḯ ŪY ll Æṽó l Ǿʳ Æ Y Ṳ Y

$t \phi \tilde{a}$ $\tilde{U} \ d\tilde{z} \ U \ \Theta$ $\tilde{U} \ \tilde{U} \ \Theta \ \mathfrak{z}$ $f \ \tilde{A}$ $f \ \tilde{A}$
 $\Theta \ \mathfrak{z} \ : \ \tilde{Q} \ \check{K}d\check{z}$

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$\emptyset \ \mathfrak{a} \ \emptyset \ \emptyset \ \emptyset \ \check{y} \ \emptyset \check{U} \check{Z} \ (\ \emptyset \check{k} \ p \hat{E} \emptyset \emptyset \ \mathfrak{F} \ \sigma \ p \hat{E} \emptyset \ \Upsilon \ \check{Q} \check{Z} \Sigma \) \ k \mathfrak{a} \ \acute{A} \ \mathfrak{H} \check{u} \ p \ \mathfrak{q} \ \check{U} \check{u} \check{g} \quad (\mathfrak{q})$
 $\check{A} \emptyset \emptyset \ \emptyset \check{u} \ \acute{g} \ k \mathfrak{a} \ \check{U} \ \emptyset \check{A} \sigma \ \check{U} \ (\text{Back Siphonage}) \ \acute{A} \ \check{A} \emptyset \emptyset \ \mathfrak{I} \ \check{U} \ \ (\text{Back Pressure}) \ \mathfrak{Z} \ \check{U} \check{u}$
 $k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \ \check{k} \ \check{k} \ \check{U} \check{u} \check{u} \ \mathfrak{a} \ \acute{g} \ \check{u} \ \check{Z} \ \check{A} \ \mathfrak{t} \ \Sigma \ \mathfrak{I} \ \acute{g} \ (\text{Trap Seal}) \ \acute{A} \ \mathfrak{I} \ \mathfrak{H} \ \mathfrak{q} \ \check{k}$
 $\acute{A} \check{u} \emptyset \sigma \ \check{U} \ k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \ \check{k} \ \check{k} \ \check{U} \check{u} \check{u} \ \mathfrak{q} \ \grave{e} \ \check{y} \ \emptyset \check{u} \ \check{Q} \Sigma \ . \ \Upsilon \ \mathfrak{I} \ \mathfrak{I} \ \mathfrak{U} \ \acute{g} \ \mathfrak{N} \mathfrak{J} \mathfrak{a}$
 $\mathfrak{H} \mathfrak{U} \check{I} \ k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \mathfrak{I} \ \acute{g} \ \acute{A} \ \check{k} \ \check{k} \ \check{U} \ \mathfrak{d} \ \mathfrak{I} \ \acute{A} \ \ " \acute{A} \ \mathfrak{I} \ \mathfrak{H} \ \mathfrak{z} \ \sigma - \check{Q} \acute{g} \Upsilon \ \mathfrak{I} \ \mathfrak{P} \mathfrak{T} \check{u} \ " \ \Upsilon$
 $\ . \ \check{Z} \ \acute{A} \check{a} \ \check{A} \check{z} \check{u} \ \Upsilon \ \mathfrak{f} \ \Upsilon \ k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \ \check{k} \ \check{k} \ \check{U} \check{u} \check{u} \ \check{K} \check{U} \Upsilon \ \mathfrak{a} \ \sigma \ \Upsilon \ \mathfrak{I}$

$\sigma \acute{g} \check{u} \ \emptyset \check{u} \ \Upsilon \ \emptyset \Sigma \ \check{U} \ \mathfrak{t} \ \emptyset \check{Q} \check{a} \ \acute{A} \check{Z} \Sigma \ \emptyset \mathfrak{H} \sigma \ \emptyset \check{U} \check{D} \check{Z} \emptyset \mathfrak{U} \ \sigma \ \mathfrak{I} \ \mathfrak{U} \ \Upsilon \ k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \ \check{k} \ \check{k} \ \check{u} \check{a} \check{a} \ \mathfrak{F} \ \check{S} \acute{O} \acute{g} \quad (\mathfrak{z})$
 $\ . \ \Upsilon \ \mathfrak{I} \ \Sigma \ \check{U} \mathfrak{I} \mathfrak{a} \ \check{A} \ \check{u} \ \check{U} \ \acute{A} \ \mathfrak{I} \ \mathfrak{H}$

$(\ \grave{e} \ \check{Q} \check{u} \ \check{U} \ \Upsilon \ \check{U} \) \ \acute{A} \ \mathfrak{I} \ \mathfrak{H} \ \acute{g} \ \mathfrak{z} \quad -$
 $\ \mathfrak{a} \ \check{o} \ \check{a} \ \sigma \quad -$
 $\ \mathfrak{d} \ \acute{A} \ \Upsilon \ \check{k} \ \sigma \quad -$
 $\ \check{U} \ \check{O} \check{R} \ \check{a} \ \sigma \quad -$

$k \mathfrak{a} \ \mathfrak{d} \ \mathfrak{t} \check{U} \ d\check{z} \ \check{U} \quad \mathfrak{q} \quad \check{g} \ d\check{z} \quad \mathfrak{H} - \mathfrak{H} - \check{I}$

$k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \emptyset \ \emptyset \check{k} \ \check{k} \ \check{U} \check{u} \check{u} \ \mathfrak{k} \mathfrak{a} \ \acute{g} \check{u} \ \check{u} \ \check{U} \ d\check{z} \ \check{U} \ \Upsilon \ \acute{A} \ \mathfrak{I} \ \mathfrak{H} \ \mathfrak{q} \ \check{k} \ \acute{A} \Sigma \ \check{U} \ \check{k} \ \check{k} \ \check{g} \ d\check{z} \mathfrak{o} \quad \mathfrak{H} - \mathfrak{H} - \mathfrak{H} - \check{I}$
 $\ . \ \mathfrak{I} \ \check{A} \acute{O} \ \check{a} \ \Sigma \ \check{Z} \acute{g}$

$\emptyset \check{U} \ \Upsilon \ \acute{A} \ \emptyset \mathfrak{I} \ \mathfrak{H} \ \mathfrak{q} \ \emptyset \check{k} \ \acute{A} \emptyset \Sigma \ \check{U} \ \sigma \acute{g} \ \emptyset \check{k} \ \check{k} \ \emptyset \ k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ k \ \check{U} \emptyset \ \sigma \acute{g} \ \emptyset \check{k} \ \check{k} \ \check{g} \ d\check{z} \mathfrak{o} \ \mathfrak{N} \mathfrak{j} \ \acute{A} \ \check{Z} \acute{g} \quad \mathfrak{H} - \mathfrak{H} - \mathfrak{H} - \check{I}$
 $\ . \ \mathfrak{I} \ \mathfrak{d} \ \check{u} \ \mathfrak{d} \ k \mathfrak{a} \ " \hat{E} \quad k \mathfrak{a} \ \acute{g} \check{u} \ \check{u} \ \check{U} \ d\check{z}$

$\acute{g} \ \mathfrak{a} \ k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \Sigma \ \check{U} \ \check{k} \ \check{k} \ \mathfrak{I} \ \mathfrak{t} \ d\check{z} \ \Upsilon \ \acute{A} \ \check{U} \ \check{k} \ \sigma \ \mathfrak{F} \ \check{u} \ \check{O} \ \check{U} \ \acute{A} \ \Upsilon \ \Upsilon \ \Upsilon \ \mathfrak{T} \ \acute{O} \Sigma \ \sigma \quad \mathfrak{H} - \mathfrak{H} - \mathfrak{H} - \check{I}$
 $\ \emptyset \ \sigma \acute{g} \ \mathfrak{a} \ \mathfrak{t} \ d\check{z} \ \check{K} \emptyset \mathfrak{T} \ \check{a} \ \emptyset \ \check{u} \ \Upsilon \ \check{O} \check{Z} \sigma \ \check{U} \ \Upsilon \ \acute{g} \ \mathfrak{a} \ \check{r} \ (\ \check{A} \mathfrak{I} \) \ \Upsilon \ \ " \check{Z} \acute{O} \acute{A} \ \mathfrak{z}$
 $\ . \ \mathfrak{I} \ \check{z} \check{r} \ \check{U} \ \acute{A} \ \mathfrak{a}$

$\check{g} \ \Upsilon \ \check{K} \check{U} \Upsilon \ \Upsilon \ k \hat{E} \mathfrak{l} \mathfrak{j} \ \mathfrak{a} \ \acute{A} \Sigma \ \check{U} \ \check{k} \ \check{k} \ k \ \check{u} \ \check{U} \ \mathfrak{I} \ \check{g} \ \Upsilon \ \check{U} \ \mathfrak{d} \ \check{U} \ \Upsilon \ \check{r} \ \Upsilon \ \check{u} \quad (\check{u})$
 $\ \check{y} \ \emptyset \ \acute{A} \emptyset \ \emptyset \ \Upsilon \ \emptyset \check{k} \ \mathfrak{f} \ \check{y} \ \Upsilon \ . \ \acute{A} \ \Upsilon \ \grave{e} \ \check{Z} \ \mathfrak{a} \ \mathfrak{I} \ \acute{g} \ \check{k} \ \check{k} \ \check{y} \ \acute{O} \ \check{r} \ \check{Z}$
 $\ . \ \check{z} \check{r} \ \check{U} \ \check{g} \ d\check{z} \mathfrak{o}$

.Y IIÆ ŽÓ ĶŮY ġ NJə II dZY ĩā † Σ ÆWĂ ġ ū ġğ ŁŚ ĶÆ ĶŽf (K

$\text{f } \check{\text{q}} \quad \check{\text{U}} \text{ d}\check{\text{Z}} \text{ U} \quad \Theta \quad \check{\text{U}} \check{\text{U}} \Theta \text{ t} \quad \text{f } \check{\text{A}} \quad \text{f } \check{\text{A}} \quad \Theta \text{ t} \quad : \check{\text{Q}} \check{\text{I}} \quad \check{\text{K}} \text{d}\check{\text{Z}}$

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$\text{g } \text{d } \text{q } \text{ } \check{\text{K}} \text{d}\check{\text{E}} \quad \check{\text{K}} \text{d}\check{\text{Z}} \text{f} \quad \text{g}\check{\text{g}} \text{ t}\check{\text{S}} \quad \check{\text{J}} \text{ q } \quad \text{Lj } \check{\text{U}} \text{ q } \text{ q } \text{ t} \quad \check{\text{A}} \check{\text{U}} \check{\text{A}} \quad \text{g } \check{\text{U}} \check{\text{g}} \text{ t}\check{\text{S}} \quad \text{d}\check{\text{Z}} \check{\text{A}} \quad (\text{r}$

$\text{d}\check{\text{Z}} \text{ Y } \text{d}\check{\text{O}} \quad \check{\text{U}} \text{Y } \text{d}\check{\text{U}} \check{\text{A}} \quad \check{\text{r}} \check{\text{A}} \check{\text{U}} \text{d}\check{\text{Z}} \quad \text{g}\check{\text{d}} \check{\text{U}} \quad \text{Y } \text{d}\check{\text{Z}} \check{\text{A}} \quad \text{d}\check{\text{U}} \quad " \text{ } \check{\text{Z}} \check{\text{U}} \quad \check{\text{U}} \check{\text{T}} \check{\text{O}} \text{t} \quad \text{g}\check{\text{g}} \text{ t}\check{\text{S}} \quad (\Theta$
 $\text{d}\check{\text{U}} \check{\text{Z}} \check{\text{A}} \quad \check{\text{U}} \check{\text{A}} \check{\text{U}} \text{d}\check{\text{U}} \check{\text{r}} \quad \text{d}\check{\text{g}} \text{Y} \quad \check{\text{O}} \text{ Y} \quad \text{g}\text{Y} \quad \check{\text{U}} \quad \check{\text{U}} \text{ Y } \check{\text{A}} \check{\text{U}} \text{H} \quad ! \text{ q}\check{\text{O}} \quad \text{t}\check{\text{O}} \text{ I } \text{U}$

Y Ů h-h-h-ĩ

$\check{\text{A}} \text{d}\check{\text{U}} \quad \text{Y } \text{Z} \quad \text{d}\check{\text{U}} \text{ nj } \text{d}\check{\text{I}} \text{j } \check{\text{A}} \text{d}\check{\text{U}} \check{\text{A}} \quad \text{d}\check{\text{g}} \check{\text{U}} \check{\text{A}} \text{d} \quad \text{d}\check{\text{K}} \check{\text{I}} \quad \text{d}\check{\text{g}} \check{\text{A}} \text{d}\check{\text{O}} \Sigma \quad \check{\text{O}} \text{ I } \text{d } \text{d} \quad \text{d}\check{\text{O}} \check{\text{U}} \check{\text{A}} \text{f } \check{\text{A}} \text{ Y} \quad (\check{\text{U}}$
 $: \text{Y } \check{\text{U}} \quad \text{q } \check{\text{e}} \quad \text{g}\text{Y}$

NHS HTM 2022
 ISO 7396
 DIN EN 737-3
 ISO 9170-1
 NFPA 99C

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$\check{\text{g}} \quad \text{d}\check{\text{O}} \check{\text{A}} \text{d}\check{\text{U}} \check{\text{A}} \quad \check{\text{U}} \check{\text{A}} \text{d}\check{\text{U}} \check{\text{A}} \quad \text{d}\check{\text{g}} \check{\text{U}} \text{ (Outlet) } \check{\text{A}} \text{d}\check{\text{O}} \Sigma \quad \check{\text{O}} \text{ t } \text{d}\check{\text{Q}} \check{\text{A}} \quad \check{\text{A}} \check{\text{Z}} \Sigma \text{ d}\check{\text{H}} \text{d} \quad \text{d}\check{\text{U}} \text{D}\check{\text{Z}} \text{d}\check{\text{U}} \quad \text{ } \text{I } \text{U} \quad \text{g } \text{Nj} \text{d} \text{ Y} \quad \text{H-h-h-h-ĩ}$
 $: \quad \check{\text{O}} \text{ Y} \quad (\text{H-h-h-h-ĩ}) \quad \text{d}\check{\text{Z}} \check{\text{U}}$

(H-h-h-h-ĩ) dZ ě
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$\text{f } \check{\text{a}}$ $\check{\text{U}} \text{ d}\check{\text{z}} \text{ U } \Theta$ $\check{\text{U}} \check{\text{U}} \Theta \text{ s}$ $\text{f } \check{\text{A}}$ $\text{f } \check{\text{A}}$
 $\Theta \text{ s}$ $:\check{\text{Q}}\text{I}$ $\check{\text{K}}\text{d}\check{\text{z}}$

$\check{\text{U}} ! \text{ d}\check{\text{z}}\text{U}$ $\check{\text{g}} \text{ F } \check{\text{a}} \check{\text{k}}$ $\text{z}\check{\text{U}} \check{\text{O}}$ $\check{\text{U}}$ (External Counter Pulsationn) ECP $\check{\text{A}} \text{ } \check{\text{Y}}$ $(\check{\text{U}})$
 $\check{\text{O}} \text{ Y}$ $\check{\text{O}} \text{ d}\check{\text{Y}} \text{ a}$ $\check{\text{g}}$

$\text{d}\check{\text{Y}} \check{\text{A}} \text{ } \check{\text{A}} \check{\text{U}} \text{Ij}$ $\text{F}\check{\text{s}}$ $\check{\text{g}}$ $\check{\text{S}}\check{\text{z}}$ $\text{Y} \text{ II} \check{\text{A}}$ $\check{\text{O}}\check{\text{D}} \text{ } \text{I} \text{ U } \check{\text{Y}}$ $\text{Y} \check{\text{A}} \text{ } \check{\text{Y}}$ $\check{\text{A}} \check{\text{O}} \text{ I } \check{\text{O}} \check{\text{Y}}$ $\text{D}\check{\text{z}} \text{ Y}$ $(\check{\text{H}})$
 .Y II

$\check{\text{A}} \check{\text{O}} \text{f } \check{\text{A}} (\check{\text{h}}-\check{\text{h}}-\check{\text{h}}-\check{\text{I}})$ $\text{d}\check{\text{z}} \check{\text{O}} \text{II } \check{\text{g}}$ $\Sigma \check{\text{A}} \check{\text{A}} \check{\text{U}} \check{\text{g}} \check{\text{A}} \Sigma \text{ } \check{\text{O}}$ F $\check{\text{g}} \text{ Y } \check{\text{O}} \text{ Y}$ $\check{\text{U}} \text{ a}$ $\Sigma \check{\text{A}}$ $\check{\text{h}}-\check{\text{h}}-\check{\text{h}}-\check{\text{I}}$
 $\text{.Y II} \check{\text{A}}$

$(\check{\text{h}}-\check{\text{h}}-\check{\text{h}}-\check{\text{I}})$ $\text{d}\check{\text{z}}$ $\check{\text{g}}$
 $\check{\text{U}}$ $\check{\text{A}}$

$(\check{\text{A}} \check{\text{A}})$ $\check{\text{C}}$ $\check{\text{A}}$		$\check{\text{U}}$	$\check{\text{U}} \check{\text{U}}$
$\check{\text{A}} \check{\text{U}} \text{ d}\check{\text{z}}$	$\text{f } \check{\text{A}}$		
$\check{\text{I}}$	$\check{\text{H}}\check{\text{g}}$	$\check{\text{h}}\check{\text{g}}\check{\text{g}} \text{ Kpa}$	$\check{\text{T}}\check{\text{O}}\text{s}$
$\check{\text{h}}\check{\text{g}}$	$\check{\text{h}}\check{\text{g}}$	$\check{\text{H}}\check{\text{g}}\check{\text{g}} \text{ mm.Hg}$	$^{\circ}\text{D}\check{\text{E}}\check{\text{O}}$

$\check{\text{g}} \check{\text{A}} \Sigma \text{ } \check{\text{O}} \text{ t d}\check{\text{z}} \check{\text{K}}\check{\text{T}}$ $\check{\text{H}}-\check{\text{h}}-\check{\text{h}}-\check{\text{I}}$

$\text{U} \text{ } \check{\text{r}} \text{ } \check{\text{g}} \text{ Y}$ $\text{t } \check{\text{Q}} \check{\text{A}} \check{\text{A}} \check{\text{z}} \Sigma \text{ H}\check{\text{O}} \check{\text{O}} \check{\text{D}} \check{\text{z}} \check{\text{O}} \text{U}$ $\text{g} \check{\text{A}} \text{ } \text{Y} \text{ D}\check{\text{E}}\check{\text{O}}$ $\check{\text{T}}\check{\text{O}}\text{s}$ $\check{\text{U}}$ $\check{\text{g}} \check{\text{A}} \Sigma \text{ } \check{\text{O}}$ $(\check{\text{U}})$
 $\text{. II} \check{\text{A}} \text{ t d}\check{\text{z}}$

$\check{\text{A}} \check{\text{O}} \check{\text{O}} \check{\text{H}} \check{\text{h}}\check{\text{g}} \text{ } \check{\text{I}} \check{\text{g}}\check{\text{g}} \check{\text{Y}} \check{\text{O}} \check{\text{A}} \text{ } \text{d}\check{\text{z}} \text{ II } \check{\text{Q}} \check{\text{z}} \check{\text{U}}$ $\check{\text{g}} \check{\text{A}} \Sigma \text{ } \check{\text{O}} \text{ t d}\check{\text{z}} \check{\text{U}} \check{\text{A}} \text{ } \check{\text{O}}$ $(\check{\text{H}})$

f $\check{\text{H}}-\check{\text{h}}-\check{\text{I}}$

$\text{T}\check{\text{I}} \text{ d}\check{\text{z}}$ $\check{\text{H}}-\check{\text{H}}-\check{\text{h}}-\check{\text{I}}$

$\check{\text{K}}\text{D}\check{\text{z}}$ $\check{\text{U}} \check{\text{A}} \check{\text{A}}$ $\check{\text{g}} \text{ } \check{\text{O}} \text{II}$ $\check{\text{U}} \check{\text{O}} \check{\text{O}} \check{\text{U}} \check{\text{k}} \check{\text{k}} \check{\text{K}} \text{ II } \check{\text{A}}$ $\check{\text{k}} \check{\text{k}} \text{ T}\check{\text{I}} \text{ d}\check{\text{z}}$ $(\check{\text{U}})$

$(\text{Free Air}) \check{\text{A}} \check{\text{s}} \check{\text{z}} \check{\text{O}} \text{ a } \check{\text{g}} \Sigma \text{ Y } \Sigma \check{\text{A}} -\check{\text{H}}$
 $\check{\text{A}} \check{\text{s}} \check{\text{z}} \check{\text{O}} \text{ a } \text{mm.Hg} -\check{\text{h}}$

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 . ɔ̌ ʋ̌ l ʋ̌ ɔ̌ Ũ l ə l ǵ ɔ̌ ll ǰ Ǫ̌ŨŸ Y ʃ̌ ũ ə ǯ ǯ Dž

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Θ *š* : *Ů* *ǎ* *Kdž*

Ů *ǎ* *ǎ* (*h*-*Ĥ*-*h*-*ǎ*) *Y* *ǎ* *ǎ* *g* *Y* *ǎ* *Y* *ǎ* *Ě* *g* *p* *ǎ* *Y* *ǎ* *g* *ǎ* *ǎ* *z* *ǎ* *ǎ* (*ǎ*)
Y *ǎ* *Dž*

$t \phi \tilde{a}$ $\tilde{U}$ $d\check{z}U$ Θ $\tilde{U}$ $\tilde{U}$ $\Theta \mathfrak{s}$ $t \check{A}$ $t \check{A}$
 $\tilde{U} \parallel$ Lj $\bar{u} \Theta \mathfrak{s}$ $t \check{A}$ $\parallel$

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$\hat{H} \mathfrak{d}$

$\tilde{U} \parallel$ Lj $\bar{u} \Theta \mathfrak{s}$ $t \check{A}$ $\parallel$

$Y \ \emptyset \ \hat{U} \ \emptyset \acute{g}Y\acute{E}\emptyset \ \emptyset \ Y \ \emptyset \ \dagger \ \phi \tilde{a} \ \acute{E}\check{z}\Sigma \ H_{\emptyset} \ \emptyset \tilde{U} \ D\check{Z}\hat{U} \ \emptyset \ I \ U \ \acute{g} \ N\mathfrak{J}\mathfrak{a} \ \acute{g} \ nj \ \parallel \ \emptyset \check{r} \ \check{y} \ -$
 $.Y \ Y \ Y \ I \ U \ \check{y} \ \acute{g} \ N\mathfrak{J}\mathfrak{a} \ \tilde{U} \ \parallel \check{a} \ H_{\emptyset} \ \acute{g} \ Lj \ \bar{u} \ \hat{U}\acute{E} \ \bar{u} \ \mathfrak{s}\hat{O} \ \emptyset \ \acute{E}f \ \check{A}$

$\hat{U} \ \emptyset \mathfrak{s}\acute{g} \ \dagger \ \emptyset \check{A} \ \emptyset \acute{g} \ I \ \emptyset U \ Y \ \dagger \ \emptyset \phi \tilde{a} \ \acute{E}\check{z}\Sigma \ \emptyset H_{\emptyset} \ \emptyset \tilde{U} \ D\check{Z}\hat{U} \ \emptyset \ \bar{U} \ \acute{g} \ N\mathfrak{J}\mathfrak{a} \ \tilde{U} \ Y \ \check{z}\mathfrak{s}\check{a} \ -$
 $\check{g} \ \emptyset \Sigma \ k \ \emptyset \ \emptyset \check{z} \ \check{y} \ \emptyset \ Y \ \acute{g} \ I \ U \ \check{y} \ \acute{g} \ N\mathfrak{J}\mathfrak{a} \ \acute{g} \ nj \ \parallel .Y \ Y \ \check{a} \ MRI \ \check{y} \tilde{U} \ \acute{E}\emptyset \acute{E}$
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$\check{y} \ \tilde{U} \ Y \ \acute{g}k \ Y \ Y \ \check{a} \ \acute{g} \ I \ U \ \check{y} \ Y \ \acute{E} \ \acute{g} \ N\mathfrak{J}\mathfrak{a} \ \acute{g} \ nj \ \parallel \ Y$
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$t \varphi \tilde{a}$	$\tilde{U}$	$d\check{z} U$	Θ	$\tilde{U}$	$\tilde{U}$	$\Theta \mathfrak{z}$	$t \check{A}$	$f \check{A}$
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		$\mp \parallel \check{r} \tilde{a} \sigma$	$\check{I}-\hat{H}\check{T}$	$\tilde{a} \mathfrak{D}\check{z}$	$p \mathfrak{z} \check{r} \hat{U} \tilde{U} \hat{E} \check{A}$
		$\check{j} \acute{o} \mathfrak{s} \acute{o} \tilde{U} \sigma$	$\check{I}-\hat{h} \acute{g}$	$\acute{E} \parallel \mathfrak{H}$	$\acute{g} \mathfrak{s}$
				$\mathfrak{a} \check{o} \tilde{a} \sigma$	$\check{I}-\mathfrak{h}$
	$\mathfrak{z} \mathfrak{z}$	Nj		$\tilde{U}$	δ
	$\mathfrak{D}$	$\check{j} \tilde{U} \mathfrak{s}$	$\check{I}-\hat{h} \hat{H}$	$I U$	$\acute{E} \mathfrak{D}$
	$\acute{E}$	$\gamma \check{k} \sigma$	$\check{I}-\hat{h} \hat{H}$	$\mathfrak{s} \mathfrak{t}$	$\acute{g} \acute{E} \check{k} \sigma \mathfrak{t} \check{r}$
$\mathfrak{s} \mathfrak{a} \hat{U} \mathfrak{D}$	$\mathfrak{f}$	$\tilde{a} \sigma$	$\check{I}-\hat{h} \mathfrak{H}$	$\acute{E} \tilde{U} \mathfrak{a}$	$\check{o} \check{j} \check{k}$
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$\acute{o} \mathfrak{H} \mathfrak{l} \sigma$	$\check{K}$	$\mathfrak{w} \check{I}-\hat{h} \check{T}$		$\acute{E} \mathfrak{a} \tilde{u} \gamma$	$\tilde{U} \check{k} \check{I}-\hat{H} \acute{g}$
$\acute{o} \check{z} \sigma$	$\mathfrak{s}$	$\check{I}-\hat{h} \check{T}$	$(p \mathfrak{s} \sigma)$	$\mathfrak{t} \varphi \tilde{a} \parallel \mathfrak{D} \sigma \parallel \mathfrak{a}$	$\check{I}-\hat{H} \hat{H}$
			$\mathfrak{D} \acute{o}$	$\acute{E} \mathfrak{a} \tilde{u} \gamma$	$\check{I}-\hat{H} \hat{H}$
			$\check{K} \mathfrak{s} \gamma$	$\acute{E} \mathfrak{a} \tilde{u} \gamma$	$\check{I}-\hat{H} \mathfrak{H}$
			$\parallel \mathfrak{D} \sigma \mathfrak{q}$	$\tilde{u} \gamma$	$\check{I}-\hat{H} \mathfrak{h}$
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			$\tilde{U} \acute{o} \mathfrak{s} \acute{o} \check{r}$	$\tilde{a} \sigma$	$\check{I}-\hat{H} \check{T}$
			$\acute{E} \mathfrak{s} \tilde{A} \mathfrak{D} \sigma / \acute{E} \mathfrak{w} \varphi \tilde{a} \parallel \mathfrak{D} \sigma \parallel \mathfrak{a}$		$\check{I}-\hat{H} \check{T}$

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 $\text{. } \text{zř } \tilde{\text{U}} \text{ } \tilde{\text{U}} \tilde{\text{g}} \text{ } \Sigma \text{ } \tilde{\text{A}} \parallel \tilde{\text{A}} \tilde{\text{U}} \text{ } \tilde{\text{g}} \text{ } \text{ŮĂdž} \text{ } \tilde{\text{U}} \text{Ě} \text{ } \tilde{\text{g}} \text{ } \text{Dž } \text{Y} \text{ -H}$
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$\text{H} \sigma$	$\Sigma \text{ Y}$	$\tilde{\text{I}} \tilde{\text{H}} / \tilde{\text{h}} - \tilde{\text{I}} \tilde{\text{I}}$	$\text{Y } \tilde{\text{U}} \emptyset$	$\Sigma \text{ Y}$	$\tilde{\text{h}} \tilde{\text{H}} - \tilde{\text{h}} \tilde{\text{g}}$	$\tilde{\text{A}} \text{ t}$	

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 $\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{z}} \Sigma \text{H} \text{u} \text{ } \emptyset \tilde{\text{U}} \text{D}\tilde{\text{z}} \emptyset \text{U} \text{ } \sigma : \text{I U}$
 $\tilde{\text{U}} : \tilde{\text{a}} \sigma$

$\text{H} \text{u} \text{ } \Theta \text{ } \Sigma \text{Y}$	$\tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{I}} - \tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{h}}$	$\text{Y } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{h}} \tilde{\text{I}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{H } \text{f}$
$\text{H} \text{u} \text{ } \Theta \text{ } \Sigma \text{Y}$	$\tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{h}} - \tilde{\text{I}} \tilde{\text{H}} / \tilde{\text{I}}$	$\text{Y } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{h}} \tilde{\text{h}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t}$	

$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}} \tilde{\text{g}} - \tilde{\text{I}} \tilde{\text{g}}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{h } \parallel \text{t} \text{ } \tilde{\text{A}}$
$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}} \tilde{\text{g}} - \text{H}\tilde{\text{g}}$	$\tilde{\text{A}} \text{t}$	

☐	☐ $\tilde{\text{A}} \tilde{\text{A}} \text{u}$	☒ $\parallel \text{R}$	$\text{H } \parallel \text{t}$
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$\tilde{\text{U}} \text{Y}$	$\tilde{\text{h}}$	$\emptyset \text{ } \text{g } \tilde{\text{K}} \tilde{\text{a}} \text{f}$	Lj
$\tilde{\text{U}} \text{Y}$	$\tilde{\text{I}}$	$\text{g } \tilde{\text{A}} \text{ } \text{ } \Sigma \tilde{\text{K}} \tilde{\text{a}} \text{f}$	

☒ $\tilde{\text{U}} \emptyset \text{ } \emptyset$	☐ $\text{t} \emptyset \text{ } \text{I}$	☐ I	$\tilde{\text{a}} \tilde{\text{K}}$	$\tilde{\text{u}}$
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☒ $\emptyset \text{ } \emptyset$	☐	☐ d	$\text{qU } \text{D}\tilde{\text{z}} \text{ } \text{D}\tilde{\text{z}}$
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$\tilde{\text{h}} \tilde{\text{I}}$	D.S. p	$\text{g } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \sigma \text{ } \text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{a}} \sigma \text{Y } \text{g}$	$\text{h } \tilde{\text{U}} \text{t } \text{Lj } \text{q } \text{q}$
☒	☐	d	$\tilde{\text{a}} \sigma \text{g } \emptyset \text{U} \sigma$	

N.C.	$\text{H}\tilde{\text{I}}$	$\text{k } \text{q}$	$\text{D}\tilde{\text{z}} \text{T}$	$\text{Rt } \text{f}$
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w/m^2	$\tilde{\text{h}} \tilde{\text{I}}$	$\tilde{\text{I}} \text{h}$
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$\text{. } \parallel \text{g } \text{d } \tilde{\text{K}} \tilde{\text{a}} \text{d } \parallel \text{j } \emptyset \emptyset \emptyset \text{f } \text{Y } \text{j } \emptyset \tilde{\text{a}} \sigma \text{Y } -\text{H}$
 $\text{.Y } \parallel \text{g } \text{d } \text{q } \text{è } \text{g } \tilde{\text{A}} \text{t} \tilde{\text{A}} -\text{h}$
 $\text{. } \parallel \parallel \text{R } \text{g } \parallel \text{t } \text{g } \text{ } -\text{H}$
 $\text{. } \text{zr } \tilde{\text{U}} \text{g } \Sigma \tilde{\text{A}} \tilde{\text{A}} \emptyset \text{g } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \sigma \tilde{\text{U}} \tilde{\text{A}} \text{g } \text{D}\tilde{\text{z}} \text{Y } -\text{h}$
 $\text{. } \emptyset \text{u } \text{d } \tilde{\text{U}} \text{" } \tilde{\text{A}} \tilde{\text{a}} \text{t } \emptyset \tilde{\text{A}} \text{f } \tilde{\text{A}} \tilde{\text{A}} \text{" } \text{g}\tilde{\text{g}} \Sigma -\tilde{\text{I}}$

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d}\tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

ĩ-ââ $\text{z } \text{ž} \parallel \text{ğ } \Sigma$

$\text{Ů} \text{q}$ ů Nj ů nj
 $\text{f } \text{q} \tilde{\text{a}} \text{ Ě } \text{ž} \Sigma \text{ H} \text{u} \text{ } \emptyset \tilde{\text{U}} \text{ D}\tilde{\text{Z}} \emptyset \text{U}$ $\sigma : \text{I U}$
 $(\text{p} \quad \text{t} \text{o}) \text{ f } \text{q} \tilde{\text{a}} \text{ I } \text{D} \text{o} \text{ I} \quad \text{a} : \tilde{\text{a}} \sigma$

$\text{H} \text{u} \text{ } \Theta \text{ } \Sigma \text{Y}$	$\tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{I}} - \tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{h}}$	$\text{Y } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{h}} \tilde{\text{I}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{H } \text{f}$
$\text{H} \text{u} \text{ } \Theta \text{ } \Sigma \text{Y}$	$\tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{h}} - \tilde{\text{I}} \tilde{\text{H}} / \tilde{\text{I}}$	$\text{Y } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{h}} \tilde{\text{h}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t}$	

$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}} \text{ğ} - \tilde{\text{I}} \text{ğ}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{h } \parallel \text{t} \quad \tilde{\text{A}}$
$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}} \text{ğ} - \text{H}\tilde{\text{ğ}}$	$\tilde{\text{A}} \text{t}$	

☐	☐ $\tilde{\text{A}} \tilde{\text{A}} \text{u}$	☒ $\parallel \text{R}$	$\text{H } \parallel \text{t}$
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$\tilde{\text{U}} \text{Y}$	$\tilde{\text{h}}$	$\emptyset \text{ } \text{ğ } \tilde{\text{K}} \tilde{\text{a}} \text{f}$	Lj
$\tilde{\text{U}} \text{Y}$	$\tilde{\text{I}}$	$\text{ğ } \tilde{\text{A}} \text{ } \text{ł } \Sigma \tilde{\text{K}} \tilde{\text{a}} \text{f}$	

☒ $\text{ů } \emptyset \text{ } \emptyset$	☐ $\text{t} \emptyset \text{ } \text{ł}$	☐ ł	$\tilde{\text{a}} \text{ } \tilde{\text{K}}$	$\tilde{\text{u}}$
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☒ $\emptyset \text{ } \emptyset$	☐	☐ a	$\text{qU } \text{D}\tilde{\text{z}} \text{ } \text{D}\tilde{\text{z}}$
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$\tilde{\text{h}} \tilde{\text{I}}$	$\text{D.S. p } \text{ğ } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \text{o } \text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{a}} \sigma \text{Y } \text{ğ}$	$\text{h } \text{ů } \text{t } \text{lj } \text{q } \text{q}$
☒	☐ a	$\tilde{\text{a}} \sigma \text{ğ } \emptyset \text{U} \sigma$	

N.C.	$\text{H}\tilde{\text{I}}$	$\text{k } \text{q} \text{D}\tilde{\text{z}} \text{T } \text{Rt } \text{f}$
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w/m^2	$\text{H}\tilde{\text{ğ}}$	$\tilde{\text{I}} \text{h}$
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$\text{Y } \parallel \text{ğ } \text{z } \text{z } \parallel \text{j } \emptyset \emptyset \emptyset \text{ } \text{f } \text{Y } \text{j } \emptyset \tilde{\text{a}} \sigma \text{Y } - \tilde{\text{H}}$
 $\text{lj } \text{ğ } \tilde{\text{A}} \tilde{\text{U}} \text{t } \tilde{\text{A}} \text{ğ } \text{z } - \tilde{\text{h}}$
 $\text{H } \parallel \parallel \text{R } \text{ğ } \parallel \text{t } \text{ğ } \text{ } \Theta - \text{H}$
 $\text{z } \tilde{\text{I}} \tilde{\text{U}} \text{ } \emptyset \text{ğ } \Sigma \tilde{\text{A}} \tilde{\text{U}} \text{ } \emptyset \text{ğ } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \text{o } \emptyset \tilde{\text{A}} \text{ğ } \text{D}\tilde{\text{z}} \text{Y } - \tilde{\text{h}}$
 $\text{z } \tilde{\text{I}} \text{z } \tilde{\text{U}} \text{ " } \tilde{\text{A}} \tilde{\text{a}} \text{t } \text{ } \emptyset \tilde{\text{A}} \text{f } \tilde{\text{A}} \tilde{\text{A}} \text{U } \text{ " } \text{ğ } \text{ğ } \Sigma - \tilde{\text{I}}$

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d}\tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

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$\text{Ů} \phi$ $\tilde{\text{u}}$ NJ $\tilde{\text{u}}$ nj
 $\text{f } \phi \tilde{\text{a}} \text{ } \tilde{\text{A}} \tilde{\text{z}} \Sigma \text{H} \text{U} \text{ } \emptyset \tilde{\text{U}} \text{D}\tilde{\text{Z}} \emptyset \text{U} \text{ } \sigma : \text{I U}$
 $\emptyset \tilde{\text{U}}$ $\tilde{\text{A}} \text{e} \tilde{\text{u}} \text{Y}$: $\tilde{\text{a}} \sigma$

$\text{H} \text{ } \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{I}} \tilde{\text{T}} / \tilde{\text{T}} - \tilde{\text{I}} \tilde{\text{T}} / \tilde{\text{h}}$	$\text{Y } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{h}} \tilde{\text{T}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{H } \text{f}$
$\text{H} \text{ } \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{I}} \tilde{\text{T}} / \tilde{\text{h}} - \tilde{\text{I}} \tilde{\text{H}} / \tilde{\text{T}}$	$\text{Y } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{Y}$	$\tilde{\text{h}} \tilde{\text{h}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t}$	

$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{T}} \tilde{\text{g}} - \tilde{\text{I}} \tilde{\text{g}}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{h } \parallel \text{t} \quad \tilde{\text{A}}$
$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}} \tilde{\text{g}} - \text{H}\tilde{\text{g}}$	$\tilde{\text{A}} \text{t}$	

☐	☐ $\tilde{\text{A}} \tilde{\text{A}} \text{U}$	☒ $\parallel \text{R}$	$\text{H } \parallel \text{t}$
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$\tilde{\text{U}} \text{Y}$	$\tilde{\text{h}}$	$\emptyset \text{ } \text{g } \tilde{\text{K}} \tilde{\text{a}} \text{f}$	Lj
$\tilde{\text{U}} \text{Y}$	$\tilde{\text{T}}$	$\text{g } \tilde{\text{A}} \text{ } \text{l } \Sigma \tilde{\text{K}} \tilde{\text{a}} \text{f}$	

☒ $\tilde{\text{u}} \emptyset \emptyset$	☐ $\text{t} \emptyset \text{ } \text{l}$	☐ $\text{ } \text{l}$	$\tilde{\text{a}} \tilde{\text{K}}$	$\tilde{\text{u}}$
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☒ $\emptyset \emptyset$	☐	☐ d	$\phi \text{U} \text{D}\tilde{\text{z}} \text{D}\tilde{\text{z}}$
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$\tilde{\text{h}} \tilde{\text{T}}$	D.S. p	$\text{g } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \sigma \text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{a}} \sigma \text{Y } \text{g}$	$\text{h } \tilde{\text{u}} \text{t } \text{lj } \phi \text{ } \phi$
☒	☐	d	$\tilde{\text{a}} \sigma \text{g } \emptyset \phi \text{U} \sigma$	

N.C.	$\text{H} \tilde{\text{T}}$	$\text{k } \phi \text{D}\tilde{\text{z}} \text{T } \text{Rt } \text{f}$
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w/m^2	hg	$\tilde{\text{T}} \text{h}$
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$\text{.Y } \parallel \tilde{\text{g}} \text{ } \text{U} \text{ } \text{U} \parallel \text{j } \emptyset \emptyset \emptyset \text{f } \text{Y } \text{j } \emptyset \tilde{\text{a}} \sigma \text{Y } -\tilde{\text{H}}$
 $\text{. } \text{lj } \text{g } \tilde{\text{A}} \tilde{\text{U}} \text{t } \tilde{\text{A}} \tilde{\text{g}} \text{ } \text{U} -\tilde{\text{h}}$
 $\text{. } \parallel \parallel \text{R } \text{g } \parallel \text{t } \text{g } \text{ } \emptyset -\text{H}$
 $\text{. } \text{z}\tilde{\text{T}} \tilde{\text{U}} \tilde{\text{U}} \tilde{\text{g}} \Sigma \tilde{\text{A}} \tilde{\text{U}} \tilde{\text{U}} \text{g } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \sigma \tilde{\text{U}} \tilde{\text{A}} \text{g } \text{D}\tilde{\text{z}} \text{Y } -\tilde{\text{h}}$
 $\text{. } \emptyset \text{U} \text{ } \text{U} \text{ } \tilde{\text{A}} \tilde{\text{a}} \text{t} \emptyset \tilde{\text{A}} \tilde{\text{t}} \tilde{\text{A}} \tilde{\text{U}} \text{ } \text{g}\tilde{\text{g}} \Sigma -\tilde{\text{T}}$

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w/m^2	hg	$\bar{t}$ h
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. ll ʁ g ʂ g ə -H
zř Ů ů ģ Σ Āł Ą ů g Ǿ Ą dʒo ů Ę g Dž Y -h
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Ĭ-Ĥh ǻ ž ʎ ğ Σ

Ů ǻ ů ʎ ů nj
 ƒ ǻ Ē ž Σ H ʋ Ø Ů D ž Ø Ů ʋ : Ĭ U
 Ĭ ʋ ǻ ū Y : ā ʋ

H ǻ Σ Y	Ĭ Ĭ/Ĭ-Ĭ Ĭ/h	Y Ů Ø Σ Y	h Ĭ-h Ĭ	Ē ʂ ʋ	Ĥ ʂ
H ǻ Σ Y	Ĭ Ĭ/h-Ĭ H/Ĭ	Y Ů Ø Σ Y	h Ĭ-h Ĭ	Ē ʂ	

D ž Y	Ĭ ğ-Ĭ ğ	Ē ʂ ʋ	Ĥ ʍ ʂ Ā
D ž Y	Ĭ ğ-H ğ	Ē ʂ	

☐	☐ Ē Ā ʋ	☒ ʍ ʎ	Ĥ ʍ ʂ
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Ů Y	Ĭ	ğ Ē ʎ Σ K ā ƒ	

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☒ Ø ʋ	☐	☐ ʂ	ǻ U D ž D ž
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h Ĭ	D.S.p ğ Ø Ā d ž ʋ D ž Y	ā ʋ Y ğ	Ĥ ů ʂ lj ǻ ǻ
☒	☐ ʂ	ā ʋ ğ Ø ʋ ʋ	

N.C.	Ĥ Ĭ	k ǻ D ž ʂ ʎ ʂ ƒ
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w/m ²	h ğ	Ĭ ʎ
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.Y ʎ ğ ʋ ǻ ʎ ž ʋ ů ů ƒ Y ž ā ʋ Y -Ĥ
 . lj ğ Ē ʂ Ā ğ ʋ -ĥ
 . ʎ ʍ ğ ʍ ğ ǻ -Ĥ
 . ž Ů Ů ğ Σ Ā Ā Ů ğ Ø Ā d ž ʋ Ē ğ D ž Y -ĥ
 . Ø ʋ ʋ Ů "Ē ā ʂ Ø ʋ Ē ƒ Ā Ē ʍ " ğ ğ Σ -Ĭ

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d}\tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

87

ĩ-ĥĩ $\text{z } \text{ž} \parallel \text{ğ } \Sigma$

$\text{Ů} \text{q}$ ů Nj ů nj
 $\text{f } \phi \tilde{\text{a}} \text{ Ě } \Sigma \text{ H} \text{u} \text{ } \emptyset \tilde{\text{U}} \text{ D}\tilde{\text{Z}} \text{U} \text{ } \sigma \text{ : I U}$
 $\text{ğ : } \tilde{\text{a}} \text{ } \sigma$

$\text{H} \text{ } \emptyset \text{ } \Sigma \text{ } \Upsilon$	$\tilde{\text{I}} \tilde{\text{T}} / \tilde{\text{T}} - \tilde{\text{I}} \tilde{\text{T}} / \tilde{\text{h}}$	$\Upsilon \text{ } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{ } \Upsilon$	$\tilde{\text{h}} \tilde{\text{T}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{ t } \sigma$	$\text{H } \text{f}$
$\text{H} \text{ } \emptyset \text{ } \Sigma \text{ } \Upsilon$	$\tilde{\text{I}} \tilde{\text{T}} / \tilde{\text{h}} - \tilde{\text{I}} \tilde{\text{H}} / \tilde{\text{t}}$	$\Upsilon \text{ } \tilde{\text{U}} \emptyset \text{ } \Sigma \text{ } \Upsilon$	$\tilde{\text{h}} \tilde{\text{h}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{ t}$	

$\text{D}\tilde{\text{z}} \text{ } \Upsilon$	$\tilde{\text{t}} \text{ğ} - \tilde{\text{I}} \text{ğ}$	$\tilde{\text{A}} \text{ t } \sigma$	$\text{h } \parallel \text{t} \text{ } \tilde{\text{A}}$
$\text{D}\tilde{\text{z}} \text{ } \Upsilon$	$\tilde{\text{I}} \text{ğ} - \text{H}\text{ğ}$	$\tilde{\text{A}} \text{ t}$	

☐	☐ $\tilde{\text{A}} \tilde{\text{A}} \text{u}$	☒ WR	$\text{H } \parallel \text{t}$
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$\tilde{\text{U}} \text{ } \Upsilon$	$\tilde{\text{h}}$	$\emptyset \text{ } \text{ğ } \tilde{\text{K}} \tilde{\text{a}} \text{ f}$	Lj
$\tilde{\text{U}} \text{ } \Upsilon$	$\tilde{\text{h}}$	$\text{ğ } \tilde{\text{A}} \text{ } \text{ł } \Sigma \tilde{\text{K}} \tilde{\text{a}} \text{ f}$	

☒ $\text{ů } \emptyset \text{ } \emptyset$	☐ $\text{t} \emptyset \text{ } \text{ł}$	☐ ł	$\tilde{\text{a}} \text{ } \tilde{\text{K}}$	$\tilde{\text{u}}$
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☒ $\emptyset \text{ } \emptyset$	☐	☐ d	$\text{qU } \text{D}\tilde{\text{z}} \text{ } \text{D}\tilde{\text{z}}$
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$\tilde{\text{h}} \tilde{\text{I}}$	$\text{D.S. p } \text{ğ } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \text{ } \text{D}\tilde{\text{z}} \text{ } \Upsilon$	$\tilde{\text{a}} \text{ } \sigma \text{ } \Upsilon \text{ } \text{ğ}$	$\text{h } \text{ů } \text{t } \text{lj } \text{q } \text{q}$
☒	☐ d	$\tilde{\text{a}} \text{ } \sigma \text{ } \text{ğ } \emptyset \text{U} \text{ } \sigma$	

N.C.	$\text{H}\tilde{\text{I}}$	$\text{k } \text{q } \text{D}\tilde{\text{z}} \text{ } \text{T} \text{ } \text{Rt } \text{f}$
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w/m^2	$\text{H}\tilde{\text{I}}$	$\tilde{\text{I}} \text{ } \text{h}$
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$\text{.Y } \parallel \text{ğ } \text{z } \text{z } \parallel \text{j } \emptyset \emptyset \emptyset \text{ } \text{f } \Upsilon \text{ } \text{j } \emptyset \tilde{\text{a}} \text{ } \sigma \text{ } \Upsilon \text{ } - \hat{\text{H}}$
 $\text{. } \text{lj } \text{ğ } \tilde{\text{A}} \text{t} \text{ } \tilde{\text{A}} \text{ } \text{ğ } \text{z } - \hat{\text{h}}$
 $\text{. } \parallel \text{WR } \text{ğ } \text{t} \text{ } \text{ğ } \text{ } \emptyset - \text{H}$
 $\text{. } \text{zř } \tilde{\text{U}} \text{ } \text{ůğ } \Sigma \tilde{\text{A}} \tilde{\text{A}} \text{ } \text{ğ } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \text{ } \text{ůĚ } \text{ğ } \text{D}\tilde{\text{z}} \text{ } \Upsilon - \text{h}$
 $\text{. } \emptyset \text{z } \text{z } \tilde{\text{U}} \text{ } \text{Ěā} \text{ } \text{t} \emptyset \text{ } \text{Ěf } \tilde{\text{A}} \text{Ě } \parallel \text{ } \text{ğğ } \Sigma - \tilde{\text{I}}$

$t \phi \tilde{a}$ $\tilde{U}$ $d\tilde{z} U$ θ $\tilde{U}$ $\tilde{U}$ $\theta \mathfrak{s}$ $f \tilde{A}$ $f \tilde{A}$
 $\tilde{U} \parallel$ Lj $\tilde{u} \theta \mathfrak{s}$ $f \tilde{A}$ $\parallel$

$\tilde{I}-\tilde{H}\tilde{r}$ $\mathfrak{z}$ $\tilde{J}\parallel \tilde{g}$ Σ

$\tilde{U} \phi$ $\tilde{u}$ Nj $\tilde{u}$ nj
 $\dagger \phi \tilde{a}$ $\tilde{A}\tilde{z}\Sigma$ $H\sigma$ $\emptyset \tilde{U}$ $D\tilde{z}\emptyset U$ σ : $I U$
 $\tilde{U} \emptyset$ $\mathfrak{S} \emptyset \tilde{r}$: $\tilde{a} \sigma$

$H\sigma$	$\mathfrak{a}$	Σ	Υ	$\tilde{I}\tilde{r}/\tilde{r}-\tilde{I}\tilde{r}/\tilde{h}$	Υ	$\tilde{U} \emptyset$	Σ	Υ	$\tilde{h}\tilde{r}-\tilde{h}\tilde{h}$	$\tilde{A}$	$\mathfrak{s}$	σ	$\mathfrak{H} \mathfrak{T}$
$H\sigma$	$\mathfrak{a}$	Σ	Υ	$\tilde{I}\tilde{r}/\tilde{h}-\tilde{I}\tilde{h}/\tilde{r}$	Υ	$\tilde{U} \emptyset$	Σ	Υ	$\tilde{h}\tilde{h}-\tilde{h}\tilde{h}$	$\tilde{A}$	$\mathfrak{s}$		

$D\tilde{z} \Upsilon$	$\tilde{r}\tilde{g}-\tilde{I}\tilde{g}$	$\tilde{A}$	$\mathfrak{s}$	σ	$\mathfrak{h} \parallel \mathfrak{s} \tilde{A}$
$D\tilde{z} \Upsilon$	$\tilde{I}\tilde{g}-H\tilde{g}$	$\tilde{A}$	$\mathfrak{s}$		

☐	☐	$\tilde{A}\tilde{A}\tilde{u}$	☒	$\parallel \mathfrak{R}$	$\mathfrak{H} \parallel \mathfrak{s}$
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$\tilde{U}$	Υ	$\tilde{h}$	$\emptyset$	$\mathfrak{g}$	$\tilde{K}\tilde{a}$	$\mathfrak{f}$	Lj
$\tilde{U}$	Υ	$\tilde{h}$	$\mathfrak{g}$	$\tilde{A}$	$\mathfrak{l}$	$\Sigma \tilde{K}\tilde{a}$	

☒	$\tilde{u}$	$\emptyset \tilde{r}$	☐	$\mathfrak{s} \emptyset$	$\mathfrak{l}$	☐	$\mathfrak{l}$	$\tilde{a}$	$\tilde{K}$	$\tilde{u}$
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☒	$\emptyset \tilde{r}$	☐	☐	$\mathfrak{a}$	ϕU	$D\tilde{z}$	$D\tilde{z}$
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$\tilde{h}\tilde{I}$	$D.S.p$	$\mathfrak{g}$	$\emptyset \tilde{A}d\tilde{z}\sigma$	$D\tilde{z} \Upsilon$	$\tilde{a} \sigma$	Υ	$\mathfrak{g}$	$\mathfrak{h} \tilde{u} \mathfrak{t} lj \phi \phi$
☒	☐	$\mathfrak{a}$	$\tilde{a} \sigma$	$\mathfrak{g}$	$\emptyset \phi U \sigma$			

N.C.	$\tilde{H}\tilde{I}$	$k \phi$	$D\tilde{z} \mathfrak{T}$	$\mathfrak{R} \mathfrak{t} \mathfrak{f}$
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w/m^2	$\tilde{H}\tilde{I}$	$\tilde{r} \mathfrak{h}$
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$\mathfrak{z} \parallel \tilde{g} \mathfrak{z} \mathfrak{z} \parallel \tilde{j} \emptyset \emptyset \tilde{u} \sigma$ $\mathfrak{f} \Upsilon \tilde{j} \emptyset \tilde{a} \sigma$ Υ $-\tilde{H}$
 $\mathfrak{l} j$ $\mathfrak{g} \tilde{A} \mathfrak{s}$ $\tilde{A} \tilde{g} \mathfrak{z}$ $-\tilde{h}$
 $\parallel \parallel \mathfrak{R} \mathfrak{g}$ $\parallel \mathfrak{s} \mathfrak{g} \mathfrak{a}$ $-\mathfrak{H}$
 $\mathfrak{z} \tilde{r}$ $\tilde{U}$ $\emptyset \tilde{g}$ $\Sigma \tilde{A} \tilde{A} \tilde{u}$ $\mathfrak{g}$ $\emptyset \tilde{A}d\tilde{z}\sigma$ $\tilde{u} \tilde{A}$ $\mathfrak{g}$ $D\tilde{z} \Upsilon$ $-\tilde{h}$
 $\mathfrak{z} \mathfrak{z}$ $\mathfrak{z} \tilde{U}$ $\mathfrak{z} \tilde{A} \tilde{a}$ $\mathfrak{s} \emptyset$ $\sigma \tilde{A} \mathfrak{f}$ $\tilde{A} \tilde{A} \mathfrak{s}$ $\mathfrak{g} \tilde{g}$ Σ $-\tilde{I}$

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d}\tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

ĩ-âĩ $\text{z } \text{ž} \parallel \text{ğ } \Sigma$

$\text{Ů} \text{q}$ ů Nj ů nj
 $\text{f } \text{q} \tilde{\text{a}} \text{ } \tilde{\text{A}} \tilde{\text{z}} \Sigma \text{ } \text{H} \text{u} \text{ } \emptyset \tilde{\text{U}} \text{ D}\tilde{\text{Z}} \emptyset \text{U}$ $\sigma : \text{I } \text{U}$
 $\tilde{\text{A}} \text{t } \tilde{\text{A}} \text{D} \text{u} / \tilde{\text{A}} \text{U} \text{q} \tilde{\text{a}}$ $\text{I } \text{D} \text{u}$ I $\text{a} : \tilde{\text{a}} \sigma$

$\text{H} \text{u}$ ə ΣY	$\tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{I}} - \tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{h}}$	$\text{Y } \tilde{\text{U}} \emptyset$ ΣY	$\tilde{\text{h}} \tilde{\text{I}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{H } \text{f}$
$\text{H} \text{u}$ ə ΣY	$\tilde{\text{I}} \tilde{\text{I}} / \tilde{\text{h}} - \tilde{\text{I}} \tilde{\text{H}} / \tilde{\text{I}}$	$\text{Y } \tilde{\text{U}} \emptyset$ ΣY	$\tilde{\text{h}} \tilde{\text{h}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{t}$	

$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}} \text{ğ} - \tilde{\text{I}} \text{ğ}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{h } \parallel \text{t} \quad \tilde{\text{A}}$
$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}} \text{ğ} - \text{H}\text{ğ}$	$\tilde{\text{A}} \text{t}$	

☐	☐ $\tilde{\text{A}} \tilde{\text{A}} \text{u}$	☒ $\text{U} \text{R}$	$\text{H } \parallel \text{t}$
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$\tilde{\text{U}} \text{Y}$	$\tilde{\text{h}}$	$\emptyset \text{ğ } \tilde{\text{K}} \tilde{\text{a}} \text{f}$	Lj
$\tilde{\text{U}} \text{Y}$	$\tilde{\text{I}}$	$\text{ğ } \tilde{\text{A}} \text{ğ } \Sigma \tilde{\text{K}} \tilde{\text{a}} \text{f}$	

☒ $\text{ů } \emptyset \text{U}$	☐ $\text{t} \emptyset \text{ğ}$	☐ ğ	$\tilde{\text{a}} \text{ğ}$	$\tilde{\text{u}}$
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☒ $\emptyset \text{U}$	☐	☐ a	$\text{qU } \text{D}\tilde{\text{z}} \text{D}\tilde{\text{z}}$
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$\tilde{\text{h}} \tilde{\text{I}}$	D.S. p $\text{ğ } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \sigma$ $\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{a}} \sigma \text{Y}$ ğ	$\text{h } \text{ů } \text{t} \text{Lj } \text{q } \text{q}$
☒	☐ a	$\tilde{\text{a}} \sigma \text{ğ } \emptyset \text{U} \sigma$	

N.C.	$\text{H}\tilde{\text{I}}$	$\text{k } \text{q}$ $\text{D}\tilde{\text{z}} \text{T}$ $\text{Rt } \text{f}$
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w/m^2	$\text{h}\text{ğ}$	$\tilde{\text{I}} \text{h}$
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$\text{Y } \parallel \text{ğ } \text{z } \text{z } \parallel \text{j } \emptyset \emptyset \emptyset \text{u} \text{f } \text{Y } \text{j } \emptyset \tilde{\text{a}} \sigma \text{Y } -\tilde{\text{H}}$
 $\text{Lj } \text{ğ } \tilde{\text{A}} \text{t} \tilde{\text{A}} \text{ğ } \text{z } -\tilde{\text{h}}$
 $\text{U} \text{R } \text{ğ } \text{t } \text{ğ } \text{ə } -\text{H}$
 $\text{z } \tilde{\text{I}} \tilde{\text{U}} \tilde{\text{U}} \text{ğ } \Sigma \tilde{\text{A}} \tilde{\text{A}} \tilde{\text{U}} \text{ğ } \emptyset \tilde{\text{A}} \text{d}\tilde{\text{z}} \sigma \tilde{\text{U}} \tilde{\text{A}} \text{ğ } \text{D}\tilde{\text{z}} \text{Y } -\tilde{\text{h}}$
 $\text{z } \tilde{\text{U}} \text{" } \tilde{\text{A}} \tilde{\text{a}} \text{t } \sigma \tilde{\text{A}} \text{f } \tilde{\text{A}} \tilde{\text{A}} \text{" } \text{ğğ } \Sigma -\tilde{\text{I}}$

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d} \tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

ĩ-ĥĩ $\text{z} \text{ ž} \parallel \text{ğ} \Sigma$

$\tilde{\text{U}} \phi$ $\tilde{\text{u}} \text{ NJ } \tilde{\text{u}} \text{ nj}$
 $\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{z}} \Sigma \text{H} \sigma \emptyset \tilde{\text{U}} \text{D} \tilde{\text{z}} \emptyset \text{U} \sigma : \text{I U}$
 $\text{f} \parallel \text{ř} : \tilde{\text{a}} \sigma$

$\text{H} \text{ u } \Sigma \text{ Y}$	$\tilde{\text{t}} \tilde{\text{h}} / \tilde{\text{t}} - \tilde{\text{t}} \tilde{\text{t}} / \tilde{\text{h}}$	$\text{Y } \tilde{\text{U}} \emptyset \Sigma \text{ Y}$	$\tilde{\text{h}} \tilde{\text{t}} - \tilde{\text{h}} \tilde{\text{h}}$	$\tilde{\text{A}} \text{ t } \sigma$	Ŧ
$\text{H} \text{ u } \Sigma \text{ Y}$	$\tilde{\text{t}} \tilde{\text{H}} / \tilde{\text{h}} - \tilde{\text{t}} \tilde{\text{t}}$	$\text{Y } \tilde{\text{U}} \emptyset \Sigma \text{ Y}$	$\tilde{\text{h}} \tilde{\text{H}} - \tilde{\text{h}} \tilde{\text{g}}$	$\tilde{\text{A}} \text{ t}$	

$\text{D} \tilde{\text{z}} \text{ Y}$	$\tilde{\text{t}} \tilde{\text{g}} - \tilde{\text{t}} \tilde{\text{g}}$	$\tilde{\text{A}} \text{ t } \sigma$	$\text{H} \parallel \text{t} \tilde{\text{A}}$
$\text{D} \tilde{\text{z}} \text{ Y}$	$\tilde{\text{t}} \tilde{\text{g}} - \tilde{\text{H}} \tilde{\text{g}}$	$\tilde{\text{A}} \text{ t}$	

☒	☐ $\tilde{\text{A}} \tilde{\text{A}} \tilde{\text{u}}$	☐ WR	$\parallel \text{t}$
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$\tilde{\text{U}} \text{ Y}$	$\tilde{\text{h}}$	$\emptyset \text{ g } \tilde{\text{K}} \tilde{\text{a}} \text{ f}$	$\text{h} \text{ Lj}$
$\tilde{\text{U}} \text{ Y}$	$\tilde{\text{h}}$	$\text{g } \tilde{\text{A}} \text{ l } \Sigma \tilde{\text{K}} \tilde{\text{a}} \text{ f}$	

☒ $\tilde{\text{u}} \emptyset \tilde{\text{U}}$	☐ $\text{t} \emptyset \text{ l}$	☐ l	$\tilde{\text{a}} \tilde{\text{K}}$	$\tilde{\text{u}}$
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☒	$\emptyset \tilde{\text{U}}$	☐	☐ d	$\phi \text{U } \text{D} \tilde{\text{z}} \text{ D} \tilde{\text{z}}$
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$\tilde{\text{h}} \tilde{\text{t}}$	D.S. p	$\text{g } \emptyset \tilde{\text{A}} \tilde{\text{d}} \tilde{\text{z}} \text{ D} \tilde{\text{z}} \text{ Y}$	$\tilde{\text{a}} \sigma \text{ Y } \text{g}$	$\text{H} \tilde{\text{u}} \text{ t } \text{lj } \phi \text{ q}$
☒	☐	d	$\tilde{\text{a}} \sigma \text{ g } \emptyset \phi \text{U} \sigma$	

N.C.	$\tilde{\text{H}} \tilde{\text{t}} - \tilde{\text{H}} \tilde{\text{g}}$	$\text{k } \phi \text{ D} \tilde{\text{z}} \text{ T } \text{Rt } \text{f}$
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w/m^2	$\tilde{\text{H}} \tilde{\text{g}}$	$\text{h } \text{h}$
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$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d} \tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$
 $\text{z} \tilde{\text{ř}} \tilde{\text{U}} \text{ Y}$ $\text{g } \emptyset \tilde{\text{g}} \Sigma \tilde{\text{A}} \tilde{\text{u}} \tilde{\text{u}} \text{ g } \tilde{\text{A}} \tilde{\text{d}} \tilde{\text{z}} \emptyset \text{Y} \parallel \tilde{\text{A}} \text{ g } \tilde{\text{a}} \sigma \text{ j}$ $\tilde{\text{A}} \tilde{\text{z}} \text{ Y} - \tilde{\text{h}}$
 $\text{g } \tilde{\text{u}} \text{ g } \Sigma \tilde{\text{A}} \tilde{\text{u}} \tilde{\text{u}} \text{ g } \tilde{\text{A}} \tilde{\text{d}} \tilde{\text{z}} \emptyset \text{Y} \parallel \tilde{\text{A}} \text{ g } \tilde{\text{a}} \sigma \text{ j}$ $\tilde{\text{A}} \tilde{\text{z}} \text{ Y} - \tilde{\text{H}}$
 $\text{g } \tilde{\text{u}} \text{ g } \Sigma \tilde{\text{A}} \tilde{\text{u}} \tilde{\text{u}} \text{ g } \tilde{\text{A}} \tilde{\text{d}} \tilde{\text{z}} \emptyset \text{Y} \parallel \tilde{\text{A}} \text{ g } \tilde{\text{a}} \sigma \text{ j}$ $\tilde{\text{A}} \tilde{\text{z}} \text{ Y} - \tilde{\text{H}}$

$t \phi \tilde{a}$ $\tilde{U}$ $d\tilde{z} U$ Θ $\tilde{U}$ $\tilde{U}$ $\Theta \mathfrak{s}$ $f \tilde{A}$ $f \tilde{A}$
 $\tilde{U} \parallel$ Lj $\tilde{u} \Theta \mathfrak{s}$ $f \tilde{A}$ $\parallel$

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ĩ-hg $\mathfrak{z}$ $\mathfrak{Z} \parallel \mathfrak{g}$ Σ

$\mathfrak{U} \phi$ $\mathfrak{u}$ Nj $\mathfrak{u}$ nj
 $\mathfrak{t} \phi \tilde{a} \tilde{A} \mathfrak{Z} \Sigma$ $H \sigma$ $\emptyset \tilde{U}$ $D \tilde{Z} \emptyset U$ $\sigma : I U$
 $\mathfrak{j} \phi \mathfrak{s} \emptyset \mathfrak{u} \tilde{U} \sigma$ $: \tilde{a} \sigma$

$H \mathfrak{u}$ $\mathfrak{a}$ Σ Υ	$\tilde{t} \tilde{h} / \tilde{t} - \tilde{t} \tilde{t} / \tilde{h}$	Υ $\tilde{U} \emptyset$ Σ Υ	$\tilde{h} \tilde{t} - \tilde{h} \tilde{h}$	$\tilde{A} \mathfrak{s} \sigma$	$\mathfrak{T}$
$H \mathfrak{u}$ $\mathfrak{a}$ Σ Υ	$\tilde{t} \tilde{h} / \tilde{h} - \tilde{t} \tilde{t}$	Υ $\tilde{U} \emptyset$ Σ Υ	$\tilde{h} \tilde{h} - \tilde{h} \mathfrak{g}$	$\tilde{A} \mathfrak{s}$	

$D \tilde{z} \Upsilon$	$\tilde{t} \mathfrak{g} - \tilde{t} \mathfrak{g}$	$\tilde{A} \mathfrak{s} \sigma$	$\mathfrak{H} \parallel \mathfrak{s} \quad \tilde{A}$
$D \tilde{z} \Upsilon$	$\tilde{t} \mathfrak{g} - \mathfrak{H} \mathfrak{g}$	$\tilde{A} \mathfrak{s}$	

☒	☐ $\tilde{A} \tilde{A} \mathfrak{u}$	☐ $\mathfrak{U} \mathfrak{R}$	$\parallel \mathfrak{s}$
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$\tilde{U}$ Υ	$\tilde{h}$	$\emptyset$ $\mathfrak{g} \tilde{K} \tilde{a} \mathfrak{f}$	$\mathfrak{h} \quad Lj$
$\tilde{U}$ Υ	$\tilde{h}$	$\mathfrak{g} \tilde{A} \mathfrak{l} \Sigma \tilde{K} \tilde{a} \mathfrak{f}$	

☒ $\mathfrak{u}$ $\emptyset \mathfrak{U}$	☐ $\mathfrak{s} \emptyset \mathfrak{l}$	☐ $\mathfrak{l}$	$\tilde{a} \tilde{K}$	$\tilde{u}$
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☒	$\emptyset \mathfrak{U}$	☐	☐ $\mathfrak{a}$	ϕU $D \tilde{z}$ $D \tilde{z}$
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-	$D.S. p$	$\mathfrak{g}$ $\tilde{\emptyset} \tilde{A} d \tilde{z} \sigma$ $D \tilde{z} \Upsilon$	$\tilde{a} \sigma$ Υ $\mathfrak{g}$	$\mathfrak{u} \mathfrak{t} \quad l j \quad \phi \quad \phi$
☒	☐	$\mathfrak{a}$	$\tilde{a} \sigma$ $\mathfrak{g}$ $\emptyset \phi U \sigma$	

N.C.	$\mathfrak{h} \mathfrak{g} - \mathfrak{H} \tilde{t}$	$k \phi$	$D \tilde{z} \mathfrak{T}$	$\mathfrak{R} \mathfrak{t} \mathfrak{f}$
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w/m^2	$\mathfrak{h} \tilde{t}$	$\mathfrak{H} \mathfrak{h}$
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$\mathfrak{z}$ $l j$ $\mathfrak{g} \tilde{A} \mathfrak{u} \mathfrak{s}$ $\tilde{A} \tilde{A} \mathfrak{a} \Upsilon \mathfrak{g}$ $\mathfrak{z}$ $-\mathfrak{H}$
 $\parallel \tilde{A} \tilde{U} \emptyset \tilde{A}$ $\mathfrak{j} \tilde{U} \mathfrak{Z}$ $\mathfrak{g} Lj$ $\tilde{U} \sigma$ $\parallel \Upsilon \parallel$ $\mathfrak{z}$ $\mathfrak{l} \tilde{z} \mathfrak{z} \mathfrak{U} \tilde{a} \sigma \mathfrak{j}$ $\tilde{A} \sigma$ $D \tilde{z} \Upsilon$ $-\mathfrak{h}$
 $\mathfrak{z}$ $\mathfrak{z}$ $\tilde{U} \tilde{A} \tilde{a}$ $\mathfrak{s} \emptyset \sigma \tilde{A} \mathfrak{f} \tilde{A} \tilde{A} \parallel$ $\mathfrak{g} \mathfrak{g} \Sigma$ $-\mathfrak{H}$

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d}\tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

$\tilde{\text{I}}\text{-}\hat{\text{h}}\hat{\text{H}}$ $\text{z } \tilde{\text{J}}\parallel \tilde{\text{g}} \Sigma$

$\tilde{\text{U}}\phi$ $\tilde{\text{u}} \text{ NJ } \tilde{\text{u}} \text{ nj}$
 $\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{E}} \tilde{\text{Z}} \Sigma \text{H}\sigma \emptyset \tilde{\text{U}} \text{D}\tilde{\text{Z}} \emptyset \text{U} \sigma : \text{I U}$
 $\text{Dz } \tilde{\text{J}} \tilde{\text{U}} \text{U} : \tilde{\text{a}} \sigma$

$\text{H}_\text{U} \text{ a } \Sigma \text{Y}$	$\tilde{\text{I}}\tilde{\text{h}}/\tilde{\text{I}}-\tilde{\text{I}}\tilde{\text{I}}/\tilde{\text{h}}$	$\text{Y } \tilde{\text{U}}\emptyset \Sigma \text{Y}$	$\tilde{\text{h}}\tilde{\text{I}}-\tilde{\text{h}}\tilde{\text{h}}$	$\tilde{\text{A}} \text{t } \sigma$	F
$\text{H}_\text{U} \text{ a } \Sigma \text{Y}$	$\tilde{\text{I}}\tilde{\text{I}}/\tilde{\text{h}}-\tilde{\text{I}}\tilde{\text{I}}$	$\text{Y } \tilde{\text{U}}\emptyset \Sigma \text{Y}$	$\tilde{\text{h}}\tilde{\text{h}}-\tilde{\text{h}}\tilde{\text{g}}$	$\tilde{\text{A}} \text{t}$	

$\text{D}\tilde{\text{z}} \text{Y}$	-	$\tilde{\text{A}} \text{t } \sigma$	$\text{H } \parallel \text{t } \tilde{\text{A}}$
$\text{D}\tilde{\text{z}} \text{Y}$	-	$\tilde{\text{A}} \text{t}$	

☐	☒ $\tilde{\text{A}}\tilde{\text{A}}\text{Dz}$	☐ UR	$\parallel \text{t}$
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$\tilde{\text{U}} \text{Y}$	$\tilde{\text{h}}$	$\emptyset \text{ g } \tilde{\text{K}}\tilde{\text{a}} \text{f}$	$\tilde{\text{h}} \text{ Lj}$
$\tilde{\text{U}} \text{Y}$	$\hat{\text{H}}\tilde{\text{g}}$	$\text{g } \tilde{\text{A}} \text{ l } \Sigma \tilde{\text{K}}\tilde{\text{a}} \text{f}$	

☐ $\tilde{\text{u}} \emptyset \text{U}$	☒ $\text{t}\emptyset \text{ l}$	☐ l	$\tilde{\text{a}} \tilde{\text{K}} \tilde{\text{u}}$
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☐ $\emptyset \text{U}$	☐	☒ d	$\phi \text{U } \text{D}\tilde{\text{z}} \text{D}\tilde{\text{z}}$
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-	D.S. p	$\text{g } \tilde{\text{A}}\tilde{\text{d}}\tilde{\text{z}} \text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{a}} \sigma \text{Y } \text{g}$	$\tilde{\text{u}} \text{t } \text{Lj } \phi \phi$
☒	☐	d	$\tilde{\text{a}} \sigma \text{g } \phi \phi \text{U}\sigma$	

N.C.	$\tilde{\text{h}}\tilde{\text{I}}-\tilde{\text{h}}\tilde{\text{g}}$	$\text{k } \phi \text{D}\tilde{\text{z}} \text{T } \text{Rt } \text{f}$
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w/m^2	$\hat{\text{H}}\tilde{\text{h}}$	$\text{H } \text{h}$
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$\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{E}} \tilde{\text{Z}} \Sigma \text{H}\sigma \emptyset \tilde{\text{U}} \text{D}\tilde{\text{Z}} \emptyset \text{U} \sigma : \text{I U}$
 $\text{Dz } \tilde{\text{J}} \tilde{\text{U}} \text{U} : \tilde{\text{a}} \sigma$
 $\text{Dz } \tilde{\text{J}} \tilde{\text{U}} \text{U} : \tilde{\text{a}} \sigma$
 $\text{Dz } \tilde{\text{J}} \tilde{\text{U}} \text{U} : \tilde{\text{a}} \sigma$

$t \phi \tilde{a}$ $\tilde{U}$ $d\tilde{z} U$ Θ $\tilde{U}$ $\tilde{U}$ $\Theta \mathfrak{s}$ $f \tilde{A}$ $f \tilde{A}$
 $\tilde{U} \parallel$ Lj $\tilde{u} \Theta \mathfrak{s}$ $f \tilde{A}$ $\parallel$

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$\tilde{I}-\hat{h}\hat{h}$ $\mathfrak{z}$ $\mathfrak{Z} \parallel \mathfrak{g}$ Σ

$\tilde{U} \phi$	$\tilde{u}$	Nj	$\tilde{u}$	nj
$\mathfrak{t} \phi \tilde{a}$	$\tilde{A} \mathfrak{z} \Sigma$	$H \sigma$	$\emptyset \tilde{U}$	$D \tilde{Z} \emptyset U$
$\mathfrak{z}$	$\tilde{A}$	γ	$\mathfrak{k}$	$\sigma : \tilde{a} \sigma$

$H \mathfrak{a}$	$\Sigma \gamma$	$\tilde{t} \tilde{h} / \tilde{I} - \tilde{I} \tilde{I} / \tilde{h}$	$\gamma \tilde{U} \emptyset$	$\Sigma \gamma$	$\tilde{h} \tilde{I} - \tilde{h} \tilde{h}$	$\tilde{A} \mathfrak{s} \sigma$	$\mathfrak{T}$
$H \mathfrak{a}$	$\Sigma \gamma$	$\tilde{I} \tilde{H} / \tilde{I} - \tilde{I} \tilde{h} / \tilde{h}$	$\gamma \tilde{U} \emptyset$	$\Sigma \gamma$	$\tilde{h} \tilde{h} - \tilde{H} \tilde{I}$	$\tilde{A} \mathfrak{s}$	

$D \tilde{z} \gamma$	-	$\tilde{A} \mathfrak{s} \sigma$	$\mathfrak{H} \parallel \mathfrak{s} \tilde{A}$
$D \tilde{z} \gamma$	-	$\tilde{A} \mathfrak{s}$	

☐	☒	$\tilde{A} \tilde{A} \mathfrak{z}$	☐	$\mathfrak{W} \mathfrak{R}$	$\parallel \mathfrak{s}$
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$\tilde{U} \gamma$	-	$\emptyset$	$\mathfrak{g} \tilde{K} \tilde{a} \mathfrak{f}$	$\mathfrak{h} Lj$
$\tilde{U} \gamma$	$\hat{H} \mathfrak{g}$	$\mathfrak{g} \tilde{A}$	$\mathfrak{l} \Sigma \tilde{K} \tilde{a} \mathfrak{f}$	

☐	$\tilde{u} \emptyset \tilde{U}$	☒	$\mathfrak{s} \emptyset \mathfrak{l}$	☐	$\mathfrak{l}$	$\tilde{a} \tilde{K}$	$\tilde{u}$
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☐	$\emptyset \tilde{U}$	☐	☒	$\mathfrak{a}$	ϕU	$D \tilde{z}$	$D \tilde{z}$
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-	$D.S.p$	$\mathfrak{g} \tilde{A} d \tilde{z} \sigma$	$D \tilde{z} \gamma$	$\tilde{a} \sigma$	γ	$\mathfrak{g}$	$\tilde{u} \mathfrak{t} l j \phi \phi$
☒	☐	$\mathfrak{a}$		$\tilde{a} \sigma$	$\mathfrak{g} \emptyset \phi U \sigma$		

N.C.	$\mathfrak{h} \mathfrak{g}$	$k \phi$	$D \tilde{z} \mathfrak{T}$	$\mathfrak{R} \mathfrak{t} \mathfrak{f}$
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w/m^2	$\mathfrak{h} \tilde{I}$	$\mathfrak{H} \mathfrak{h}$
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$\mathfrak{z} \emptyset \phi \tilde{e}$ $\mathfrak{g} \tilde{A} \mathfrak{s}$ $\tilde{A} \mathfrak{g} \mathfrak{z}$ $-\hat{H}$
 $\parallel$ $\mathfrak{l}$ $\mathfrak{g} Nj \mathfrak{a}$ $\mathfrak{J} \tilde{U} \mathfrak{z}$ $\mathfrak{g} \gamma$ $-\hat{h}$
 $\parallel$ $\mathfrak{g} \tilde{R} \tilde{e}$ $\mathfrak{g} \Sigma \tilde{Q} \tilde{a}$ $\mathfrak{z} \tilde{U}$ $"\tilde{A} \tilde{a}$ $\mathfrak{s} \emptyset \sigma \tilde{A} \mathfrak{f}$ $\tilde{A} \tilde{A} \parallel$ $\mathfrak{g} \mathfrak{g} \Sigma$ $-\mathfrak{H}$

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d}\tilde{\text{z}} \text{U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

$\tilde{\text{I}}\text{-}\tilde{\text{h}}\text{H}$ $\text{z } \tilde{\text{J}}\parallel \tilde{\text{g}} \Sigma$

$\tilde{\text{U}}\phi$ $\tilde{\text{u}} \text{ NJ } \tilde{\text{u}} \text{ nj}$

$\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{E}} \tilde{\text{Z}} \Sigma \text{H}\sigma \emptyset \tilde{\text{U}} \text{D}\tilde{\text{Z}} \emptyset \text{U} \sigma : \text{I U}$
 $\emptyset \text{ d } \text{d} \text{f} : \tilde{\text{a}} \sigma$

$\text{H}_\text{U} \text{ a } \Sigma \text{Y}$	$\tilde{\text{I}}\tilde{\text{h}}/\tilde{\text{I}}\text{-}\tilde{\text{I}}\tilde{\text{I}}/\tilde{\text{h}}$	$\text{Y } \tilde{\text{U}}\emptyset \Sigma \text{Y}$	$\tilde{\text{h}}\tilde{\text{I}}\text{-}\tilde{\text{h}}\tilde{\text{h}}$	$\tilde{\text{A}} \text{t } \sigma$	F
$\text{H}_\text{U} \text{ a } \Sigma \text{Y}$	$\tilde{\text{I}}\text{H}/\text{h}\text{-}\tilde{\text{I}}\tilde{\text{I}}$	$\text{Y } \tilde{\text{U}}\emptyset \Sigma \text{Y}$	$\tilde{\text{h}}\text{H}\text{-}\tilde{\text{h}}\tilde{\text{g}}$	$\tilde{\text{A}} \text{t}$	

$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}}\tilde{\text{g}}\text{-}\tilde{\text{I}}\tilde{\text{g}}$	$\tilde{\text{A}} \text{t } \sigma$	$\text{H } \parallel \text{t } \tilde{\text{A}}$
$\text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{I}}\tilde{\text{g}}\text{-}\text{H}\tilde{\text{g}}$	$\tilde{\text{A}} \text{t}$	

☐	☒ $\tilde{\text{A}}\tilde{\text{A}}\text{d}$	☐ WR	$\parallel \text{t}$
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$\tilde{\text{U}} \text{Y}$	$\tilde{\text{h}}$	$\emptyset \text{ g } \tilde{\text{K}}\tilde{\text{a}} \text{f}$	$\text{h } \text{Lj}$
$\tilde{\text{U}} \text{Y}$	$\text{H}\tilde{\text{g}}$	$\text{g } \tilde{\text{A}} \text{ l } \Sigma \tilde{\text{K}}\tilde{\text{a}} \text{f}$	

☐ $\tilde{\text{u}} \emptyset \emptyset$	☒ $\text{t}\emptyset \text{ l}$	☐ l	$\tilde{\text{a}} \tilde{\text{K}}$	$\tilde{\text{u}}$
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☐ $\emptyset \emptyset$	☐	☒ d	$\phi \text{U } \text{D}\tilde{\text{z}} \text{D}\tilde{\text{z}}$
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-	D.S.p	$\text{g } \tilde{\text{A}}\tilde{\text{d}}\tilde{\text{z}} \text{D}\tilde{\text{z}} \text{Y}$	$\tilde{\text{a}} \sigma \text{Y } \text{g}$	$\tilde{\text{u}} \text{t } \text{lj } \phi \phi$
☒	☐	d	$\tilde{\text{a}} \sigma \text{g } \emptyset \phi \text{U}\sigma$	

N.C.	$\tilde{\text{h}}\tilde{\text{I}}\text{-}\tilde{\text{h}}\tilde{\text{g}}$	$\text{k } \phi \text{D}\tilde{\text{z}} \text{T } \text{Rt } \text{f}$
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w/m^2	$\tilde{\text{H}}\tilde{\text{I}}$	$\text{H } \text{h}$
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$\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{E}} \tilde{\text{Z}} \Sigma \text{H}\sigma \emptyset \tilde{\text{U}} \text{D}\tilde{\text{z}} \emptyset \text{U} \sigma : \text{I U}$
 $\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{E}} \tilde{\text{Z}} \Sigma \text{H}\sigma \emptyset \tilde{\text{U}} \text{D}\tilde{\text{z}} \emptyset \text{U} \sigma : \text{I U}$
 $\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{E}} \tilde{\text{Z}} \Sigma \text{H}\sigma \emptyset \tilde{\text{U}} \text{D}\tilde{\text{z}} \emptyset \text{U} \sigma : \text{I U}$

$\text{f } \phi \tilde{\text{a}}$ $\tilde{\text{U}} \text{ d}\tilde{\text{z}} \text{ U}$ Θ $\tilde{\text{U}} \tilde{\text{U}} \Theta \text{ t}$ $\text{f } \tilde{\text{A}}$ $\text{f } \tilde{\text{A}}$
 $\tilde{\text{U}} \parallel$ Lj $\tilde{\text{u}} \Theta \text{ t}$ $\text{f } \tilde{\text{A}}$ $\parallel$

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$\tilde{\text{I}}\text{-}\tilde{\text{h}}\tilde{\text{h}}$ $\text{z } \tilde{\text{J}}\parallel \tilde{\text{g}} \Sigma$

$\tilde{\text{U}}\phi$ $\tilde{\text{u}} \text{ NJ } \tilde{\text{u}} \text{ nj}$
 $\text{f } \phi \tilde{\text{a}} \tilde{\text{A}} \tilde{\text{E}} \tilde{\text{Z}} \Sigma \text{ H}\tilde{\text{u}} \tilde{\text{U}} \text{ D}\tilde{\text{Z}} \tilde{\text{U}} \text{ } \sigma \text{ : I U}$
 $\tilde{\text{U}} \tilde{\text{Z}} \text{ } \text{Y : } \tilde{\text{a}} \text{ } \sigma$

Hu a Σ Y	$\tilde{\text{I}}\tilde{\text{I}}/\tilde{\text{I}}-\tilde{\text{I}}\tilde{\text{I}}/\tilde{\text{h}}$	Y $\tilde{\text{U}}\tilde{\text{U}}$ Σ Y	$\tilde{\text{h}}\tilde{\text{I}}-\tilde{\text{h}}\tilde{\text{h}}$	$\tilde{\text{A}} \text{ t } \sigma$	$\text{H } \tilde{\text{T}}$
Hu a Σ Y	$\tilde{\text{I}}\text{H}/\tilde{\text{h}}-\tilde{\text{I}}\tilde{\text{I}}$	Y $\tilde{\text{U}}\tilde{\text{U}}$ Σ Y	$\tilde{\text{h}}\text{H}-\tilde{\text{h}}\tilde{\text{g}}$	$\tilde{\text{A}} \text{ t}$	

Dž Y	$\tilde{\text{I}}\tilde{\text{g}}-\tilde{\text{I}}\tilde{\text{g}}$	$\tilde{\text{A}} \text{ t } \sigma$	$\text{h } \parallel \text{t } \tilde{\text{A}}$
Dž Y	$\tilde{\text{I}}\tilde{\text{g}}-\text{H}\tilde{\text{g}}$	$\tilde{\text{A}} \text{ t}$	

☐	☐ $\tilde{\text{A}}\tilde{\text{A}}\tilde{\text{U}}$	☒ $\parallel \text{R}$	$\text{H } \parallel \text{t}$
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$\tilde{\text{U}} \text{ Y}$	$\tilde{\text{h}}$	$\tilde{\text{U}} \text{ g } \tilde{\text{K}}\tilde{\text{a}} \text{ f}$	Lj
$\tilde{\text{U}} \text{ Y}$	$\tilde{\text{h}}$	$\text{g } \tilde{\text{A}} \text{ l } \Sigma \tilde{\text{K}}\tilde{\text{a}} \text{ f}$	

☒ $\tilde{\text{u}} \tilde{\text{U}} \tilde{\text{U}}$	☐ $\text{t } \tilde{\text{U}} \text{ l}$	☐ l	$\tilde{\text{a}} \tilde{\text{K}}$	$\tilde{\text{u}}$
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☒ $\tilde{\text{U}} \tilde{\text{U}}$	☐	☐ d	$\phi \text{U } \text{D}\tilde{\text{Z}} \text{ D}\tilde{\text{Z}}$
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$\tilde{\text{h}}\tilde{\text{I}}$	D.S.p	$\text{g } \tilde{\text{U}}\tilde{\text{A}}\tilde{\text{d}}\tilde{\text{Z}}\text{ } \text{D}\tilde{\text{Z}} \text{ Y}$	$\tilde{\text{a}} \text{ } \text{Y } \text{g}$	$\text{h } \tilde{\text{u}} \text{ t } \text{lj } \phi \text{ } \phi$
☒	☐	d	$\tilde{\text{a}} \text{ } \text{g } \tilde{\text{U}}\tilde{\text{U}}\text{ } \sigma$	

N.C.	$\tilde{\text{H}}\tilde{\text{I}}$	$\text{k } \phi \text{ D}\tilde{\text{Z}} \text{ T } \text{Rt } \text{f}$
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w/m^2	$\tilde{\text{H}}\tilde{\text{I}}$	$\tilde{\text{I}} \text{ h}$
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$\tilde{\text{u}} \text{ Y } \tilde{\text{g}} \text{ } \tilde{\text{A}} \text{ } \text{g } \parallel \tilde{\text{A}}\tilde{\text{U}}\text{Y } \tilde{\text{A}}\tilde{\text{U}} \text{ Y } \tilde{\text{a}} \text{ } \tilde{\text{j}} \text{ } \tilde{\text{u}} \text{ -}\tilde{\text{H}}$
 $\text{. t } \text{lj } \text{g } \tilde{\text{A}}\tilde{\text{U}}\text{t } \tilde{\text{A}} \tilde{\text{A}}\tilde{\text{U}}\text{Y } \tilde{\text{g}} \text{ } \tilde{\text{h}}$
 $\text{. } \parallel \parallel \text{ l } \text{g } \text{NJ} \text{a } \parallel \text{t } \text{g } \text{a -H}$
 $\text{. z}\tilde{\text{r}} \tilde{\text{U}} \tilde{\text{U}} \tilde{\text{g}} \Sigma \tilde{\text{A}}\tilde{\text{U}} \text{g } \tilde{\text{U}}\tilde{\text{A}}\tilde{\text{d}}\tilde{\text{Z}}\text{ } \tilde{\text{U}}\tilde{\text{A}} \text{g } \text{D}\tilde{\text{Z}} \text{ Y -h}$
 $\text{. } \tilde{\text{U}} \text{ } \tilde{\text{U}} \text{ "}\tilde{\text{A}}\tilde{\text{a}} \text{ t } \text{ } \tilde{\text{A}}\tilde{\text{f}} \tilde{\text{A}} \tilde{\text{A}} \text{ } \parallel \text{ " } \text{g}\tilde{\text{g}} \Sigma \text{ -}\tilde{\text{I}}$

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w/m^2	$\tilde{H}\tilde{I}$	$\tilde{h} \quad \tilde{h}$
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$t \phi \tilde{a}$ $\tilde{U} \ d\tilde{z} \ U$ Θ $\tilde{U} \ \tilde{U} \ \Theta \ t$ $f \ \tilde{A}$
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$\tilde{I}-\tilde{h}\tilde{I}$ $\tilde{z} \ \tilde{J} \parallel \ \tilde{g} \ \Sigma$

$\tilde{U} \phi$ $\tilde{u} \ Nj \ \tilde{u} \ nj$
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$H \ \emptyset \ \Sigma \ Y$	$\tilde{I}\tilde{h}/\tilde{I}-\tilde{I}\tilde{I}/\tilde{h}$	$Y \ \tilde{U} \emptyset \ \Sigma \ Y$	$\tilde{h}\tilde{I}-\tilde{h}\tilde{h}$	$\tilde{A} \ t \ \sigma$	F
$H \ \emptyset \ \Sigma \ Y$	$\tilde{I}\tilde{H}/\tilde{I}-\tilde{I}\tilde{h}/\tilde{h}$	$Y \ \tilde{U} \emptyset \ \Sigma \ Y$	$\tilde{h}\tilde{h}-\tilde{H}\tilde{I}$	$\tilde{A} \ t$	

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$D\tilde{z} \ Y$	$\tilde{I}\tilde{g}-\tilde{H}\tilde{g}$	$\tilde{A} \ t$	

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$\tilde{U} \ Y$	$\tilde{h}$	$\emptyset \ \tilde{g} \ \tilde{K} \tilde{a} \ t$	Lj
$\tilde{U} \ Y$	$\tilde{h}$	$\tilde{g} \ \tilde{A} \ \eta \ \Sigma \ \tilde{K} \tilde{a} \ t$	

☒ $\tilde{u} \ \emptyset \ \tilde{U}$	☐ $t \ \emptyset \ \eta$	☐ η	$\tilde{a} \ \tilde{K}$	$\tilde{u}$
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☒	$\emptyset \ \tilde{U}$	☐	☐ ∂	$\phi U \ D\tilde{z} \ D\tilde{z}$
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$\tilde{h}\tilde{I}$	$D.S.p$	$\tilde{g} \ \emptyset \tilde{A} \tilde{d} \tilde{z} \emptyset \ D\tilde{z} \ Y$	$\tilde{a} \ \sigma \ Y \ \tilde{g}$	$\tilde{h} \ \tilde{u} \ t \ lj \ \phi \ \phi$
☒	☐	∂	$\tilde{a} \ \sigma \ \tilde{g} \ \emptyset \phi U \sigma$	

N.C.	$\tilde{h}\tilde{I}-\tilde{h}\tilde{g}$	$k \ \phi \ D\tilde{z} \ T \ R t \ t$
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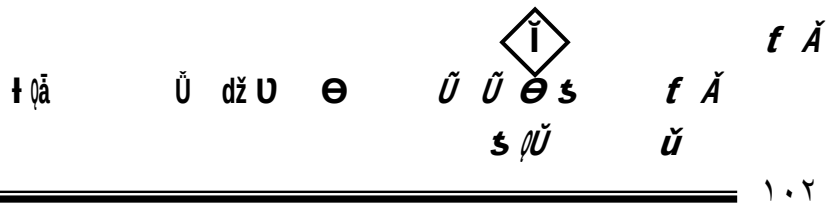
w/m^2	$\tilde{H}\tilde{I}$	$\tilde{h} \ \eta$
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$\tilde{z} \emptyset \ lj \ \tilde{g} \ Y \ \tilde{A} \ \emptyset \tilde{a} \ Y \ \tilde{g} \ \partial \ -\tilde{H}$
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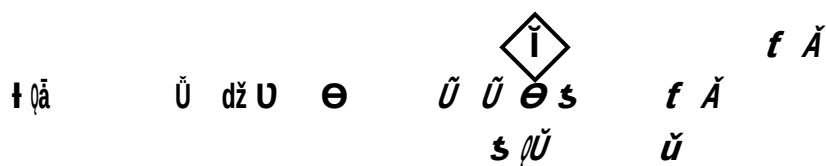
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NHS-HTM 2022

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Health Buildings Design

**Guidelines for Mechanical Services of
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**Office of Deputy for Technical Affairs
Technical, Criteria Codification and Earthquake Risk Reduction
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1386/2007

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